



United States
Department of
Agriculture

Forest
Service

October 2003



Environmental Assessment

Recreational Residence Rebuilding and the Issuance of New 20-Year Permits for the North Fork San Gabriel Recreation Residence Tract and the San Dimas Canyon Recreation Residence Tracts

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SUMMARY

The Angeles National Forest proposes permitting reconstruction of recreation residences destroyed in the Curve and Williams wildfires of 2002, and issuing new term permits within the North Fork San Gabriel and San Dimas Canyon recreation residence tracts for both reconstructed and existing cabins. The tracts lie within the San Gabriel Mountains north and northeast of Glendora, CA, within the San Gabriel River Ranger District of the Angeles National Forest, California.

At the time of the fires, there were 139 occupied lots, 62 in the North Fork San Gabriel tract and 77 in the San Dimas Canyon tracts. Since the fires, 32 permits have been relinquished or terminated, leaving a total of 107 permittees.

All rebuilt and existing cabins must meet Los Angeles County fire, building, sanitary/septic, and potable water system codes. Consistency reviews were conducted on all lots. A determination was made from the reviews that the recreation residence tracts were inconsistent with the Forest Plan, which resulted in a site-specific analysis being completed.

The Forest Service evaluated the following alternatives:

- **Alternative 1: No Action.** No rebuilding would occur. Existing cabin permittees in compliance with the terms and conditions of their special use permit and meeting county codes for septic/sanitary systems and potable water systems would receive new term permits in 2009. Roads would be reconstructed to basic standards at cost to the permittee.
- **Alternative 2: Proposed Action.** Allow reconstruction, to county code, of all burned cabins in essentially the same location as previously occupied. Permittees in compliance would receive new term permits in 2009. Roads would be rebuilt to Los Angeles County fire and safety standards at cost to the permittee.
- **Alternative 3: Modified Proposed Action.** Allow reconstruction on lots within 150 feet of roads meeting county fire and safety access requirements. Cabins would be rebuilt in essentially the same location as previously occupied. Existing cabins that meet county codes and Forest Service standards and guidelines would receive new term permits in 2009. Roads would be reconstructed to basic standards at cost to the permittee.
- **Alternative 4: Phase-out Tracts.** No rebuilding would occur. Existing cabins would be given 10 years continued use from the date of decision, or the permittees would have the option of allowing the government to purchase the recreation residence. Remaining permittees would need to comply with all terms and conditions of the current permit, including county sanitation and septic requirements. Roads would be reconstructed to basic standards at cost to the permittee. At the end of ten years the recreational residence special use for the two tracts would cease, the area would be restored and both tracts would revert to alternative public use. If this alternative is chosen, a separate environmental analysis regarding alternative public uses may be required.

Based upon the consistency review and this environmental assessment, the responsible official will decide which of the alternatives to implement, or whether further environmental analysis is required.

CHAPTER 1: PURPOSE AND NEED

Introduction

Document Structure

The Forest Service has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- *Introduction:* The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency’s proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Comparison of Alternatives, including the Proposed Action:* This section provides a more detailed description of the agency’s proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action and other alternatives. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives that follow.
- *Agencies and Persons Consulted:* This section provides a list of preparers and agencies consulted during the development of the environmental assessment.
- *Appendices:* The appendices provide more detailed information to support the analyses presented in the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the San Gabriel River Ranger District Office in Glendora, CA.

Background

The North Fork San Gabriel tract was severely impacted by the Curve fire, which started on September 1, 2002, destroying 81% of the structures. The San Dimas Canyon tracts were impacted by the Williams fire, which started on September 22, 2002. The Main Fork tract lost 87% of the structures, while the West Fork lost 71%.

Forest Service Handbook (FSH) 2709.11, R5 Supplement No. 2709.11-2000-1, Section 41.23 (6) provides the following direction: “Following destruction or substantial damage (greater than 50 percent) of a recreation residence by catastrophic events or natural causes, allow rebuilding if the lot can be occupied safely and the use remains consistent with the Forest Land and Resources Management Plan.”

The 1994 National Policy set direction for issuing new term permits for recreation residences. Decisions to issue new recreation residence term permits, following expiration of the current term permit, requires a determination of consistency with the current Forest plan. When recreation residence use is consistent with the Forest plan, it shall continue (Forest Service Manual 2721.23e).

When recreation residence use remains consistent with management direction given in the Forest Plan, Forest Service Handbook (FSH 2709.11, 41.23a) direction is to issue a new permit to the same holder in accordance with the following:

- Where “recreation residences have been in place for many years, and experience in administering this use has shown that continuing the use does not cause significant environmental impacts, issuance of a new permit can be made without further environmental documentation, except when the following situations are present: If the use has not been analyzed sufficiently as part of an EA or EIS completed within 5 years of permit expiration, complete the appropriate environmental analysis and documentation.”
- “Initiate the analysis and action to issue a new permit 2 years prior to expiration of the current term permit and notify the holder of the outcome of the action”.
- “Ensure the current use is in full compliance with the terms of the permit before issuing the new term permit.”
- “Review and update the term permit provisions to ensure that the new permit contains those clauses necessary to comply with all current regulations of the Secretary of Agriculture and all present Federal, State, or county laws, regulations, or ordinances which are applicable to the area covered by the permits.”

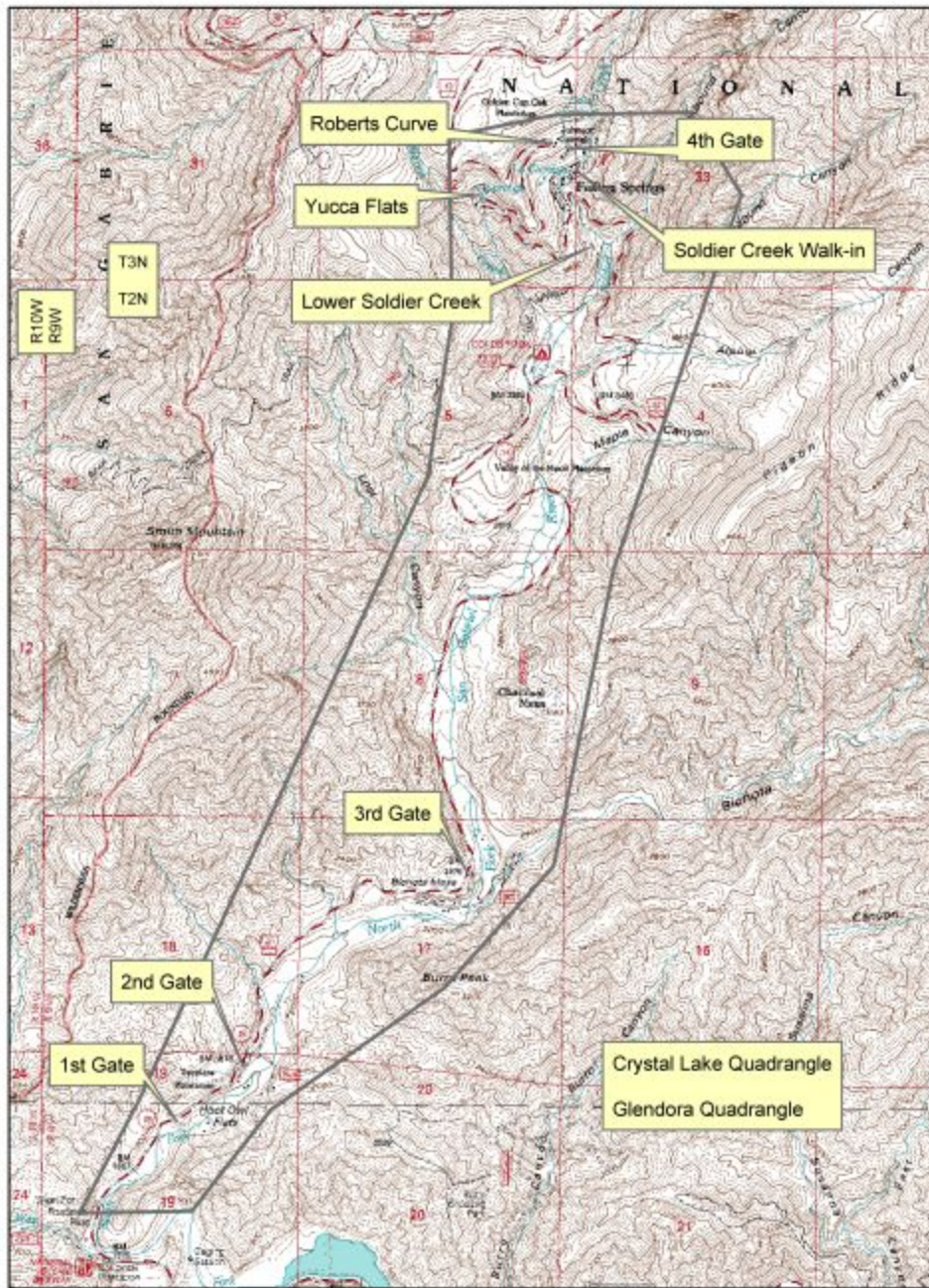
Road access is determined by Los Angeles County code, including direction for fire fighter access and safety (Title 26, Los Angeles County Code Supplemental Correction List, Fire Zone 4 Requirements, January 6, 1996; The Curve and Williams Fire Cabin Re-Construction Requirements, Fire Prevention Division Land Development Unit, November 20, 2002).

The North Fork San Gabriel tract totals approximately 45 acres and is located in T2N, R9W, Sections 4, 5, 8, 17, 18, 19 and T3N, R9W, Sections 32 and 33 (Figure 1). The tract is subdivided into eight groupings: 1st Gate, 2nd Gate, 3rd Gate, 4th Gate (also known as Upper Soldier Creek), Soldier Creek Walk-in, Lower Soldier Creek, Yucca Flats, and Roberts Curve, with access points off of California Highway 39. Lots are clustered on the North Fork of the San Gabriel River, Bichota Creek, and Soldier Creek, between Rincon and Crystal Lake Recreation Area.

The North Fork San Gabriel (NFSG) tract had 166 lots when it was originally designated in 1916. At the time of the fire, there were 62 occupied lots; the fire destroyed 50 of the cabins and 12 remain intact. The fire also destroyed Coldbrook Campground. 16 of the 50 burned residences have had their permits terminated, leaving 34 burned and 12 standing residences, or a total of 46 permittees.



North Fork San Gabriel Tract



Legend

North Fork San Gabriel Project Boundary

0 0.25 0.5 1 Miles

Map prepared by T.E.A.M.S
Enterprise Unit 09/15/2003

Figure 1: North Fork San Gabriel Project Area.

The San Dimas Canyon Recreation Residence tracts are known as the Main Fork of the San Dimas and the West Fork of the San Dimas (Figure 2). The Main Fork is located in T1N, R8W, Sections 17 and 18 and in T1N, R9W, Section 13 and totals approximately 25 acres. The Main Fork San Dimas (MFSD) tract is accessed by Forest Road 1N072 and is located along the Main Fork between Wolfskill Canyon and the confluence with the West Fork. It was originally designated in 1916 and had as many as 95 lots. There were 39 occupied lots at the time of the fire; 34 were destroyed and 5 remain standing. Of the 34 residences that burned, 9 have had their permits terminated leaving 30 permittees.

The West Fork of the San Dimas (WFSD) tract is located in T1N, R9W, Sections 12 and 13. It is accessed by Forest Road 1N112, between the San Dimas Experimental Forest gate at the Flintham Memorial Forest Plantation and the confluence with the Main Fork. The West Fork tract was also designated in 1916, encompassing approximately 25 acres, and had as many as 89 lots. At the time of the Williams Fire, the West Fork had 38 permittees; 26 residences burned and 12 cabins remained standing. Of the 26 burned residences, 6 permits have been terminated; of the 12 standing residences, 1 permit has since been terminated, leaving a total of 31 WFSD permittees.



San Dimas Canyon Tracts

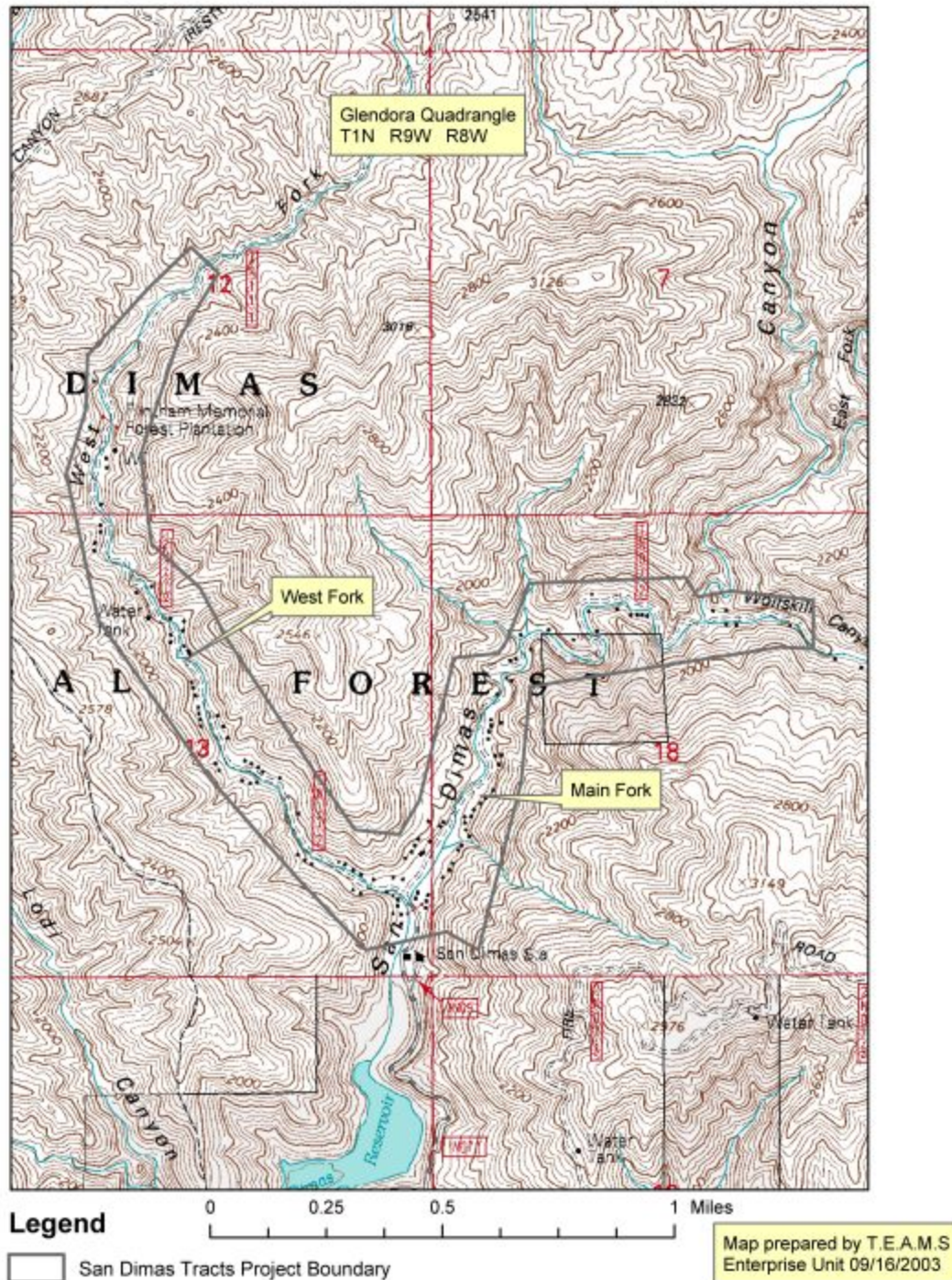


Figure 2: San Dimas Canyon Tracts

The results of the Consistency Review identified issues that are evaluated in the environmental assessment that will determine whether the use should continue. Continuation determinations are done on a tract basis not by individual lots. This environmental assessment (EA) will be completed within 5 years of the 2008 expiration date of the current recreational Special Use term permits. Under the NEPA guidelines, this EA can address issuance of the new term permit authorization. In addition to streamlining the NEPA process, authorizing new term permits may help secure bank loans for permittees whose recreation residences were destroyed in the recent fires. Permittees have expressed concern that banks would not loan money for rebuilding, when a permit will expire within 5 years without the assurance of a new term permit being issued.

A site-specific analysis was conducted on all 350 lots depicted on the tract plat maps; 166 lots within the NFSG tract, 95 lots in the MFSD tract and 89 in the WFSD tract. Following this analysis, 12 lots within the NFSG are available for Alternatives 1 and 4, 38 lots for Alternative 2, and 15 lots for Alternative 3; within the MFSD, 5 lots are available under Alternatives 1 and 4, 33 under Alternative 2, and 8 under Alternative 3; within the WFSD, 11 lots are available under Alternatives 1, 3 and 4, and 12 lots are available under Alternative 2. Thus, of the 350 lots analyzed, 28 are potentially available as recreation residence lots as displayed by Alternatives 1 and 4; 83 lots for Alternative 2; and 34 lots for Alternative 3. Additionally, under Alternative 2, three of the existing lots in the NFSG would not have permits re-issued in 2009, leaving a total of 80 lots. There are currently 107 permittees seeking permits. A complete listing of the tracts and associated lots can be found in Appendix A.

Purpose of and Need for Action

The purpose for the Proposed Action is to analyze whether rebuilding the 50 recreation residences destroyed by the Curve wildfire in the North Fork San Gabriel River tract and the 60 recreation residences destroyed by the Williams wildfire in the San Dimas Canyon tracts should be allowed. Additional and related purposes are to determine whether recreation residence use is consistent with the Forest Plan and whether new 20-year permits should be issued in 2009 after the current permits for the recreation residences in these tracts terminate.

Out of 139 permitted lots at the time of the fires, 110 recreational residences were burned (50 in the NFSG tract, 34 in the MFSD and 26 in the WFSD). Since the fires, 32 permits have been relinquished or terminated, leaving 107 permittees needing suitable lots and/or new term permits (46 in the NFSG, 30 in the MFSD and 31 in the WFSD).

The need for the Proposed Action arises from the destruction of the recreation residences on the San Gabriel River Ranger District by wildfires. The Forest Service Manual (FSM) and the Angeles National Forest Land and Resources Management Plan (LRMP) recognizes that recreation residences are a valid use of National Forest System lands, and an important component of the overall National Forest recreation program. It is Forest Service policy to continue recreation residence use and to work in partnership with holders of these permits to maximize the recreational benefits of these residences (FSM 2347.1; LRMP 4-13).

A consistency review must be completed in order to ensure all uses on National Forest System lands are consistent with the Angeles Forest Plan. The permits for the recreation residences destroyed by the wildfires as well as those recreation residences unaffected by the wildfires are valid only until December 31, 2008. To assist permit holders wanting to rebuild obtain loans and for efficiency, a continuation determination will be conducted on the entire tract.

The Forest Service must conduct an environmental analysis of the proposed reconstruction to ensure that effects to the environment are prevented or minimized and that the lots can be occupied safely. National Environmental Policy Act (NEPA) direction in FSH 1909.15, 41 requires that an environmental analysis be conducted to determine the effects of issuing new term recreation residence special use permits. The recreation residence term special use permits will expire on December 31, 2008. It has been more than 5 years since the Forest Plan analyzed recreation residence use, so additional environmental review and documentation is necessary (FSM 2721.23e and FSH 2709.11).

In summary the purpose of this EA is to determine if the reconstruction of the cabins and re-issuance of the recreational Special Use permits is consistent with the Forest Plan.

Proposed Action

The San Gabriel River Ranger District of the Angeles National Forest proposes to allow the reconstruction of the NFSG, MFSD, and WFSD tract recreational residences destroyed in the Curve and Williams fires of 2002, consistent with the previously cited direction. If rebuilt, the cabins would be located in essentially the identical locations previously occupied. Permittees whose cabins were destroyed, and whose lots are not consistent with the LRMP, may be offered in-lieu lots within the same tract, if available.

In addition, the Proposed Action will analyze issuing new 20-year term permits to every permittee in each tract upon expiration of the current permits on December 31, 2008.

The following is a list of the conditions for reconstruction and issuance of new 20-year permits if the recreation residence tracts are consistent with the Forest Plan (pp. 4-46, 47; FSM 2721.23e[1]):

- If a threatened, endangered, or sensitive species is found that affects any tract for the duration of the permit, the forest biologist will be notified to determine mitigation measures for protection of the species (Term Special Use Permit for Recreation Residences, Clause IV.A).
- Permit holders must be in compliance with the terms and conditions of their current term permit prior to the issuance of the new term permit (FSH 2709.11, 41.23a, 3).
- Rebuilding of the recreation residences will comply with Los Angeles County building, environmental health, and fire codes. Permit holders of the recreation residences unaffected by the wildfire must be in compliance with Los Angeles County codes for water systems and sanitation prior to the issuance of the new term permit (Term Special Use Permit for Recreation Residences, Clause IV.A).
- Issuance of permits allows for use, occupancy, and maintenance of recreation residences. These structures are maintained for the use and enjoyment of holders and their guests. Cabins must be used at least 15 days per year, but cannot be used as a principal residence. (Term Special Use Permit for Recreation Residences, Page 1 and Clause I.C.)
- Any ground-disturbing activities involved with rebuilding will be addressed in this analysis. Existing off-lot improvements that are owned and managed by homeowners associations (such as footbridges, water systems, roads, etc.) are authorized separately, and permit issuance for them is included in this analysis.

The following are a list of the conditions if the Recreation Residence tracts are not consistent with the Forest Plan (FSM 2721.23e[2]):

- The project analysis shall consider continuation of existing recreation residence use through appropriate modification of the term permit provisions or amendment of the Forest Plan to accommodate the use, or discontinuation of the use. If the analysis results in a decision to amend the Forest Plan so that recreation residence use may continue, modify the provisions of the current term permits as appropriate (FSM 2721.23e[2]a).
- If the project analysis results in a decision to convert a lot to an alternative public use at some point in the future, grant the holder at least 10 years continued use from the date of the decision, unless the continued use conflicts with law and regulation, and identify the specific alternative public use(s) for which the land is being recovered (FSM 2721.23e[2]b).
- When new permits will not be issued following expiration of the present permit, make a reasonable effort to provide an in-lieu lot, if available, at locations not needed in the foreseeable future, generally, the period covered by the Forest Plan (FSM 2721.23f).

Table 1 displays the remaining standing structures, permittees needing building sites, the number of potentially available vacant lots passing the site specific analysis, the maximum number of possible permittees under Alternative 2 (the Proposed Action), and the potential surplus or deficit of available sites versus current permit holders.

Table 1: Current permittees and lot status.

Permittees	NFSG	MFSD	WFSD
Standing	12	5	11
Rebuilding	34	25	20
Total Permittees	46	30	31
Available Lots	26	28	1
Maximum Alt. 2	38	33	12
Potential Deficit/Surplus	-8	+3	-19

Potential deficit permit holders may be offered in-lieu lots outside of the North Fork San Gabriel and San Dimas Canyon Tracts. A separate environmental analysis for those potential holders would be required. This analysis would be at the holder’s expense.

Decision Framework

Given the purpose and need, the deciding official will review the proposed action and the other alternatives in order to make the following decisions: will the proposed action cause significant harm to the environment (consistent with the Forest Plan); can the proposed action meet the need and concept of recreational residences; can the proposed action be carried out safely with regard to human life and property; is the continued recreational use consistent with the multiple use concept in providing recreational opportunities to the greatest number of people?

When recreation residence use remains consistent with management direction given in the Forest Plan, Forest Service Handbook (FSH 2709.11, 41.23a) direction is to issue a new permit to the same holder in accordance with the following:

- Since recreation residences have been in place for many years, and experience in administering this use has shown that continuing the use does not cause significant environmental impacts, issuance of a new permit can be made without further environmental documentation, except when the following situations are present:
 - If the use has not been analyzed sufficiently as part of an EA or EIS completed within 5 years of permit expiration, complete the appropriate environmental analysis and documentation.
- Ensure the current use is in full compliance with the terms of the permit before issuing the new term permit.
- Review and update the term permit provisions to ensure that the new permit contains those clauses necessary to comply with all current regulations of the Secretary of Agriculture and all present Federal, State, or county laws, regulations, or ordinances which are applicable to the area covered by the permit.

It was decided to complete the consistency review, continuation determination, and environmental analysis concurrently because of the large number of cabins destroyed by the wildfires and because all permits within each tract would be expiring on December 31, 2008. (Please see Appendix A for a summary of the status of all lots). The proposed action was developed based on the assumptions that rebuilding on the lots would be allowed, and a new 20 year permit would be issued upon expiration in 2008 because continued use is consistent with the Forest Plan. These assumptions are based on the fact that the lots within these tracts have been in use for approximately 80 years.

Public Involvement

The proposal was listed in the Angeles National Forest's Schedule of Proposed Actions on each quarter beginning with the December 2002 issue. A scoping letter was mailed February 16, 2003, to 700 permit holders, public individuals and agencies, and posted on the Angeles National Forest website, for comment. The Notice of Proposed Action was published in the Legal Notices section of the Los Angeles Times on February 20, 2003. The Notice of Proposed Action was also published in the Legal Notices section of the San Gabriel Valley Tribune on February 24, 2003.

Letters dated December 12 and December 21, 2003 were mailed to all permittees explaining the process that would be done to determine if rebuilding would be allowed. The December 21, 2003 letter included all the forms and checklists that would be used from the consistency review through the county building process if rebuilding were allowed.

The Forest Service received four responses in letter format: two from agencies, one from the San Manuel Band of Mission Indians, and one citizen. An editorial from the San Gabriel Valley Tribune was published March 23, 2003. Individual oral comments were also received. From this scoping process a list of issues to address was developed.

Issues

The Forest Service separated the issues into two groups: significant and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..." A list of non-significant issues and reasons regarding their categorization as non-significant may be found in the project record. A summary is attached here. Letters received are available as part of the public record, and are included in Appendix B.

The Forest Service identified the following 4 significant issues from scoping:

Issue #1: Do not rebuild the recreation residences. No rebuilding would occur. Measures include habitat effectiveness, watershed health, and lot rehabilitation costs. This issue is addressed in Alternatives 1, 3 and 4.

Issue #2: Do not rebuild the recreation residences and restore tracts as habitat. Measures are the same as for issue 1, with the addition of costs associated with pro-active habitat restoration. This issue is addressed in Alternative 4.

Issue #3: Cost of meeting codes are too expensive, especially the cost of building roads to county fire codes. To meet codes, approximately 5.25 miles of all-weather access road to prescribed width must be constructed, or only those lots next to roads meeting code can be used. Measures for this issue consist of costs of meeting codes, and distances of lots to new and existing roads. This issue is addressed in Alternatives 2 and 3.

Issue #4: The use of the public land around the cabins has changed because of the increasing influx of visitors who disturb the recreational residence experience. The permit states if there is a change in use, the Forest Service may purchase the improvements and phase out the recreational residence use. To measure, examine the increase in developed and dispersed recreational use and determine costs associated with a buy-out. This issue is addressed in Alternative 4.

Tiering and Incorporation by Reference

In order to eliminate repetitive discussion and documentation, this environmental assessment tiers to the analysis of the Angeles National Forest Land and Resources Management Plan (LRMP, 1987) and the associated Final Environmental Impact Statement. The following documents prepared as a foundation for this analysis are incorporated by reference and are located in the project file:

Title 26, Los Angeles County Code Supplemental Correction List Fire Zone 4 Requirements, County of Los Angeles Department of Public Works Building and Safety/Land Development Division (July 6, 1996)

USDA Forest Service Term Special Use Permit for Recreation Residences (FS-2700-5a, August 1999)

Biological Assessment for Recreation Residences (Angeles National Forest, 2000)

Biological and Conference Opinions (US Fish and Wildlife Service, 2001)

Inventory and Evaluation of National Register of Historic Places Eligibility, Main Fork San Dimas and West Fork San Dimas Recreation Residence Tracts, Angeles National Forest, USDA Forest Service, Pacific South West Region (McNiel, Jones & Stokes, July 2001)

Letter of Concurrence, USFS010516A, State of California Office of Historic Preservation (Mellon, 2001)

Inventory and Evaluation of National Register of Historic Places Eligibility, North Fork San Gabriel Recreation Residence Tract, Angeles National Forest, USDA Forest Service, Pacific Southwest Region (Jones & Stokes, S. McNiel, 2001)

Preliminary Report: The Effects of the 2002 Curve Fire on the Historic Character of the North Fork San Gabriel Recreation Tract (Vance, 2002)

Letter of Concurrence, USFS020930B, State Of California Office of Historic Preservation (Mellon, 2002)

Curve Fire Burned Area Emergency Report Implementation Plan (Andresen, et al, October 9, 2002)

Williams Fire Burned Area Emergency Report Implementation Plan (Napper, et al, October 17, 2002)

The Curb (sic) and Williams Fire Cabin Re-Construction Requirements (Fire Prevention Division, Land Development Unit (Los Angeles County, November 20, 2002)

Main and West Fork San Dimas, North Fork San Gabriel Recreation Residence Consistency Review (Angeles National Forest, April 06, 2003)

Angeles National Forest, San Gabriel River Ranger District, Findings of Consistency/Inconsistency for North Fork San Gabriel River Recreation Residence Tract, West

Fork San Dimas Recreation Residence Tract, and Main Fork San Dimas Recreation Residence Tract (Dumpis, April 10, 2003)

San Dimas and North Fork San Gabriel Recreation Residence Rebuilding and the Issuance of New 20-Year Permits Social-Economics Report (Gripne, September 19, 2003)

*Angeles National Forest San Gabriel River Ranger District San Dimas and North Fork San Gabriel Recreation Residence Re-building and Permit Reissuance Biological Evaluation/Biological Assessment **and** Wildlife, Fish and TES Plants Input (Hamann, September 18, 2003)*

San Dimas and North Fork San Gabriel Recreation Residence Rebuilding and the Issuance of New 20-Year Permits, Fire/Fuels Management (Lewis, September 17, 2003)

Recreation Residence Building and Issuance of new 20-Year Permits for San Dimas Canyon and North Fork San Gabriel River Tracts Soil and Hydrology Report (Thornton, September 19, 2003)

County of Los Angeles – DHS Environmental Health, Mt. & Rural Water, Sewage & Subdivision Program Recreational Cabin Evaluation Form (nd)

County of Los Angeles Department of Public Works Building and Safety Division, Building Plan Check (nd)

USDA Forest Service Plat Maps, North Fork San Gabriel Tract Sheets 3-9, 11-15; Main San Dimas Tract Sheets 1-5; W.F. San Dimas Tract Sheets 1-4 (nd)

CHAPTER 2: ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter describes and compares the alternatives considered for the Recreation Residence Rebuilding and the Issuance of New 20-Year Permits project. It includes a description and map of each alternative considered. This section also presents the alternatives in comparative form, defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative and some of the information is based upon the environmental, social and economic effects of implementing each alternative. Road standards and definitions used in the following discussion can be found in Appendix C.

Permit holders must be in compliance with the terms and conditions of their current permit. Each lot and its associated improvements has been reviewed for compliance with the terms and condition of the current term permit and with national and regional standards (FSH 2709.11, 41.23, FSH R5 Supplement No. 2709.11-2000-1) and as identified by the Recreation Residence Consistency Review Checklist (RRCR), located in the project file. If deficiencies exist, holders may be issued an annual permit allowing time to correct deficiencies. Term permits will be issued when lots are brought into compliance.

State, county, and forest system roads are used to access many of the recreation residence tracts; their use and priorities for maintenance and improvement will be addressed when the forest initiates roads analyses. Roads within the tracts should be under permit to an association, and have a road maintenance agreement in place. Some roads are currently under permit to tract associations, and will not require any additional analysis. Roads used to access tracts, but for which there are no current permits will be analyzed for permit issuance, and must be maintained to standard. All roads will be managed to ensure resource protection and public access. Appendix C describes the condition of, and maintenance needed for, roads within the tracts.

Recreation residence permit holders have formed associations to operate and maintain improvements, such as water systems, bridges, and other improvements. A permit is required to operate and maintain structures on National Forest System lands, but not all association improvements are currently authorized under a special use permit. These facilities will be analyzed for environmental effects prior to issuing or re-issuing a special use permit, or authorization of such improvements on the face of an existing permit.

Alternatives considered but eliminated from further study

Allow rebuilding without meeting all county codes. Let cabin owners assume the liability and risk of rebuilding in the National Forest.

Rationale: Inability to provide resource protection; already decided by law or regulation. The recent fires depict the severity and danger associated with wildfires. The extreme fire behavior, limited access and water supply, and lack of safety zones for firefighters precluded the opportunity for effective structure protection, despite a response time of 22 minutes for the Curve fire and 3 minutes for the Williams fire. The Associations and/or individual permittees lack equipment and/or resources to adequately protect their improvements.

Laws regulating sanitation and potable water are developed and implemented by the state and county to protect water quality and prevent public health hazards. Clause IV.A of the recreation residence permit states, “The holder, in exercising the privileges granted by this permit, shall comply with all present and future regulations of the Secretary of Agriculture and all present and future federal, state, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit. However, the Forest Service assumes no responsibility for enforcing laws, regulations, ordinances and the like, which are under the jurisdiction of other government bodies.” The Forest Service recognizes that the state and counties have the authority and jurisdiction, through the Clean Water Act, to regulate and enforce individual wastewater disposal systems by way of regulations, standards, and codes. The agency further recognizes that these regulations, standards, and codes apply to recreation residence wastewater disposal systems because they are privately built, owned, and operated.

This alternative would require a Forest Plan Amendment as well as modifying the terms of the special use permit to avoid meeting county codes. Amending the Forest Plan or modifying the permit to accommodate recreation residence use would be in violation of current laws, policy, and regulations.

Alternatives

Alternative 1

No Action

Under the No Action alternative, no rebuilding of the cabins destroyed in the Curve and Williams wildfires would occur. The surviving 28 cabins (12 in the NFSG (Figure 3), 5 in the MFSD, and 11 in WFSD (Figure 4)), would receive new term permits upon expiration of the current permits on December 31, 2008. Permittees would have to be in compliance with the terms and conditions of their special use permit, correct any deficiencies described in the Recreation Residence Consistency Review Checklist (RRCR) and meet county codes for septic/sanitary systems and potable water systems before they would receive new term permits.

Road or trail access to the cabins in the North Fork San Gabriel Tract (NFSG) would remain the same. Gates 1 and 2 would require culverts and river crossing structures at an immediate cost of \$35,000 for Gate 1 and \$80,000 for Gate 2. Road access to the cabins in the San Dimas Main and West Fork Tracts (MFSD and WFSD) would be repaired or reconstructed to standards of road maintenance level 2, traffic level D, at an immediate cost of \$25,000 each, but would not be repaired or reconstructed to previous standards. Costs would be shared by the permittees, as displayed by tract in Table 2. Annual maintenance costs for the Main and West Forks of the San Dimas tracts are expected to average \$14,500 per fork, or \$145,000 over ten years. Estimated annual maintenance costs for the NFSG are \$4,200 for Gate 1, \$8,190 for Gate 2 and \$735 for Gate 4.

Approximately \$192,250 in revenue would be generated from the 28 recreation residence leases over ten years.

Table 2: Cost per recreation residence by alternative for road construction/repair.

Tract	Alternative 1	Alternative 2	Alternative 3	Alternative 4
NFSG Gate 1	\$11,667	\$111,093	\$11,667	\$11,667
NFSG Gate 2	\$16,000	\$243,600	\$16,000	\$16,000
NFSG Gate 3	\$0	\$66,960	\$0	\$0
NFSG Gate 4	\$0	\$47,048	\$0	\$0
Lower Soldier Creek	\$0	\$0	\$0	\$0
Soldier Creek Walk-In	\$0	\$0	\$0	\$0
Robert's Curve	\$0	\$0	\$0	\$0
Yucca Flats	\$0	\$0	\$0	\$0
MFSD	\$5,000	\$93,391	\$5,000	\$0-5,000
WFSD	\$2,273-25,000	\$127,989	\$2,273-25,000	\$0 or \$2,273-25,000



Alternative 1: North Fork San Gabriel

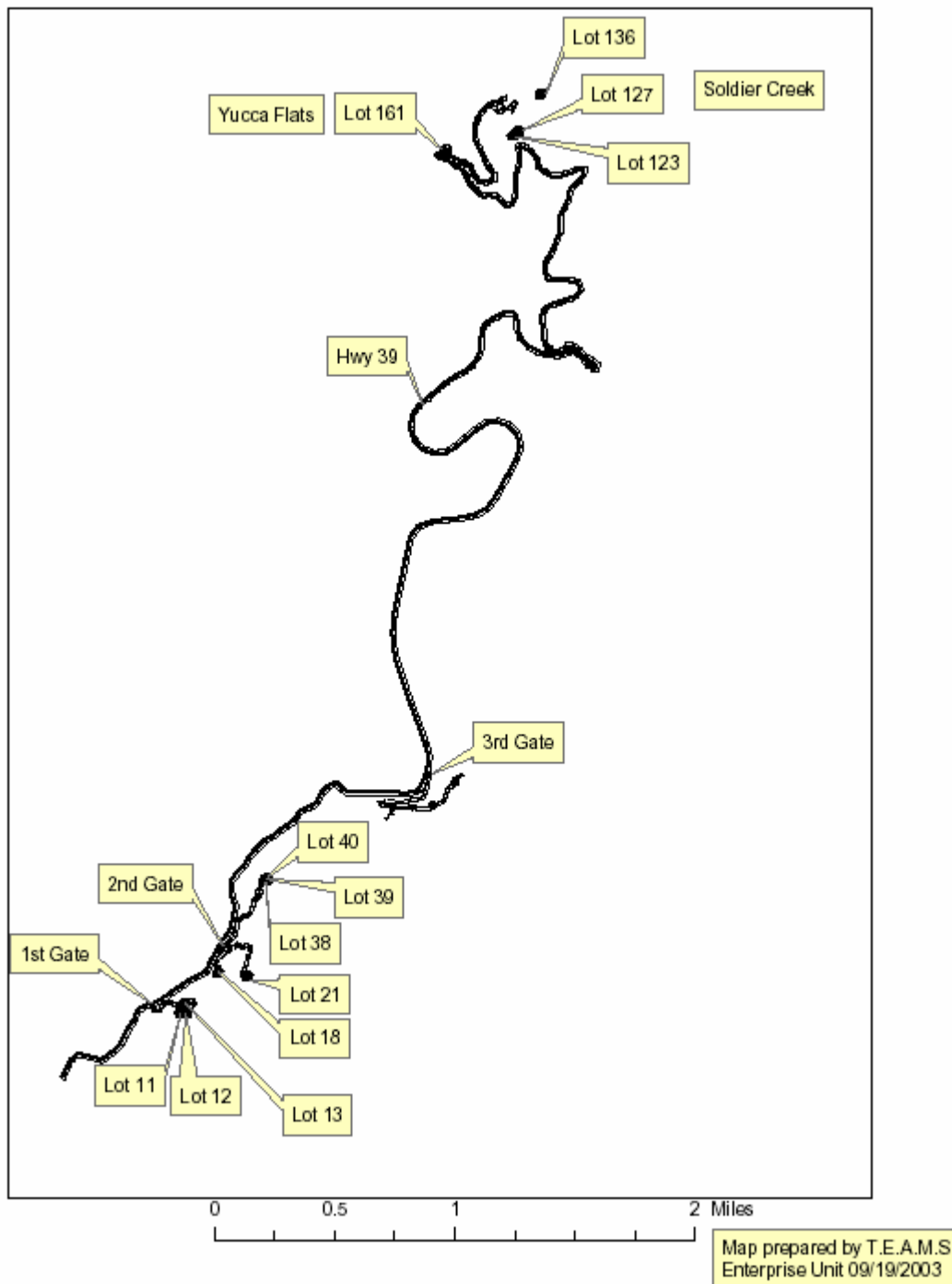


Figure 3: Alternative 1, no action, NFSG existing cabin sites.



Alternative 1: San Dimas Canyon Tracts

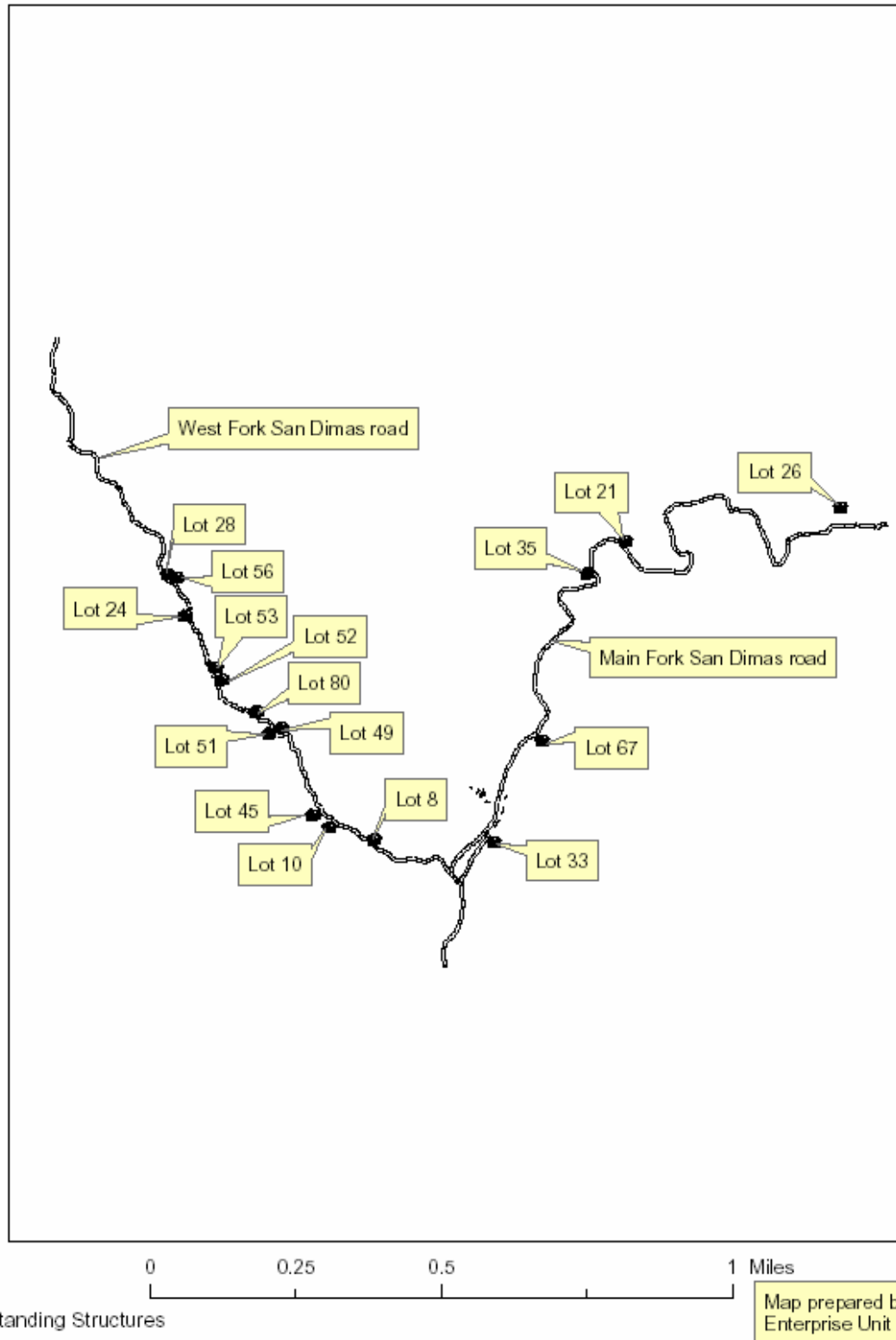


Figure 4: Alternative 1, no action, San Dimas Canyon tracts existing cabin sites.

Alternative 2

The Proposed Action

This alternative would allow rebuilding the recreation residences destroyed by the Curve wildfire in the North Fork San Gabriel River tract and the Williams wildfire in the San Dimas Canyon tracts. Permittees who lost residences and are on lots that are not available for rebuilding (Appendix A) may be offered in-lieu lots within the same tract. Existing cabins meeting county fire codes, specifically the road requirements would remain. Suitable lots and existing cabins are depicted in Figure 5 and Figure 6. There are 12 existing cabins and 26 available lots, (38 permittees) for the NFSG, 5 existing cabins and 28 available lots (33 permittees) for the MFSD, and 11 existing cabins and 1 available lot (12 permittees) for the WFSD. If the number of permittees (83) requesting re-building permits (79) exceeds the available in-lieu lots (55), they may be offered in-lieu lots in other tracts on the San Gabriel River Ranger District. A separate environmental analysis would be required at permittee expense.

New term permits would be issued to every permittee in each tract upon expiration of the current permits on December 31, 2008 except for existing cabins 123, 127 and 136 in the Soldier Creek Walk-in area of the NFSG. These cabins would not meet the County Fire Code, road access requirement. The three lots would be phased out within 10 years from the date of decision, or by the year 2019, and the permittees may be offered in-lieu lots, if available.

Permittees would have to be in compliance with the terms and conditions of their special use permit, Los Angeles County fire, building, sanitary/septic, and potable water system codes, and correct any deficiencies described in the Recreation Residence Consistency Review Checklist (RRCR)

Road and bridge access to the cabins in the NFSG tract and the San Dimas Canyon tracts would be repaired or reconstructed to Los Angeles County standards (Appendix C). The total estimated road cost for Alternative 2 is \$8,046,818. Each recreation residence would be responsible for road costs on their tract or tract grouping. The NFSG would require approximately 2.25 miles of access roads, bridges, culverts and other road improvements at an approximate cost of \$3,429,030. The access roads leading to lots 11-14 (1st Gate), 18, 21, 33, 37-40 (2nd Gate), 58, 59, 64, 65, 68, 69, 73, 79, 80, 82-86, and 89-91 (3rd Gate), and lots 150-152 (4th Gate) would all be affected, with costs prorated by grouping. The MFSD would require approximately 1.6 miles of road and bridge at an approximate cost of \$3,081,918, accessing lots 2-7, 21, 26, 33, 35, 41, 42, 55, 60-67, 81, and 87-95 (lots 21 and 26 would require a right-of-way access through private lands). The WFSD would require approximately 1.2 miles of road and bridge at an approximate cost of \$1,535,870, accessing lots 8, 10, 24, 28, 45, 49, 51-54, 56 and 80. In addition to normal cut-and-fill, tree removal, retaining walls, bank stabilization and other road building requirements, the Main and West Fork of the San Dimas would require 15-foot wide and 5-foot deep concrete channels to ensure stream flow control.

Table 2 breaks out the costs by residence within each tract. If recreation residence permittees choose not to rebuild, the associated costs per permittee by tract or grouping would increase accordingly. Table 3 displays the costs by action. The water system in the San Dimas Canyon Tracts would be repaired by the permittees.

Approximately \$609,250 in revenue would be generated from the 83 recreation residence leases over ten years.

Table 3: Alternative 2, costs of road reconstruction and channelization.

Part A	San Dimas Canyon - Main Fork (lots 2-7, 21, 26, 33, 35, 41, 42, 55, 60-67, 81, 84, 85, 87-95)	Amount	Units	Cost/Unit	Cost
1	survey 1.6 miles; 100 foot wide	1.6	mile	\$5,000.00	\$8,000
2	remove about 15 mature trees per 100 foot; for 1.6 miles	1267	each	\$112.00	\$141,904
3	remove and replace 2 feet of soil 25 feet wide; for 1.6 miles	15644	cu. yd	\$10.00	\$156,440
4	excavate 15 foot wide, 5 foot deep water channel; for 1.6 miles	23467	cu. yd	\$9.18	\$215,427
5	line water channel with concrete; 15 foot wide; 5 foot deep; for 1.6 miles	179098	sq. ft	\$7.00	\$1,253,686
6	place and compact 4 feet thick roadbed, 25 foot wide; for 1.6 miles	31289	cu. yd	\$4.39	\$137,359
7	place 1000 feet of retaining wall between channel and road; 8 foot high	1000	lin. ft	\$218.00	\$218,000
8	drainage; place 4" diam. perforated PVC pipe along base of wall	1000	lin. ft	\$8.05	\$8,050
9	asphalt paving; 25 feet wide; 3" thick; 1.6 miles	23467	sq. yd	\$6.25	\$146,669
10	mob/demob & contingency (25% - culverts, etc.)	25	percent		\$571,384
11	75,000 pound (minimum) capacity bridge	.5	bridge	\$450,000	\$225,000
Subtotal Part A:					\$3,081,918

Part B	San Dimas Canyon – West Fork (lots 8, 10, 24, 28, 45, 49, 51-54, 56, 80)	Amount	Units	Cost/Unit	Cost
1	survey 1.2 miles; 100 foot wide	1.2	mile	\$5,000.00	\$6,000
2	remove about 10 mature trees per 100 foot; for 1.2 miles	634	each	\$112.00	\$71,008
3	remove and replace 2 feet of soil 25 feet wide; for 1.2 miles	11733	cu. yd	\$10.00	\$117,330
4	excavate 15 foot wide, 5 foot deep water channel; for 0.6 mile	8800	cu. yd	\$9.18	\$80,784
5	line water channel with concrete; 15 foot wide; 5 foot deep; for 0.6 mile	67162	sq. ft	\$7.00	\$470,134
6	place and compact 4 feet thick roadbed, 25 foot wide; for 1.2 miles	23467	cu. yd	\$4.39	\$103,020
7	place 400 feet of retaining wall between channel and road; 8 foot high	400	lin. ft	\$218.00	\$87,200
8	drainage; place 4" diam. perforated PVC pipe along base of wall	400	lin. ft	\$8.05	\$3,220
9	asphalt paving; 25 feet wide; 3" thick; 1.2 miles	17600	sq. yd	\$6.25	\$110,000
10	mob/demob & contingency (25% - culverts, etc.)	25	percent		\$262,174

Part B	San Dimas Canyon – West Fork (lots 8, 10, 24, 28, 45, 49, 51-54, 56, 80)	Amount	Units	Cost/Unit	Cost
11	75,000 pound (minimum) capacity bridge	.5	bridge	\$450,000	\$225,000
Subtotal Part B:					\$1,535,870

Part C	NFSG 1st Gate Above Rincon (lots 11-14)	Amount	Units	Cost/Unit	Cost
1	survey 0.4 mile	0.4	mile	\$5,000.00	\$2,000
2	remove about 50 mature trees	50	each	\$112.00	\$5,600
3	remove and replace 2 feet of soil 25 feet wide; for 0.4 mile	3911	cu. yd	\$10.00	\$39,110
4	cut and lay back slope; 20 foot high, 200 foot long	600	cu. yd	\$9.18	\$5,508
5	place 200 feet of retaining wall; 15 foot high	200	lin. ft	\$575.00	\$115,000
6	place 15 foot deep; 20 inch diameter piles at 10 feet o.c.	300	vert lin. ft	\$500.00	\$150,000
7	drainage; place 4" diam. perforated PVC pipe along base of wall	200	lin. ft	\$8.05	\$1,610
8	asphalt paving; 25 feet wide; 3" thick; 0.4 mile	5867	sq. yd	\$6.25	\$36,669
9	mob/demob & contingency (25% - culverts, etc.)	25	percent		\$88,874
Subtotal Part C:					\$444,371

Part D	NFSG 2nd Gate Above Rincon (lots 18, 21, 33, 37-40)	Amount	Units	Cost/Unit	Cost
1	survey .782 mile	0.782	mile	\$5,000.00	\$3,912
2	remove about 20 large boulders	20	each	\$50.00	\$1,000
3	remove about 80 mature trees	80	each	\$112.00	\$8,960
4	cut and lay back slope; 2 foot high, 250 foot long	80	cu. yd	\$9.18	\$734
5	cut and lay back slope; 3 foot high, 400 feet long	180	cu. yd	\$9.18	\$1,652
6	cut and lay back slope; 20 foot high, 400 feet long	1186	cu. yd	\$9.18	\$10,887
7	place 250 feet of retaining wall; 2 foot high	250	lin. ft	\$183.00	\$45,750
8	place 400 feet of retaining wall; 3 foot high	400	lin. ft	\$183.00	\$73,200
9	place 500 feet of retaining wall; 20 foot high	500	lin. ft	\$845.00	\$422,500
10	remove and replace 2 feet of soil 25 feet wide; for .73 mile	7184	cu. yd	\$10.00	\$71,840
11	place 20 foot deep; 26 inch diameter piles at 10 feet o.c.	1000	vert lin. ft	\$500.00	\$500,000
12	drainage; place 4" diam. perforated PVC pipe along base of wall	500	lin. ft	\$8.05	\$4,025
13	hand backfill/compact behind 20' high, 100' ret. wall, w/ bench. & drains	740	cu. yd	\$200.00	\$148,000
14	asphalt paving; 25 feet wide; 3" thick; .782 mile	11472	sq. yd	\$6.25	\$71,701
15	mob/demob & contingency (25% - culverts, etc.)	25	percent		\$341,040
Subtotal Part D:					\$1,705,201

Part E	NFSG 3rd Gate Above Rincon (lots 58, 59, 64, 65, 68, 69, 73, 79, 80, 82-86, 89-91)	Amount	Units	Cost/Unit	Cost
1	survey 1 mile	1	mile	\$5,000.00	\$5,000
2	remove about 100 mature trees	100	each	\$112.00	\$11,200
3	remove and replace 2 feet of soil 25 feet wide; for 1 mile	9778	cu. yd	\$10.00	\$97,780
4	cut and lay back slope; 10 foot high, 0.6 mile long	5000	cu. yd	\$9.18	\$45,900
5	place 0.6 mile of retaining wall; 7 foot high	3168	lin. ft	\$200.00	\$633,600
6	drainage; place 4" diam. perforated PVC pipe along base of wall	3168	lin. ft	\$8.05	\$25,502
7	asphalt paving; 25 feet wide; 3" thick; 1 mile	14667	sq. yd	\$6.25	\$91,669
8	mob/demob & contingency (25% 0 culverts, etc.)	25	percent		\$227,663
Subtotal Part E:					\$1,138,314

Part F	NFSG 4th Gate Above Rincon (lots 150-152)	Amount	Units	Cost/Unit	Cost
1	survey 350 feet	0.0663	mile	\$5,000.00	\$332
2	remove about 20 mature trees	20	each	\$112.00	\$2,240
3	remove and replace 2 feet of soil 25 feet wide; for 350 feet	648	cu. yd	\$10.00	\$6,480
4	cut and lay back slope; 4 foot high, 150 foot long	90	cu. yd	\$9.18	\$826
5	place 150 feet of retaining wall; 4 foot high	150	lin. ft	\$183.00	\$27,450
6	drainage; place 4" diam. perforated PVC pipe along base of wall	150	lin. ft	\$8.05	\$1,208
7	place 100 feet of retaining wall; 15 foot high; backfill & compact	100	lin. ft	\$575.00	\$57,500
8	cut slope, 15 ft high; wall backfill & compact	1	lump sum	\$10,000.00	\$10,000
9	drainage; place 4" diam. perforated PVC pipe along base of wall	100	lin. ft	\$8.05	\$805
10	asphalt paving; 25 feet wide; 3" thick; 350 feet	972	sq. yd	\$6.25	\$6,075
11	mob/demob & contingency (25% - culverts, etc.)	25	percent		\$28,229
Subtotal Part F:					\$141,144
GRAND TOTAL FOR ESTIMATE:					\$8,046,818

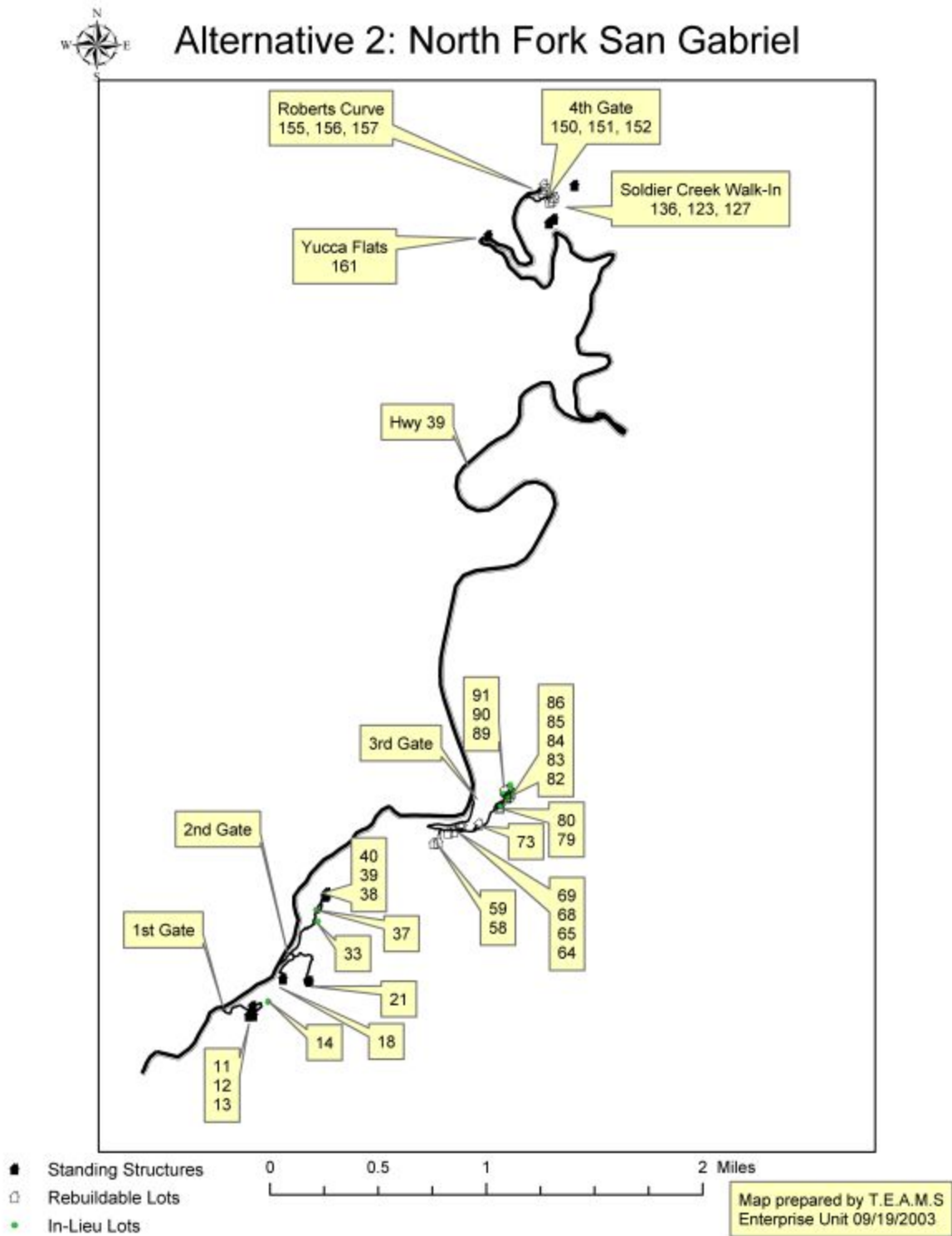


Figure 5: Alternative 2, proposed action, NFSG, suitable building sites and existing cabins.



Alternative 2: San Dimas Canyon Tracts

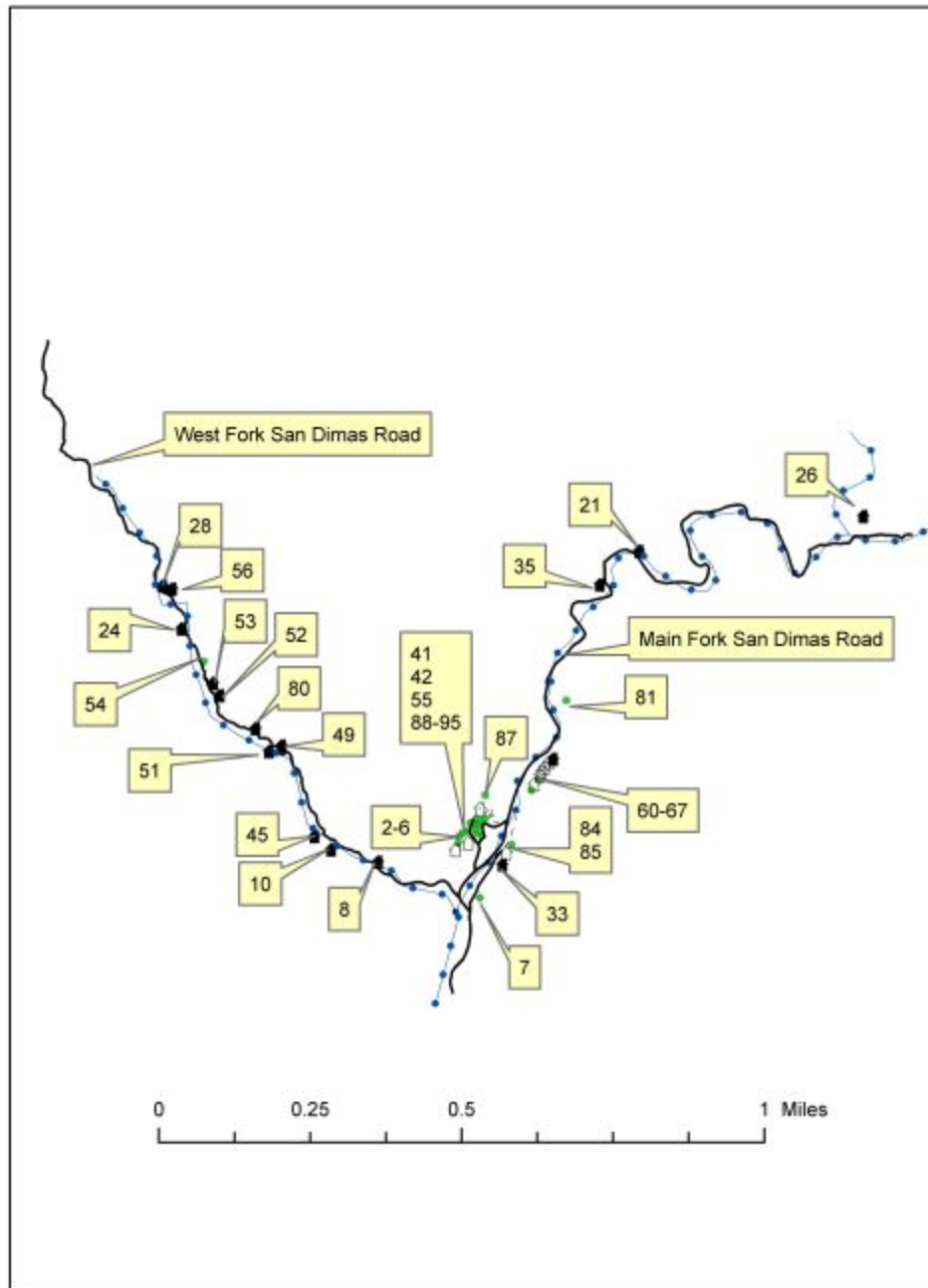


Figure 6: Alternative 2, proposed action, MFSD and WFSD suitable building sites and existing cabins.

NOTE: Channel and road locations are approximate and may change with final survey.

Alternative 3

The Modified Proposed Action

This alternative was developed from Significant Issue 3. Recreation residences lost from the fires that are already next to roads meeting county fire codes would be allowed to rebuild. This alternative will also identify and analyze the use of suitable vacant lots within the tracts as in-lieu lots that are adjacent to roads meeting county fire codes.

The remaining and rebuilt cabins would receive new term permits upon expiration of the current permits on December 31, 2008. A total of 12 existing cabins and 3 rebuildable lots (15 total permittees) would be available for the NFSG. None of the NFSG in-lieu lots meet the access requirements. There are 5 existing, 1 rebuildable, and 2 in-lieu lots available (8 total permittees) available for the MFSD. There are 11 existing (11 total permittees) available for the WFSD. None of the WFSD burned lots or in-lieu lots meet the access requirements. Figure 7 and Figure 8 displays the lots and residences.

Permittees would have to be in compliance with the terms and conditions of their special use permit, correct any deficiencies described in the Recreation Residence Consistency Review Checklist (RRCR) and meet county codes for septic/sanitary systems and potable water systems before they would receive new term permits.

Road or trail access to the cabins in the North Fork San Gabriel tract (NFSG) would remain the same. Gates 1 and 2 would require culverts and river crossing structures at an immediate cost of \$35,000 for Gate 1 and \$80,000 for Gate 2. Road access to the cabins in the San Dimas Main and West Fork tracts (MFSD and WFSD) would be repaired or reconstructed to standards of road maintenance level 2, traffic level D, at an immediate cost of \$25,000 each, but would not be repaired or reconstructed to previous standards. Costs would be shared by the permittees, as displayed by tract in Table 2. Annual maintenance costs for the Main and West Forks of the San Dimas tracts are expected to average \$14,500 per fork, or \$145,000 over ten years. Annual maintenance costs for the NFSG are estimated to be \$4,200 for Gate 1, \$8,190 for Gate 2 and \$735 for Gate 4.

Approximately \$232,750 in revenue would be generated from the 34 recreation residence leases over ten years.

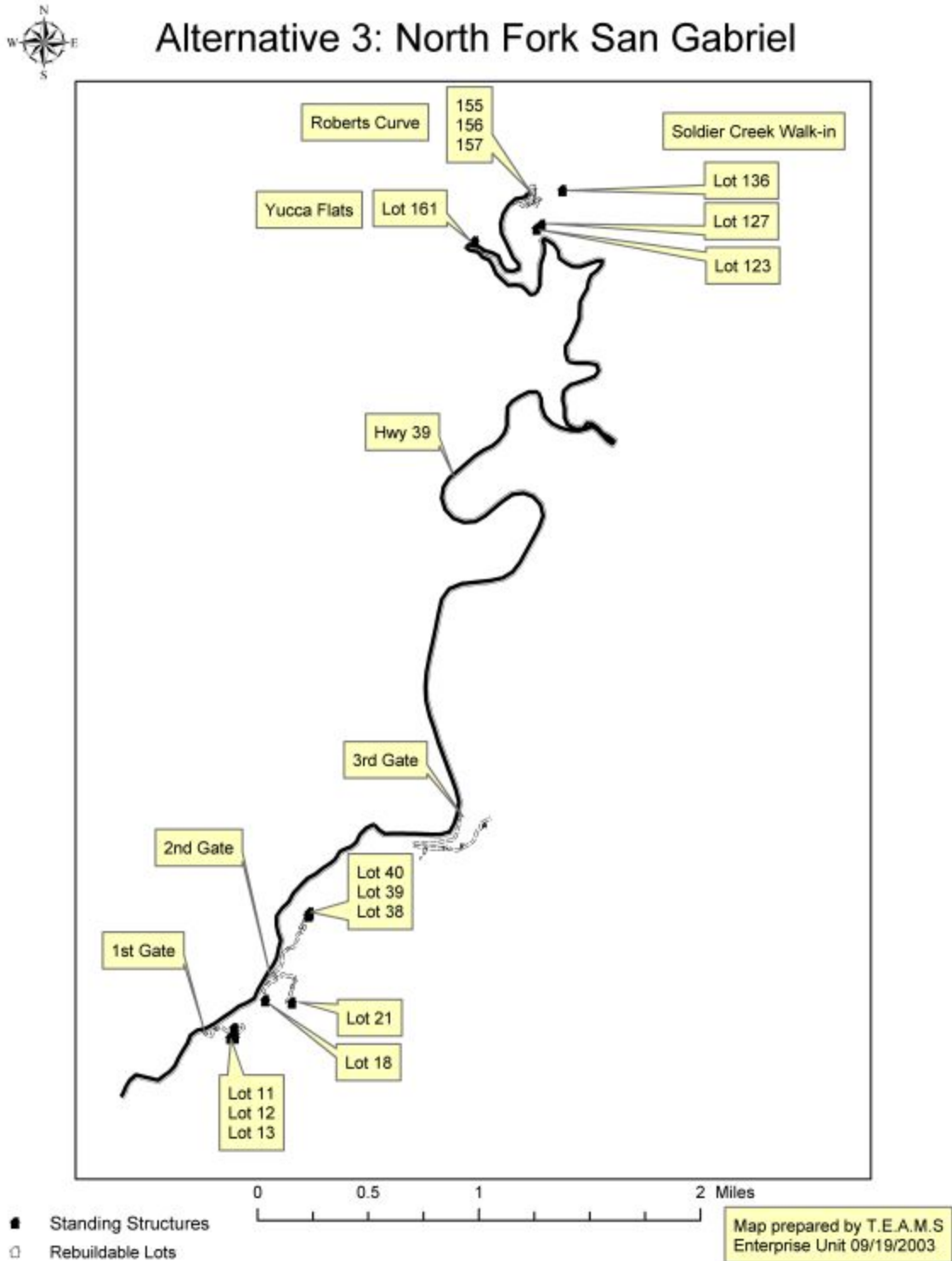


Figure 7: Alternative 3, modified proposed action, NFSG, suitable building sites and existing cabins.



Alternative 3: San Dimas Canyon Tracts

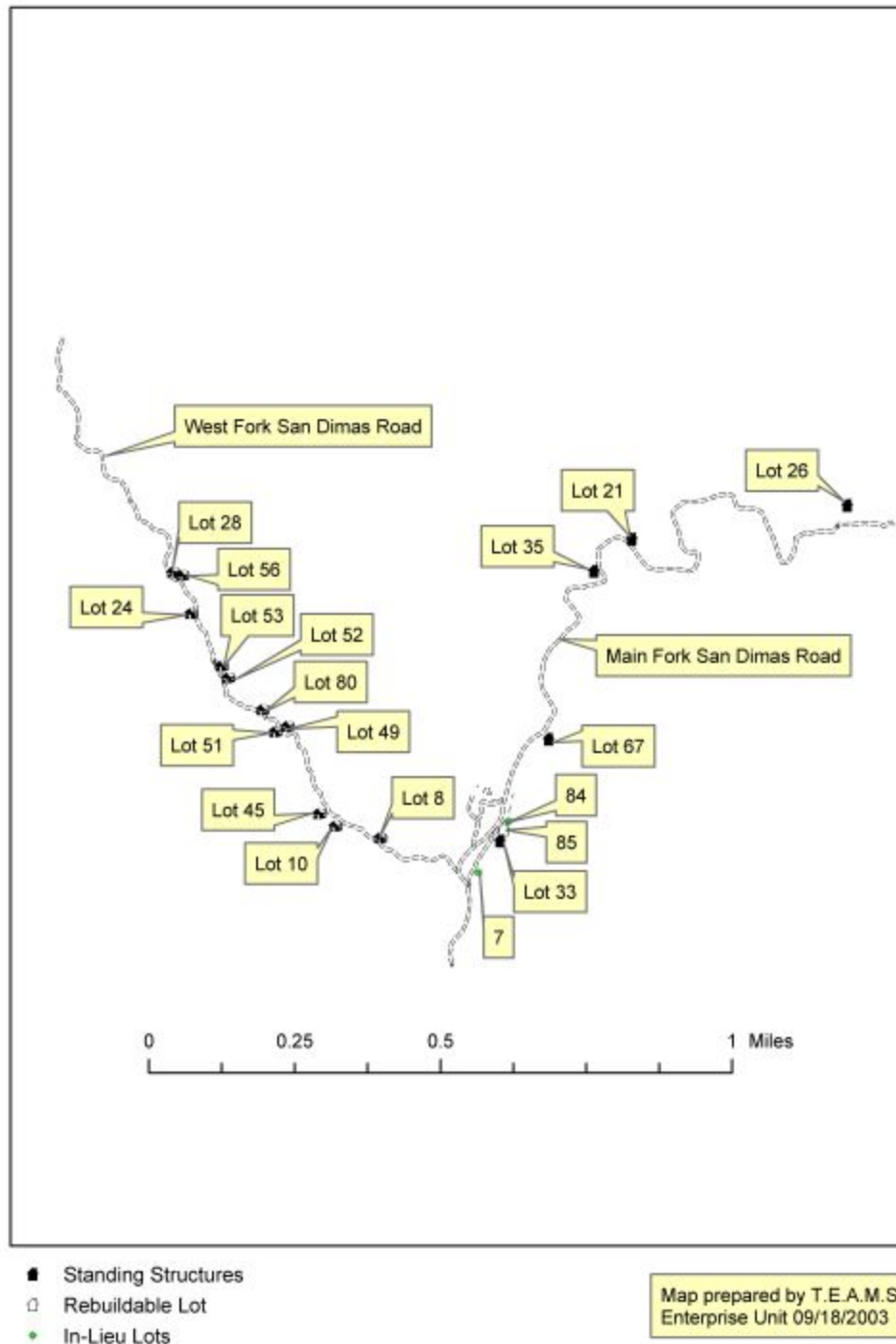


Figure 8: Alternative 3, modified proposed action, MFSD and WFS, suitable building sites and existing cabins.

Alternative 4

The Phase-out Tracts

This alternative was developed from Significant Issues 1, 2, and 4. No rebuilding would occur. Existing cabins would be given 10 years continued use from the date of decision, or the permittee would have the option of allowing the government to purchase the recreation residence. At the end of ten years the recreational residence special use for the two tracts would cease, the area would be restored and both tracts would revert to alternative public use. If this alternative is selected, a separate environmental analysis for the alternative public uses would be conducted. For purposes of this analysis (cumulative effects), the foreseeable action for the NFSG would allow existing dispersed public recreational access in those areas where recreation residences still exist with some facility development (toilets, parking lots, fencing, picnic tables and trash management) in those areas where there are no recreation residences. The MFSD and WFSD tracts would revert to the San Dimas Experimental Forest.

The existing 28 cabins (12 in the NFSG (Figure 9), 5 in the MFSD, and 11 in WFSD (Figure 10)), would have to be in compliance with the terms and conditions of their special use permit, correct any deficiencies described in the Recreation Residence Consistency Review Checklist (RRCR) and meet county codes for septic/sanitary systems and potable water systems. Per the terms of their permit, a permittee opting for the buy-out, or at the end of the ten-year term, would be responsible for the removal of their improvements and site restoration. Site restoration is estimated to range from \$10,000 to \$25,000 per site.

Costs to the government associated with the buy-out are unknown, as the number of permittees choosing this option is uncertain. An estimate of \$75,000 per cabin, or a total cost to the government of \$2,100,000 is possible if all permittees opted for the buy-out. Past sales have ranged from \$500 to \$125,000 in the San Dimas Tracts and \$5,000 to \$150,000 in the San Gabriel Tract. Actual costs may be higher or lower, depending upon appraisal figures at the time of the accepted buy-out.

Road or trail access to the cabins in the North Fork San Gabriel tract (NFSG) would remain the same. Gates 1 and 2 would require culverts and river crossing structures would at an immediate cost of \$35,000 for Gate 1 and \$80,000 for Gate 2. Road access to the cabins in the San Dimas Main and West Fork tracts (MFSD and WFSD) would be repaired or reconstructed to standards of road maintenance level 2, traffic level D, at an immediate cost of \$25,000 each, but would not be repaired or reconstructed to previous standards. Costs would be shared by the permittees, as displayed by tract in Table 2. Annual maintenance costs for the Main and West Forks of the San Dimas tracts are expected to average \$14,500 per fork, or \$145,000 over ten years. Estimated annual maintenance costs for the NFSG are \$4,200 for Gate 1, \$8,190 for Gate 2 and \$735 for Gate 4.

Approximately \$192,250 in revenue would be generated from the 28 recreation residence leases over ten years.

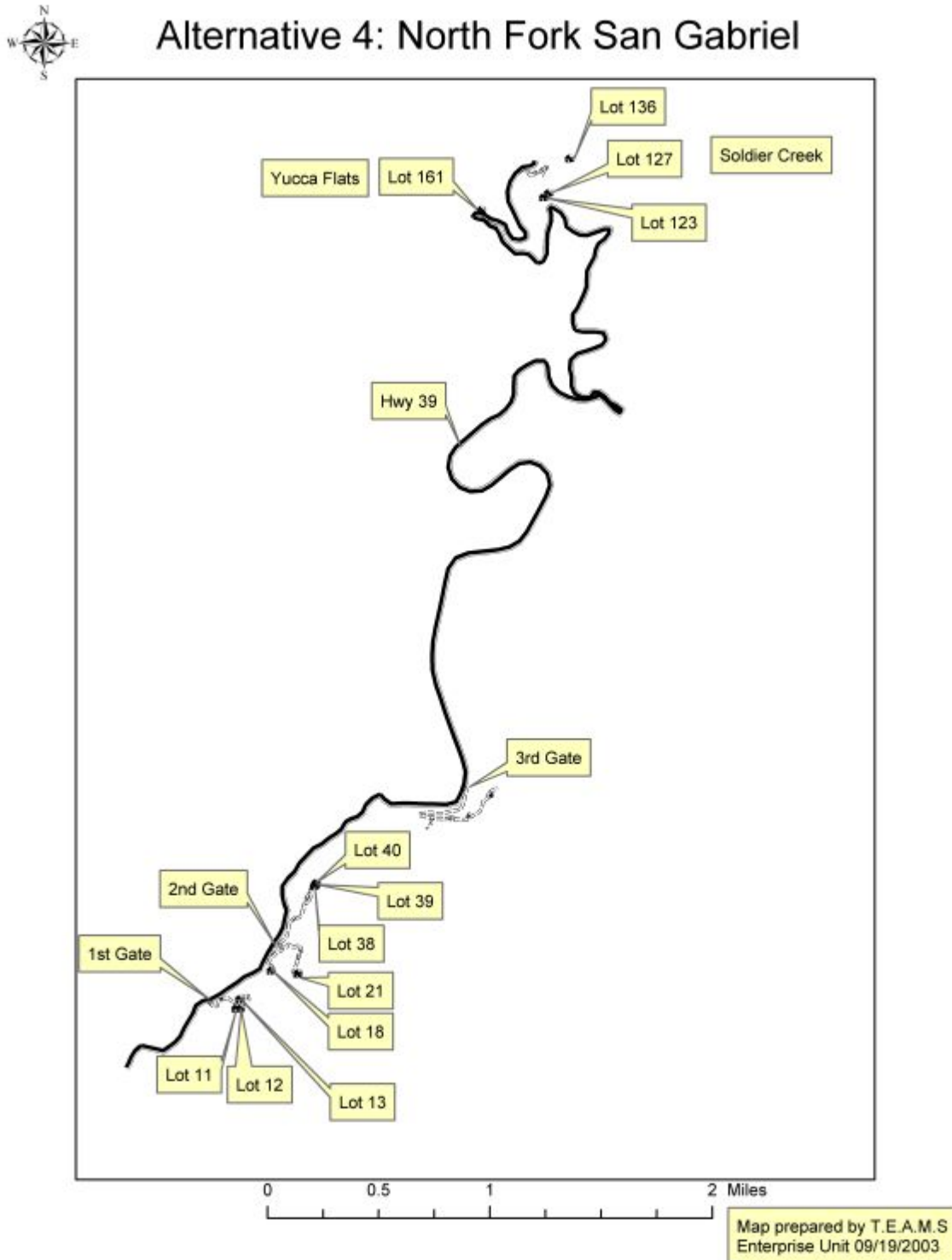


Figure 9: Alternative 4, phase-out, NFSG, existing cabins.



Alternative 4: San Dimas Canyon Tracts

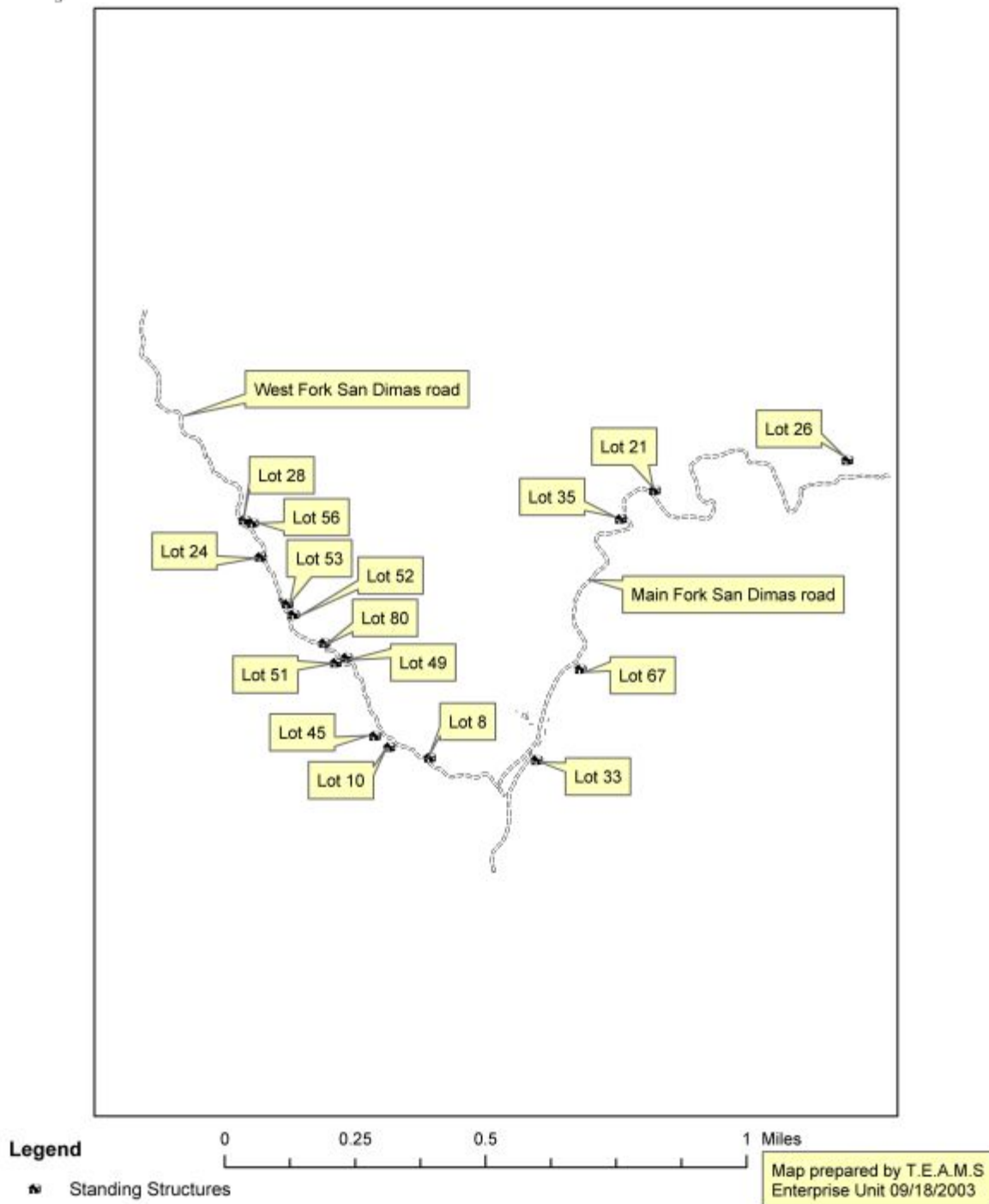


Figure 10: Alternative 4, phase-out, MFSD and WFSD, existing cabins.

Mitigation Common to All Alternatives _____

In response to the proposals, mitigation measures were developed to ease some of the potential impacts the various alternatives may cause. The mitigation measures may be applied to any of the action alternatives.

Permits for existing structures must comply with the terms and conditions of the current permit, correct any deficiencies described in the Recreation Residence Consistency Review Checklist (RRCR) and meet county codes for septic/sanitary systems and potable water systems. At a minimum, this includes:

- Prohibit new pit toilets within 100 feet of rivers, streams and wetlands.
- Gray water disposal systems must be approved and permitted by Los Angeles County codes
- Septic systems must be approved and permitted by Los Angeles County codes.
- Permit holders must be in compliance with State of Californian and Los Angeles County sanitation and potable water systems.
- Junk, abandoned cars and other forms of trash will be removed.
- Noxious weeds and non-native species will be removed.
- Riparian and other vegetation will be restored.
- Inappropriate structures, appurtenances or other yard items will be removed.
- Vegetation treatment will meet defensible fire space requirements.
- Roads, trails and parking areas causing resource damage will be rehabilitated, reconstructed or obliterated.

Comparison of Alternatives _____

This section provides both a narrative and tabular summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

All alternatives meet the purpose and need of providing recreation residence use, varying by number of lots occupied and duration of permitted use, with Alternative 4 providing only 10 years of additional recreational residence use in both tracts. All of the alternatives had the same number of lots determined unavailable due to riparian or floodplain concerns.

Fewer permits would be available under all alternatives in comparison to the pre-existing condition. There may be an increase in opportunity for dispersed recreational use for the public in some of the areas due to the lack of recreation residences. Visual quality would be improved. Improvement in the amount, quality, and connectivity of habitat for wildlife species would occur. Riparian vegetation would be restored over time. Fewer lots would occupy riparian and floodplain zones.

Soils and Hydrology:

Alternatives 1, 3 and 4 are similar and have minimal effects to soil and water. Any construction that takes place with these alternatives would cause minimal changes compared to the effects of the fire and flooding. Alternative 2 builds almost 3 miles of road in San Dimas Canyon, and

channelizes both the West Fork and the Main Fork of the San Dimas River along these new roads. This would lead to long-term adverse changes in water quality, timing of flows, and channel morphology. In NFSG approximately 2.25 miles of road would be built potentially increasing erosion in the short-term. Under Alternative 4, after ten years cabins would be removed and long-term improvement in water quality, stream flow regime and channel morphology would occur.

Plants and Wildlife:

The greatest potential for adverse impacts from occupancy and associated use of recreation residence tracts is reduction in water quality from leaky or inadequate septic systems. While the extent of the problem is unknown, 22 of the 28 standing cabins, (6 in the NFSG, 5 in the MFSD and 11 in the WFSD), are located within floodplain or riparian areas. While existing cabins would have to be in compliance by December 2008, ongoing contamination could continue until that time under all alternatives.

In addition to sanitation issues, Alternative 2 would realize adverse impacts to riparian-associated species in the San Dimas drainages. Under this alternative, the riparian areas would be paved and channelized, effectively removing the riparian and floodplain habitat.

Construction under all alternatives would include BMPs to ensure minimal long-term measurable effects on water quality (sediment).

Recreation:

Recreation residence use would occur under all alternatives, but would be phased out after 10 years under Alternative 4. Under all alternatives recreation residence use would decrease. Dispersed recreation use would likely increase under Alternatives 1, 2 and 3 as a result of the decrease in recreational residences. Dispersed use would increase under Alternative 4 if the North Fork San Gabriel is designated for dispersed recreational use and new developed recreation sites are constructed. Recreation residence fees would decrease under all alternatives, and would be eliminated under Alternative 4. Loss of recreation residence fees may be offset by increased sales of Recreation Adventure Passes and the collection of fees at developed recreation sites.

Roads:

The Angeles National Forest engineering staff reviewed the roads accessing the tracts in San Dimas and San Gabriel Canyons on July 23, 2003 to determine the amount and type of rehabilitation necessary to meet county requirements.

On November 20, 2002, the Los Angeles County Fire Prevention Division, Land Development Unit, issued a memorandum outlining the requirements for re-constructing cabins destroyed by the 2002 Curve and Williams fires. The memorandum requires access roads to be constructed with an "all weather surface capable of supporting Fire Department apparatus," with a minimum width of 24 feet if serving 3-4 units, and 26 feet if serving 5 or more units.

San Dimas Canyon Roads - The roads providing access to the cabins in the Main and West Forks of San Dimas Canyon suffered severe flood damage following the Williams Fire. The Main Fork road is approximately 1.6 miles, and the West Fork road is approximately 1.2 miles in

length. These dirt roads were 8 to 20 foot wide, meandering within streambeds. Access is currently through the streambed in most areas, with minor road segments still extant in the West Fork. The streambeds have steep flanks precluding construction of a new road outside the existing channel. County road requirements can only be achieved by dividing the existing streambed into a water channel and a road. A water channel could be excavated and the excavated material used to raise a roadbed. The channel would be trapezoidal in shape, approximately 15 feet wide and 5 feet deep. The roadbed would be 26 feet wide and 3 to 4 feet thick. These dimensions would balance the channel excavation volume with the roadbed fill volume. A hydrologic study should be performed to ensure the preliminary channel dimensions are adequate. The water channel should be lined with concrete to help prevent future erosion. The road should be paved with asphalt to provide a long term “all weather surface.” A retaining wall may be necessary at narrow streambed sections, to separate the channel from the road. Based on rough estimates, the channel/ road construction would cost approximately \$3.1 million for the Main Fork, and \$1.5 million for the West Fork.

San Gabriel Canyon Roads – Rebuildable lots 155-157 and lot 161 (a standing structure) are within 150 feet of a paved highway. There are four other areas (Gates 1-4) requiring access roads. The existing roads are cut into the hillside and are 15 to 20 foot wide. Widening these roads to meet width requirements would require cutting into the slope and constructing a retaining wall at the toe of the cut slope. Cost estimates for road improvement would be approximately \$3.4 million for about 2.25 miles.

Culverts and low-water crossings would be required for all alternatives. Typical installation would include a 50-foot long, 24-inch diameter culvert, with an inlet structure for low-water crossing; v-shaped 6-inch concrete slabs with thickened (24-inch) edges, 12-feet wide and 20-foot long. Approximate costs are \$10,000 per culvert and \$25,000 for each low-water crossing. Gate 1 would require one culvert and crossing; Gate 2 would require three culverts and two low-water crossings.

Fuels Management:

Alternatives 1 and 4 have the lowest potential for risk to firefighters and the public, as they would permit the fewest structures. Alternative 4 would pose the least risk, as the residences would be removed from the area, eliminating the need for evacuation of residents and structure protection when a wildfire occurs. Alternative 3 represents the next lowest risk since meeting county fire codes would offset the negligible increase in number of structures. This benefit would apply to more than just the newly constructed residences since proximity to other structures would also provide improved access/egress to other residences.

Alternative 2, although meeting the requirements for county fire and emergency codes, poses the greatest potential risk to firefighters and public safety by virtue of the substantially greater number of people involved. Adherence to the county codes can reduce, but not eliminate the threat of wildfires to people and property. The risk of wildfire threatening these areas will increase over time due to the increasing flammability and loading of fuels in and around the tracts.

Heritage Resources:

Heritage resource surveys were conducted within each tract, to determine the tracts' potential eligibility to the National Register of Historic Places. It has been determined, in consultation with the State Historic Preservation Officer, that neither tract nor the remaining cabins are eligible. In addition, surveys were conducted for the Burned Area Emergency Rehabilitation reports. Other site and project specific inventories for the area have also been conducted. No significant sites would be affected by either alternative. If an alternative were selected authorizing ground-disturbing activities in areas not previously surveyed, inventory would occur.

Table 4: Summary comparison of alternatives.

	Alternative 1: No Action	Alternative 2: Proposed Action	Alternative 3: Modified Proposed Action	Alternative 4: Phase Out Tracts
Maximum Permits NFSG	12	38	15	12
Maximum Permits MFSD	5	33	8	5
Maximum Permits WFSD	11	12	11	11
Maximum Permittee Road Costs NFSG	\$115,000 plus \$13,125 annual maintenance	\$3,429,030 plus annual maintenance	\$115,000 plus \$13,125 annual maintenance	\$115,000 plus \$13,125 annual maintenance
Maximum Permittee Road Costs MFSD	\$25,000 plus \$14,500 annual maintenance	\$3,081,918 plus annual maintenance	\$25,000 plus \$14,500 annual maintenance	\$25,000 plus \$14,500 annual maintenance
Maximum Permittee Road Costs WFSD	\$25,000 plus \$14,500 annual maintenance	\$1,535,870 plus annual maintenance	\$25,000 plus \$14,500 annual maintenance	\$25,000 plus \$14,500 annual maintenance
Maximum Lease Revenue (10 year)	\$192,250	\$609,250	\$232,750	\$192,250
NFSG Road Paving	0	2.25 miles	0	0
MFSD Road Paving plus Channelization	0	1.6 miles	0	0
WFSD Road Paving plus Channelization	0	1.2 miles	0	0
Percent decrease in occupancy from pre-fire level	80%	40%	75%	80 to 100%

CHAPTER 3: ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments from implementation of the alternatives. It also presents the scientific and analytical basis for the comparison of alternatives presented in Table 4, Chapter 2. Full citations for the references cited in this section can be found within each specialist report in the project record.

Analysis Area

The analysis areas are identical for all alternatives. The analysis area for the San Dimas Canyon Tract is approximately 330 acres, with the recreation residences occupying about 25 acres in the Main Fork San Dimas (MFSD) and 25 in the West Fork San Dimas (WFSD) tracts. Lots in both forks are tightly concentrated along the respective river channels. In the MFSD 5 lots are presently occupied. In the WFSD, 11 lots are presently occupied. All currently occupied lots are within riparian or floodplain zones.

The lots in the North Fork San Gabriel (NFSG) tract are more scattered. The project area for the NFSG tract is approximately 2500 acres with the recreation residences occupying about 45 acres. Of the 12 lots presently occupied, 6 are outside the floodplain and riparian zones. However, these 6 sites all require stream crossing for access by primitive roads and natural ford crossings. The remaining 6 sites are within riparian, floodplain, or spring-saturated areas.

The project area is the same as the analysis area for direct and indirect effects of all alternatives. The cumulative effects analysis area for the NFSG tract extends downstream to San Gabriel Reservoir. The cumulative effects analysis area for the San Dimas tracts extends downstream to the San Dimas Reservoir (Figure 1, Chapter 1).

Analysis Guidelines and Forest Direction

In addition to the previously cited and tiered reports, direction for this analysis comes from the Clean Water Act, the legal requirements set forth under Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1536(c), 50 CFR 402), and policy and standards set forth in Forest Service Manual 2672.4 through 2672.42. Relevant portions of these documents can be found in the specialist reports located in the project record.

Affected Environment

General Description

The project area is located in the south side of the San Gabriel Mountains, part of the transverse range, an area of rapid uplift. The San Gabriel Mountains are composed primarily of fractured and faulted granitic and metamorphic rocks. The topography consists of highly dissected canyons with steep slopes (averaging 60% to 100%), young loose soils; and due to rapid uplift, a naturally high erosion rate.

The climate is considered Mediterranean and is characterized by hot dry summers and mild winters. Most of the precipitation falls between November and April. High intensity summer

thunderstorms occur at higher elevations. The annual precipitation is generally between 19 and 31 inches with additional precipitation at higher elevations (Bull, 1991).

The vegetative cover is primarily grasses and chaparral with pine and juniper on the slopes and riparian hardwoods in the drainages.

Site Specific Description

The NFSG tract lies along the North Fork (NF) San Gabriel River and tributaries. The elevation ranges from 1,800 to 4,600 feet. Steep slopes and narrow ridgelines typify the topography. Access is via Highway 39. The lots in the northern part of the NFSG tract lie in the riparian uplands above Soldier Creek (Roberts Curve and Gate 4), within flowing springs that drain into Coldbrook Creek (Yucca Flats), and along Soldier Creek (Soldier Creek Walk-In and Lower Soldier Creek). Canyon live oak, incense cedar, California bay and white alder are the dominant vegetation.

The lots in the southern part of NFSG lie along Bichota Creek (the majority of Gate 3) or the NF San Gabriel River (Gates 1, 2 and portions of Gate 3). Most are in the floodplain or riparian zone. The southern part has many remnants of older river terraces above the present floodplain where some lots are located. White alder along with lesser amount of California sycamore, California bay and bigleaf maple dominate riparian vegetation.

The San Dimas tracts lie in narrow canyons with steep slopes. The elevation ranges from 1,400 to 2,800 feet. The slopes are bedrock with a thin layer of loose ravelly soil. The valley bottom is entirely floodplain and the hillslopes are typically 50% to 80%. The narrow valley is only 100 to 200 feet wide in most areas. Both the Main (MF) and West Fork (WF) of the San Dimas River were burned over in the Williams Fire in September 2002. Spring rains beginning in February of 2003 deposited several feet of soil and debris in the bottoms, destroying the majority of the San Dimas Canyon roads. White alder in the overstory dominated the Main Fork and West Fork riparian areas. Understory riparian vegetation consisted of willow, exotic vines and blackberry. Both the overstory and understory suffered high mortality as a result of the fires and subsequent flooding. Upland vegetation consists of scrub oak and chamise chaparral (greasewood).

SOIL

Mass Movement, Erosion, Compaction, and Productivity: There are many older landslides in the project area with large slides in the vicinity of NF San Gabriel. The geology is best characterized as faulted granite with numerous landslides. Mud and debris flows are common throughout the project area. The fires of 2002 were followed with flooding in the spring. The combination of wildfires and seasonally intense rain accelerated the naturally high erosion rate. Debris flows occurred in the intermittent and ephemeral channels, while the larger streams and rivers were scoured and experienced sedimentation. This accelerated erosion could continue for at least five years until the vegetation has recovered. Severely burned areas could take ten years or more to recover (Curve Fire, Soil & Water Assessment, 2002).

The soils tend to be shallow, loose and poorly developed (young). The soils are primarily derived from granitic rocks; and are primarily gravelly, sandy soils with a high rock content, underlain by fractured or partially decomposed parent material. All the soils in the project areas except river-wash have a high to very high erosion rating. Many of the cabins have rockwork or some

type of barrier to control dry ravel from rolling down the slopes and hitting their structures, as well as for debris flow and flood control.

Compaction is not a large problem given the loose sandy texture of most of the soils. Loss of soil productivity is primarily associated with fire and subsequent flooding. The only additional loss of productivity would be in the areas where road building or widening would occur.

HYDROLOGY

Rivers and streams are complex and dynamic natural systems. The physical, chemical and biological conditions that exist between their banks and across their floodplains are a result of the natural and man-made characteristics of the watershed. Stream system dynamics can be understood best by subdividing the system into water quality, streamflow, and stream channel morphology.

The streams within the project area include the West Fork (WF) San Dimas River, the Main Fork (MF) San Dimas River, and the North Fork (NF) San Gabriel River. Main tributaries to NF San Gabriel include Soldier Creek, Bichota Creek, and a flowing spring that is a tributary to Coldbrook Creek.

Water Quality

Sedimentation, Temperature, Bacteria, and Pollutants: Water quality refers to the physical, chemical, and biological composition of a given stream and how these components affect beneficial uses. The existing water quality of the drainages within the project area is a result of the combination of natural characteristics of the watersheds with management activities. Water quality parameters that may affect beneficial uses in these drainages include: sediment, temperature, bacteria, and unknown chemical constituents such as petroleum products and pesticides.

At present, the largest water quality problem for the San Dimas River is the large influx of sediment into the system. The naturally high erosion rate has been increased by the wild fires and subsequent flooding, filling the channel with sediment. A potential problem may be increasing water temperatures as the trees killed or damaged in the fire are removed or fall down and the river is no longer shaded.

Most of the San Dimas lots lie within the riparian or riparian upland zone. Portions are within the floodplain. During a post-fire field review it appeared that most sanitation facilities do not meet county codes and some may be draining into the river. During a field visit in the summer of 2003 outhouses were found located within 100 feet of water. A survey by USGS personnel in 2002 (before the fire) remarked on the sewage smell in the WF San Dimas. Sewage from the outhouses or inadequate sewage systems may be ending up in the rivers, adversely effecting water quality. In addition, many cars were buried in flood debris in the WF San Dimas potentially releasing anti-freeze and petroleum products into the river; and any household contaminants such as pesticides, herbicides, or paints stored in the burned cabins could have been carried into streams by rain or flooding.

In the NFSG tract lots 155-157 and lot 21 are several hundred feet from water and are probably not contributing to degradation of water quality. Most of the other lots are within 100 ft of streams and therefore more likely to interact with the stream. One outhouse is still standing

within 100 ft of Soldier Creek (lot 136). It is unknown how many other NFSG cabins have inadequate sewage facilities.

Flow Regime

The fires have affected the flow regime by removing much of the vegetation that would normally intercept rainfall, leading to higher than normal flows. Drainages that burned with high severity leave soils exposed and increase hydrophobicity of naturally water repellent soils. The hydrophobic layer can take six months to two years to break down (Parenti and Loadholt, 1 and 2, 2002). This leads to lower than normal infiltration rate, resulting in more runoff, higher peak flows, and consequently, more erosion.

The MF San Dimas River is a perennial stream through the project area. The WF San Dimas flows through part of the project area and is subsurface in some areas.

Soldier Creek, Bichota Creek and NF San Gabriel are perennial within the project area.

Channel Morphology

Management activities have the potential to alter erosion processes and cause increases in sediment concentrations within the stream. However, the fires and flooding have had a greater effect on the channel morphology in San Dimas canyon than any management activity. Before the fire the MF San Dimas River was described as a vegetated, narrow, steep-sided well-defined channel containing some deeper pools. The substrate was primarily rock and cobbles. In spring 2003 the San Dimas River flooded severely, depositing approximately 4-6 feet of sand and gravel in the lower reach, with several side-channels contributing a large amount of debris to the main drainage. While one reach of the MF San Dimas is braided to more efficiently carry the sandy substrate, the other reaches are poorly defined channels meandering across the floodplain. Traces of the old road can be found in the Main Fork; however, travel now is primarily within the streambed.

The WF San Dimas was described as a well vegetated narrow steep-sided channel with little sand and some smaller pools. The WF San Dimas also flooded and removed a majority of the road. Many cars were buried just upstream from the confluence of the two forks. Both forks of the San Dimas River are unstable and will continue to be so until the hillslopes revegetate and stabilize, and the large amount of sediment is moved through the system allowing a more stable channel to develop. Portions of the old road still exist, however much of the travel is within the streambed.

All of the cabins in the floodplain have extensive rockwork in both the main channels and side channels to control erosion and debris flows around the cabin sites. In the narrow San Dimas Canyon this rockwork acts like bedrock in confining the channel. In areas where concrete (less dense than the rockwork) was used the concrete was sometimes moved by the flooding and is no longer in place.

The upper part of the NFSG tract lies along Soldier Creek, a bouldery high-energy stream. The southern part of NFSG lies along Bichota Creek and the NF San Gabriel River. This is a larger river than the San Dimas and carries more coarse sediment. Flooding filled in many pools with sediment. The sediment is coarse and contains boulders and cobbles as well and sand and

gravels. The flood moved the channel of the NF San Gabriel just below the confluence with Bichota Creek and bypassed the existing culvert.

Floodplains, Riparian Areas

Roads and their location as well as the location of the cabins affect floodplains within the analysis area. The roads in San Dimas Canyon are entirely within the floodplain. All existing cabins in the San Dimas tracts lie in the riparian or riparian upland zone and some lie in the floodplain. In-lieu lots, although outside the floodplain and riparian zone proper, are still within the riparian uplands. Appendix A lists cabins in riparian or floodplain zones.

In the NFSG tract the cabins are scattered, with small roads or trails accessing separate groupings. Many of these roads lie within or traverse the floodplain or riparian zone. In San Gabriel most existing cabins are located in the riparian or riparian upland zone, and some are in the floodplain. Lots 158-166 (Yucca Flats) are built almost entirely in the riparian zone on spring-saturated ground. Many of the springs have been diverted for use at occupied lots.

WILDLIFE

Threatened and Endangered Species

There are several federally listed plant species with potential habitat in the project areas. Listed plants include slender-horned spineflower, Brauton's milkvetch, Nevin's barberry, and thread-leaved brodiaea. In May 2002, plant surveys were conducted during the flowering period on these recreation tracts, and none of the listed plant species were found.

Listed animal species analyzed for this project include Santa Ana sucker, unarmored 3-spine stickleback, arroyo southwestern toad, California red-legged frog, mountain yellow-legged frog, desert tortoise, California condor, bald eagle, southwestern willow flycatcher, least Bell's vireo, and coastal California gnatcatcher. There are historical records of California red-legged frog and mountain yellow-legged frog in both tracts, but none have been found recently. The only listed species known to occur in the project areas is the Santa Ana sucker. Detailed results of the threatened and endangered species surveys can be found in the project record, Biological Evaluation/Biological Assessment (BE/BA) (Hamann, 2003).

Sensitive Species

There are numerous Forest Service R5 sensitive species that could be present in the project area, including 11 plants, 2 fish, 3 amphibians, 8 reptiles and 2 mammals, and are detailed in the above referenced BE/BA and biologist reports. Presence is based upon suitable habitat. Affected species are listed and discussed by alternative.

Management Indicator Species

The Angeles LRMP identified 11 Management Indicator Species (MIS) or species assemblages. These include listed species, featured species, habitat indicators and ecological indicators (LRMP 3-9). Plan direction specific to MIS includes development of management plans, identification of research needs and opportunities (LRMP 4-33).

The California condor, spotted owl and least Bell's vireo are listed species and are evaluated in the BE/BA. Pinyon/juniper habitats are not present in the project areas and the pinyon/juniper bird assemblage won't be considered further. The remaining MIS and species assemblages include mule deer, Nelson's bighorn sheep, rainbow trout, and four native fish; the Santa Ana sucker, arroyo chub, speckled dace and unarmored three-spine stickleback.

Riparian Areas: There are more than 150 bird species in the riparian assemblage, including species dependent on riparian habitat for foraging, breeding or protection, during some times of the year; and are an ecological indicator. The Angeles LRMP identifies factors that could negatively affect habitat capability including wildfire, snag and log removal and high levels of recreation use. The LRMP includes management practices that would maintain or enhance existing riparian communities.

Riparian habitats make up less than 0.5% of the total land area in California, but are the most important habitats for land birds. They have been declining over the last 150 years, due to reservoir construction, channelization, grazing, timber harvest, water pollution, introduction of non-native plant species, gravel and gold mining, and clearing for agricultural and domestic uses. The Riparian Bird Conservation Plan (RHJV 2000) identified 14 focal species for riparian habitats. Two are associated with the canopy and mid-story but most are associated with the understory for nesting. Two of these, least Bell's vireo and willow flycatcher are addressed in the BE/BA as listed species.

Riparian habitats in the project areas have been impacted by heavy recreation use, wildfire and subsequent debris flows. Surveyors in the summer of 2002 noted no areas of undisturbed riparian, as well as lots of garbage, on the 2.5-mile stretch of the NFSG that they surveyed (USGS 2002). Heavy rains in February 2003, following the wildfires, resulted in the deposition of several feet of debris on the San Dimas drainages, which buried understory riparian vegetation. In addition, many of the recreation residence cabins were located within the riparian zone or floodplain, and may have inadequate septic systems, including some discharge into the streams. Surveyors in the summer of 2002 noted a heavy sewage odor and white film on rocks and vegetation on the West Fork San Dimas (USGS 2002).

Conifer/Oak Woodland: The LRMP identified over 100 bird species in the conifer and oak woodland assemblage. These species use these vegetation types for foraging, breeding and protection. The LRMP identified factors that could contribute to a decline in habitat capability including wildfire, snag and log removal and high levels of recreation use.

Oak woodlands have high bird species richness, primarily because they provide acorns, a high quality and frequently abundant food supply. CaPIF (2002) identified numerous focal species associated with oak woodlands. These species are associated with the forest canopy.

Many of the recreation residence cabins are located within the riparian zone or floodplain. There are a few cabins/lots located higher on the slope in oak or conifer woodland. However, many of the woodland trees were killed by the wildfires, marginalizing their value as conifer or oak woodland habitat.

Chaparral: In the chaparral bird assemblage, the LRMP identified approximately 60 species. Birds in this assemblage generally require an intermediate to dense shrub cover interspersed with small open areas, in mid to late successional stages. Factors contributing to a decline in this

habitat type include large wildfires, decadence from lack of wildfire and displacement from high levels of recreation use (Plan 3-11).

CaPIF (2003) identified numerous focal species associated with chaparral habitats. These include ground, low shrub, and shrub and tree nesters. Some are susceptible to fragmentation, while others are tolerant of small patch sizes and tolerant of human edges.

Many of the recreation residence cabins are located within the riparian zone or floodplain. There are a few cabins/lots located higher on the slope adjacent to chaparral types.

RECREATION

Many popular recreation areas in the Angeles National Forest are already at or beyond capacity. The lower portion of the San Gabriel Canyon was reported to be over safe capacity during peak periods of use in the late 1990's. The Angeles National Forest is one of the most heavily used forests by recreationists in the United States. The forest was ranked first in recreation use for California forests and fifth nationally with 9.8 million recreation visitor days in 1995 (Chavez 1993, 1998, 2001).

A 35% downward trend for recreational residences has occurred since the LRMP was published in 1987. At that time there were 773 recreational residences. According to the Draft Angeles National Forest Business Plan (2003), there are now approximately 505 recreation residences.

SOCIAL AND ECONOMIC FACTORS

The proposed project would occur on the Angeles National Forest, located adjacent to the Los Angeles metropolitan area and is within a one and one-half hour drive of 9.6 million people. The six-county Southern California Association of Governments (SCAG) area contained 16.5 million people in 2000. Most of the county is highly developed with the Forest making up 72% of the committed open space.

Los Angeles has served as a port of entry for many people with high rates of immigration and emigration. Ethnic groups are varied, with over 101 different ancestries reported in the 2000 census. The diverse community is reflected in the high percentage (54%) of households where a language other than English is spoken. Nearly 70% of county residents have obtained a high school education. Median household income in 2000 was \$42,000 and 14% of families were below the poverty level (U.S. Census Bureau 2000).

FUELS MANAGEMENT

The Curve fire burned 50 recreation residences in the NFSG tract; the Williams fire burned 34 residences in the MFSD and 26 in the WFSD. The fires burned under very dry conditions and escaped initial attack despite quick, aggressive suppression action. On the Curve fire 3 engines arrived on scene within 22 minutes, and additional resources were ordered immediately. The first engine on the Williams fire arrived on scene within 3 minutes of being dispatched. In both cases, the fires were spreading at very high rates with high flame lengths. Concerns over evacuation of area residents, as well as firefighter and public safety were the priorities on both fires. During the fires, extreme and erratic fire behavior, limited access and water supply, and lack of safety zones for firefighters precluded effective structure protection.

In the NFSG, fuels prior to the fire consisted primarily of mature/over mature chaparral, and in the San Dimas Canyon tracts consisted primarily of mature/over mature chamise chaparral and

associated scrub oak. The only significant change in fuel was along riparian areas. The fire consumed much of the surface vegetation in the dry uplands. For the NFSG, mortality in riparian areas was variable, with most areas experiencing some level of overstory mortality. In the San Dimas Canyon tracts, those overstory riparian trees not completely scorched experienced high levels of radiant heat and are experiencing high mortality as of the summer of 2003.

Both the NFSG and San Dimas Canyon tracts are located in a Fire Zone 4, Very High Fire Hazard Severity Zone, as designated by the L.A. County Forester and Fire Warden. Most of the recreation residence cabins in both tracts are located within the riparian zone or floodplain. There are a few cabins located higher on the slope in oak or conifer components, or adjacent to chaparral types. Many of the residences burned as a result of the high levels of radiant heat. However, spot fires on or directly adjacent to the structures were also likely sources of ignition (Cohen 1999).

Fire Behavior

Fire will continue to be a reoccurring event in the analysis area. Fire is the primary agent of change for vegetation across the analysis area. The distribution, composition, and structure of almost all plant communities in the analysis area are influenced by fire.

Chaparral Fuel Type: Intense fires in chaparral fuel types typically burn a large percentage of the above ground vegetation, with prolific sprouting from dormant soil seed banks and live roots quickly revegetating the site. As of July 2003, most of the ground within the fire perimeters appears to have vegetation when viewed from a distance. The dry uplands within the analysis area can be expected to continue to revegetate with chaparral as the dominant species. This fuel-type is characterized by increasing flammability over time. Under strong wind conditions fires can spread actively through even young stands of chaparral. Typically chaparral fuels can be expected to increase in flammability for 30 years, at which point the flammability plateaus.

Fires in older aged chaparral burn with higher flame lengths and faster rates of spread than fires in younger stands, such as exists in most of the analysis area following the fires. However, fires in these immature stands can still spread very quickly, posing a risk to firefighter and public safety. For the purposes of this analysis, 10 years was chosen as the breakpoint for mature and immature chaparral stands.

Riparian Fuel Type: Typically riparian areas burn less intensely than uplands due to the shade provided by the overstory and wetter conditions near streams. In the analysis area, the steep slopes, dense cover, and abundant undergrowth resulted in fairly intense burning within the riparian zones where most of the recreation residences are located. Fire induced mortality to the overstory will result in increasing fuel accumulations once the standing dead trees begin to fall, resulting in higher fire intensities, and increased resistance to control. Although the riparian zones within the tracts contain differing vegetation than the uplands, field reconnaissance of the area concluded that the steep terrain and close proximity to upland fuels influenced fire behavior in these zones.

Structures: Cohen (1999) has shown that structures with typical ignition characteristics (wood sided, wood framed, asphalt composition roof) are at risk of catching fire from one of three sources. The first is direct exposure to intense flames from a nearby source, which could be intensely burning vegetation or another structure. His research shows that the structures may be at risk if the flame front is less than 100 feet away. A second source of ignition is flammable

material against or close to the side of the structure, such as firewood, ignited by a ground fire or firebrands. The third source is firebrands falling directly on roofs.

Due to the topography and fuels associated with the area in and directly adjacent to recreational residence tracts, a fire in the area that escapes initial attack (in excess of 10 acres) could continue to threaten residents and structures within the NFSG, MFSD and WFSO tracts. Because wooden structures are so vulnerable to ignition by radiation and lofted embers, in the event of a wild fire, firefighters would need to present (Scott 2002).

Fire Suppression

Firefighters must provide for their own safety while effectively protecting structures. Firefighter and public safety is the number one priority on all wildfires. As such, safety zones and escape routes must be provided for firefighters in order to safely conduct suppression actions. Firefighters need a zone around the structure in which to lay hose, raise ladders to the roof, inspect the home exterior for ignitions, and suppress external structure ignitions. To this end, firefighters attempting structure protection during passage of a fire front can only work within a safety zone (Scott 2003). Efforts to protect structures without a safety zone require escape routes such as roads or trails that facilitate quick egress. Such areas can consist of unburnable material such as rock slopes, areas cleared of vegetation, or areas of light fuels that could be burned out prior to use by firefighters. The size of an adequate safety zone varies with the fuels, topography and weather conditions under which the fire is burning. However as a general rule of thumb, the distance between firefighters and the flame front must be 4 times the expected flame height, not including a factor for safety (Butler and Cohen 1998). The size of safety zones must also be adjusted for the number of people who must occupy the site, and must be doubled when fuels are present that allow the fire to burn on all sides of the safety zone. In addition, convective heat from wind or terrain influences increases the distance requirement (NFES 2002).

Steep slopes, narrow canyons, and single access points make fire suppression safety more complex. In the case of the San Dimas Canyon tracts, the only location that could serve as a safety zone for firefighters is located where the West Fork and Main Fork merge together. This location is less than ideal, as it shows signs of intense heat and high mortality following the fire. Although this location could serve as a safety zone under some circumstances, its location at the juncture of the two canyons could funnel radiant and convective heat into the area, negating its effectiveness as a safety zone. This is of particular concern because normal air movement patterns can be overridden by Santa Ana winds, which are known to affect wildfire spread and intensity.

Table 5: Number of potential lots under each alternative by tract or grouping.

Tract	Pre-existing	Current	Alt 1	Alt 2	Alt 3	Alt 4
NFSG Lots 4-15 1 st Gate	3	3	3	4	3	3
NFSG Lots 6-40 2 nd Gate	5	5	5	7	5	5
NFSG Lots 41-110 3 rd Gate	18	0	0	17	0	0
NFSG Lots 112-121 Lower Soldier Creek	3	0	0	0	0	0
NFSG Lots 122-147 Soldier Creek Walk-In	16	3	3	3	3	3
NFSG Lots 148-152 4 th Gate	5	0	0	3	0	0

Tract	Pre-existing	Current	Alt 1	Alt 2	Alt 3	Alt 4
NFSG Lots 155-157 Roberts Curve	3	0	0	3	3	0
NFSG Lots 158-166 Yucca Flats	9	1	1	1	1	1
Total NF San Gabriel	62	12	12	38	15	12
MFSD Lots 1-95	39	5	5	33	8	5
WFSD Lots 1-89	38	11	11	12	11	11
Total San Dimas	77	16	16	45	19	16
TOTAL ALL TRACTS	139	28	28	83	34	28

NOTES: NFSG lots 1-3, 111, 153 and 154 were also analyzed but are not part of the above groupings.

The tracts were analyzed by location. The MFSD, the WFSD, and NFSG tracts were analyzed separately unless the effects are the same for all tracts

Direct and Indirect Effects

For any construction, under all alternatives, California BMPs and the Angeles National Forest Interim Riparian Standards and Guidelines would be applied to minimize impacts to streams and riparian areas. Because Alternatives 1, 3 and 4 have a similar number of useable lots, effects of these alternatives are grouped. The NFSG would have 12 occupied lots under Alternatives 1 and 4, and 15 under Alternative 3; the MFSD would have 5 potentially occupied lots under Alternatives 1 and 4, and 8 under Alternative 3; the WFSD would have 11 potentially occupied lots under all three alternatives. The additional lots available under Alternative 3 are adjacent to existing roads, in previously disturbed areas outside of the floodplain and riparian zones, although still within riparian uplands.

Alternative 1

SOIL

Mass movement, erosion, compaction, and productivity: The greatest driver for mass movement within the project area is fire followed by flooding. Current conditions will generally persist, and debris flows could continue to occur at an accelerated rate until the effects of the fires are gone. No increase to mass movement is expected

There could be a minor amount of erosion where septic systems are updated by 2009. As there are only 16 lots in San Dimas and 12 in San Gabriel, an unknown number of which need to update sewage facilities, and BMPs would be in effect, erosion would be insignificant.

There could be some short-term erosion associated with reconstructing a low-specification road into the San Dimas Canyons. This would be an insignificant effect compared to the increased erosion from the fires. No road building would take place in the NFSG tract, but concrete approaches and culverts would be installed at the river crossings within Gates 1 and 2. Soil movement would be insignificant and erosion associated with vehicles driving across the streams would be eliminated.

HYDROLOGY

Water Quality

Sedimentation, bacteria, contaminants, and temperature: For all occupied tracts there could be short-term additional sedimentation from upgrading the septic systems. However, there would be long-term improvement in water quality (for bacteria) after the septic systems are upgraded, as many are thought to be substandard at this time.

Flow

There would be less water usage than before the fires because fewer lots would be occupied. There would be minor to insignificant effects on flow in areas where people are using the water for drinking or irrigating.

Channel Morphology

Alternative 1 could affect channel morphology where roads would be rebuilt. However, given that the effects of the fire will continue for about 5 years, the changes from rebuilding the road would be insignificant compared to the changes in channel morphology from the sediment the river is currently moving through the fluvial system.

Floodplains, Riparian Areas

Alternative 1 leaves the San Dimas tracts with 16 cabins, and the NFSG tract with 6 cabins in floodplains or riparian areas. The main roads up the Main Fork and West Fork lie in the floodplain and will continue to experience flooding. Portions of the roads for Gates 1 and 2 in NF San Gabriel are also in the floodplain and will periodically flood.

WILDLIFE

Threatened and Endangered Species

While several threatened and endangered species were analyzed for this project, only one species, the Santa Ana sucker, is known to occur in the project area, and is discussed below. (See BA/BE for a complete TES analysis).

Santa Ana sucker. This species is found in the stream and river reaches adjacent to NFSG Tract Gates 1-3, although suitable habitat exists throughout the North Fork San Gabriel and the Main Fork San Dimas. The Main Fork was considered suitable habitat prior to the wildfire and subsequent debris flows. While not currently suitable, it could recover over time. This analysis focuses on the lower reach of the occupied NFSG and on MFSD. Upper NFSG lots are included in parts of the NFSG analysis because they contribute effects to downstream habitats.

Sensitive Species

There is suitable habitat for a number of sensitive species in the project areas. The information in this EA summarizes effects to groups of species. (Complete documentation of sensitive species can be found in the BA/BE).

Plants. Any activity resulting in ground disturbance, spread of invasive species, introductions of non-native species, loss of individuals or portions of plants, diversion of water supplies, loss of seed bank, or alteration of habitat would have adverse effects on plant populations (Stephenson and Calcarone 1999). Habitat near trails, roads, and recreational residences are the areas of highest concern. Maintenance of trails, roads, and recreational residences has the potential to directly or indirectly affect plant populations through ground disturbance, spread of non-native species, and trampling of habitat and plants over the long-term.

Fish and Amphibians. The lower North Fork San Gabriel River contains arroyo chub and the Santa Ana speckled dace. Numerous surveys have been conducted in the upper San Gabriel River over recent years, but these species have not been found there.

No new construction would occur under Alternatives 1 and 4, and construction under Alternative 3 would be minimal. Any road, septic, sewer or water reconstruction and repair would include use of BMPs, which should result in no long-term measurable effects on water quality (sediment). Existing cabins would need to be in compliance by December 2008 under all alternatives. Some level of contamination could occur until all existing cabins are in compliance.

Reptiles. Alternatives 1, 3 and 4 have the lowest potential for effects to species and habitats. All alternatives have associated recreation use, especially in the riparian areas. This could result in a decrease in habitat suitability for southwestern pond turtle, coastal rosy boa and two-striped garter snakes, which are often associated with riparian areas. However, use decreases under all alternatives (80% decrease from pre-fire occupation under Alternatives 1 and 4, and 75% under Alternative 3), resulting in a net improvement in habitat for these species.

Birds. Sensitive bird species are not expected to use the analysis areas except on an infrequent basis.

Mammals. There is potential habitat for two species, pallid bat and western red bat. This project would have minimal effects on these two species. There could be small decreases in roosting habitat for western red bats as hazard trees are removed from the riparian area. Pallid bats roost in a wide variety of sites, reducing their vulnerability to human activities. Individuals may be removed or excluded from roost sites in cabins.

Management Indicator Species

Mule deer. Mule deer are very adaptable to changes in habitat. Some of the burned areas may draw more use into these tracts as they take advantage of new green growth. All alternatives would result in fewer cabins than before the fires in September 2002. Over the long-term there are no expected changes in habitat capability or distribution as a result of any of the alternatives.

Nelson's bighorn sheep. The NFSG tract lies between two occupied areas (Bear Creek in the San Gabriel Wilderness and the upper East Fork and Cattle Canyon in the Sheep Mountain Wilderness), but it does not provide any escape terrain. Disturbance from human activities has the potential to affect movement patterns as individuals move from one area to another. However, all activity associated with this project is concentrated along the road and areas associated with human use. All alternatives would result in fewer cabins than before the fires in September 2002. Over the long-term there are no expected changes in habitat capability, distribution or movement patterns as a result of any of the alternatives.

Riparian bird assemblage. Before the fires there were 139 cabins on these tracts, over 70% of which were in floodplains or within riparian zones. While 22 of the existing 28 cabins lie within the floodplain or in the riparian zone, all in-lieu or rebuilt cabins would be located outside of these areas (but may still be within riparian uplands). Effects of disturbance and loss of habitat would be reduced under all alternatives compared to pre-fire conditions.

Under all alternatives, there would be some removal of hazard trees around cabins, lots or along roads. In some cases, these may be within the riparian zone. These would be dead trees, which could provide foraging habitat or habitat for cavity nesters. The loss of trees as a result of this project is negligible because of the large number of fire-killed trees in the larger area.

Currently, the San Dimas drainages are buried under debris and there is no understory riparian vegetation. It would be expected to recover over time in Alternatives 1, 3 and 4.

Conifer and oak woodland bird assemblage. There may be some trees removed as hazard trees; however these would be dead trees, with decreased suitability for nesting or foraging for most species. Cavity nesters would not experience a decrease in quantity of available snags as a result of this removal because of the large number of snags created as a result of the wildfires.

Generally, these habitats would not be affected by proposed actions. There could be a few individual trees cleared for construction of in-lieu cabins or along the new road right-of-way under Alternatives 2 and 3, but these effects would be minimal. All available lots have been built on in the past, so little clearing of live trees would be needed.

Chaparral bird assemblage. There are a few cabins partially located in chaparral types. Much of this was burned in the Curve and Williams fires, so species using young-aged stands could be most impacted. However, the available lots have been built on in the past, so little loss of habitat would occur.

Rainbow trout. The greatest potential for adverse impacts on the NFSG River from occupancy and associated use of recreation residence tracts is reduction in water quality from leaky or inadequate septic systems. Although the current extent of septic contamination is unknown, all alternatives require that in-lieu and rebuilt cabins meet county septic codes, and existing cabins comply by December 2008 in order for a permit to be re-issued. In Alternative 4, the existing cabins would be allowed - for up to 10 years continued use, and then removed.

Construction under Alternatives 1, 3 and 4 would include use of BMPs resulting in no long-term measurable effects on water quality (sediment).

ECONOMICS

Approximately \$192,250 in recreational residence lease revenue (special use fees) would be generated over ten years.

FUELS MANAGEMENT

The county fire codes would not be met for any of the currently standing structures under either Alternative 1 or 4, except for the structure on Lot 161, NFSG, which is within 150 feet of paved California Highway 39, in an area saturated by nearby springs.

Under mild weather conditions, the area identified as a potential safety zone may be adequate for the limited fire fighting resources required by Alternatives 1, 3, and 4.

Alternative 2

Alternative 2 allows rebuilding 55 cabins on all tracts, 28 in MFSD, 26 in NFSG and 1 in the WFSD. In NFSG 20 of the 26 cabins would be rebuilt between Gates 1-3 (lower portion of the North Fork San Gabriel River); with 17 of the 20 at Gate 3, where no cabins currently exist. Alternative 2 would also involve new road construction, paving and channelizing the Main Fork and West Fork of San Dimas, and new road construction at Gates 1-4 in the NFSG.

SOIL

Mass movement, erosion, compaction, and productivity: Building roads to county specifications have the greatest potential to increase mass movement and erosion. With some of the road building in NFSG tract on steep slopes with non-cohesive soils, road building could lead to additional mass movement and accelerated erosion by destabilizing slopes in the road building process. At least 5 river crossings would have culverts and concrete approaches, 1 for Gate 1, 2 for Gate 2 and at least 2 for Gate 3.

There is approximately 2.8 miles of road building, and stream channelization proposed in San Dimas Canyon under this alternative. The roads would be built in the floodplain and require a large amount of construction, resulting in erosion in both forks.

For all areas, rebuilding the cabins could lead to a small amount of short-term increased erosion around the building sites. BMPs would minimize the effects of construction.

HYDROLOGY

Water Quality

Sedimentation, bacteria, contaminants, and temperature: Alternative 2 would adversely affect water quality for both forks of the San Dimas River primarily by channelizing the Main Fork and West Fork. All trees along the channels would be removed. This would leave the wide, shallow, trapezoidal channel unshaded, resulting in higher water temperatures.

In addition to the effects of road construction and channelization on the San Dimas River, cabin construction could also lead to short-term additional sedimentation. None of the constructed cabins would be in the floodplain. BMPs would be used to minimize the movement of sediment from building sites to the streams.

Alternative 2 would also require improving roads in Gates 1-4 of the NFSG tract. This construction could lead to an increase in sedimentation where the roads were close to or crossed the streams. Removal of trees along the streams would also result in higher water temperatures until trees grew to shade the stream.

Flow

In the San Dimas Tract Alternative 2 would have the greatest adverse effect on flow because of the amount of building, road construction and channelization. The channelization of the river would move water and sediment efficiently downstream raising peak flows but potentially lowering base flows.

There would probably be no change in flow tied to Alternative 2 for the NFSG. The small amount of road building spread over a large area would have minimal affect on flow.

Channel Morphology

Alternative 2 has the greatest impact on channel morphology from proposed road building in the San Dimas Main and West Forks. The proposed road would require concrete channels to stabilize the rivers, significantly and adversely impacting the channel morphology. This is a significant adverse effect and does not meet the LRMP management objectives or standards and guidelines for riparian areas. The road would be 26 feet wide, and the concrete channel 15 feet wide. The combined 41 feet is as wide as the entire canyon in some spots. If this alternative were chosen an EIS and Forest Plan amendment would be necessary.

Floodplains, Riparian Areas

The San Dimas tract would have roads built to county specifications and require channelizing the rivers. This would have significant adverse effect to the floodplain and riparian areas by turning the rivers into ditches and destroying both the riparian zone and the functioning of the floodplain.

In the NF San Gabriel River tract road building would be partially in the floodplain from Gates 1-3. This would have an adverse effect on floodplain function by constraining the channel and effectively removing part of the active floodplain from the river. In addition, portions of these roads are subject to more reconstruction and maintenance due to the higher probability that they would be damaged/ or washed away by flooding.

WILDLIFE

Threatened and Endangered Species

Santa Ana sucker. This species is found in the stream and river reaches adjacent to NFSG Tract Gates 1-3, although suitable habitat exists throughout the North Fork San Gabriel and the Main Fork San Dimas. This analysis focuses on the lower reach of the occupied NFSG and on MFSD, where impacts to habitat could be significant under Alternative 2. Upper NFSG lots are included in parts of the NFSG analysis because they contribute effects to downstream habitats.

Alternative 2 would allow cabin rebuilding (up to 26 cabins in the NFSG and 28 in the MFSD), as well as require the construction of new, higher standard roads and channelization of the MF San Dimas. Before the fires there were 101 cabins on these tracts, over 70% of which were in floodplains or within riparian zones. While 11 surviving cabins are partially to entirely within the floodplain or riparian zones, all new cabins would be located outside of these areas. The risk of contamination from rebuilt cabin septic systems would be decreased by locating them further from the riparian area, and requiring compliance with Los Angeles County sanitation building codes. Existing cabins would have to meet code by December 2008.

While BMPs would be followed, there is the potential for short-term increases in sediment into the drainages. In addition, construction of a higher-standard road in the San Dimas drainages would require channelization of the creeks. The Main Fork was considered suitable habitat prior to the wildfire and subsequent debris flows. While not currently suitable, it could recover over time. Alternative 2 would modify this habitat, making it unsuitable over the long-term.

Sensitive Species

Plants. The disturbance associated with Alternative 2 is expected to be much greater than under any other alternative and the potential for loss of habitat, trampling, and loss of sensitive plants is highest under this alternative.

Both San Dimas tracts have a number of non-native plant species around many of the lots. The potential for spread of these is highest under Alternative 2 due to higher levels of disturbance.

Stream channel clearing and channelization would have direct negative effects on species found in streambeds, seeps, and springs. There are no riparian-associated sensitive plant species with suitable habitat on the San Dimas drainages. Suitable habitat for thread-leaved brodiaea, a listed species, did exist in these drainages before the fires. Surveys during the flowering period in 2002 did not find this species. However, it is difficult to survey because it often sits dormant underground for long periods of time. Several feet of new sediment have been deposited over the old channels; if the plants were there, they are now buried. Channelization in Alternative 2 would preclude these drainages from providing habitat for this species into the future.

Fish. Up to 26 new cabins could be constructed on the NFSG, 20 of which are in the lower North Fork San Gabriel River. This section contains arroyo chub and the Santa Ana speckled dace. While BMPs would be followed, there is the potential for short-term increases in sediment into the drainage.

Management Indicator Species

Mule deer. Some deer could be displaced during construction of cabins or roads but others would habituate to the activity.

Riparian bird assemblage. The Main Fork and West Forks of San Dimas would be channelized to allow construction of a new higher-standard road. This channelization would eliminate the potential for re-establishment of the riparian habitat associated with these reaches and would not meet Forest Plan direction.

Chaparral bird assemblage. Gate 4, an existing short road segment on the NFSG off of Highway 39, lies in the chaparral type. It would access three lots (150-152) that would be rebuilt under this alternative. Due to the previous disturbance, effects would be insignificant.

Rainbow trout. Up to 55 cabins could be constructed in the project areas. While BMPs would be followed, there is the potential for short-term increases in sediment into the drainage. However, the rebuilt cabins would be on previously disturbed or occupied sites, and there would be 40% fewer cabins than there were pre-fire.

Construction of a higher-standard road in the San Dimas drainages would require channelization of the creeks. The Main Fork was habitat prior to the wildfire and subsequent debris flows. While not currently suitable, it could recover over time. Alternative 2 would modify this habitat, making it unsuitable over the long-term.

ECONOMICS

Approximately \$609,250 in recreational residence lease revenue (special use fees) would be generated over ten years.

FUELS MANAGEMENT

Alternative 2 would allow up to 83 cabins in the tracts, as well as require the construction of new, higher standard road meeting county fire and emergency access codes. This would require channelizing the Main Fork and West Forks of San Dimas, and construction and surfacing of a new road system to replace the existing road that was washed out by debris flows. Re-construction would also be required to access Gates 1-4 on NFSG, and to meet the additional codes and ordinances required in L.A. county Fire Zone 4. Among other details, the road surface is required to be an all weather surface that reaches within 150 feet of all portions of the exterior walls. Any bridge that is required must be sufficient to carry a minimum of 75,000 pounds.

As the number of structures threatened by a wildfire increases, so must the number of fire fighting resources committed to protecting them. As a general rule of thumb, one engine is required per 1-3 structures, depending on the topography, fire intensity, access, water supply, and proximity of the structures to each other, provided they could access the cabins. The potential exposure to wildfire for the recreational residences would be greater than prior to the burns, due to their location farther from the moister riparian area. However, they would better resist ignition than the previously burned structures because of improved fire resistant building methods and materials.

A county water supply for firefighting purposes, access devices, and traffic calming measures would need to be met. The main requirements would be a water tank meeting standards established by NFPA 1142, chapters 3, 4, and 5, and a fire hydrant installed between 50 –150 feet from the closest point of the structure, measured via vehicular access. Determination of compliance to county codes and ordinances for new buildings is the jurisdiction of L.A. County.

Under alternative 2, up to 30 or more engines could be required. As the volume of equipment and firefighters increases, the space required for a true safety zone increases. The increased access and water supply required by county codes for Alternative 2 would provide an increase in firefighter safety. However, the significantly larger commitment of firefighting resources could overwhelm any safety zone.

Standing structures on Lots 123, 127 and 136 (Soldier Creek Walk-In) are accessible only by foot trails. These cabins would not meet county access code and would be phased out within 10 years of the Alternative 2 decision.

Alternative 3

Alternative 3 is similar to Alternatives 1 and 4, with the addition of building on lots 7, 84 and 85 in MFSD and lots 155-157 in NFSG.

SOIL

Mass movement, erosion, compaction, and productivity: There would be no increased mass movement. There could be short-term erosion associated with cabin construction. However, given the small number of cabins the effect would be negligible. BMPs would be applied to minimize erosion during construction.

HYDROLOGY

Water Quality

Sedimentation, bacteria, contaminants, and temperature: Potential sediment input is possible from the construction associated with the 3 MFSD cabins. Lots 155-157 in NFSG are well away from any stream and are not likely to add sediment. Application of BMPs would minimize any sedimentation. In addition, all new cabins would be required to comply with Los Angeles County sanitation codes.

Flow

Alternative 3 would allow rebuilding along roads meeting county standards for fire safety and would have no effect on flow.

Channel Morphology

Alternative 3 would allow rebuilding only in areas where roads meet county standards and would have no impact to channel morphology.

Floodplains, Riparian Areas

None of the six additional building sites are within floodplain or riparian area, and would have no additional impact to these areas.

WILDLIFE

Threatened and Endangered Species

Santa Ana sucker. The additional cabins would have to meet Los Angeles County sanitation codes. While BMPs would be followed, there is the potential for short-term increases in sediment into the drainages.

Sensitive Species

Same as Alternatives 1 and 4.

Management Indicator Species

Same as Alternatives 1 and 4.

ECONOMICS

Approximately \$232,750 in recreational residence lease revenue (special use fees) would be generated over ten years.

FUELS MANAGEMENT

The in-lieu lots would be new construction that would meet county fire codes. The 6 available lots are located within 150 of roads meeting county access requirements.

Lots 155-157 in the NFSG would meet county codes if rebuilt under Alternative 3. All three lots are adjacent to paved California Highway 39. Lots 7, 33 (standing), 84 and 85 in the MFSD may meet the county access test for width and turn-around, but would need to be paved to provide an all-weather surface.

Alternative 4

Alternative 4 allows the same use as Alternative 1, with the exception that all recreational residence use would be discontinued after 10 years from the date of the decision. Removal of existing cabins under this alternative may cause insignificant short-term adverse environmental effects, and beneficial long-term environmental effects.

SOIL

Mass movement, erosion, compaction, and productivity: The MFSD road (10N072) accesses a private in holding, and could be used for long-term property access. The WFSD road, (1N112 and 10N072), provide access to the San Dimas Experimental Forest. In the NFSG, the Gate 4 road would be reclaimed. Roads for Gates 1-3 (roads 2N12 and 2N14) may remain as far as the North Fork of the San Gabriel for public access. Should this alternative be selected, a separate roads analysis for these uses would be conducted. There could be short-term erosion associated with removal of standing cabins but the long-term effects would be positive, as in the long-term, erosion and compaction associated with roads and trails would end.

HYDROLOGY

Water Quality

Sedimentation, bacteria, contaminants, and temperature: There could be short-term sedimentation associated with removal of the structures and roads.

There would be long-term beneficial effects to water quality from the removal of septic systems as well as reduced sediment input to streams as structures, roads, and trails are removed, and the recreation areas revegetate. With the cabins removed there would be less risk of household contaminants reaching streams.

The lower portion of the NF San Gabriel River would likely see increased pressure from additional dispersed recreation, which could prevent revegetation.

Flow

An undetermined number of residences divert water from the springs and streams for household and yard usage. Some residences had pools, ponds and other water storage facilities. Flow rates would go up slightly as residences no longer used the water. Changes in most areas would be insignificant. The Yucca Flats area in NFSG has the most modified flow from manipulation of springs. In ten years all streams and spring would return to their natural flow.

Channel Morphology

Some of the barriers to flow from structures associated with the cabins near the channels would be removed immediately, while others would be removed by high flows over time. Removing the

roads and cabins in the MFSD and WFSD floodplain would allow the streams to return to a more natural morphology.

The NFSG cabins and roads have less influence on the broad floodplain in the narrower San Dimas Canyon. However, removing roads and culverts would allow the river to utilize the entire floodplain.

Floodplains, Riparian Areas

There would then be short-term impacts to soil and water as a result of removal disturbances. Long-term, there would be improvement in erosion and sedimentation as revegetation of the disturbed sites occurred.

WILDLIFE

Threatened and Endangered Species

Santa Ana sucker. The alternative public use for the NFSG would likely be dispersed recreation. This lower stretch was surveyed in 2002 and surveyors noted that the whole 2.5-mile stretch was disturbed and had abundant trash (USGS 2002). If the cabins were removed, more dispersed recreation would be expected. This would lead to streamside trampling and loss of vegetation, water-play and destruction of in-stream habitat, potential introduction of contaminants into the water and garbage. These effects are likely to be less than what had occurred pre-fire or as a result of reduced occupation levels. Potential additional mitigation includes increased educational signage, patrolling and management presence. The MFSD and WFSD would likely revert to the San Dimas Experimental Forest, which should reduce overall impacts and promote a more rapid recovery to the silted-in San Dimas forks.

Sensitive Species

Refer to the Sensitive Species section in Alternative 1, and effects under Alternative 4, Threatened and Endangered Species (paragraph above).

Management Indicator Species

Refer to the MIS section in Alternative 1, and effects under Alternative 4, Threatened and Endangered Species (paragraph above).

ECONOMICS

Approximately \$0 to \$192,250 in recreational residence lease revenue (special use fees) would be generated over ten years, depending on the number of people opting for the buy-out. Loss in lease fees would likely be offset by an increase in Adventure Pass purchases from an increase in dispersed recreation users. Costs associated with the cabin purchases by the Forest Service are unknown, as the number of permittees wanting to remain versus taking a potential buy-out is unknown.

FUELS MANAGEMENT

Refer to the discussion under Alternative 1.

Summary of Activities and Effects

Table 6: Ground-disturbing activities under each alternative.

Ground disturbing activity	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Upgrade sanitation systems	Yes	Yes	Yes	Yes
Rebuild cabins	No	Yes	Yes	No
Low standard road repair	Yes	No	Yes	Yes
Build road to county specifications	No	Yes	No	No
San Dimas channelization	No	Yes	No	No
Remove structures and roads	No	No	No	Yes

Table 7: Potential effects to soil by alternative.

Area	Road Construction	Soils		
		Mass movement	Erosion	Compaction
West Fork San Dimas	1-4		1, 2*, 3	2
Main Fork San Dimas	1-4		1, 2*, 3	2
NF San Gabriel Gates 1-4	2	2	2	

NOTE: * = Potentially significant effects

Table 8: Potential effects to hydrologic function by alternative.

Location	Road Construction	Water Quality			Flow Regime	Channel Morphology
		Sediment	Temperature	Bacteria		
WFSD	1, 2, 3	1, 2, 3, 4	2	4	2	2*
MFSD	1, 2*, 3	1, 2, 3, 4	2	4	2	1, 2*, 3
NFSG Gates 1-4	2	2				

NOTE: * = Significant effect

Cumulative Effects

Cumulative effects consist of effects in the past, present and foreseeable future.

Past management activities included recreation, road building and maintenance, and rehabilitation after wildfires.

Potential future actions could include building or improving recreation facilities, and removing snags left by the fires. Natural affects such as wildfires and the associated flooding exert the greatest influence on soil and water in the project area and would occur episodically. Other future federal actions that could occur include hazard tree removal around existing cabins, on lots where new cabins would be built, and along access roads and trails. These standing dead trees are a result of the wildfires in September 2002. If Alternative 4 were selected there could be additional actions; area rehabilitation of lots and roads; and construction of recreational developments (picnic areas, parking lots etc) in the NFSG. Fire rehabilitation has already been done, and there is no prescribed burning planned for at least the next five years. No new developments would occur under Alternative 4 for at least 5 years. New developments associated with alternative public uses would require a separate site-specific analysis because they are more than 5 years in the future.

Alternatives 1 and 3

Cumulative effects are primarily associated with sanitation and road systems. The sanitation systems are expected to be in compliance by January of 2009. Roads would require on-going maintenance. Roads in the San Dimas Canyon tracts would continue to experience flood damage, requiring additional reconstruction. Gates 1 and 2 in the North Fork San Gabriel tract would experience similar flood damage and require culvert maintenance at the river crossings. Cabins would continue to stand in floodplain and riparian zones.

Alternative 2

Alternative 2 would more efficiently transport water (and sediment unless sediment traps were added above the channelized portions and major side-channels). The channelization of approximately 1.6 miles of the MFSD and 1.2 miles of the WFSD would have significant cumulative effect to water quality, stream flow, channel morphology, and floodplain and riparian functions. This could lead to changes in the function of San Dimas River below the San Dimas tract to the San Dimas Reservoir.

Channelization would prevent the re-establishment of suitable habitat for riparian birds and thread-leaved brodiaea the MFSD and WFSD, as well as prevent re-establishment of Santa Ana sucker and rainbow trout in the MFSD.

Roads in all areas would require continual maintenance at permittee expense, and would likely experience periodic flood events, especially in the next 3-5 years until re-vegetation is fully established.

Cabins would continue to stand in floodplain and riparian zones. Cabin construction would be outside of riparian wetlands, but within riparian uplands.

The effects to the hydrologic and wildlife systems are considered significant and an Environmental Impact Statement would be required if this alternative is selected. This analysis, at permittee expense, would likely take 2-3 years.

Alternative 4

Alternative 4 is an analysis of alternative public use for the tracts. The San Dimas tracts would likely be added to the San Dimas Experimental Forest, which would improve hydrologic function as the natural regime was reestablished. Long-term, removing cabins and roads could have a positive effect on water quality for the San Dimas River. Alternative 4 would have no adverse cumulative effect in the San Dimas tracts.

The NFSG tract would likely become open for more dispersed recreation. East Fork San Gabriel River is on the California 303d list with trash as the pollutant. With additional dispersed recreation near the NF San Gabriel River there could be a cumulative effect to the amount of trash added by the additional recreation. The forest would need to closely monitor the use if additional areas are opened for dispersed recreation along the North Fork San Gabriel River. Conversely, opening a larger area for dispersed recreation would decrease the concentration of use near the confluence of the East Fork and the immediate area to the north along the North Fork. Trampling, trash and user conflicts could decrease as people and use spread out. Monitoring should provide necessary mitigation.

Forest Plan Compliance

Soils and Hydrology: The LRMP states that management activities can occur in riparian areas. However, these activities will be compatible with the needs of the riparian dependent resources. Resource conflicts must be mitigated in favor of the dependent resources.

New construction and reconstruction of existing facilities can occur in a riparian zone only when unacceptable conflicts or impacts will be mitigated and riparian-dependent resources can be protected. Prevent detrimental changes to water quality, aquatic flora and fauna, and/or hydrophytic vegetation within these areas, and prevent adverse riparian area changes in water temperature, chemistry, sedimentation, and channel blockages, and riparian-dependent resources.

As discussed above, the channelization of the Main and West Fork San Dimas River under Alternative 2 leads to a significant adverse impact to water quality (temperature), channel morphology, floodplains, and riparian ecosystems and does not meet the direction of the Forest Plan. Alternatives 1, 3 and 4 would be in compliance.

Wildlife, Fish and TES Plants: The LRMP includes direction for riparian management. Before the fires there were 139 cabins on these tracts, over 70% of which were in floodplains or within riparian zones. While 22 of the 28 existing cabins lie within the floodplain or in the riparian zone, all new cabins would be located outside of these areas. However, as discussed above, Alternative 2 would not meet this direction, putting the Main Fork and West Forks of San Dimas in concrete channels. This action would eliminate these stretches as riparian habitat over the long-term.

Fuels Management: The Angeles National Forest Land and Resources Management Plan direction for fire and fuels management, and The Angeles National Forest Fire Management Plan designate full suppression action to control wildfires at 10 acres or less on 95% of all ignitions.

Recreation: The consistency review and site-specific analysis identified several issues where the recreational residence use is inconsistent with the Forest Plan and with the terms and conditions of the special use permit.

Alternative 4 would provide optimal recreation facilities and dispersed recreational opportunities, emphasizing areas currently unavailable or inaccessible to the public. The North Fork San Gabriel in particular has been identified as a high-use area, and is a Forest management priority. Riparian areas have also been identified as particularly popular and subject to heavy use. Management plans would be developed to address the consequences this level of use.

CHAPTER 4: CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, federal, state, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

Interdisciplinary Team Members:

San Gabriel River Ranger District: Marty Dumpis, District Ranger; Marti Johnston, Recreation Special Uses. T.E.A.M.S Enterprise Unit: Stephanie Gripne, Social and Economics; Betsy Hamann, Wildlife Biologist; Glen Lewis, Fuels; Bob Nykamp, IDT Leader; Carol Thornton, Soils and Hydrology; Kristin Whisennand, Writer and Editor. Angeles National Forest Supervisor's Office: George Farra, Assistant Forest Engineer.

Federal, State, and Local Agencies:

In July 1995 a Biological Assessment was prepared for short-term (5-years or less) permit issuance for about 300 recreation residence special use permits, SOME of which are in the project areas. In September of 1995, the Angeles National Forest received a letter from FWS concurring that issuing the permits would have no effect on federally listed species.

In July 2000 a Biological Assessment was prepared to reissue permits that were due to expire in December 2000. These permits were to be issued through 2008. The FWS has not responded to this BA as they are waiting for resolution of designation of critical habitat for Santa Ana sucker; scheduled to be done by February 2004 (B. Brown, Angeles Forest Biologist, personal communication).

On September 03, 2002 the Carlsbad Fish and Wildlife Service (FWS) Office was notified that a wildfire situation in the North Fork of the San Gabriel River has the potential to impact the Santa Ana Sucker, a federally threatened fish. This was followed by a field trip and fire updates. A Biological Assessment/Biological Evaluation prepared for the Curve fire in September 2002 and included the North Fork San Gabriel (NFSG) Recreation Residence Tract.

On September 24, 2002 the Carlsbad Fish and Wildlife Service (FWS) Office was notified that a wildfire situation in the East Fork of the San Gabriel River has the potential to impact the Santa Ana Sucker, a federally threatened fish. This was followed by fire updates. In October 2002 a Biological Assessment/Biological Evaluation prepared for the Williams fire and included the San Dimas Recreation Residence Tract.

Tribes:

Project-specific scoping resulted in one letter from the San Manuel Band of Serrano Mission Indians, who requested final recommendations. Semi-annual consultation meetings are also conducted, as well as the regular publishing of the Angeles National Forest Schedule of Proposed Actions. No other tribal comments or concerns were received as a result of this proposed project

APPENDIX A: LOT STATUS AND AVAILABILITY

Appendix A is a complete listing of all lots within each tract. The Main Fork of the San Dimas (MFSD) and the West Fork of the San Dimas (WFSD) tracts are shown as separate tracts. The North Fork of the San Gabriel (NFSG) tract has been subdivided into eight groupings: Gate 1, Gate 2, Gate 3, Gate 4 (also known as Upper Soldier Creek), Soldier Creek Walk-in, Below Lower Soldier Creek, Yucca Flats, and Roberts Curve. Each group of lots has associated tables tracking their status following the consistency review and site-specific analysis. The consistency review and site specific analysis followed the guidelines established by the Angeles National Forest Land and Resources Management Plan (LRMP) (1987), specifically those found under the Forestwide Standards and Guidelines, pp. 4-36 and 4-37; Rights of Way Program, p. 4-43; Recreation, pp. 4-46 and 4-47; Recreation Residences pp. 4-53 and 4-54; Transportation, pp. 4-55 through 4-59; and Riparian Areas, p. 3-34. Where there is discrepancy between the Forestwide Standards and Guidelines and the management area prescriptions, prescriptions will override except for the Riparian, Threatened and Endangered, and Cultural Standards and Guidelines (LRMP, p. 4-22).

The consistency review and the site specific analysis reviewed all lots within the three tracts, including those vacant at the time of the fires, those that burned, and lots with standing structures. Lot locations were obtained from plat maps located at the San Gabriel River Ranger District office. Consistency reviews were conducted following the fires in January and February 2003. Site visits were conducted after the flood events associated with the winter rains in February 2003, and again in July of 2003.

Vacant lots were examined for in-lieu status, to be made available to permittees who lost cabins in the fire and whose lots were considered unsuitable for rebuilding based on the findings of the consistency review and the site specific analysis. Vacant lots that had undergone flood events in the past, such as the 1938 flood, were considered unavailable for recreational residence use. Other vacant lots were considered unavailable due to administrative designations, such as campgrounds, gates, guard stations, etc. Several permittees who lost cabins in the fires have since relinquished their permits or had their permits terminated. These lots were classified as vacant lots for the purposes of review and analysis.

For Alternative 4, individual lots with standing structures were reviewed to determine if new term permits would best serve the current use of the area, or if unacceptable hazards exist to the user or public. For this project, the entire tract was analyzed to determine whether it is best serving the current and projected future use of the area, and consistent with maintaining the health, enjoyment, or well being of the permittee or the public (LRMP p. 4-47).

Of a total of 350 lots within the 3 tracts; 139 lots were removed via previous reviews, due to flooding, administrative use, access, etc; and 128 failed the current consistency review and site specific analysis, primarily due to riparian and floodplain considerations; leaving 83 available lots. Of these, available lots consist of: 35 burned lots, 28 lots with intact cabins, and 20 in-lieu lots. If Alternative 2 is selected, 3 of the currently occupied sites, lots 123, 127, and 136, would disappear after 2008, as the lots would not meet road access requirements, leaving 80 available lots after 2008.

With 28 of the available 83 lots occupied, there are 55 potential building sites; 26 in the NFSG, 28 in the MFSD and 1 in the WFSD. Of the 110 permitted cabins that burned, 31 permits have been relinquished or terminated, leaving a potential 79 permittees, and a deficit of 24 sites (permittees seeking building sites, vs. available number of sites). If these permit holders cannot be accommodated on their current lots under the alternatives, they may be offered in-lieu lots in other tracts, requiring a separate environmental analysis at the holders expense.

The lots are summarized in the following tables by the tract groupings defined in paragraph one, above.

Table 9: North Fork San Gabriel tract lot summary.

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
1	NA	Public recreation area - West Fork parking area	NA	?
2	NA	1938 flood; North Fork parking area	NA	?
3	NA	1938 flood: North Fork parking area	NA	?
1st Gate				
4	NA	1938 flood; public recreation area	NA	3
5	NA	1938 flood; public recreation area	NA	3
6	NA	1938 flood; public recreation area	NA	3
7	NA	1938 flood; public recreation area	NA	3
8	NA	1938 flood; public recreation area	NA	3
9	NA	1938 flood	NA	3
10	NA	1938 flood; intersected by road for access to lots 11-13	NA	3
11	Standing	River crossing	1-4	3
12	Standing	River crossing	1-4	3
13	Standing	River crossing; riparian zone	1-4	3
14	In-lieu	River crossing; road overgrown - 25% side canyon impact 1938 flood	2	3
15	In-lieu removed	River crossing; road overgrown - 15% side canyon impact 1938 flood; riparian zone	NA	3
2nd Gate				
16	NA	1938 flood	NA	4
17	NA	30 feet above river; no access to lot; riparian zone	NA	4
18	Standing	Outside of Curve fire; floodplain	1-4	4
19	In-lieu removed	Damaged in 38; lower 1/2 in floodplain; burned '59 or '60	NA	4
20	In-lieu removed	Burned in 1999 Bridge fire; lower half in floodplain	NA	4

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
21	Standing	Outside of Curve fire; stream crossing; bridge/culvert 1/2 way up access road	1-4	4
22	NA	Never developed; north of lot 21; no current road access	NA	4
23	NA	1938 flood	NA	4
24	NA	1938 flood	NA	4
25	NA	1938 flood	NA	4
26	NA	1938 flood	NA	4
27	NA	1938 flood	NA	4
28	NA	1938 flood	NA	5
29	NA	1938 flood	NA	5
30	NA	1938 flood	NA	5
31	NA	1938 flood	NA	5
32	NA	1938 flood	NA	5
33	In-lieu	Water crossing, burned in 1999 Bridge fire; on high spot	2	4
34	NA	1938 flood	NA	4
35	NA	1938 flood	NA	4
36	NA	1938 flood	NA	4
37	In-lieu	River crossing; burned in 1999 Bridge fire; retaining wall	2	5
38	Standing	Outside Curve fire; stream crossing; house in poor condition	1-4	5
39	Standing	Outside Curve fire; stream crossing	1-4	5
40	Standing	Outside Curve fire; stream crossing	1-4	5
3rd Gate				
41	NA	1938 flood	NA	5
42	NA	1938 flood	NA	5
43	NA	1938 flood	NA	5
44	NA	1938 flood	NA	5
45	NA	1938 flood	NA	5
46	NA	1938 flood	NA	6
47	NA	1938 flood	NA	6
48	NA	1938 flood	NA	5
49	NA	1938 flood	NA	5
50	NA	1938 flood	NA	5
51	NA	1938 flood	NA	6
52	NA	1938 flood	NA	7

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
53	NA	1938 flood	NA	7
54	NA	1938 flood	NA	7
55	NA	1938 flood	NA	7
56	NA	1938 flood	NA	7
57	NA	1938 flood	NA	7
58	Curve Fire	Footpath access; river footbridge missing	2	7
59	Curve Fire	Footpath access; river footbridge missing	2	7
60	NA	1938 flood	NA	7
61	NA	1938 flood	NA	7
62	NA	1938 flood	NA	7
63	NA	1938 flood	NA	7
64	Curve Fire	2/8/03 notes says 100% 1938 flood damage, rebuilt	2	7
65	Curve Fire	2/8/03 notes says 100% 1938 flood damage, rebuilt	2	7
66	NA	1938 flood	NA	7
67	NA	1938 flood	NA	7
68	Curve Fire	Dry site, 1st lot on the upper left	2	7
69	Curve Fire	Dry site, 2nd lot on the upper left	2	7
70	NA	1938 flood	NA	7
71	NA	1938 flood	NA	8
72	NA	1938 flood	NA	?
73	Curve Fire	Lot 73 accessed via bridge (washed out) over SGR	2	8
74	NA	1938 flood	NA	8
75	NA	1938 flood	NA	8
76	NA	1938 flood	NA	8
77	NA	1938 flood	NA	8
78	Curve Fire	Lots 78-86 road access - bridge (SGR) and water crossing (Bichota Ck.) Side tributary; flooding and debris flow; floodplain - removed	NA	8
79	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.)	2	8
80	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003.	2	8
81	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.) Side tributary; flooding and debris flow; floodplain - removed	NA	8

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
82	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003.	2	8
83	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003.	2	8
84	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003.	2	8
85	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003.	2	8
86	In-lieu	Vacant; road access - bridge (SGR) and water crossing (Bichota Ck.)	2	8
87	Curve Fire	Lots 87-91 trail access off road - Bridge (SGR) and water crossing (Bichota Ck.); floodplain - removed	NA	8
88	Curve Fire	Bridge (SGR) and water crossing (Bichota Ck.). Permit relinquished 2003; floodplain - removed	NA	8
89	In-lieu	Vacant; trail access off road - Bridge (SGR) and water crossing (Bichota Ck.)	2	8
90	Curve Fire	Lots 87-91 trail access off road - Bridge (SGR) and water crossing (Bichota Ck.)	2	8
91	In-lieu	Vacant; trail access off road - Bridge (SGR) and water crossing (Bichota Ck.)	2	8
Flood Removal of Access				
92	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	8
93	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	8
94	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	8
95	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	8
96	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	8
97	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
98	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
99	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
100	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
101	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
102	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
103	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
104	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
105	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
106	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
107	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
108	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
109	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
110	NA	Northern portion of Bichota Mesa area. Access removed after 1938 flood	NA	9
Administrative Removal				
111	NA	Coldbrook Campground - administrative site	NA	11
Below Lower Soldier Creek				
112	NA	1938 flood; between 115-117 and Coldbrook Campground	NA	11
113	NA	1938 flood; between 115-117 and Coldbrook Campground	NA	11
114	NA	1938 flood; between 115-117 and Coldbrook Campground	NA	11
115	Curve Fire	South side Hwy 39, walk-in access, Soldier Creek; floodplain - removed	NA	12
116	Curve Fire	Walk-in access, Soldier Creek. Permit terminated 2003; riparian zone - removed	NA	12
117	Curve Fire	Walk-in access, Soldier Creek. Permit relinquished 2003; floodplain -removed	NA	12
118	NA	Rockbound Creek, north of Hwy 39. Access removed after 1938 flood	NA	12
119	NA	Rockbound Creek, north of Hwy 39. Access removed after 1938 flood	NA	12
120	NA	1938 flood; NW of 115-117 on Soldier Creek	NA	13
121	NA	1938 flood; NW of 115-117 on Soldier Creek	NA	13
Soldier Creek Walk-in				
122	Curve Fire	Lower Soldier Creek; Curve fire. Permit relinquished 2003; floodplain - removed	NA	13

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
*123	Standing	Lower Soldier Creek walk-in; floodplain	1-4	13
124	In-lieu removed	Burned July 2003 - electrical fire; floodplain	NA	13
125	NA	Lower Soldier Creek, 1938 flood	NA	13
126	NA	Lower Soldier Creek, 1938 flood	NA	13
*127	Standing	Lower Soldier Creek walk-in, used as primary residence; riparian zone	1-4	13
128	Curve Fire	Lower Soldier Creek walk-in; riparian zone - removed	NA	13
129	Curve Fire	Lower Soldier Creek walk-in; floodplain - removed	NA	13
130	Curve Fire	Permit relinquished 2003; floodplain - removed	NA	13
131	NA	Lower Soldier Creek, 1938 flood	NA	13
132	Curve Fire	Lower Soldier Creek walk-in; floodplain - removed	NA	13
133	Curve Fire	Permit relinquished 2003; floodplain - removed	NA	14
134	Curve Fire	Lower Soldier Creek walk-in; floodplain - removed	NA	14
135	Curve Fire	Lower Soldier Creek walk-in; floodplain - removed	NA	14
*136	Standing	Lower Soldier Creek walk-in; floodplain	1-4	14
137	NA	Lower Soldier Creek, 1938 flood	NA	13
138	NA	Vacant, not available; floodplain	NA	13
139	Curve Fire	Permit relinquished 2003; floodplain - removed	NA	13
140	Curve Fire	Lower Soldier Creek walk-in; floodplain - removed	NA	14
141	NA	Lower Soldier Creek, 1938 flood	NA	14
142	Curve Fire	Permit terminated 2003. Flooding and debris flow from unnamed tributary; floodplain - removed	NA	14
143	NA	1938 flood. Upper Soldier Creek walk-in.	NA	14
144	Curve Fire	Upper Soldier Creek walk-in; floodplain - removed	NA	14
145	NA	Never developed per 1938-flood assessment. Upper Soldier Creek walk-in.	NA	14
146	Curve Fire	Upper Soldier Creek walk-in; riparian zone - removed	NA	14
147	NA	Never developed per 1938-flood assessment. Upper Soldier Creek walk-in.	NA	14

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
4th Gate - Upper Soldier Creek Road Spur Access				
148	Curve Fire	Upper Soldier Creek walk-in; floodplain - removed	NA	14
149	Curve Fire	Permit relinquished 2003; Side channel flooding and debris flow; floodplain - removed	NA	14
150	Curve Fire	Upper Soldier Creek; w/in 150 feet of narrow access road accessed off Hwy 39, Gate 4	2	14
151	Curve Fire	Upper Soldier Creek; w/in 150 feet of narrow access road accessed off Hwy 39, Gate 4	2	14
152	Curve Fire	Upper Soldier Creek; w/in 150 feet of narrow access road accessed off Hwy 39, Gate 4	2	14
Administrative Removal				
153	NA	Never developed per 1938 flood assessment	NA	14
154	NA	Falling Springs Resort - heavily saturated springs area, previously developed, now in ruins	NA	13
Roberts Curve				
155	Curve Fire	Hwy 39 access at Roberts Curve/Johnson Corner	2-3	14
156	Curve Fire	Hwy 39 access at Roberts Curve/Johnson Corner	2-3	14
157	Curve Fire	Hwy 39 access at Roberts Curve/Johnson Corner	2-3	14
Yucca Flats				
158	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15
159	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15
160	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15
161	Standing	Built on spring deposits, saturated ground, flooding from peak flows; used as primary residence; w/in 150 ' Hwy 39	1-4	15
162	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15
163	Curve Fire	High water table due to spring; flooding from peak flows; permit relinquished 2003 - removed	NA	15
164	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15
165	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15

Lot #	Status	North Fork San Gabriel comments	ALT	Plat #
166	Curve Fire	Concentration of spring deposits, saturated ground; flooding from peak flows; removed	NA	15

Table 10: Main Fork San Dimas tract lot summary.

Lot #	Status	Main Fork San Dimas comments	ALT	Plat #
1	NA	1938 flood	NA	4
2	Williams Wildfire	Stream crossing	2	1
3	Williams Wildfire	Permit revoked 2003	2	1
4	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
5	Williams Wildfire	Permit revoked 2003 - available in-lieu	2	1
6	Williams Wildfire	Permit revoked 2003 - available in-lieu	2	1
7	In-lieu	Vacated 1966; good access	2-3	1
8	NA	Old guard station site	NA	1
9	NA	75% flooded in 38 - side channel; riparian zone	NA	2
10	In-lieu removed	Alluvial fan; debris flow problems; riparian zone	NA	2
11	In-lieu removed	Alluvial fan; debris flow problems; riparian zone	NA	2
12	Williams Wildfire	Alluvial fan; debris flow problems; floodplain - removed	NA	2
13	NA	Not designated	NA	
14	Williams Wildfire	Floodplain, stream crossing - removed	NA	3
15	Williams Wildfire	Riparian zone, stream crossing - removed	NA	3
16	NA	1938 flood	NA	3
17	NA	1938 flood	NA	3
18	NA	1938 flood	NA	3
19	NA	1938 flood	NA	3
20	NA	1938 flood	NA	3
21	Standing	Debris flow; at risk; floodplain	1-4	3
22	NA	Never designated on the ground	NA	
23	In-lieu removed	Permit terminated 1962; requires right-of-way	NA	3
24	In-lieu removed	Permit terminated 1973; requires right-of-way	NA	4
25	NA	Never designated on the ground	NA	
26	Standing	GPSed from lower steps, moved in GIS edit; requires r-o-w	1-4	4
27	In-lieu removed	Permit terminated 1972; requires right of way	NA	4
28	In-lieu removed	Permit terminated 1962; requires right-of-way	NA	4
29	In-lieu removed	Combined with Lot 30 in 1938; removed 2001; requires r-o-w	NA	4
30	In-lieu removed	Combined with Lot 29 in 1938; removed 2001; requires r-o-w	NA	4
31	Williams Wildfire	Riparian zone, stream crossing - removed	NA	3

Lot #	Status	Main Fork San Dimas comments	ALT	Plat #
32	NA	Never designated on the ground	NA	
33	Standing	Good road access; debris flow; at risk; riparian zone	1-4	1
34	NA	1938 flood	NA	2
35	Standing	No GPS cover, added to GIS; floodplain	1-4	3
36	NA	1938 flood	NA	3
37	Williams Wildfire	Floodplain, stream crossing - removed	NA	3
38	In-lieu removed	Permit terminated 1962; floodplain, stream crossing	NA	3
39	NA	1938 flood	NA	3
40	Williams Wildfire	Floodplain, stream crossing - removed	NA	3
41	Williams Wildfire	Stream crossing	2	1
42	In-lieu	Stream crossing	2	1
43	NA	Permit revoked in '61 per 50% destruction clause; floodplain	NA	5
44	NA	1938 flood	NA	3
45	Williams Wildfire	GPSed wrong lot; moved in GIS edit; floodplain - removed	NA	3
46	Williams Wildfire	Could not get GPS data; added in GIS edit; requires right-of-way; floodplain - removed	NA	4
47	Williams Wildfire	Permit revoked 2003; requires r-o-w; floodplain - removed	NA	4
48	In-lieu removed	Permit terminated 1963; requires right-of-way; floodplain	NA	4
49	NA	Permit revoked in '62; floodplain	NA	5
50	NA	Permit revoked in 2002; floodplain	NA	5
51	NA	Commercial lot; floodplain	NA	5
52	Williams Wildfire	Could not get GPS data; added in GIS edit; requires r-o-w; floodplain - removed	NA	4
53	In-lieu removed	Permit terminated 1962; requires right-of-way; floodplain	NA	4
54	In-lieu removed	Permit terminated 1963; floodplain	NA	2
55	Williams Wildfire	Stream crossing	2	2
56	Williams Wildfire	Riparian zone, stream crossing - removed	NA	2
57	Williams Wildfire	Alluvial fan and debris flow problems; riparian zone - removed	NA	2
58	Williams Wildfire	Alluvial fan and debris flow problems; riparian zone - removed	NA	2
59	Williams Wildfire	Permit revoked 2003; riparian zone - removed	NA	2
60	Williams Wildfire	Permit revoked 2003	2	2
61	Williams Wildfire	Stream crossing	2	2
62	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	2
63	Williams Wildfire	Stream crossing	2	2
64	Williams Wildfire	Stream crossing	2	2
65	Williams Wildfire	Stream crossing	2	2
66	Williams Wildfire	Stream crossing	2	2

Lot #	Status	Main Fork San Dimas comments	ALT	Plat #
67	Standing	Year-around use? Debris flow; at risk	1-4	2
68	Williams Wildfire	Permit revoked 2003; riparian zone - removed	NA	2
69	Williams Wildfire	Riparian zone, stream crossing - removed	NA	2
70	NA	1938 flood	NA	2
71	Williams Wildfire	Riparian zone, stream crossing - removed	NA	1
72	Williams Wildfire	Riparian zone, stream crossing - removed	NA	1
73	Williams Wildfire	Riparian zone, stream crossing - removed	NA	1
74	In-lieu removed	Permit terminated 1969; riparian zone	NA	1
75	In-lieu removed	Permit terminated 1971; riparian zone	NA	1
76	In-lieu removed	Permit terminated 1970; site of current San Dimas 1st gate; riparian zone	NA	1
77	In-lieu removed	Permit terminated 1970; riparian zone	NA	2
78	NA	1938 flood	NA	4
79	NA	1938 flood	NA	3
80	NA	1938 flood	NA	3
81	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	2
82	NA	1938 flood	NA	4
83	NA	1938 flood	NA	4
84	In-lieu	Good road access	2-3	1
85	Williams Wildfire	Good road access	2-3	1
86	NA	Vacant, not available; floodplain	NA	5
87	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	2
88	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
89	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
90	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
91	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
92	Williams Wildfire	Permit revoked 2003	2	1
93	Williams Wildfire	Permit revoked 2003	2	1
94	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1
95	In-lieu	Location uncertain; not GPSed, added in GIS edit	2	1

Table 11: West Fork San Dimas tract lot summary.

Lot #	Status	West Fork San Dimas comments	ALT	Plat #
1	In-lieu removed	Only garage burned - no house on site. Riparian zone.	NA	1
2	Williams Wildfire	Riparian zone - removed	NA	1
3	NA	1938 flood	NA	1

Lot #	Status	West Fork San Dimas comments	ALT	Plat #
4	Williams Wildfire	May be side channel/debris; riparian zone - removed	NA	1
5	Williams Wildfire	May be side channel/debris; riparian zone - removed	NA	1
6	Williams Wildfire	Permit terminated 2003; riparian zone - removed	NA	1
7	Williams Wildfire	Permit terminated 2003; riparian zone - removed	NA	1
8	Standing	Riparian zone	1-4	1
9	NA	1938 Flood	NA	1
10	Standing	Riparian zone. Debris flow; at risk	1-4	1
11	NA	Vacant; debris slide	NA	2
12	Williams Wildfire	Fan to south; riparian zone - removed	NA	2
13	In-lieu removed	Floodplain	NA	2
14	In-lieu removed	Riparian zone	NA	2
15	Williams Wildfire	Debris flow; riparian zone - removed	NA	2
16	Williams Wildfire	Debris flows from side channel; riparian zone - removed	NA	2
17	In-lieu removed	Riparian zone	NA	2
18	NA	1938 Flood	NA	2
19	In-lieu removed	Riparian zone	NA	2
20	Williams Wildfire	Riparian zone - removed	NA	2
21	Williams Wildfire	Side channel eroding around rock work on site but not at cabin; riparian zone - removed	NA	2
22	Williams Wildfire	Permit relinquished 2003; riparian zone - removed	NA	2
23	In-lieu removed	Riparian zone	NA	2
24	Standing	Riparian zone. Full-time permit; not GPSed, added in GIS edit	1-4	2
25	In-lieu removed	Riparian zone	NA	2
26	In-lieu removed	Riparian zone	NA	3
27	NA	1938 Flood	NA	3
28	Standing	Full-time permit; lots of mass wasting, could be dry ravel not debris flow; riparian zone	1-4	3
29	NA	1938 Flood	NA	3
30	Williams Wildfire	Riparian zone - removed	NA	3
31	In-lieu removed	Side drainage w/debris; riparian zone	NA	3
32	In-lieu removed	Riparian zone - burned in 1961	NA	3
33	NA	1938 Flood	NA	3
34	Williams Wildfire	Riparian zone - removed	NA	1
35	Williams Wildfire	Riparian zone - removed	NA	1
36	In-lieu removed	Riparian zone	NA	1
37	Williams Wildfire	Floodplain - removed	NA	2
38	NA	Never designated	NA	None

Lot #	Status	West Fork San Dimas comments	ALT	Plat #
39	NA	Never designated	NA	None
40	NA	Never designated	NA	None
41	In-lieu removed	Riparian zone	NA	1
42	NA	1938 Flood	NA	1
43	In-lieu removed	Riparian zone	NA	1
44	Williams Wildfire	Riparian zone - removed	NA	1
45	Standing	Floodplain; side channel	1-4	1
46	In-lieu removed	Riparian zone	NA	1
47	In-lieu removed	Debris flow; riparian zone	NA	1
48	In-lieu removed	Floodplain	NA	2
49	Standing	Riparian zone; side channel impacts	1-4	2
50	In-lieu removed	Riparian zone	NA	2
51	Standing	Full-time permit; debris flow; floodplain	1-4	2
52	Standing	Debris flow; at risk	1-4	2
53	Standing	Side channel causing problems with culvert at road	1-4	2
54	In-lieu	Vacant; erosion	2	2
55	Williams Wildfire	Riparian concerns - removed	NA	2
56	Standing	At risk; retaining wall next to cabin for sediment control from side channel	1-4	3
57	Williams Wildfire	Side channel w/ debris - removed	NA	3
58	Williams Wildfire	Side channel w/ debris - removed	NA	3
59	In-lieu removed	Riparian concerns	NA	3
60	Williams Wildfire	Side drainage thru part of lot; permit terminated 2003; floodplain -removed	NA	3
61	NA	Permit canceled 1957; water tank site.	NA	3
62	In-lieu removed	Side drainage thru part of lot; no GPS coverage; riparian zone	NA	3
63	In-lieu removed	Debris flow; using barriers; standing structure removed 9/15/03; riparian zone	1-4	3
64	In-lieu removed	Riparian zone	NA	4
65	In-lieu removed	Majority of lot covered by sediment - permit revoked 1961; riparian zone	NA	4
66	NA	Vacant, past gate, in San Dimas Experimental Forest	NA	4
67	NA	Vacant, past gate, in San Dimas Experimental Forest	NA	4
68	In-lieu removed	Floodplain	NA	3
69	In-lieu removed	Floodplain	NA	4
70	Williams Wildfire	Riparian zone - removed	NA	1
71	NA	1938 Flood	NA	3

Lot #	Status	West Fork San Dimas comments	ALT	Plat #
72	In-lieu removed	Riparian zone	NA	1
73	Williams Wildfire	Floodplain - removed	NA	4
74	NA	1938 Flood	NA	4
75	In-lieu removed	Riparian zone	NA	3
76	In-lieu removed	Tunneled site; debris flow from unnamed tributary; floodplain	NA	4
77	In-lieu removed	Riparian zone	NA	3
78	NA	1938 Flood	NA	3
79	In-lieu removed	Riparian zone	NA	3
80	Standing	Riparian zone	1-4	2
81	NA	1938 flood; lot in ephemeral side channel	NA	3
82	In-lieu removed	Floodplain	NA	2
83	Williams Wildfire	Riparian zone - removed	NA	2
84	In-lieu removed	Floodplain	NA	3
85	Williams Wildfire	Riparian zone - removed	NA	2
86	In-lieu removed	Riparian zone	NA	2
87	Williams Wildfire	Permit terminated 2003; debris flow from unnamed tributary; floodplain - removed	NA	3
88	Williams Wildfire	Permit terminated 2003; riparian zone - removed	NA	4
89	In-lieu removed	Riparian zone	NA	2

APPENDIX B: RESPONSE TO SCOPING ISSUES

The proposed action and purpose and need were mailed to 650 individuals, groups, organization, and other governmental agencies on February 16, 2003. The Notice of Proposed Action was published in the Legal Notices section of the Los Angeles Times on February 20, 2003. The Notice of Proposed Action was also published in the Legal Notices section of the San Gabriel Valley Tribune on February 24, 2003.

The following five (5) comments were received:

1. Western Land Exchange Project
P.O. Box 95545
Seattle, WA 98145-2545

“In short, we believe that regardless of whether it would comply with the Forest Plan, permitting the reconstruction of these residences would be entirely counter to common sense.”

Significant Issue 1: Don’t rebuild the recreation residences.

2. Mike Graves
2205 N. Valley Street
Burbank, CA 91505

“I agree with a proposed action that provides for rebuilding recreation cabins, as that purpose and need should be recognized.”

Nonsignificant Issue: Allow rebuilding and issue new 20-year permits. (Already addressed by the proposed action)

3. Southern California Association of Governments
Main Office
818 West Seventh Street
12th Floor
Los Angeles, CA 90017-3435

“We have reviewed the Recreation Residence Rebuilding and the Issuance of New 20-Year Permits, and have determined that the proposed project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality ACT (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time.”

No Issue

4. San Manuel Band of Mission Indians
Environmental Protection Department
P.O. Box 266
Patton, CA 92369

“That is why I am requesting that you forward to me the recommendations submitted by the San Bernardino County Archaeological Information center for review by our office.”

No Issue

5. San Gabriel Valley Tribune
Editorial Opinion
Sunday, March 23, 2003

“Unless legally protected, homes on federal land that burned should not be rebuilt, but rather this area should become restored habitat. However, the Cabin User Fee Fairness Act of 2000 protects the use of recreational cabins on National Forest Land. Whether specific plots are covered is questionable. And in the case of the cabins lost in the Curve and Williams fires in the Angeles National Forest, any new residences will have to follow county building codes. While devastating to forest residents – many had turned the recreational structures into year-round homes and are now without permanent housing – nature has given the Forest Service both the means and time to reassess whether permanent housing ought to be allowed.”

Significant Issue 2: Don’t rebuild the recreation residences and the tracts should become restored habitat.

Nonsignificant Issue: If any residences are rebuilt, they will have to follow county building codes. (Already addressed by the proposed action).

Nonsignificant Issue: Assess whether permanent housing ought to be allowed. (Outside the scope of the proposed action).

The following issues were identified internally:

Significant Issue 3: Cost of meeting all codes are too expensive, especially the cost of building roads to county fire codes.

Nonsignificant Issue: Allow rebuilding without meeting all county codes. (Outside the scope of the proposed action).

Nonsignificant Issue: Let cabin owners assume the liability and risk of rebuilding in the National Forest. (Outside the scope of the proposed action).

APPENDIX C: TRANSPORTATION MANAGEMENT GUIDELINES

Table 12: Traffic service level definitions.

	Level A	Level B	Level C	Level D
Flow	Free flowing with adequate parking facilities.	Congested during heavy traffic such as during peak logging or recreation activities.	Interrupted by limited passing facilities, or slowed by the road condition.	Flow is slow or may be blocked by an activity. Two way traffic is difficult and may require backing to pass.
Volumes	Uncontrolled; will accommodate the expected traffic volumes.	Occasionally controlled during heavy use periods.	Erratic; frequently controlled as the capacity is reached.	Intermittent and usually controlled. Volume is limited to that associated with the single purpose.
Vehicle Types	Mixed; includes the critical vehicle and all vehicles normally found on public roads.	Mixed; includes the critical vehicle and all vehicles normally found on public roads.	Controlled mix; accommodates all vehicle types including the critical vehicle. Some use may be controlled to vehicle types.	Single use; not designed for mixed traffic. Some vehicles may not be able to negotiate. Concurrent use traffic is restricted.
Critical Vehicle	Clearances are adequate to allow free travel. Overload permits are required.	Traffic controls needed where clearances are marginal. Overload permits are required	Special provisions may be needed. Some vehicles will have difficulty negotiating some segments.	Some vehicles may not be able to negotiate. Loads may have to be off-loaded and walked in.
Safety	Safety features are a part of the design.	High priority in design. Some protection is accomplished by traffic management.	Most protection is provided by management.	The need for protection is minimized by low speeds and strict traffic controls.
Traffic Management	Normally limited to regulatory, warning, and guide signs and permits	Employed to reduce traffic volume and conflicts.	Traffic controls are frequently needed during periods of high use by the dominant resource activity.	Used to discourage or prohibit traffic other than that associated with the single purpose.
User Costs	Minimize; transportation efficiency is important.	Generally higher than "A" because of slower speeds and increased delays.	Not important; efficiency of travel may be traded for lower construction costs.	Not considered.
Alignment	Design speeds is the predominant factor within feasible topographic limitations.	Influenced more strongly by topography than by speed and efficiency.	Generally dictated by topographic features and environmental factors. Design speeds are generally low.	Dictated by topography, environmental factors, and the design and critical vehicle limitations. Speed is not important.

Road Surface	Stable and smooth with little or no dust, considering the normal season of use.	Stable for the predominant traffic for the normal use season. Periodic dust control for heavy use or environmental reasons. Smoothness is commensurate with the design speed.	May not be stable under all traffic or weather conditions during the normal use season. Surface rutting, roughness, and dust may be present, but controlled for environmental or investment protection.	Rough and irregular. Travel with low clearance vehicles is difficult. Stable during dry conditions. Rutting and dusting controlled only for soil and water protection.
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Table 13: General relationship among maintenance levels.

PARAMETERS	MAINTENANCE LEVEL				
	Level 1	Level 2	Level 3	Level 4	Level 5
Service Life	Intermittent Service-Closed Status	Constant Service or Intermittent Service - Open Status (Some uses may be restricted under 36 CFR 261.50)			
Traffic Type	Open for non-motorized uses. Closed to motorized traffic.	Administrative, permitted, dispersed recreation, specialized, commercial haul.	All National Forest Traffic - General Use, Commercial Haul		
Vehicle Type	Closed-N/A	High clearance, pick-up, 4x4, log trucks, etc.	All types - passenger cars to large commercial vehicles		
Traffic Volume	Closed-N/A	Traffic volume increases with maintenance level			
Typical Surface	All types	None, Native, or Aggregate -- may be dust abated	Aggregate -- usually dust abated; paved		
Travel Speed	Closed-N/A	Travel speed increases with maintenance level			
User Comfort and Convenience	Closed-N/A	Not a consideration	Low Priority	Moderate Priority	High Priority
Functional Classification	All Types	Local Collector	Local Collector Arterial	Local Collector Arterial	Local Collector Arterial
Traffic Service Level	Closed-N/A	D	A, B, C -- Traffic service level increases with maintenance level		
Traffic Management Strategy	Prohibit or Eliminate	Discourage or Prohibit cars. Accept or Discourage high clearance vehicles.	Encourage, Accept	Encourage	Encourage

NOTE: *FSH 7709.58 - Transportation System Maintenance Handbook WO Amendment 7709.58-92-1 effective 9/4/92

Table 14: Transportation system maintenance prescription guidelines.

Type of Activity	Code	Guidelines Level 1	Guidelines Level 2	Guidelines Level 3	Guidelines Level 4	Guidelines Level 5
General	0000	As needed.	As needed.	As needed.	As needed.	As needed.
Traveled Way	1000	Generally no work required.	Log out and brush as necessary to provide passage for planned traffic. Maintain road prism to provide for passage of high clearance vehicles.	Maintain surface to provide travel by prudent driver in standard passenger cars. Some surface roughness is tolerated. User comfort and convenience is a low priority. Maintain traveled way crown or cross slope to provide adequate drainage. Replace base course and surfacing as needed.	Maintain traveled way to provide for a moderate degree of user comfort and convenience and for protection of investment and resource values. Replace surfacing to depth required for blade maintenance and to prevent wear of the base course. Abate dust when needed.	Maintain surface to provide for protection of investment and resource values, and for a high degree of user comfort and convenience.
Shoulder	2000	Generally no work required.	Maintain only as necessary for planned traffic.	Maintain existing shoulders commensurate with traveled way.	Same as Level 3.	Maintain to the same standard as the traveled way.
Drainage	3000	As necessary to keep drainage facilities functional and prevent unacceptable environmental damage.	Same as Level 1.	Same as Level 1.	Same as Level 1.	Same as Level 1.
Roadway	4000	Perform only that work needed to facilitate restoration of the roadway for future use and to alleviate erosion or sedimentation on or from roadway or roadsides. Normally defer removal of brush and trees from the roadway. Vehicle traffic is not a consideration.	Manage vegetative cover as needed for planned traffic. Remove and/or repair slides and/or slumps as needed for access with high clearance vehicles to control resource damage.	Maintain existing vegetative cover. Control vegetation to provide sight distance. Repair and/or remove slides and slumps to provide passage by prudent drivers in standard passenger cars.	Same as Level 3.	Same as Level 3.
Roadside	5000	Generally no	Generally no work	Remove hazard	Clean up litter in	Same as Level 4.

Type of Activity	Code	Guidelines Level 1	Guidelines Level 2	Guidelines Level 3	Guidelines Level 4	Guidelines Level 5
		work required.	required.	trees and clean up litter.	accordance with road management objectives. Remove hazard trees and perform landscape treatment as required.	
Structure	6000	Inspect and repair only those items which cannot be deferred, and that are necessary to protect investment and preserve structural integrity.	Maintain all structures to provide for the passage of planned traffic.	Maintain all structures to provide for passage of planned traffic and preserve structure for future use. Defer noncritical items and combine to provide for more economical project. For example, defective bridge rails, running planks, and bridge guide posts on a current basis. Defer painting of bridge rails to a logical project cycle.	Same as Level 3.	Same as Level 3.
Traffic Service	7000	Ensure that physical closure devices and/or appropriate signing are in place and functional at the road entrance. Defer maintenance of signs within the closure until the road is opened. Correct deferred items prior to open opening the road to traffic.	Install and maintain route markers; warning, regulatory, and guide signs; and other traffic control devices to provide for planned traffic and appropriate traffic management strategy.	Install and maintain route markers; warning, regulatory and guide signs; and other traffic devices to provide for planned traffic.	Same as Level 3.	SIGNS --Same as Level 3. MARKINGS —Renew centerlines, edge stripes, and other pavement and curb markings as needed to provide for planned traffic.

NOTE: *FSH 7709.58 - Transportation System Maintenance Handbook WO Amendment 7709.58-92-1, effective 9/4/92

APPENDIX D: FOREST PLAN STANDARDS AND GUIDELINES

LRMP, Forest Wide Standards and Guidelines (chapter and page number listed after Standard and Guideline):

General Guidelines for Riparian Areas

Management activities can occur in riparian areas. However, these activities will be compatible with the needs of the riparian dependent resources. Resource conflicts must be mitigated in favor of the dependent resources. 4-55

Construction and reconstruction of existing facilities can occur in a riparian zone only when any unacceptable conflicts or impacts will be mitigated and riparian-dependent resources can be protected. 4-55

Prevent detrimental changes to water quality, aquatic flora and fauna, and/or hydrophytic vegetation within these areas, and adverse riparian area changes in water temperature, chemistry, sedimentation, and channel blockages, and riparian-dependent resources. 4-55

Any activities shall not result in more than 30% reduction in the potential ground cover vegetation at any given time. 4-55

Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water. This area shall correspond to at least the recognizable area dominated by riparian vegetation. 4-55

A secondary zone of potential riparian vegetation has been identified in association with intermittent streams. This secondary zone will be considered "riparian" until such time as field investigation has shown that on-site conditions do not warrant management under these Standards and Guidelines. 4-55

Floodplain Management

Avoid to the extent possible adverse impact associated with the occupancy and modification of floodplains. Avoid or mitigate development on floodplains wherever there is a practical alternative. 4-57

Avoid or mitigate adverse environmental impacts of any floodplain development. 4-57

Streamside Protection

Maintain a permanent vegetative cover to protect streambanks and aquatic resources, where practical. 4-58

Emphasize retention of dead and down woody material for instream stabilization and fish and wildlife habitat maintenance and enhancement. 4-58

Design road and motorized trail crossings and alignments within riparian zones so that the minimum possible area is affected. 4-58

In areas where streambanks or channels exhibit excessive erosion or are otherwise damaged by overuse or other unnatural factors, actions will be taken to reinforce or otherwise stabilize such areas to return the bank to a near natural and stable state. 4-58

Water Quality

BMPs will be implemented to meet water quality objectives and maintain and improve the quality of surface water on the Forest. 4-60

Recreation

Management plans will be developed for heavily used riparian areas. These plans will establish human use capacity and development capability based upon critical environmental factors specific to the area. Current high use areas include San Gabriel Canyon. 4-57

When no alternative exists for locating outside of the 100-year floodplain, appropriate mitigation and flood protection measures will be taken. 4-58

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