

CORONADO NATIONAL FOREST

PINALEÑO MOUNTAINS

ECOSYSTEM MANAGEMENT AREA

Transportation Analysis Plan



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References

- Coronado National Forest, Forest Level Roads Analysis Report, January 13, 2003.
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Introduction

This Transportation Analysis Plan (TAP) was originally completed January 2008 and revised in November 2009. As conditions and needs change or if omissions are discovered this TAP should be reviewed and updated and is the reason for this revision.

Travel planning in the Forest Service was traditionally split between the engineering program for road management and the recreation program for trails management. A recently revised federal regulation now combines the analysis of the motorized use of trails and roads under the travel analysis process. This process is intended to identify opportunities for the Coronado National Forest transportation system to meet current and future management objectives, and to provide information that allows integration of ecological, social, and economic concerns into future decisions. This report is tailored to local situations and site conditions as identified by forest staffs and collaborated with public input. The outcome of this analysis is a set of recommendations for the forest transportation system. A thorough Travel Analysis supports subsequent National Environmental Policy Act (NEPA) process, allowing individual projects to be more site-specific and focused, while still addressing cumulative impacts.

On January 12, 2001, the Forest Service issued the final National Forest System Road Management Rule. This rule revised regulations concerning the management, use, and maintenance of the National Forest Transportation System. The final rule is intended to help ensure that additions to the National Forest System road network are essential for resource management and use; that construction, reconstruction, and maintenance of roads minimize adverse environmental impacts; that unneeded roads are decommissioned; and that restoration of ecological processes is initiated.

This Ecosystem Management Area level Transportation Analysis Plan (TAP) addresses existing open National Forest System Roads (NFSR) as well as non-system roads located in the Pinaleno Mountains Ecosystem Management Area. This Transportation Analysis is not a NEPA document but supports NEPA Planning. It is an integrated approach to transportation planning, addressing both existing and future roads. Code of Federal Regulations Title 36 Part 212.5 Road System Management, requires that the forest identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands.

The Transportation Analysis process is described in Report FS-643, Roads Analysis: *Informing Decisions About Managing the National Forest Transportation System*. The Transportation Analysis requirements for Forest, Area, Watershed and Project Scale are described in *FSM 7700 - Transportation System: Chapter 7710 - Transportation Atlas, Records, and Analysis*; also see Interim Directives that may be policy at the time of the report. Below is the link to the complete FSM 7700 - Transportation System.
<http://fsweb.wo.fs.fed.us/directives/fsm/7700/7710.rtf>

Objectives

The objective of this analysis is to provide the Forest Service Line Officer with critical information to ensure that existing and future road systems are safe and responsive to public needs and desires, are affordable and efficiently managed, have minimal negative ecological effects on the land, are in balance with available funding for needed management actions, and are consistent with road management objectives FSM 7712.5. This analysis will not change or modify any existing NEPA decisions, but information generated by this analysis might cause the line officer to reconsider, and perhaps at some future date revise previous NEPA decisions.

Transportation Analysis Overview

This analysis is intended to identify changes to the national forest transportation system that may be needed to meet current or future management objectives. The process is intended to complement, rather than replace or preempt, other planning and decision processes.

Six Step Process

The analysis process is a six-step progression, regardless of scale, customized to local situations; landscape and site conditions coupled with public issues, forest plan land allocations, and management constraints. The process provides a set of possible road-related issues and analysis questions. Only those relevant questions and any additional suggestions on information needs and research findings that might apply to the project need to be addressed. The six steps are:

- Step 1. Setting up the Analysis
- Step 2. Describing the Situation
- Step 3. Identifying Issues
- Step 4. Assessing Benefits, Problems and Risks
- Step 5. Describing Opportunities and Setting Priorities
- Step 6. Reporting

The amount of time and effort spent on each step differs by the complexity of the issues, specific situations and available information particular to the project. Details about these steps can be found in FS-643 titled *Roads Analysis: Informing Decisions about Managing the National Forest Transportation System*.

Transportation Analysis Products

This report is a product of the analysis process and documents the information and analyses used to identify opportunities and priorities for future national forest road and motorized trail systems (where applicable). Included in this report is a transportation map displaying the existing/recommended road system and where applicable the existing/recommended motorized trail system and the needs and/or recommendations for each. This report will:

- Identify needed and unneeded roads;
- Identify road related social, environmental and public safety risks;
- Identify site-specific priorities and opportunities for road improvements and decommissioning;
- Identify areas of special sensitivity or any unique resource values.

This report will help managers address questions on road access related to ecosystem health and sustainability, commodity extraction, recreation, social and cultural values, and administrative uses.

This report may help to inform future management decisions on the merits and risks of building new roads; relocating, upgrading, or decommissioning existing roads; managing traffic; and enhancing, reducing, or discontinuing road maintenance. This analysis is based upon:

- Use of the best available scientific information;
- Economics;
- Social and economic costs and benefits of roads; and
- Contribution of existing and proposed roads to management objectives.
- Input from resource specialists

Step 1 – Setting Up the Analysis

Purpose, Scope and Objectives:

The purpose of the project is to identify the minimum road system needed to administer and utilize National Forest System (NFS) resources within budget constraints. This TAP will support the Forest Plan.

The scope of this analysis includes the area bounded by the Pinaleño Mountain Ecosystem Management Area on the Safford Ranger District. This is an Ecosystem Management Area level TAP with boundaries indicated on the map in Appendix F. A complete inventory of user-created routes is not required in order to complete a TAP. However, new routes are continually being created during the inventory process and therefore this report will only reflect user-created routes as of the date of this report. Some user-created routes are well located, provide excellent opportunities for outdoor recreation by motorized and non-motorized users alike, and would enhance the system of designated routes and areas. Other user-created routes are poorly located and cause unacceptable environmental impacts. The Coronado National Forest is committed to working with user groups and others to identify such routes and consider them on a site-specific basis. (Title 36 CFR 212.2) This analysis will include recommendations where appropriate to add user-created routes to the forest transportation system or recommend prohibition or restriction of motor vehicle use on identified system roads.

The objective of this Transportation Analysis is to provide critical information for a minimum road system that is safe and responsive to public needs and desires, is affordable, conforms to the Coronado National Forest Plan, is efficiently managed, has minimal negative ecological effects on the land, and is sustainable with available funding for needed management actions. All existing system roads, additional motorized travel routes and proposed roads within the project area, as well as access roads to the Forest Boundary are

included in this Transportation Analysis Plan. This analysis provides a comprehensive look at the network of NFS roads and motorized NFS trails as well as all other user-created roads located in the EMA and will be used during the NEPA process. The TAP is intended to be a broad scale comprehensive look at the transportation network. The main objectives of the TAP are:

- Balance the need for access while minimizing risks by examining important ecological, social, and economic issues related to roads and trails;
- Furnish maps, tables, and narratives that display transportation management opportunities and strategies that address future access needs, and environmental concerns;
- Identify the need for changes by comparing the current road and motorized trail system and areas to the desired condition;
- Make recommendations to inform travel management decisions in subsequent NEPA documents.

This document provides information for the Forest Plan Revision and the Travel Management Rule as it relates to the Coronado National Forest. This analysis will look at the options concerning access issues and needs, proliferation of non-system roads, un-needed roads, user-created routes, mixed use, and OHV use where applicable.

Analysis Plan

The following items were specifically investigated in this analysis:

- Verify current road conditions and drivability.
- Verify accuracy of road locations on maps.
- ID Team and Line Officer identify preliminary access and resource issues, concerns and opportunities.
- Identify additional issues, concerns and opportunities through internal resource staffs.
- Recommend changes to the existing road system based on the findings of this roads analysis.

Information Needs

Information needs were identified and the IDT worked to gather as much information as available about the following items:

- Accurate location and condition of all system roads and motorized trails within the project area. A complete inventory of all unauthorized (user-created) routes is not required but the IDT felt it provided valuable information about what the public and other agencies were doing on the forest.
- Assessment of opportunities, problems and risks for all roads and motorized trails in the project area.
- Public access and recreational needs and desires in the area including access to private landowners.
- Areas of special sensitivity, resource values, or both.
- Best management practices for the area.
- Current forest plan and management direction for the area.
- Agency objectives and priorities.

- Interrelationship with other governmental jurisdictions for roads and motorized trails.
- Public and user group values and concerns.

Potential Key Issues, Concerns, and Opportunities

The following items were considered in this analysis:

- Private property blocking federal land access
- Access to special-use permit sites
- Soil erosion, water quality, riparian issues
- OHV Recreation Use
- Motorized Trail and Vehicles route sharing
- Access to grazing allotments and improvements
- Special Uses
- Ecological effects to species and habitats
- Mineral access
- Cultural resources and Archaeological sites within the study area
- Excessive roads in the study area

Step 2- Describing the Situation

Regional Setting

The **Pinaleño Mountains** are a remote mountain range in southeastern Arizona. They have over 7,000 feet of vertical relief, more than any other range in the state. The mountains are surrounded by the Sonoran-Chihuahuan Desert. Subalpine forests cover the higher elevations. According to The Nature Conservancy, they traverse five ecological communities and contain "the highest diversity of habitats of any mountain range in North America." The highest point is Mount Graham at 10,720 feet. Locals often refer to the whole mountain range as "Mount Graham", in which case the peak is referred to as "High Peak". The mountains cover 300 square miles and are part of the Coronado National Forest, Safford Ranger District.

The Pinaleño Mountains Ecosystem Management Area (EMA) is located within the Basin and Range physiographic province (Fenneman 1931) in southwestern Arizona which is characterized by an east-west alignment of generally parallel mountain ranges with broad valleys in between. The slopes and valleys are bisected by intermittent riparian tributaries. Sitting atop the highest mountain in the Pinaleños is Mount Graham International Observatory, a division of the Steward Observatory primarily maintained by the University of Arizona.

The prominent vegetation within the Pinaleño Mountain EMA include Arizona upland division of Sonoran Desert scrub, Semi-desert Grassland, Madrean Evergreen Oak Woodland, Interior Chaparral, Rocky Mountain Montane Conifer Forest, Deciduous Riparian

Woodland, and Spruce-fir associations (Brown 1982). The mountains are a Madrean sky island range that is typical of southern Arizona, specifically south-central Arizona. Sky island ranges are mountains isolated by desert valleys.

The following communities are located in proximity:

- Safford
- Thatcher
- Pima
- Duncan
- Central
- Fort Thomas
- Solomon
- Willcox
- Bonita
- Fort Grant

The Interdisciplinary Team (Appendix C) convened and examined the existing transportation system in relation to current forest plan direction. This required a description of the road system; its location, ownership, condition, and current forest plan direction. A description of the physical, biological, social, cultural, economic and political aspects of the analysis area was discussed and generated by the team.

A map of the area's transportation system was developed to facilitate this description. (See Appendix F).

The products of this step are:

- A map or other descriptions of the existing road system defined by the current forest plan, and
- Basic data needed to address transportation analysis issues and concerns.

The following table provides existing data such as length of road within the Forest Boundary, current operational maintenance level and route status as listed in the INFRA database. The table also provides data on user-created routes that were GPS'd using a Trimble GeoXT handheld unit. The table provides data above and beyond what is required by a TAP.

Existing Direction for Roads and Motorized Trails

Travel analysis is focused on identifying needed changes to the forest transportation system; identifying the existing direction is an important first step. In general terms, the existing direction includes the National Forest System roads, trails and areas currently managed for motor vehicle use. Restrictions, prohibitions, and closures on motor vehicle use are also part of the existing direction on the forest.

Existing direction from laws and regulations, official directives, forest plans, forest orders, and forest wide or project specific roads decisions, determine the motorized routes and areas open to public motorized travel. This information about a unit's managed system is often

documented in road and motorized trail management objectives, maps, Recreation Opportunity Guides, tabular databases, and other sources.

Open Authorized Road

Existing roads open to the public for motorized use are forest system roads, which are currently in the Forest's INFRA database with attributes reflecting an existing, National Forest System Road under the jurisdiction of the Forest Service with an operational maintenance level between 2 and 5.

Closed Authorized Road

Closed roads have been closed to vehicle traffic for at least a year but are necessary for future activities. If there is a future need for the road but no immediate need, then it is placed in the system as a closed (ML1) road. They appear in the INFRA database with an operational maintenance level of 1. If there is no compelling administrative or public need for the road in the long-term, then it should be decommissioned.

Open Unauthorized Road

An unauthorized road is not included in a forest transportation atlas or database. These roads are usually established by various users over time. They were not planned, designed, or constructed by the Forest Service.

Decommissioned Road

Decommissioned roads have some type of physical closure at their entrance or may be completely obliterated. They appear in the INFRA database with a route status of decommissioned. In order to return a decommissioned road to service as a system road, the NEPA process must be followed even when no physical work is required to allow motorized traffic back on the road.

Table 2.1 – Existing Transportation System

EXISTING SYSTEM	Road Classifications							Pinaleño EMA
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
57	2.98						2	Marijilda - 3.68 mi long w/ 0.70 mi off Forest
88	1.73						2	Webb Peak - Admin use only
89	0.95						2	Treasure Park - campground use
103	0.96						2	Frye Mesa - 8.45 mi long w/ 7.49 mi off Forest
103 A	0.22						2	Frye Mesa Reservoir
119	0.42						2	Dutch Henry - 4.56 mi long w/ 4.14 mi off Forest
119-spur			0.36					Non-system Road
119 J	2.25						2	Gillespie - 2.73 mi long w/ 0.48 mi off Forest
119 J2	0.90						2	Veach -
119 J3	0.59						2	Spring Canyon - 1.63 mi long w/ 1.04 mi off Forest
137	0.29						3	Shannon CG -
156	2.71						2	North Taylor - 6.04 mi long w/ 3.33 mi off Forest

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
156 J	4.52						2	Carter Sawmill Spring - last 1.06 mi is Admin Only
156 J-4.50R-1			0.05					Non-system Road
157	1.94						2	Grant Creek Rd - 3.34 mi long w/ 1.40 mi off Forest
180	0.50						2	Upper Turkey Flat
180 A	0.55						2	Upper Turkey Flat
198	0.35						3	Stockton Pass CG
266	12.58						4	State Highway 266 - 21.52 miles long w/ 8.94 mi off FS; Jurisdiction is State
266-2.68R-1			2.69					Non-system Road
266-6.89L-1			1.91					Non-system Road
266-8.60R-1			0.24					Non-system Road - leads to Bear Canyon TH
266-8.60R-2			0.41					Non-system Road
266-8.60L-1			0.07					Non-system Road - leads to private inholding 0.07 mi on FS
266-8.86L-1			0.00					All in private - 0.29 miles
286	10.56						2	Tripp Canyon - 26.33 mi long w/ 15.77 mi off Forest

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
286-Rd to Corral			0.03					Non-system Road - leads to corral; 4.63 mi long w/ 4.60 mi off forest
286 A	0.17						2	Dry Lake
287	0.55						3	Riggs Flat Access
287 A	0.78						4	Riggs Flat CG
307	2.15						2	Un-named - 3.78 mi long w/ 1.63 off Forest
351	0.09						2	Tripp Canyon Cutoff - 5.37 mi long w/ 5.28 mi off Forest
352	2.32						2	Heliograph Lookout - Admin Only
366	24.34						4	Swift Trail; State Highway 366 - 28.42 mi long w/ 4.08 mi off Forest; Jurisdiction is all State and Federal
366-spur			0.13					Non-system road - Loop road across from upper Turkey Flat road 180 A
472	0.91						2	Snowflat
507	0.11	4.93					2	High Peak
508	2.52						2	Bible Camp -
509		0.73					1	South Taylor - 6.12 mi long w/ 5.39 mi off Forest
644				0.66			C	Un-named - Converted to a Trail

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
645				0.40			C	Un-named - Converted to a Trail
646	1.70						2	Un-named
646 B	0.87						2	Un-named
647				0.71			C	Un-named - previously converted to a Trail
648				1.41			D	Un-named - previously obliterated
650	0.82						2	Frye Mesa Canyon - 8.22 mi long w/ 7.40 mi off Forest
652	0.20						3	Lower Hospital Flat CG -
655	0.17						3	Arcadia CG
655 A	0.15						3	Upper Arcadia
655 B	0.11						3	Arcadia Overflow
656	0.42						3	Soldier Creek CG
656-0.28R-1			0.12					Non-system Road - leads to host site at Soldier Creek Campground.
661	9.37						2	Jernigan - Restricted Access; 9.92 mi long w/ 0.55 mi off Forest
661-1.42L-1			0.25					Non-system Road - access to powerline
661-1.42L-2			0.18					Non-system Road
661-2.33L-1			0.58					Non-system Road - access to water tank

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
661-spur			1.34					Non-system road
661 A	0.43						2	Jernigan HQ - Locked Gate; private; 0.60 mi long w/ 0.17 mi off Forest
662	2.82						2	Dial - Leads to tank; 6.46 mi long w/ 3.64 mi off Forest
662 A		0.67					1	Un-named
662 B	0.28						2	Un-named
662 C	1.46						2	Sycamore Spring - leads to Range improvement
662 C-0.95R-1			1.08					Non-system road
662 D		0.23					1	Un-named - ML 1 road
663	3.35						2	Oak Draw - 5.20 mi long w/ 1.85 mi off Forest
663-3.18L-1			0.20					Non-system road - leads to game drinker
663-4.29L-1			0.50					Non-system road -leads to water tank
664	0.00						2	O Bar O - All off Forest; 12.85 mi long
665	6.67						2	Middle Stockton Pass - 6.87 mi long w/ 0.20 mi off Forest
667	0.28						2	Noon Creek - Admin Only
668	0.00							All off Forest ; 4.94 mi long

EXISTING SYSTEM Road Number	Road Classifications					New Proposed Routes (Miles)	Operational Maintenance Level	Pinaleño EMA Description
	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)			
668 J	0.00							All off Forest ; 0.41 mi long
669		1.80					1	Hawk Peak ; ML 1 road
673		0.42					1	Lindsey Canyon ; 2.25 mi long w/ 1.83 mi off Forest
673 A				0.40			D	Un-named - previously obliterated
674	0.42						2	Van Valer Spring - 1.58 miles long w/ 1.16 miles off Forest; located in IRA
675	1.42						2	Bellows Canyon
675-0.06R-1			0.27					Non-system road
675-0.18R-1			0.43					Non-system road
675-0.18R-2			0.10					Non-system road
675-0.18R-3			0.08					Non-system road - Grave access road
675-0.58R-1			0.18					Non-system road
675-0.93L-1			0.08					Non-system road
676		2.72					2	Iron Tank Well - access issue; 3.86 mi long w/ 1.14 mi off Forest
676-1.43R-1			1.54					Non-system road
676-1.43R-2			0.14					Non-system road
676-1.43R-3			0.04					Non-system road

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
676 A		0.34					1	Eureka Tank - access issue
680			1.04					Non-system road - Not listed in INFRA ; 4.29 mi long w/ 3.25 mi off Forest
681	1.19						2	McEnary Tunnel ; 7.55 mi long w/ 6.36 mi off Forest
681 J	1.00						2	Shingle Mill - 3.39 mi long w/ 2.39 mi off Forest
726	3.98						2	Wood Canyon - 12.07 mi long w/ 8.08 mi off Forest
726-8.80R-1			0.30					Non-system road
726-10.61L-1			0.07					Non-system road
727	3.13						2	Gillman Canyon - 8.95 mi long w/ 5.82 mi off Forest
730	1.02						2	Clark Peak Loop
730-0.37L-1			0.41					Non-system road
730-0.80L-1			0.06					Non-system road
803	5.82						3	Clark Peak
808	0.20						3	Noon Creek CG
819	1.43						3	Twilight

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
857	0.38						2	Cluff Dairy - Admin Use Only
861	2.22						2	Jacobson Overlook
1173			0.65				2	Gillespie Well -
1173-0.54L-1			2.77					Non-system road
1173-0.54L-2			0.36					Non-system road
4505		0.89					1	Hell Road
4513	1.41						2	Mother's Canyon - 2.93 mi long w/1.52 mi off Forest
4514	0.57						2	Angle Orchard
4515	0.76						2	Lebanon Ditch - 4.30 mi long w/ 3.54 mi off Forest
4516		0.27					1	Babcock Wood - ML 1 road
4519	0.47						2	Riggs Wood
4521	0.53						2	Hells Hole -
4522	0.32						2	Grand View
4524				0.21			D	Soldier Spring - previously obliterated
4525	0.15						3	Soldier Creek Disp Camp
4527	0.27						2	Ash Ridge West Spur -

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
4529	0.34						2	Bible Tank Spur
4535				2.36			D	Un-named - previously obliterated
4539	0.25			1.95			2,D	Grant Hill - portion previously obliterated
4541				1.41			D	Hospital Ridge N Spur - previously obliterated; now a foot trail
4542	0.26						2	Cunningham CG
4543	0.24						2	Cunningham Loop
4547		0.30					1	Snow Flat Spur - ML 1 road
4554	0.37						2	Lower Treasure Park
4559	1.46						2	Snow Lure Spur
4559-0.37R-1			0.17					Non-system road
4561	0.25						2	Upper Hospital flat
4567	2.00						3	MGIO - Admin Only ; under special use permit
4568	0.11							Field Camp - Admin Only ; under special use permit
4569	0.44						2	Conservation Camp
4571	0.24						2	Bible School
4572				0.47			C	Trail Head - previously converted to a trail

EXISTING SYSTEM	Road Classifications						Pinaleño EMA	
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description
4573				0.22			D	Columbine Spring - previously obliterated
4575	0.36						2	Old Columbine
4577	0.18						3	Columbine Corral
4597	1.00						2	Mother's Bypass - 1.05 mi long w/ 0.05 mi off Forest
4998	0.37						2	Moonshine - popular dispersed camping
6099	1.04						2	Un-named - 1.07 mi long w/ 0.03 mi off Forest
6502	1.74						2	Un-named
6502 A	1.20						2	Big Creek
6599	1.46						2	Gibbs Tank - 2.90 mi long w/ 1.44 mi off Forest
6609	2.15						2	Two Troughs Spring Tank - 8.11 mi w/ 5.96 mi off Forest
6609-7.88R-1			0.83					Non-system road
6609-8.00R-1			0.02					Non-system road - leads to Deer Tank
6609 A		0.70					D	Un-named - previously obliterated
6610	1.55						2	North 2 Troughs Springs

EXISTING SYSTEM Road Number	Road Classifications					New Proposed Routes (Miles)	Operational Maintenance Level	Pinaleño EMA Description
	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)			
6611	2.43						2	Dead Steer Mesa - 5.79 mi long w/ 3.35 mi off Forest
6612	1.40						2	Un-named
6612-0.66R-1			0.26					Non-system road
6613	1.37						2	Un-named
6613 A	0.18						2	Un-named
6613 B	0.00						2	Un-named - off forest ; 0.27 mi long
6614		0.57					1	Left Hand Tank - 2.57 mi long w/ 2.00 mi off Forest
6614 J		0.77					1	Dripping Spring Tank
6625				0.22			D	Shake - previously obliterated
6629	0.51						2	Deadman - 2.04 mi long w/ 1.53 mi off forest
6692		2.04					1	Grapevine Canyon - 3.16 mi long w/ 1.12 mi off Forest
6693		0.28					1	Grapevine Spring - 1.68 mi long w/ 1.40 mi off Forest
6694		0.87					1	Gold
6694 A		0.30					1	Un-named

EXISTING SYSTEM	Road Classifications								Pinaleño EMA
Road Number	OA - Open Authorized (Miles) on Forest	CA - Closed Authorized (Miles) ML 1	OU - Open Unauthorized (Miles)	Route Status Decommissioned (Miles)	OHV Routes (Miles)	New Proposed Routes (Miles)	Operational Maintenance Level	Description	
6695		1.36					1	Gold Gulch - 2.10 mi long w/ 0.74 mi off Forest	
6696		0.18					1	Horse - 2.78 mi long w/ 2.60 mi off Forest	
TOTALS	157.63	20.37	19.94	10.42	0.00	0.00			

Table 2.1. Legend

* Road Classifications:

OA = Open Authorized Road on the Forest Road System
OU = Open Unauthorized Road, not on the Forest Road System
CA = Closed Authorized Road on the Forest Road System
D = Identified for Decommissioning

Functional Classes: (*Functional Class applies only to roads under Forest Service jurisdiction*)

A = Arterial – Provides service to large land areas and usually connects with other arterials or public highways.
C = Collector – Provides service to smaller land areas than an arterial road, usually connects arterial roads to local roads or terminal facilities.
L = Local – Connects terminal facilities with forest collector or arterial roads or public highways, usually single purpose transportation facilities.
T = Trail – Convert back to Trail (not an official designation in the data dictionary, used for this document only and applies to one road)

Maintenance Level Descriptions:

1 = Basic custodial care (closed)	5 = High degree of user comfort
2 = High clearance vehicles	C = Convert use
3 = Suitable for passenger cars	D = Decommission
4 = Moderate degree of user comfort	

Maintenance levels only apply to roads under Forest Service jurisdiction. For unauthorized roads, the maintenance levels are recommended; they would not be implemented until the recommendations are adopted.

- *Operational Mtc. Level = How the road is maintained on-the-ground.*
- *Objective Mtc. Level = Maintenance level the road would be maintained to if funding permitted. Reconstruction may be required before the road could be maintained to this level.*

Decommissioning Methods:

- Reestablish former drainage patterns, stabilize slopes, and restore vegetation.
- Block the entrance to a road, install water bars and/or outslope. Entrance treatment can include earthen barriers or hide with brush or woody debris.
- Remove culverts, reestablish drainage-ways, remove unstable fills, pull back road shoulders, and scatter slash on the roadbed.
- Completely eliminate the roadbed by restoring natural contours and slopes.
- Gate and closure order to eliminate all human uses.
- Abandon and monitor for motorized use.
- Other methods designed to meet the specific conditions associated with the unneeded roads.

Table 2.2 - Existing Road Classifications

Road Classification	Existing Miles of Road
OA = Open Authorized	157.63
CA = Closed Authorized (ML1)	20.37
OU = Open Unauthorized (Non-system)	19.94
OHV	0.00
Total Miles, All Existing Roads	197.94
Previously decommissioned roads not counted in total miles	9.36

Step 3- Identifying Issues

The following issues are addressed in this analysis and described in more detail in Step 4:

- Private land access
- Private property blocking federal land access
- Access to special-use permit sites
- Soil erosion, water quality, riparian issues
- OHV Recreation Use
- Motorized Trail and Vehicles route sharing
- Dispersed camping and user created routes
- Access to grazing allotments and improvements
- Special Uses
- Ecological effects to species and habitats
- Mineral access
- Cultural resources and Archaeological sites within the study area
- Excessive roads in the study area

The purpose of this step is to:

- Describe resource concerns and issues
- Identify the key questions and issues affecting road-related management

The products of this step are:

- A summary of key road-related issues, including their origin and basis, and
- A description of the status of the current data

The interdisciplinary team met in September 2008 and again in February 2010 and identified preliminary issues. A review of the questions in FS-643 titled *Roads Analysis: Informing*

Decisions about Managing the National Forest Transportation System was also used in order to identify any issues not previously made aware for this project.

Answers to the following questions helped the IDT to identify the most important road-related issues in the analysis area.

- What are the primary public issues and concerns related to roads and access?
- What are the primary management concerns (internal issues) related to roads and access?
- What are the primary legal constraints on roads and roads management?
- What additional information will be needed to better understand and define the key issues?
- What resources and skills are available to complete an effective analysis?

Road Maintenance

The Forest Service objective for system roads is to operate and maintain National Forest System Roads (NFSR) roads in a manner that meets road management objectives (RMOs) and that provides for:

1. Safe and efficient travel;
2. Access for the administration, utilization, and protection of its lands; and
3. Protection of the environment, adjacent resources, and public investment.

The Forest Service (FS) is responsible for maintenance of NFSRs resulting from traffic associated with:

- a. Administration of FS lands,
- b. Noncommercial uses and activities,
- c. Incidental noncommercial use related to ownership or occupancy of isolated parcels of private land served by an NFS road,
- d. Commercial road use that is not subject to cost recovery, and
- e. Incidental public use.

The amount and frequency of maintenance is subject to: availability of funding, obligations, agreements, and protecting the FS's investment.

Road Maintenance Levels

Maintenance levels are defined by the Forest Service Handbook (FSH) 7709.58 as the level of service provided by and maintenance required for, a specific road. The maintenance level must be consistent with RMOs, and maintenance criteria.

The maintenance level is determined by the Line Officer by considering the following factors:

- Resource program needs
- Environmental and resource protection requirements
- Visual quality objectives

- Recreation spectrum classes
- Road investment protection requirements
- Service life and current operational status
- User safety
- Volume, type, class, and composition of traffic.

The RMO identifies the current maintenance level or operational maintenance level and desired maintenance level or objective maintenance level for each road. The operational and objective maintenance level may or may not be the same for a road depending on the current needs, road condition, budget constraints, and environmental concerns and those forecasted for the future.

The following are the five maintenance levels classified by the FSH 7709.58:

Road Maintenance Level 5 (ML5) – roads that provide a high degree of user comfort and convenience. These roads are normally double-lane, paved facilities, some may be aggregate surfaced and dust abated. These roads are subject to the Highway Safety Act (HSA) and Manual of Uniform Traffic Control Devices (MUTCD). These roads have the following characteristics:

- Highest traffic volume and speeds
- Typically connect to State and county roads
- Usually arterial and collector roads
- Drainage addressed by use of culverts.

Road Maintenance Level 4 (ML4) – roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most are double-lane and aggregate surfaced. These roads are also subject to the HSA and MUTCD and have the following characteristics:

- Moderate traffic volume and speeds
- May connect to county roads
- Usually a collector road
- Drainage addressed by use of culverts

Road Maintenance Level 3 (ML3) – roads that are open and maintained for travel by prudent drivers in a standard passenger car. User comfort and convenience are low priorities. These roads are typically low speed, single lane with turnouts, and spot surfacing. These roads are also subject to the HSA and MUTCD and have the following characteristics:

- Moderate to low traffic volume
- Typically connect to arterial and collector road, and/or are collector roads
- Combination of grade dips and culverts provide drainage
- Potholing or washboarding may occur.

Road Maintenance Level 2 (ML2) – roads are open for use by high-clearance vehicles; passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation, or other specialized uses.

The following characterize these roads:

- Low traffic volume and speed
- Typically local roads
- Typically connect collector or other local roads

- Grade dips are the preferred drainage treatment
- Surface smoothness is not a consideration
- Not subject to HSA

Road Maintenance Level 1 (ML1) – roads that are closed to vehicular traffic intermittently for periods that exceed 1 year. Basic custodial maintenance is performed to protect adjacent resources and enable the road to facilitate future management activities. Planned road deterioration may occur at this level; may be open and suitable for non-motorized uses. Roads in this category may be of any type, class or construction standard, and may be managed at any other maintenance level during the time they are open for traffic. ML1 roads have the following attributes:

- Vehicular traffic is eliminated, including administrative traffic
- Entrance is physically blocked or disguised
- No maintenance other than a condition survey may be required so long as no potential exists for resource damage
- Not subject to HSA

Annual Maintenance is the performance of one or more work activities needed to preserve or protect a roadway including surface, shoulders, roadside, structures and such traffic-control devices as are necessary for its safe and efficient use to the standard provided through construction, the most recent reconstruction, or other condition as agreed.

Unpaved roads require much more frequent maintenance than paved roads, especially after wet periods and when accommodating increased traffic. Wheel motion shoves material to the outside (as well as in-between travelled lanes), leading to rutting, channelizing of water, reduced water-runoff to ditch line, and eventual road damage if unchecked. As long as the process is interrupted early enough simple re-grading is sufficient for several years, with material being pushed back into shape.

Another problem with well-used higher-speed unpaved roads is washboarding — the formation of corrugations across the surface at right angles to the direction of travel. They can become severe enough to cause vibration in vehicles so that bolts loosen or cracks form in components. Grading removes the corrugations. Good quality surface materials can help prevent corrugations from re-forming.

Deferred maintenance is the practice of postponing needed maintenance activities such as grading for one or more maintenance cycles in order to save money and/or labor. The failure to perform needed repairs leads to road deterioration and ultimately road impairment. Sustained deferred maintenance may result in higher eventual maintenance costs, road failure, and in some cases, road safety implications.

The accounting standard-setter for the U.S. Government defines deferred maintenance in this way, “*Deferred maintenance*” is maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period. For purposes of this standard, maintenance is described as the act of keeping fixed assets in

acceptable condition. It includes preventive maintenance, normal repairs, replacement of parts and structural components, and other activities needed to preserve the asset so that it continues to provide acceptable services and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, those originally intended.

An example of deferred maintenance for a system road is not performing recommended routine maintenance or repairs as recommended in road condition surveys: the road will not remain at its recommended standard or serviceability and will be more likely to degrade and become damaged over time.

Maintenance competes for funding with other programs and is often deferred because appropriations are insufficient or were redirected to other priorities or projects. Deferred maintenance is not routinely reported, however awareness of the implications of deferred road maintenance exists in the Forest Service.

Operating a road system and attempting balance between resource protection and public wishes is a challenging task. This travel analysis helps to fulfill two major requirements of 36 CFR 212, Subpart A – *Administration of the Forest Transportation System* and Subpart B- *Designation of Roads, Trails, and Areas for Motor Vehicle Use*:

- **212.5** Road System Management - Identify the minimum road system.
- **212.55 & 212.56** - Identify and subsequently designate a system of roads, motorized trails, and areas for motor vehicle use.

In so far as feasible there is a need to be more financially in balance with road maintenance funding versus road maintenance needs. The forest's authorized road network will continue to degrade and have access impacts as well as environmental impacts as long as needs exceed funded maintenance efforts. Decreasing Forest maintenance costs and increasing road maintenance funding should continue to be our overall goal. Reducing costs, balancing resource needs and meeting access needs are major components of our operation and maintenance efforts. Strategies that reduce road maintenance costs include:

- Lower road maintenance levels (e.g. ML3 to ML2).
- Decrease mileage by closing or decommissioning system roads (abandonment or obliteration).
- Transfer jurisdiction (ownership) or maintenance responsibilities to other maintenance entities (including private land owners and home owner associations) as appropriate.
- Convert open and/or closed roads to motorized trails recognizing this will increase trail maintenance costs (class 1, 2, or 3 which is basically a minimally maintained, natural surfaced trail).
- Reduce mileage of paved roads.
- Work cooperatively with other public road agencies and associations for material and equipment/labor sharing opportunities.
- A combination of the above strategies.

The Coronado National Forest **Annual Road Maintenance Plan** provides a list of roads that will receive maintenance during the current fiscal year. Roads on each District receiving maintenance are prioritized by District Ranger and staff and known critical road safety needs receive the highest priority. The entire Coronado National Forest has approximately 1715 miles of ML 2 roads, approximately 289 miles of ML 3 roads, about 24 miles of ML 4 roads, and about 4 miles of ML 5 roads. Therefore there are a total of about 2100 miles of National Forest System Roads on this forest.

Forest wide Operational Maintenance Level Miles:

District	ML 1 (miles)	ML 2 (miles)	ML 3 (miles)	ML 4 (miles)	ML 5 (miles)
Douglas	12.94	285.024	76.834	1.402	0.00
Nogales	2.91	458.355	69.466	1.450	0.00
Sierra Vista	18.02	633.353	83.599	0.063	3.93
Safford	18.89	207.157	12.118	0.775	0.00
Santa Catalina	15.94	130.8985	47.0944	19.9194	0.00
Forest Total	68.70	1714.7875	289.1114	23.6094	3.93
*Percent receiving annual maintenance	0%	8.28%	60.9%	8.47%	0%

*Based on FY2010 Road Accomplishments

As noted in the table above, not all roads receive maintenance every year. In 2010, a total of 320 miles out of 2100 miles of roads were maintained, which represents about 15.24% of the total forest total miles. This is about average for a typical year on the Coronado with a 3 man road crew. Based on the FY2010 road accomplishment report, only 142 miles of ML 2 roads or 8.3% of all forest ML 2 road miles received maintenance. Also during FY2010, 176 miles of ML 3 road received maintenance which represents approximately 61% of all ML 3 roads. Since very few ML4 and ML 5 roads receive maintenance only 8.5 % ML 4 roads and 0% ML 5 roads received maintenance in FY 2010. The lion's share of the annual road maintenance is concentrated on maintenance level 3 roads.

The Coronado has conducted required annual road condition surveys since 1999 to determine the maintenance and associated funding needed to maintain roads to the required safety standards and assigned maintenance levels. Condition surveys describe the features of the road (e.g. surfacing material, ditches, culverts, signs, etc.) and their current condition. Deferred and annual maintenance costs for those roads are then calculated using a regional standard cost guide.

Maintenance Level 2 Roads

The only standards for a ML 2 road are for route marker signing. Most high road density areas are attributable to ML 2 roads. In most cases nonsystem roads are contributing to the road density in the EMA and are good candidates for decommissioning in order to reduce that density.

Maintenance Level 3, 4, 5 Roads

The Highway Safety Act requires maintenance level 3-5 roads to meet the standards for directional, regulatory, and warning signs. Clearing for sight distance and safety is not occurring as often as needed due to limited funding. Therefore with limited funding, the focus must be on high-priority roads which are identified in the Annual Maintenance Plan which is approved by the line officer. High priority roads are often maintenance level 3-5 roads and almost always have higher traffic volumes than maintenance level 2 roads.

Although the initial remedy may be to decommission roads to provide a sustainable system, the expense of decommissioning would need to include both the planning cost of conducting the appropriate environmental analysis as well as the physical implementation cost of achieving the desired objective. Such costs may include provision for new road construction, or adoption of a non-system road to access a portion of the area served by a decommission-candidate road.

Shared or exchanged road maintenance is occurring primarily on maintenance level 3-5 roads, but could be increased overall. Road maintenance agreements with surrounding counties in which the Forest has roads have expired but are still in place. Agreements with other governments and entities need to be investigated in the future. Counties are also attempting to shed road maintenance costs and responsibilities for similar reasons. Efficiencies which serve all public road agencies are actively sought.

Legal public motorized access on or to system roads is lacking in many locations, often on roads which are currently being used by the public. Closure of such access is often sudden, difficult and time consuming to resolve—if possible at all—and fully within the rights of private property owners who own lands needed for such access. Resolving access problems often consumes funding otherwise used for road maintenance. Conversely, unequivocal lack of legal public access with no probable solution is an opportunity to decommission authorized roads and thereby save maintenance funds for roads which provide the public with legal access to their public land. Such decommissioning actions can also be an inducement for private landowners who might otherwise close public access routes across their land to cooperatively work toward a mutually acceptable legal motorized public access route across and/or adjacent to their land in order to retain designated system roads further inside the National Forest behind their property.

Road Maintenance Frequency

The quantity and frequency of maintenance is subject to: availability of funding, obligations under agreements, and protecting the FS’s investment. In accordance with the maintenance levels described above the following table displays the cyclic activities required to properly maintain roads:

Activity	As Needed		Annually		
	ML 1	ML 2	ML 3	ML 4	ML 5
Maintain traveled way for protection of investment, resource values, and to provide some degree of user comfort			Low	Moderate	High

Activity	As Needed		Annually		
	ML 1	ML 2	ML 3	ML 4	ML 5
Maintain road prism to provide for passage of high clearance vehicles		X			
Maintain shoulder for structural integrity of roadway and drainage functionality		X	X	X	X
Keep drainage structures/features functional and prevent unacceptable resource damage	X	X	X	X	X
Vegetation removal to provide for sight distance			X	X	X
Vegetation removal for access and to control resource damage		X			
Alleviate erosion or sedimentation on or from roadway	X				
Remove roadside hazard trees			X	X	X
Maintain structures to provide for passage of planned traffic and preserve structure and to protect natural resources		X	X	X	X
Install/maintain warning, regulatory, and guide signs and other traffic devices to provide for existing traffic			X	X	X

Road Maintenance Costs

Federally appropriated funds used for road operation and maintenance on the Coronado National Forest (CNF) have ranged from about \$750,000 to \$1,100,000 per year over the last five years, with the average funding being approximately \$850,000 per year.

Besides the on-the-ground performance of maintenance related work, all road systems have fixed costs associated with management of the systems. Management includes:

- Oversight of the road system.
- Establishing and maintaining road management systems required by law (e.g., pavement management, bridge management, safety management, sign management, and congestion management).
- Collecting and maintaining data about the road system (e.g., conducting road condition surveys, gathering traffic count and vehicle accident information, etc).
- Providing information services (e.g., maps, road condition reporting, etc).
- Out-year project planning (e.g., specialist surveys/reports, agreements with other entities, etc).
- Office support (contracting officers, utilities, equipment, etc.)

Over the last five years, fixed costs accounted for approximately **30 percent** of the appropriated funds leaving the other 70 percent for on-the-ground maintenance. The table below lists the existing forest-wide average annual maintenance cost per mile per maintenance level for roads on the CNF. The costs were calculated based on an average road maintenance budget of \$850,000 per year.

Road maintenance costs for entire Forest

Operational Maintenance Level	Annual Cost per Mile	AVG Miles Maintained	Annual Cost
5*	\$ 0	0	\$ 0
4	\$4250	2	\$ 8,500
3	\$2656	176	\$467,456
2	\$2634	142	\$374,028
1*	\$ 0	0	\$ 0
Totals		320	\$849,984

*The Coronado rarely performs maintenance on ML 5 and ML 1 roads and has no average maintenance costs available.

Step 4- Assessing Benefits, Problems and Risks of the Existing Road System

The purpose of this step is to:

- Assess the benefits, problems and risks of the current road system and whether the objectives of the Forest Plan are being met

The products of this step are:

- A synthesis of the benefits, problems and risks of the current road system,
- An assessment of the ability of the road system to meet management objectives

Roads analysis is a science-based process and the interdisciplinary team (Appendix C) used and interpreted relevant scientific literature to identify issues which may cause potential impacts. Any assumptions made during the analysis, and limitations of the information on which the analysis is based will be described.

Specific questions were used to assess benefits, problems, and risks. Benefits are the potential uses and socioeconomic gains provided by roads and related access. Problems are conditions for certain environmental, social, and economic attributes that managers deem to be unacceptable. Risks are likely future losses in environmental, social, and economic attributes if the road system remains unchanged. The questions were used as a checklist to scan the range of possible

benefits, problems, and risks and to screen them for those relevant to roads in the area under consideration.

The relevant questions were then used to guide more in-depth assessment and link to the science base for each of the identified benefits, problems, and risks. These questions were not intended to be prescriptive, but were used to assist the interdisciplinary team in developing questions and approaches appropriate to each analysis area. Which questions are appropriate for a particular analysis area and which warrant deep or cursory treatment will depend on the particular area and the issues being addressed. Some question may need to be addressed at several scales. Addressing these and other road-related questions was done with maps, GIS, statistical summaries, or other information that contributed to understanding the benefits, needs, risks, and effects of the roads. These indicators did not answer questions directly but assisted in discerning and quantifying important interactions.

Lands

- *How does the road system connect large blocks of land in other ownership to public roads (ad hoc communities, subdivisions, inholdings, and so on)?*
- *How does the road system affect managing roads with shared ownership or with limited jurisdiction? (Federal Revised Statute 2477, cost-share, prescriptive rights, FLPMA easements, FRTA easements, DOT easements)?*
- *How does the road system connect to public roads and provide primary access to communities?*
- *How does the road system affect managing special-use permit sites (concessionaires, communications sites, utility corridors, and so on)?*
- *What are people's perceived needs and values for access?*

Background:

The Pinaleño Mountain Ecosystem Management Area (EMA) is located within the Safford Ranger District, Coronado National Forest in Graham County near the rapidly developing community of Safford, Arizona. The EMA is mainly surrounded by Arizona State Trust lands and private land, with a minimal amount of Bureau of Land Management bordering the southeast portion.

There are numerous scattered private land parcels of various shapes and sizes within and adjacent to the proclaimed boundaries of the Pinaleño EMA, resulting in a complex and intermingled landownership pattern. Depending on the location of the private land, National Forest System Roads (NFSR) are used to access them. A NFSR is defined as a road wholly or partly within or adjacent to and serving a part of the NFS and which has been included in the NFSR Plan. Unless otherwise required by an order, the use of an existing NFSR does not require a special-use authorization; however, any such use is subject to compliance with all Federal and

State laws governing the road used (36 CFR 251.50(d)). Where ingress and egress to private land is via an existing NFSR, which is open and available for general public use, the private landowner is permitted to use the road without a written authorization. The use of a NFSR for ingress and egress to private lands does not include the right to relocate, construct, reconstruct, or maintain the existing roadway, clear any vegetation, or perform any other ground disturbing activities. If ingress or egress to private land across NFS land requires surface disturbance or the use of a road not on the NFSR system or open to unrestricted public use, the landowner must apply for and receive a special-use or road-use authorization (36 CFR 251.110(d)).

It is Forest Service policy to provide access across National Forest System (NFS) land to private land that is adequate to secure the owners thereof of reasonable use and enjoyment of their land without unnecessarily reducing the management options of the Forest Service or damaging NFS lands or resources. "Access needs" to in-holdings are addressed on an individual basis as requests are received. When a subdivision occurs on a larger private parcel, it is also Forest Service policy to require the landowners to create an association or some type of consolidated organization to represent all of the landowner interests. This eliminates the need for the Forest to enter into road use or special-use permits with each individual landowner.

If access is being provided by a public road agency such as the County or State, then the Forest Service may not be obligated to provide any additional access over Federal lands. When larger developments or subdivisions occur and in-holding traffic is expected to exceed that generated by the users of NFS land, Agency policy is to pursue turning jurisdiction of the Forest road over to another public road authority such as the County or State. The volume of in-holding traffic may require relocation of portions of an existing road or construction of an entirely new road. These roads will be open and available to the traveling public on a regular and consistent basis.

The main access to the analysis area is from Interstate 10, U.S. Highway 191, U.S. Highway 70, State Highway 266, State Highway 366 and several County Roads. These roads connect to arterial, collector, and some local roads within the Forest where traffic is dispersed into the Forest for a variety of uses. This use provides access to tourists, industries, and private lands and also make for pleasurable drives. The Pinaleño EMA is also a very popular for camping and other recreational uses.

Roads are also needed to access special-use authorizations permitting various types of activities within the EMA. In addition to the Mount Graham recreation area, there are two Recreation Residence tracts, Heliograph Peak Radio Facilities, Angle Orchard which is under a special-use authorization, communication sites and an organization camp. There are numerous commercial outfitters under permit who use the road system and could be affected if roads are closed or decommissioned. Closure of any authorized and unauthorized roads will remain an important issue to special-use permit holders as well as private landowners.

Existing Roads that provide access to special-use permit sites; connect blocks of non-Federal land to public roads; have shared ownership or with limited Forest Service jurisdiction; or connect to public roads and provide primary access to communities:

Road Number	Description
NFSR 57:	Connects to State Highway 366. May or may not have permanent legal access.
NFSR 103:	Connects to Frye Mesa Reservoir. Documented permanent legal access.
NFSR 119:	Connects to U.S. Highway 191. Goes across Arizona State Trust lands.
NFSR 156:	Keep. May or may not have permanent legal access.
NFSR 157:	Connects to State Highway 266. Documented permanent legal access.
NFSR 307:	Keep. May or may not have permanent legal access.
NFSR 351:	Keep. Leads to private inholding. May or may not have permanent legal access.
NFSR 646:	Connects to NFSR 648. Goes through inventoried roadless area. May or may not have permanent legal access.
NFSR 648:	Connects to State Highway 266. Documented permanent legal access. Goes through inventoried roadless area.
NFSR 661:	Connects both sides of the EMA. Goes through inventoried roadless area. Blocked at two different private inholdings.
NFSR 662:	Connects to U.S. Highway 191. Goes across Arizona State Trust lands. May or may not have permanent legal access.
NFSR 663:	Connects to U.S. Highway 191. Goes across Arizona State Trust lands. May or may not have permanent legal access.
NFSR 665:	Connects to State Highway 266. May or may not have permanent legal access.
NFSR 673:	May or may not have permanent legal access.
NFSR 676:	Blocked. Need documented permanent legal access.
NFSR 681:	Keep. May or may not have permanent legal access.
NFSR 861:	Connects to State Highway 366. May or may not have permanent legal access.
NFSR 4515:	Connects to NFSR 57. May or may not have permanent legal access.
NFSR 6610:	May or may not have permanent legal access.
NFSR 6613:	Connects to NFSR 648. May or may not have permanent legal access.
NFSR 6629:	Connects to Arizona State Trust land and private land. May or may not have permanent legal access.
State Highway 366:	This highway leads to many NFSRs and a variety of uses, including the Mount Graham recreation area, two Recreation Residence tracts, Heliograph Peak Radio Facilities, Angle Orchard which is under a special-use authorization, communication sites and an organization camp.
266-8.60L-1:	<p>Provides access to the northern half of HES 172 (north of State Highway 266) and the livestock grazing permittee's ranching operation from Rd 266-8.60R-1 and State Highway 266.</p> <p>Recommendation: add 266-8.60R-1 as open authorized restricted use (OAR) for the portion of roadway across NFS lands from Rd 266-8.60R-1 and incorporated into the grazing permit.</p> <p>Note: HES 172 has been submitted as a FY2011 L&WCF purchase proposal. If the parcel is purchased by the United States, it is recommended the road status be changed to open authorized.</p>
266-8.86L-1:	<p>Road 266-8.86L-1 is located entirely off non-federal (private) land. The road provides access to a portion of HES 172 south of State Highway 266 from State Highway 266.</p> <p>Recommendation: If HES 172 is purchased by the United States (refer to Road 266-8.60L-1 above), it is recommended the road be added the forest road system and its status be changed to open authorized.</p>

Future Considerations:

The ability of the public and Forest Service to access portions of NFS lands in the Pinalaño EMA has become increasingly difficult over the past decade as rapid growth of Arizona's population has led to increased demand for access to public lands, and at the same time, increased development of adjacent private lands. Many traditional access routes through adjacent private lands to the NFS have been gated and locked.

Reluctance by adjoining private landowners to grant right-of-way for public access has increased exponentially with the demand for public access. Most public land user and private landowner conflicts as well as creation of wildcat roads are due to attempts by public land users to access NFS lands after traditional access routes have been gated and locked.

As traditional access points are gated and locked, the public land has essentially become National Forest "back yards" for adjoining landowners and their guests, providing little benefit to the general public. Although it is a private landowner's right and prerogative to block and control access across their private land, to best serve the interests of all citizens, the Forest Service has a responsibility to provide reasonable access to public land.

Access needs identified in the existing or revised Forest Land and Resource Management Plan or in this analysis may not be fully met by the Forest road system, as it currently exists. The existing Forest road system may be needed for future activities not currently planned for and to provide public access to the NFS lands as well as non-Federal lands within the proclaimed boundaries. Private landowners will continue to block and close traditional access routes through their private lands, thus limiting and further restricting administrative and public access to and through NFS lands. New roads, relocation and reconstruction of portions of existing authorized and unauthorized roads, or re-commissioning of closed authorized and unauthorized roads may be required to meet both future administrative and public access needs.

Soil, Water, Air, and Forestry

- *How and where does the road system modify the surface and subsurface hydrology of the area?*
- *How and where does the road system generate surface erosion?*
- *How and where do road-stream crossings influence local stream channels and water quality?*
- *How and where does the road system create potential for pollutants, such as chemical spills, oils, or herbicides to enter surface waters?*
- *How and where is the road system 'hydrologically connected' to the stream system?*
- *How do the connections affect water quality and quantity (such as delivery of sediments, elevated peak flows)?*
- *What downstream beneficial uses of water exist in the area?*
- *What changes in uses and demand are expected over time?*

- *How are they affected or put at risk by road-derived pollutants?*
- *How and where does the road system affect wetlands?*
- *How does the road system alter physical channel dynamics, including isolation of floodplains; constraints on channel migration; and the movement of large wood, fine organic matter, and sediment?*
- *How does the road system affect riparian plant communities?*

Roads in the Pinaleno Ecosystem Management Area (EMA) include parts of the following watersheds (See Figure 1):

Puertocito Wash

- Cottonwood Wash-Upper Gila River (Hydrologic Unit Code (HUC) 1504000507)
- Stockton Wash (HUC 1504000506)
- Slick Rock Wash-San Simon River (HUC 1504000608)
- Gold Gulch-San Simon River (HUC 1504000607)
- Wilcox Playa (HUC 1505020100)
- Upper Aravaipa Creek(HUC 1505020304)
- Black Rock Wash-Upper Gila River(HUC 1504000508)

General

Roads affect soil, water, and air by accelerating erosion, diverting water, providing access for various polluting agents, and creating dust. The roads in these watersheds are having these affects, but have not been identified as causing significant negative effects on water quality at the sample points, or air quality at any monitoring location. Local effects on soil, water (including riparian areas), and air may be important. Roads affect forestry resources by providing access for management of fuels and forest products. Following is the background information about the area.

Large areas of this EMA are not roaded or are accessible only by the poorest of roads. This is due in large part to the steep nature of the central portion of the EMA. The Swift Trail (State Highway 366) is the only route that enters the high country in the center of the EMA. It enters from the east and dead ends in the northwest portion of the EMA. The only route that traverses the range from east to west is the Stockton Pass Road (State Highway 266). All other roads either make short dead end entries up generally steep, narrow canyons at the base of the range, or are dead end or loop roads that access range allotment improvements, special use sites, recreation sites, or historic logging areas.

Soil

A General Ecosystem Survey (GES) was completed by the Forest Service in 1991 and covers the entire Pinaleno EMA (USDA, 1991). In the GES report, the soils are found to occur in three of the four possible GES climatic classes due to wide range in elevation and aspect. These classes are Low Sun Mild (LSM) in the low elevation grasslands, chaparral, or shrublands, High Sun Mild (HSM) in the mid elevation woodlands, and Low Sun Cold (LSC) in the high elevation

coniferous forests. These classes describe when the majority of the mean annual precipitation occurs and whether or not the winters are mild or cold. *Low Sun* indicates the majority of the annual precipitation occurs *between September 30 and April 1*; *High Sun* indicates the majority occurs *between April 1 and September 30*. The different GES Units found within the EMA are shown below in Figure 2 and Table 4.1, with general unit descriptions in Table 4.2.

TABLE 4.1 General Ecosystem Survey Units Found in the Watersheds of the Pinaleño EMA

Watershed Name	General Ecosystem Survey Units
Black Rock Wash Upper Gila River	475, 476, 490
Cottonwood Wash-Upper Gila River River	451, 466, 475, 476, 490
Gold Gulch-San Simon River	475, 490
Slick Rock Wash-San Simon River	475, 490
Stockton Wash	370, 466, 475, 476, 490
Upper Aravaipa Creek	475, 476, 490
Wilcox Playa	451, 466, 475, 490

TABLE 4.2 General Ecosystem Survey Units Descriptions

GES UNIT	Average Gradient %	Surface Texture/ Modifier	Soil Depth	Parent Material	Climate Class (see text for description)	Erosion Hazard
370	0% to 15%	Extremely Gravelly Sandy Loam	Deep	Alluvium	HSM	Slight
451	15% to 40%	Very Cobbly Sandy Loam	Deep	Granite	LSC	Moderate
466	0% to 40%	Cobbly to Very Gravelly Sandy Loam	Deep	Granite	LSC	Slight
475	40% to 80%	Extremely Cobbly / Sandy Loam	Shallow	Granite, Rhyolite	HSM	Moderate
476	60% to 100%	Extremely Cobbly / Sandy Loam	Deep	Granite	LSC	Moderate
490	4% to 25%	Very Cobbly / Sandy Loam	Deep	Granite, Rhyolite	HSM	Moderate to Severe

See the summary below for recommended road closures related to soil stability or erosion issues.

Water

Arizona Department of Environmental Quality (ADEQ) assesses water quality for streams and natural channels throughout the State. All assessments are made comparing water quality requirements for specific uses expected of the watercourse with data from water samples collected. Several streams and lakes within the EMA have been assessed. Ash Creek in the Cottonwood Wash-Upper Gila River watershed has designated uses of wildlife and warm water aquatics, fish consumption, full body contact, and agriculture-livestock. Ash Creek is assessed to be Category 2 Attaining some uses. No violations were found, but some parameters have not been measured. Frye Canyon Creek also in the Cottonwood Wash-Upper Gila River watershed has designated uses of wildlife and cold water aquatics, fish consumption, drinking water supply, full body contact, and agriculture-livestock. Frye Canyon Creek is also assessed to be Category 2 Attaining some uses. No violations were found, but again some parameters have not been measured. Grant Creek in the Wilcox Playa watershed has designated uses of wildlife and cold water aquatics, fish consumption, drinking water supply, full body contact, and agriculture-livestock. Grant Creek is assessed to be Category 3 Inconclusive. No violations were found, but only two samples have been collected. Riggs Flat Lake and Snow Flat Lake, both in the Wilcox Playa watershed, have designated uses of wildlife and cold water aquatics, fish consumption, full body contact, and agriculture-livestock. Both lakes are assessed to be Category 3 Inconclusive because there is only one sample for each (<http://www.azdeq.gov/environ/water/assessment/download/303-04/sc.pdf>). No road closures or relocations are recommended due to water quality issues.

Riparian areas are extremely important everywhere on the Coronado National Forest, and they occupy less than 4% of the watersheds in the Pinaleño EMA. Roads can alter riparian areas by

physically occupying the area, diverting water, providing access to people and vehicles that in turn destroy riparian vegetation, and by generating erosion that degrades the site.

See the summary below for recommended road closures related to riparian issues.

Air

None of the Pinaleño EMA is located in a Class I air quality area. None of the Pinaleño EMA is located in a non-attainment area for air quality (<http://www.azdeq.gov/environ/air/plan/notmeet.html>). In general, dust from roads is an air pollutant and should be minimized where possible. No roads are proposed for closure for air quality purposes at this time.

Forestry

The Pinaleño EMA watersheds have provided limited sawtimber harvest opportunities and opportunities for personal use fuelwood gathering. Fuels management and other forest management activities use access by roads. No new roads are proposed, and no roads are proposed for closure for forest management purposes at this time.

Summary

It is recommended that the following system roads remain on the system as **maintenance level 1** roads to be used only occasionally for administrative purposes.

Road Number	Recommendation	Comments
4505	Retain as a ML 1 road	This road, known as the “Hell Road,” is needed for forest restoration project access. Forest will accept responsibility of maintenance in areas of steep slopes.
4529	Retain as a ML 1 road	This road, which accesses the water tanks near Bible Camp, is needed for forest restoration project access. Forest will accept responsibility of maintenance in areas of steep slopes.

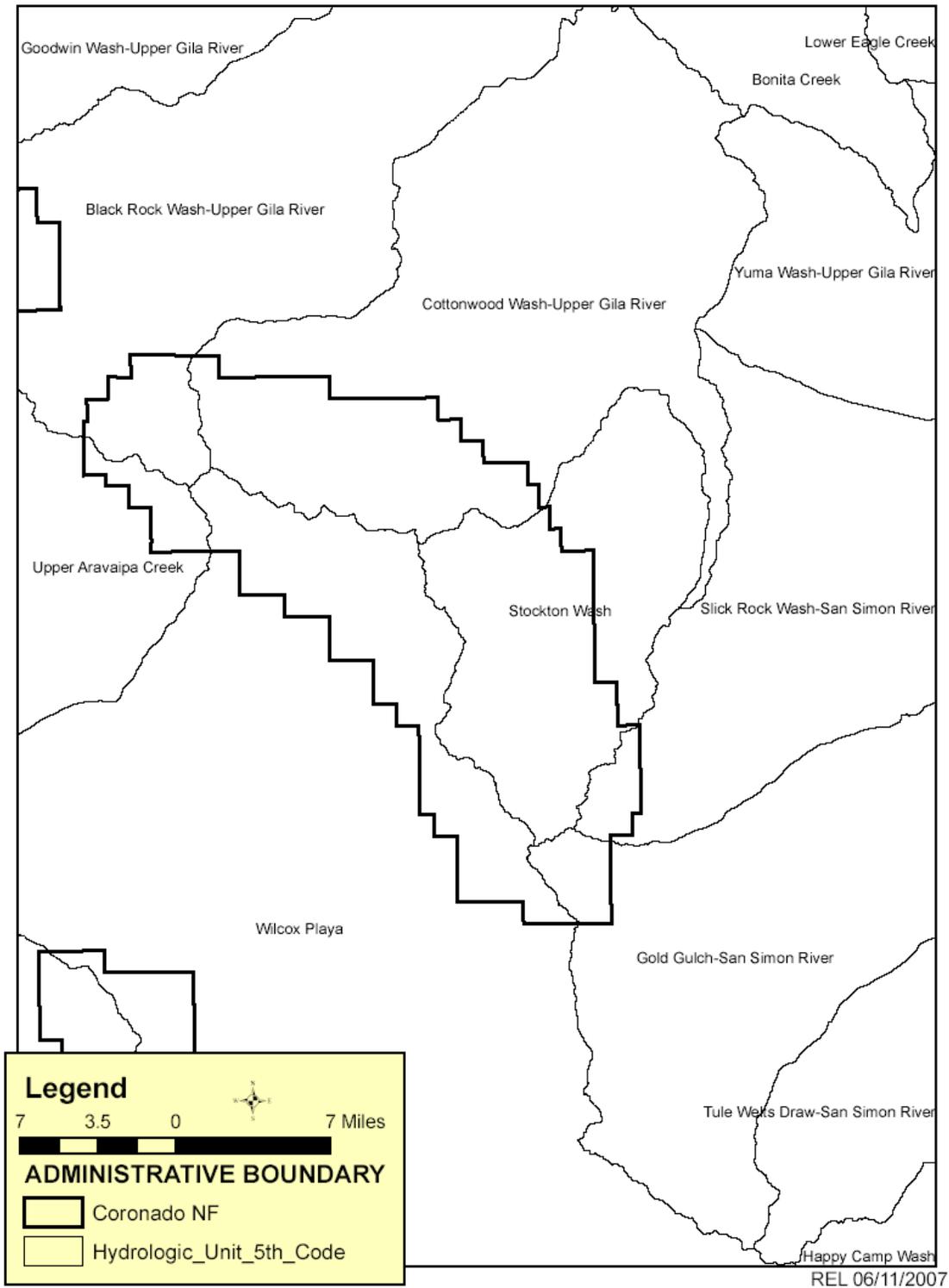
It is recommended that the following non-system road be added to the system as part of the camping corridor along the system road.

Road Number	Recommendation	Comments
156 J-4.50R-1	Add to system as Open Authorized	This road has no significant effects to riparian resources, and is within 300 feet of the existing system road.

It is recommended that the following system roads be kept on the system (OA) because they are needed for access to the Forest even though there are known threats to watershed resources.

Road Number	Recommendation	Comments
57	Retain on the system	This is the Marijilda road. It has insignificant effects to riparian resources. It is the only access to this area.
156	Retain on the system	This is the North Taylor road. The effects to riparian resources are not significant, and the Forest accepts responsibility for maintenance of this road through steep terrain. This is the only access to the Forest in this area.
507	Retain the first 0.12 miles on the system as open and authorized. The remainder of the road is recommended as decommissioned.	This is road the High Peak road. It is required to reforest a portion of this road per the Arizona/Idaho Conservation Act (AICA). Need to comply with AICA until Congress changes the Act or NEPA satisfies this requirement.
662	Retain on the system	This is the road to Jernigan Ranch headquarters. There are insignificant effects to riparian resources.
998	Retain on the system	This is the Knob Tank road, which crosses High Creek. The effects to riparian resources are not significant.
6632	Retain on the system	This is the YLE road. There are no effects to riparian resources.

Figure 4.1 Watershed Map



References:

Arizona Department of Environmental Quality. 2004. Water Quality Assessment (<http://www.azdeq.gov/environ/water/assessment/download/303-04/sc.pdf>).

U.S. D.A. Forest Service. 1991. General Ecosystem Survey. U. S. D. A. Forest Service, Southwestern Region.

Recreation

- *Is there now or will there be in the future excess supply or excess demand for roaded/unroaded recreation opportunities?*
- *Is developing new roads into unroaded areas, decommissioning existing roads, or changing maintenance of existing roads causing significant changes in the quantity, quality or type of roaded/unroaded recreation opportunities?*
- *What are the adverse effects of noise and other disturbances caused by constructing, using and maintaining roads on the quantity, quality, or type of roaded/unroaded recreation opportunities?*
- *Who participates in roaded/unroaded recreation in the areas affected by road constructing, maintaining, or decommissioning.*
- *What are these participant's attachments to the area, how strong are their feelings and are alternative opportunities and locations available.*

Recreation Uses and Opportunities

Recreational uses in this area include hiking, hunting, camping, mountain biking, off-highway vehicle use, fishing, target shooting, equestrian use, rock collecting, bird watching and sightseeing. Developed camping is available at several sites along Swift Trail (Hwy 366). Dispersed recreational use is mostly by unorganized groups or individuals. Permitted uses include grazing, reservations of group campsites, outfitter/guide permits for hunting, the Mount Graham International Observatory, electronic communications sites at Heliograph and Ladybug Saddle, Old Columbine and Turkey Flat Summer home areas, as well as the Arizona Church of Christ Bible Camp. The Mt. Graham Wilderness Study Area lies in the central elevation band around the mountain. There is adequate road access for visitors to the high elevations of this EMA, but very limited access in the lower elevations.

Due to its proximity to Tucson, and with the population of the City of Tucson, Pima County, Cochise County, and Graham County continuing to grow, it is expected demands for all types of outdoor recreation will continue to increase. As of 2009, the population of nearby Cochise County was estimated at approximately 129,000 (U.S. Census Bureau) with the most populated areas being Sierra Vista and nearby communities. The Pinaleño EMA also receives recreation pressure from Safford, Willcox and other surrounding towns. Summer is the most popular time for high-elevation activities in this mountain range, while lower campgrounds such as Stockton Pass are more commonly used in the spring and fall. Hunting season also brings an influx of activity at all elevations.

The 2007 National Visitor Use Monitoring survey for the Coronado National Forest does not represent specific areas of the forest as the results are combined from survey points throughout the forest. It does, however give a general idea of the recreation interests of forest visitors as a whole. The following are percentages of survey respondents who reported participating in particular recreation activities: Complete survey results are available on-line at <http://www.fs.fed.us/recreation/programs/nvum> (National Visitor Use Monitoring Program).

Table 4.3. Activity participation on the Coronado National Forest (National Visitor Use Monitoring FY2007 data)

Activity	% of visitors who participated in this activity ^a	% who said it was their primary activity ^b	Average hours spent in primary activity ^c
Camping in developed sites	6.4	3.5	29.9
Primitive camping	3.1	0.7	22.7
Backpacking	0.9	0.1	73.9
Resort Use	0.5	0.0	30.0
Picnicking	12.8	3.3	3.4
Viewing wildlife, birds, fish, etc	65.9	4.5	2.8
Viewing natural features (scenery)	68.2	11.2	2.5
Visiting historic/prehistoric sites	8.5	0.6	2.4
Visiting a nature center	17.2	0.8	1.7
Nature Study	15.7	0.0	
Relaxing	45.9	5.3	7.7
Fishing	3.8	2.5	6.6
Hunting	3.2	3.1	12.4
OHV use	4.5	1.1	3.7
Driving for pleasure	23.7	5.9	2.8
Snowmobile travel	0.0	0.0	
Motorized water travel	0.0	0.0	
Other motorized activities	0.5	0.3	1.1
Hiking or walking	75.6	52.2	2.7
Horseback riding	0.1	0.0	2.5
Bicycling	1.9	1.1	4.6
Non-motorized water travel	0.5	0.0	
Downhill skiing or snowboarding	0.0	0.0	
X-C skiing, snow shoeing	0.0	0.0	
Other non-motor activity (swim, etc.)	0.7	0.1	8.3
Gathering forest products mushrooms, berries, firewood	2.7	0.2	3.0
Motorized trail Activity	3.2	1.3	2.1

Alternate locations for similar outdoor recreation activities include the Catalina EMA to the west, which is closer to Tucson and receives high recreation use. The Stockton Pass area (along Hwy 266) of the Pinaleño EMA is particularly popular for OHV use.

This EMA receives a high level of hunting use and lies completely within Game Management Unit 31. (2009-10 Arizona Hunting and Trapping Regulations, Arizona Game and Fish Department, AGFD). Permit availability for the 2009-2010 general deer hunt, is as follows: antlered mule deer – 10/03/09 to 11/05/09 – 150 permits, 11/13/09 to 11/19/09 – 150 permits; antlered whitetail deer – 10/23/09 to 10/29/09 – 300 permits, 11/06/09 to 11/12/09 – 250

permits, 11/27/09 to 12/03/09 – 250 permits, 12/11/09 to 12/31/09 – 165 permits (1,265 total permits for the general hunt). There are many other hunts including muzzleloader and archery deer, javelina, quail, dove and juniors' only hunts. The tremendous influx of hunters in the fall creates a sudden increase in demand for motorized access to remote areas, and for dispersed camping locations that are accessed by NFS roads. If areas accessible by roads were fewer and hunters did not have the ability to adequately disperse, hunting pressure would be disproportionately distributed through the EMA. There are some unauthorized roads that have been submitted by the AGFD as important for hunting and dispersed camping access and they support the retention of most existing forest system roads.

Off-Highway Vehicle Management

The increasing popularity of off-highway vehicles (OHVs), particularly all terrain vehicles (ATVs), means places to ride and drive are more and more in demand. The Pinaleño EMA has not received as much impact from this type of use as compared to other areas of the Forest, such as the east side of the Santa Rita EMA, Redington Pass in the Santa Catalina EMA or Providencia Canyon in the Huachuca EMA. As the more popular parts of the Coronado NF continue to receive more recreation use and become more crowded, it is likely OHV use will spread to the Pinaleño area which is readily accessible from Tucson and Nogales and the growing communities nearby. Locally, due to the prevalence of private gates being locked around the Forest boundary and available State land surrounding the Pinaleño EMA, pressure for access to meet community recreation needs is increasing and development of illegal access points may become more prevalent.

The rough terrain of the Pinaleño EMA makes it unsuitable for the development and maintenance of high density road networks that would support high OHV use. The existing primitive routes lead to interesting destinations and provide challenging 4 X 4 experiences. Swift Trail, which travels to the upper elevations of this EMA, provides a scenic backcountry touring opportunity for people driving 2-wheel drives and passenger cars. The unroaded parts at the middle elevations of the EMA are within the Wilderness Study Area, and as such, should be preserved for non-motorized uses only.

Roads classified as unauthorized currently provide more areas for motorists to ride or drive but many of these are dead-end routes and do not substantially enhance the motorized recreation experience. Non-system roads that are classified as "unauthorized" in the transportation analysis may have been formed through legal, permitted uses such as range improvement projects, fuel wood cutting, or historic logging, and in some cases the roads then became useful roads for forest access. Some "unauthorized" roads are historic roads that were never added to the road system. These non-system roads have been used as though they were part of the road system, some for many years. Some non-system roads in this EMA have been identified as highly desirable for continued recreation and hunter access.

The noise and dust from OHVs and other vehicles can disturb visitors such as hikers, hunters, bird watchers and campers. Currently, most noise impacts are experienced near Swift Trail. During some weekends and holidays, high-speed use of ATVs and frequency of traffic in general may detract from the experiences of people who seek quiet places to enjoy nature and escape the noise and bustle of the city.

Dispersed Motorized Camping

The Forest Land and Resource Management Plan (pp. 27, 28) provides for motorized dispersed camping as follows: “Vehicles may pull off roads or trails up to 300 feet for parking or camping.” Along many roads, parking and camping spots are limited by terrain, vegetation and rockiness. Frequently used motorized dispersed campsites, where evidence of camping such as fire rings can be seen, are usually readily identifiable. Some dispersed campsites are occupied only during hunting season and may not be obvious at other times of the year. The demand for opportunities for motorized dispersed camping continues to grow. The forest road system is used to access these dispersed campsites. If the 300 foot dispersed camping corridor were to be eliminated on some roads the only way access with vehicles could be allowed to campsites is by the designation of spur roads.

Responses to Specific Road Comments

While not officially Forest System roads, some non-system roads classified as unauthorized are currently being used by both the Forest Service and other agencies for administrative purposes and by the public. AGFD and Safford Ranger District personnel have recommended that some of these be evaluated for addition to the forest road system based on their value for purposes such as hunter and general recreation access, contingent upon appropriate environmental and social analysis. Those recommended for addition to or to keep within the forest roads system as open-authorized roads (open to the public) are as follows: 119J2, 156J, 157, 266-6.89L-1, 266-2.68R-1, 266-8.60R-1, 508, 646, 646B, 650, 656-0.28R-1, 662C, 662D, 663, 663-3.18L-1, 665, 675-0.06R-1, 675-0.18R-1, 675-0.18R-2, 675-0.58R-1, 675-0.93L-1, 726, 4505, 4516, 4521, 4522, 4543, 4554, 4559, 4559-0.37R-1, 4998, 4569, 4577, 6610, 6611, and 6613.

Four roads are recommended to be changed or maintained as open authorized restricted-access, including 266-8.60R-2, 507, 663-4.29L-1, 669. It is recommended that roads 336-spur, 662A, 730-0.37L-1, and 730-0.80L-1 be decommissioned, as they are no longer needed for recreation. In some cases, the roads have already disappeared on the ground, and others lead to areas already attainable by other roads.

Some roads are recommended to change to ML-1. These include 509 and 6614J. Portions of the following roads should be converted to OHV trails: 676, 676-1.43R-1, 676-1.43R-2, 676-1.43R-3, and 6609-7.88R-1.

Range Management

- *How does the road system affect access to range allotments?*

The Pinaleno Ecosystem Management Area contains approximately 198,884 acres. There are 17 grazing allotments within this EMA. All are currently active. Every allotment has structural range improvements that have been constructed by the FS over the tenure of the each grazing allotment for the purpose of improving applied management. Therefore all of the allotments have varying degrees of constructed roads within them as a result. Many, if not all, of these

improvements need to be maintained on a regular basis so the roads continue to serve an important purpose. As time has passed these roads have developed into what is basically considered to be a significant portion of the EMA transportation system. These are the roads or travel-ways that by-in-large make up the routes that are used by ATVs, 4WDs, motorcycles, hunters, bicyclers and other visiting publics. Generally the roads we consider Level 1 and 2 roads. We expect to keep all roads within the EMA (listed in INFRA) at their current level and do not intend to drop them to some other designation.

Properly managed livestock grazing is a sustainable and legitimate use of National Forest System lands. The roads described in the following pages are also used by the Forest Service to administer the grazing permits. Due to the rough topography and remoteness of some of the mountain range, these roads are crucial to access important areas of the allotments. Grazing activities must be aggressively monitored throughout the grazing season to ensure resource protection and compliance with the grazing permit, NEPA decisions, ESA section 7 consultations, and annual operating instructions to permittees.

Activities or reasons that these roads are needed for range management purposes include, but are not limited to the following:

- Access to range improvements (fences, corrals, cattleguards, pipelines, water delivery systems, earthen tanks) which must be checked, maintained, and repaired on a regular basis.
- The anticipated need for construction of new structural and non-structural range improvements identified through adaptive management and the NEPA process related to grazing authorizations and the development of AMPs.
- The past and current level of cross-country travel as demonstrated over the past 10 – 20 years for general range management and permit compliance purposes.
- The type and complexity of grazing management and frequency of livestock movements for range management purposes.
- The type of fences needing to be maintained (e.g., electric fences as opposed to traditional barbed wire fences).
- The need for checking the functionality of fences and the logistics involved in the transport of repair materials to fence line locations.
- The need and logistics for repair and maintenance of wildlife and other types of enclosures which are the responsibility of the grazing permit holder.
- The need for placing or staging supplements in strategic locations for livestock and grazing management purposes.
- The need to check gates potentially left open by other national forest users (e.g., recreationists and hunters).
- The need to attend to sick or injured livestock.

Past, Current & Future Access Issues: Access to the EMA has not kept pace with the current growth of Gila Valley. Public access has not been a problem for this EMA.

Off Road Driving: Because of the topography and rough terrain off road driving hasn't been a problem for most of this EMA. The EMA has some wildcat roads which serve no purpose and may be the end result of allowing individuals the opportunity to travel 300 feet off the existing and established road bed.

Roads and Watersheds: Most of the roads in the EMA are Maintenance Level 1 & 2 roads. All roads need and require routine maintenance and attention which is sometimes not very timely with the result that more time and effort is required to bring them to a serviceable standard when maintenance is implemented. Some roads within the EMA get more attention than others primarily due to their location and use by the public to access special use summer homes, picnic and campgrounds areas and other high use areas on Mt. Graham. All or most of the roads contribute to sediment loading in washes and are eroding. Roads are a major contributor to sediment loading in many washes. Better water drainage and erosion control is needed on all the roads.

Maintain Access for Range & Wildlife Management: The road network within the EMA is adequate for the purposes of range and wildlife management if better access is achieved. New roads are not planned for construction on this EMA under this project. Some of the roads need to be better maintained to allow the user public the opportunity to travel to areas within the EMA without incurring damage to their vehicles or risking life and limb for recreational use or to maintain range improvements.

The following table provides a list of recommendations for non-system roads to be added to the system as **Open Authorized** (OA); maintenance level 2. These roads are currently being used by range permittees for management of livestock grazing.

Road Number	Rationale
266-6.89L-1	Needed for administration of Grazing Permit.
266-2.68R-1	Needed for administration of Grazing Permit.
726-8.80R-1	Needed for administration of Grazing Permit.
726-10.61L-1	Needed for administration of Grazing Permit.

The following table provides a list of recommendations for system roads to be retained on the system as **Open Authorized** (OA); maintenance level 2.

Road Number	Rationale
662	Needed for administration of Grazing Permit.
674	Needed for administration of Grazing Permit.

The following table provides a list of recommendations for non-system roads to be added to the system as **Open Authorized Restricted** (OAR), maintenance level 2, under Special Use Permit.

These roads are currently being used by range permittees for management of livestock grazing and will be restricted from use by the public.

Road Number	Rationale
266-8.60R-2	Grazing Permittee authorized use to maintain Range Improvement.
661-1.42L-1	Grazing Permittee authorized use to maintain Range Improvements
661-1.42L-2	Grazing Permittee authorized use to maintain Range Improvements
661-2.33L-1	Grazing Permittee authorized use to maintain Range Improvements
663-4.29L-1	Grazing Permittee authorized use to maintain Range Improvements
680	Grazing Permittee authorized use to maintain Range Improvements
6609-8.00R-1	Grazing Permittee authorized use to maintain Range Improvements

The following table provides a list of recommendations for non-system roads to be decommissioned.

Road Number	Rationale
662 C-0.95R-1	Historic Mine Shack – not needed for range improvement access.

Biology

- What ecological attributes, particularly those unique to the region, would be affected by “roading” of currently “unroaded” areas?
- To what degree do the presence, type, and location of roads increase the introduction and spread of exotic plant and animal species, insects, diseases, and parasites?
- What are the potential effects of such introductions to plant and animal species and ecosystem function in the area?
- To what degree do the presence, type, and location of roads contribute to the control of insects, diseases, and parasites?
- How does the road system affect ecological disturbance regimes in the area?
- What are the adverse effects of noise caused by developing, using, and maintaining roads?
- What are the direct effects of the road system on terrestrial species habitat?
- How does the road system facilitate human activities that affect habitat?
- How does the road system affect legal and illegal human activities (including trapping, hunting, poaching, harassment, road kill, or illegal kill levels)? What are the effects on wildlife species?
- How does the road system directly affect unique communities or special features in the area?
- Do areas planned for road entry, closure, or decommissioning have unique physical or biological characteristics, such as unique natural features and threatened or endangered species?

- How and where does the road system facilitate the introduction of non-native aquatic species?
- To what extent does the road system overlap with areas of exceptionally high aquatic diversity or productivity, or areas containing rare or unique aquatic species or species of interest?
- What are the traditional uses of animal and plant species within the area of analysis?
- How and where does the road system restrict the migration and movement of aquatic organisms?
- What aquatic species are affected and to what extent?

1. What ecological attributes, particularly those unique to the region, would be affected by the roading of current unroaded areas?

The Pinaleño Mountain Range on the Safford Ranger District rises from semi-desert grasslands (both Sonoran and Chihuahuan) at approximately 3,000 ft to approximately 10,720 ft at the summit of Mt. Graham. The broad elevational gradient results in a great diversity of plant and animal species that form a variety of biotic communities in the mountain range. These biotic communities include Arizona upland division of Sonoran Desert scrub, Semi-desert Grassland, Madrean Evergreen Oak Woodland, Interior Chaparral, Rocky Mountain Montane Conifer Forest, Deciduous Riparian Woodland, and Spruce-fir associations (Brown 1982).

Within these biotic communities, a large variety of vegetation associations provide habitat for a huge array of wildlife species. Of particular concern to land managers are species included on the Federal List of Threatened and Endangered species, the Regional Forester’s Sensitive Species List (Revised 2007), and the List of Management Indicator Species (MIS) found in the Coronado National Forest Land Resource Management Plan. The table below includes the list of special status species that are known to occur or could potentially occur in the Pinaleño Mountains.

The Pinaleño Mountain EMA is located in Graham County approximately 15 miles southwest of Safford, Arizona. The local population base of Safford, Thatcher, and Pima includes approximately 15,000 residents, based on population estimates from the year 2000. However, the recent re-opening of a copper mine northeast of town has led to a localized increase in these populations. Southern Arizona is a destination for winter visitors and year-round recreation due to its mild climate and, to a large extent, because of the availability of a high quality wildland experience on the Coronado National Forest. The upper elevations of the Pinaleño Mountains include two small recreational residence/summer home areas (Turkey Flat at around 6,000 ft elevation and Old Columbine at approximately 9,500 ft elevation), which are accessed using the main road, Swift Trail (Hwy 366). This road is paved (level 4) from Hwy 191 up to Shannon Campground, after which it becomes a level 3 dirt road. It provides access for approximately 100 vehicles per day, plus the part-time residents of Turkey Flat, Old Columbine, and nearby recreation residences and organization camp. Stockton Pass Road (Hwy 266) is a level 5 road that leads through the southern end of the Pinaleños, running east-west through a valley between the main body of the Pinaleños and a segment of foothills-type area known as the Greasewoods. There are several campgrounds along this main road, and it is frequently used as an access point for quail hunters and deer hunters. Many smaller level 1 and 2 roads provide access to entry

points within the lower elevations of this EMA, generally focused near riparian areas and washes.

The potential effects of roads to certain special status species of the Pinaleño EMA are described below the table. Federally Listed Species such as the Mexican Gray Wolf, Jaguar, and Jaguarundi are not discussed because potential effects are remote since there are no known recent records of occurrence on the Forest. A few Forest Service sensitive species are discussed in detail where there are particular concerns related to road construction. For the remainder of Sensitive species, there is a general discussion of potential impacts that are common to whole groups of species. The same is true of MIS species discussions.

The Pinaleños are one of many rural mountain ranges in Southern Arizona. However, during the summer, traffic and human activity along Swift Trail can be extremely high. This mountain range provides the highest elevation access south of the Mogollon Rim. Recreation use of this area has increased due to rising population numbers in the Safford area, as well as increased public awareness of recreation opportunities to be had. The Pinaleños have always provided locals an escape from high summer temperatures in the valley, and more people are coming from longer distances to take advantage of this opportunity, as well as opportunities to hunt, fish, and camp at such high elevations. Fall and winter hunting, hiking, and camping opportunities also exist at the lower elevations, particularly in the Stockton Pass area, when the upper elevations are closed off due to gate closure and snow. Hunting access is highest in the fall, particularly in areas along Stockton Pass Road, in the Marijilda area, and near West Peak.

The road system contributes to the presence of urbanization effects that can affect far greater areas than just the road sites themselves; it can also result in changes in wildlife and plant communities of a variety of taxa (unit used in the science of biological classification). Urbanization affects forest dwelling bird communities by favoring certain species while selecting against others (Marzluff 1997). Similar effects may be expected for other taxa especially small mammals (Marzluff *ibid*). The presence of domestic pets such as dogs (which is common at many of the campgrounds, but less so at the summer home areas) can increase nest failure in many bird species and may affect changes in distribution of small mammal and reptile species. The increase of both native and non-native predators can cause increased reproductive failure in the vicinity of the urban areas. Even low-density urban areas such as summer homes areas can affect the adjacent plant communities through trampling, soil compaction, and brush removal.

In addition to mortalities due to road-building and the ensuing traffic using the road, continual modification of the physical environment occurs long after a road is opened. Factors such as soil compaction, increased surface temperature, and decreased moisture content may seem innocuous, but most people have seen the potential for animals, reptiles especially, to be drawn to the residual warmth held by roads. Dust continually raised by driving along dirt roads may settle onto plants adjacent to the road, blocking photosynthesis; this same dust can then be introduced into water systems as sediment and contaminants to ecosystems (Trombulak and Russell 2000).

In areas other than the two main highway corridors, the majority of the Pinaleño Mountains are unsuitable for road building due to steep terrain. Most of the existing roads that branch off Swift

Trail are roads into campgrounds or roads used for administrative access to fire lookouts and special use sites. Most of these roads end within 1 mile of Swift Trail, as the slope increases sharply beyond this point. Areas where slope exceeds 40% are generally unaffected by urbanization effects, due to their distance from roads. Additional roads in these areas would tend to produce the undesirable effects seen along the developed highway corridors.

Roads at lower elevations are similarly limited by terrain; most roads into the lower elevations of the Pinalenos traverse the flattest areas around the base, and are discontinued once the area has entered the Forest and reached steeper terrain. In the past, during times of logging businesses in the area, roads existed that reached from low elevations to the highest areas. A logging road along the Ash Creek area once extended down the hill and was later maintained in case of need for emergency evacuation. This and similar roads have been closed and allowed to naturally revegetate. The current road system is more responsive to terrain limitations, management needs, and more sensitive to the surrounding environment and wildlife needs.

Table 4.4. Threatened, Endangered, Proposed and Sensitive Animal and Plant Species known to or suspected to occur on the Pinaleño Mountains, Safford Ranger District:

Group	Species Scientific Name	Common Name	Federal Status
<u>BIRDS</u>	<i>Strix occidentalis lucida</i>	Mexican spotted owl	T
<u>FISH</u>	<i>Oncorhynchus apache</i>	Apache trout	T
	<i>Oncorhynchus gila</i>	Gila trout	T
<u>MAMMALS</u>	<i>Tamiasciurus hudsonicus grahamensis</i>	Mount Graham red squirrel	E
	<i>Canus lupus baileyi</i>	Mexican Gray Wolf	E
	<i>Panthera onca</i>	Jaguar	E
	<i>Felis yagouaroundi tolteca</i>	Jaguarundi	E
	<i>Leptonycteris curasoae yerbabuena</i>	Lesser long-nosed bat	E

¹LT = Listed Threatened; LE = Listed Endangered; FS = Forest Sensitive

Mexican Spotted Owl - Threatened.

There are 31 known Mexican Spotted Owl Protected Activity Centers (PAC’s) in the Pinaleño Mountains. These 31 PACs are generally located along the highest elevations of the mountain range associated with heavily forested areas of more mature trees. Swift Trail (Hwy 366) passes through or touches twelve of these, and the side roads (such as the Webb Peak Road and the 507 Road) touch or pass through an additional three PACs. Both motorized and non-motorized vehicles may degrade or destroy spotted owl habitat, particularly riparian and shrub habitats vital to the owl’s prey. Noise produced by vehicles and the vehicle riders may disturb spotted owl nesting and roosting sites. Most of the PACs are in areas with long-established road systems and the potential for additional road building is small due to the steep nature of the PACs and the mountain in general. New roads in these PACs would have the effect of increasing disturbance to breeding owls and therefore adversely affect this federally listed species.

Apache Trout – Threatened.

These fish are located in Grant Creek on both sides of Swift Trail. Likely, the fish in Grant Creek are already somewhat affected by siltation factors. Introduction of new roads would likely adversely affect individuals of the species; however, the Apache trout in the Pinaleño Mountains are known to have hybridized with rainbow trout. As such, they do not contribute to the amount

of habitat considered occupied for the species, nor does the population contribute to further reintroductions for the species.

Gila Trout – Threatened.

These fish are located in Frye Creek and restoration activities are planned to restore them to Ash Creek and Marijilda Creek. Between the Old Columbine Summer Home Area and the fish in Frye and Ash Creeks, the mountain takes a steep decline in elevation, and new road development is unlikely. The Marijilda population will be restored above existing dirt road and existing terrain would prevent new road development. If new roads were developed in the highest elevations there would be a high likelihood of siltation in the Frye and Ash Creek drainages. This would likely adversely affect individuals of the species.

Mount Graham Red Squirrel – Endangered.

This species occupies dense forest at the highest elevations of the Pinaleño Mountains (above 7800 feet). Swift Trail runs through their habitat already, and the introduction of new roads would have the potential to further fragment the remaining habitat. There would also be increased potential for roadkills, and increased disturbance due to traffic and noise from people. Road-building could lead to disturbance or destruction of middens (mounds of cone scales that serve as caches for over-winter food storage). Opening corridors of the canopy above the road area could also act as a hunting corridor for migratory and non-migratory birds of prey, presenting a threat to the red squirrels. All of these potential side effects of road building would adversely affect this species.

Lesser Long-nosed Bat - Endangered.

This species is not known to roost in the Pinaleño EMA, but is likely to forage in the area, particularly at lower elevations in the Stockton Pass area (along Hwy 266). In this area, the bats feed mainly on agave. Apart from direct disturbance of roost sites, potential effects to this taxon are associated with the loss of food plants. Large areas of the Pinaleño Mountains remain un-roaded. However, the majority of foraging habitat for this species lies south of the Stockton Pass Road (Hwy 266) and is within an area of the Greasewoods that does not contain public roads. These areas provide an adequate food source for this species; however, creation of additional roads in these areas could impact the food plants for this species, leading to adverse effects to the species.

Table 4.5. Sensitive Animal and Plant Species known to or suspected to occur on the Pinaleño Mountains, Safford Ranger District:

Forest Service Sensitive Species			
<u>AMPHIBIANS</u>	<i>Rana yavapaiensis</i>	Lowland leopard frog	SEN
<u>BIRDS</u>	<i>Falco peregrinus anatum</i>	American peregrine falcon	SEN
	<i>Accipiter gentilis apache</i>	Apache Northern goshawk	SEN
	<i>Buteogallus anthracinus</i>	Common black hawk	SEN

<u>INSECTS</u>	<i>Amblycheila baroni</i>	A Tiger beetle	SEN
	<i>Calephelis arizonensis</i>	Arizona metalmark	SEN
	<i>Agathymus aryxna</i>	Aryxna giant skipper	SEN
	<i>Neophasia terlootii</i>	Chiricahua white	SEN
	<i>Ameletus falsus</i>	False ameletus mayfly	SEN
	<i>Speyeria nokomis nitocris</i>	Mountain silverspot butterfly	SEN
	<i>Limenitis archippus obsoleta</i>	Obsolete viceroy	SEN
	<i>Anthocharis pima</i>	Pima orange tip	SEN
	<i>Agathymus polingi</i>	Poling's giant skipper	SEN
	<i>Argia sabino</i>	Sabino Canyon damselfly	SEN
	<i>Megathymus ursus</i>	Ursine giant skipper	SEN
<u>REPTILES</u>			
	<i>Cnemidophorus burti stictogrammus</i>	Giant spotted whiptail	SEN
	<i>Thamnophis eques megalops</i>	Mexican garter snake	SEN
<u>PLANTS</u>			
	<i>Salvia amissa</i>	Aravaipa sage	SEN
	<i>Heuchera glomerulata</i>	Arizona alum root	SEN
	<i>Carex ultra</i>	Arizona giant sedge	SEN
	<i>Manihot davisiae</i>	Arizona manihot	SEN
	<i>Aconitum infectum</i>	Arizona monkshood	SEN
	<i>Graptopetalum bartramii</i>	Bartram stonecrop	SEN
	<i>Eupatorium bigelovii</i>	Bigelow thoroughwort	SEN
	<i>Muhlenbergia dubioides</i>	Box Canyon muhly	SEN
	<i>Penstemon discolor</i>	Catalina beardtongue	SEN
	<i>Carex chihuahuensis</i>	Chihuahuan sedge	SEN
	<i>Hackelia ursine</i>	Chihuahuan stickseed	SEN
	<i>Samolus vegans</i>	Chiricahua mountain brookweed	SEN
	<i>Arabis tricornuta</i>	Chiricahua rock cress	SEN
	<i>Mammillaria mainiae</i>	Counter-clock fishhook cactus	SEN
	<i>Allium gooddingii</i>	Goodding's onion	SEN
	<i>Ipomoea tenuiloba var. lemmonii</i>	Lemmon's morning glory	SEN
	<i>Stevia lemmonii</i>	Lemmon's stevia	SEN
	<i>Hedeoma dentatum</i>	Mock pennyroyal	SEN
	<i>Echinomastus erectocentrus var. erectocentrus</i>	Needle-spined pineapple	SEN
	<i>Sisyrinchium cernuum</i>	Nodding blue-eyed grass	SEN
	<i>Abutilon parishii</i>	Pima indian mallow	SEN
	<i>Hieracium rusbyi</i>	Rusby hawkweed	SEN

	<i>Viola umbraticola</i>	Shade violet	SEN
	<i>Hermannia pauciflora</i>	Sparseleaf hermannia	SEN
	<i>Penstemon superbus</i>	Superb beardtongue	SEN
	<i>Muhlenbergia xerophila</i>	Sycamore Canyon muhly	SEN
	<i>Agave schottii</i> var. <i>treleasei</i>	Trelease agave	SEN
	<i>Tumamoca macdougallii</i>	Tumamoc globeberry	SEN
	<i>Metastelma mexicanum</i>	Wiggins milkweed vine	SEN

Northern Goshawk – FS Sensitive - This forest-dwelling raptor is found in forested habitat and its distribution overlaps that of the Mexican Spotted Owl in the Pinaleño EMA. Concerns are virtually identical for goshawks as for Mexican spotted owls, with the primary potential impact from newly constructed roads being disturbance of breeding birds. Its potential to nest in less steep habitat means that there is greater potential for the creation of roads in occupied habitat, so there is slightly greater potential for impacts from road building to this species. Currently, roads exist near most of the known goshawk nests on the district. While the long-term existence of these roads may indicate that goshawks can eventually adapt to the presence of roads, new roads would require large swaths of vegetation removal and periods of heavy disturbance in association with the construction phase, which may adversely impact this species.

FS Sensitive Species General Discussion - Construction and maintenance of roads in currently un-roaded areas has the potential to impact a variety of species in similar ways. Bird species are impacted most by fragmentation of habitat, disturbance during breeding season, and changes in habitat due to vegetation removal, introduction of non-native plants, and altered fire regimes. Increased encroachment on un-roaded areas results in impacts related to urbanization described at the beginning of this section. Plant species are also affected through direct disturbance of individuals from road construction or creation of wildcat roads. Additional effects to plant species can result from increased illegal collection of rare species and the introduction of non-native competitors that degrade habitat quality or alter natural fire regimes. Similarly, insect species are also potentially impacted by the introduction of non-native plants along travel corridors. Most frequently, non-native plants compete with and exclude native plant species that function as host plants for insects during some part of their complex life cycles. Insects may also be impacted by vegetation removal (loss of cover) and increases in soil compaction.

Table 4.6 Management Indicator Species*

	Group	Species
1	Cavity Nesters	Coppery-tailed (Elegant) Trogon Sulphur-bellied Flycatcher Other primary and secondary cavity nesters
2	Riparian Species	Gray hawk Blue-throated hummingbird Coppery-tailed (elegant) trogon Rose-throated becard Thick-billed kingbird Sulphur-bellied flycatcher Northern Beardless tyrannulet

	Group	Species
		Bell's vireo Black bear
3	Species Needing Diversity	White-tailed deer Merriam's turkey Coppery-tailed (elegant) trogon Sulphur-bellied flycatcher Buff-breasted flycatcher Black bear
4	Species Needing Herbaceous Cover	White-tailed deer Mearn's quail Pronghorn antelope Desert massassauga Baird's sparrow
5	Species Needing Dense Canopy	Bell's vireo Northern beardless tyrannulet Gray hawk
6	Game Species	White-tailed deer Mearn's quail Pronghorn antelope Desert bighorn sheep Merriam's turkey Black bear
7	Special Interest Species	Mearn's quail Gray hawk Blue-throated hummingbird Coppery-tailed (elegant) trogon Rose-throated becard Thick-billed kingbird Sulphur-bellied flycatcher Buff-breasted flycatcher Northern beardless tyrannulet Five-striped sparrow
8	Threatened and Endangered Species	Desert bighorn sheep Gray hawk Peregrine falcon Blue-throated hummingbird Coppery-tailed (Elegant) trogon Rose-throated becard Thick-billed kingbird Sulphur-bellied flycatcher Buff-breasted flycatcher Northern beardless tyrannulet Bell's vireo Baird's sparrow Five-striped sparrow Mexican stoneroller Arizona (Apache) trout Gila topminnow Gila chub Sonora chub Desert massassauga Twin-spotted rattlesnake Arizona ridge-nosed rattlesnake

	Group	Species
		Huachuca (Sonora) tiger salamander Tarahumara frog Western barking frog Spikedace Arizona treefrog Mt. Graham spruce (red) squirrel Gould's turkey

Management Indicator Species, or MIS, are organized into groups that represent their dependence on various habitat characteristics or their importance to humans. Groups 1 through 6 in the table above can all be impacted through the alteration of habitat from the introduction of non-native plants or directly by the loss of key habitat components such as the loss of dead trees that provide nesting cavities for group 1 species, for instance. *Note: Not all species in the above table occur on this EMA; however, the various characteristics under which the indicators are grouped are still important to the overall analysis of impacts.

2. To what degree do the presence, type, and location of roads increase the introduction and spread of exotic plant and animal species, insects, diseases, and parasites?

Roads provide corridors for the introduction and spread of non-native species. The Pinaleno EMA is somewhat threatened by this because it is fairly close to Tucson, and the number of visitors is increasing annually. Recent growth in the city of Safford has already increased the number of visitors on the mountain, and more and more visitors from Tucson and Phoenix are also learning about the beauty and heat relief that can be found in this range. Developed areas are immense sources of non-native plants that are used as ornamental landscaping. Additionally, other governmental agencies in the region have used many of the invasive species as erosion control or as landscaping along roadways.

Lehmann lovegrass (*Eragrostis lehmanniana*) and Boers lovegrass (*E. chloromelas*), introduced into the southwest in the early 1930s, has invaded low-elevation (3000 to 4500 feet) grasslands around the base of the Pinaleno Mountains. While roads may have been a factor in its spread (highway rights of way were seeded with Lehmann lovegrass), there is no feasible control for non-native lovegrass.

Non-native organisms have been a major factor implicated in declines of native amphibians and fish throughout western North America. Eradication of non-native amphibians and fish species, such as green sunfish (*Lepomis cyanellus*), has been a focus of the Coronado National Forest in recent years. While state and federal agencies no longer intentionally introduce bullfrogs or green sunfish in Arizona, well-intentioned private individuals who are unaware of the repercussions of their actions still move bullfrogs and sunfish about. Existing roads accessing springs and riparian areas may facilitate the spread of bullfrogs and other non-native organisms.

3. What are the potential effects of such introductions to plant and animal species and ecosystem function in the area?

Not all non-native species are a problem, but some aggressively out-compete native species. Lehmann lovegrass dominates the low-elevation grassland areas, affecting both the presence of

native grasses and wildlife species and the natural fire regime. This species produce abundant herbage that, when dry, may provide fuel for wildfires. There is also some concern that lovegrass seeds and foliage are not as valuable as food sources as native grasses would be. The potential impacts from bullfrog introduction include potential for large quantities of predation on other vertebrate and invertebrate species that are native to the area.

4. To what degree do the presence, type, and location of roads contribute to the control of insects, diseases, and parasites?

The existing road system provides access for monitoring and control of these problems in coniferous forest habitat. The road system may also provide fire lines that can be used during the implementation of prescribed fires, which can help manage the problems listed above. More remote portions of the range are best accessed by trail on foot or horseback.

5. How does the road system affect ecological disturbance regimes in the area?

The primary ecological disturbances in the Pinaleño EMA are drought, wildfire, and flood. Roads have no effect on drought but may increase the incidence of wildfire by providing access to areas of dense fuel. Although roads may increase the potential for human-caused fire, they also allow for rapid response by suppression crews.

Flooding in the Pinaleño EMA generally follows large wildfires, such as the Clark Peak Fire of 1995, and the Nuttall Complex Wildfire of 2004. Post-fire flooding can carry large amounts of ash, debris, and trees downhill. Along with this mass movement of trees, ash, and dirt, large boulders may be moved downhill as the sediments that held them in place are carried away. Movement of large items like boulders and trees may have massive impacts on creeks in this area, and in some cases (e.g., Wet Canyon and Noon Creek), the debris may cause changes in waterways or create large sections of flooded roads. When this happens along Swift Trail, there is a hazard of road and bridge damage, as well as the potential to lock people on the mountain, away from communication and food sources. In addition to human-related hazards, there is potential for damage to habitat for the Wet Canyon Talussnail, which resides in the interstitial spaces among rocks in Wet Canyon.

6. What are the adverse effects of noise caused by developing, using, and maintaining roads?

The presence of summer home areas at Turkey Flat and Old Columbine, as well as the presence of the Mount Graham International Observatory in the upper elevations of this EMA has subtle, but long-term effects on a variety of plant communities and species. The changes are summarized under the heading of urbanization and are caused by more than just noise alone. Urbanization affects forest dwelling bird communities by favoring certain species while selecting against others (Block and Finch 1997). Similar effects may be expected for other taxa especially small mammals (Block and Finch *ibid*). The presence of house pets such as dogs increases nest failure in many bird species and may affect changes in distribution of small mammal and reptile species. The increase of both native and non-native predators can cause increased reproductive failure in the vicinity of the urban areas. Even low-density urban areas such as summer home

areas can affect the adjacent plant communities through trampling, soil compaction, and brush removal. These changes can favor one species over another due to disturbance tolerance or loss of suitable foraging or breeding habitat. As an example, the cliff chipmunk generally benefits from increased urbanization and human presence.

The development, maintenance, and use of Swift Trail have resulted in some levels of urbanization effects at the highest elevations of the mountain. This is the main road traversing the Pinaleño EMA. The main effects are currently those that are directly road-related, such as increased dust and noise levels, as well as reduced wildlife crossings. However, as numbers of people continue to increase, there will likely be increased effects, including, trampling effects at campgrounds, wildcat shooting, and use of OHVs off roads and trails. Because Swift Trail essentially bisects Mt. Graham red squirrel habitat, there is particular concern for the effects that are caused by sustained or increasing levels of disturbance and the potential for increasing harassment or take of this species.

7. What are the direct affects of the road system on terrestrial species habitat?

Roads can fragment habitat and disrupt wildlife migration corridors. In addition to fragmenting the habitat and reducing habitat availability, high road density can translate to a higher incidence of vehicle-caused mortality.

The roads analysis has taken potential for habitat damage into consideration throughout the Pinaleño EMA, and a small number of roads have been selected for removal in order to prevent damage that could harm existing improvements that benefit wildlife and domestic species.

8. How does the road system facilitate human activities that affect habitat?

Swift Trail and other roads within the Pinaleño EMA provide access for hunters, hikers, cyclists, and other recreationists. While some impacts would be expected due to these activities, the main habitat-affecting activities are fuelwood collection, mechanical thinning, and prescribed burning. All of these activities are facilitated by the presence of roads and can be managed to benefit wildlife habitat.

9. How does the road system affect legal and illegal human activities (including trapping, hunting, poaching, harassment, road kill, or illegal kill levels)? What are the effects on wildlife species?

Road access can increase the amount of mortalities due to road kill and provide opportunities for illegal activities. However, the presence of roads also allows for an increased presence of federal and state law enforcement agents. Pressure from illegal uses may increase if the local population increases.

10. How does the road system directly affect unique communities or special features in the area?

See above.

11. Do areas planned for road constructing, closure, or decommissioning have unique physical or biological characteristics, such as unique features and threatened or endangered species?

Road construction is not within the scope of this project. Roads are not planned for construction on this EMA under this project. Any future projects that would involve such potential would be consulted upon individually in order to minimize and/or mitigate effects. All roads recommended for decommissioning occur within habitat for Mt. Graham Red Squirrels, Mexican Spotted Owls, and Northern Goshawks.

12. How and where does the road system facilitate the introduction of non-native aquatic species?

See above.

13. How and where does the road system overlap with areas of exceptionally high aquatic diversity or productivity or areas containing rare or unique aquatic species or species of interest?

Many creek areas cross Swift Trail in the Pinaleño EMA, including Grant Creek, Post Creek, and Moonshine Creek. However, the area of most concern would be the Wet Canyon area, which contains the Wet Canyon Talussnail. This snail is a Forest Service Sensitive Species, and the Forest Service has a conservation agreement with the USDI Fish and Wildlife Service for the species. Riparian areas, especially the Grant Creek and Noon Creek areas, also provide excellent foraging for many raptor species, including Northern Goshawks and Common Blackhawks.

14. What are the traditional uses of animal and plant species within the area of analysis?

Wildlife viewing, hunting, fishing, camping, and hiking are the primary uses. Several active grazing allotments exist at the lower elevations, and there is some gathering of traditional products by Native American Tribes of beargrass. Fuelwood gathering is also common.

15. How and where does the road system restrict the migration and movement of aquatic organisms?

Currently, no barriers to fish movement seem to exist as a by-product of road presence.

16. What aquatic species are affected and to what extent?

None.

17. For roads receiving specific wildlife-related comments from the public, what response is given?

Forest Roads 57 and 6614J do occur within ½ mile of lowland leopard frog habitat. As a Forest Service Sensitive species, these frogs warrant protection within their existing habitat and consideration prior to any project that may affect their existence. There is no evidence that frogs are being taken from riparian areas or stock tanks as a result of nearby recreation activities. Maintaining access to areas with stock tanks allows for the maintenance of those tanks to continue supporting leopard frogs. The Forest Hydrologist has determined that these roads do not impact nearby riparian vegetation or precipitate erosion into the nearby riparian areas. As a result, there is no likelihood of negative effects to areas containing frogs. However, 6614J may be converted to ML-1 to preclude use, but allow future access to repair a water tank in the area.

Forest Roads 88, 352, 507, 508, 669, 4505, 4516, 4521, 4522, 4529, 4543, 4554, 4569, and 4577 do occur within ½ mile of Mexican spotted owl Protected Activity Centers (PACs). These roads may all be integral to a planned habitat restoration, the Pinaleño Ecosystem Restoration Project, as routes by which to remove excess wood and other fuels. Because this project is likely to benefit owls in the long-term by reducing the likelihood of catastrophic wildfires, these roads should be maintained.

Of these, routes 88, 352, 507, and 669 are already restricted-access only; routes 88 and 352 are necessary for access to fire lookout towers, which help the Forest Service respond quickly to wildfire and manmade ignitions. According to the Mexican spotted owl Recovery Plan (USFWS 1995), catastrophic fire is considered one of the main threats to this subspecies. As such, maintaining lookouts for quick suppression of fires will be necessary at least until such time as a natural fire regime is once again in place.

Route 507 and portions of route 669 have been used as fire lines during several wildfires, and allow for repeated short-notice uses more efficiently than opening new areas for fireline use. Re-using areas also allows disturbance to be contained to one area, rather than cutting new fire lines through undisturbed areas. Route 669 and portions of route 507 also occur within the highest elevations of this mountain range, in the spruce-fir vegetation association. This vegetation is not known to be used by spotted owls, and so the presence of these roads likely has little or no effect.

The lower portion of route 507 (approximately ¾ of a mile) actually occurs within portions of a PAC. This PAC is regularly occupied by an adult male owl and no breeding has been documented in the PAC since its delineation in 1989; the area may or may not actually represent breeding habitat. As noted above, this road is restricted access, and it receives very little use.

Route 508 currently provides access to the Old Columbine summer homes, Bible Camp, and to an established trailhead. This road also provides essential access for the management and monitoring of this subspecies, and it has been used as a fireline in the past. Road use past the Bible Camp is fairly low, and use of the Bible Camp itself is irregular. Owl use of the PACs in the immediate area has been fairly consistent, with documented breeding and regular occupancy. The only exceptions to this occupancy were one year of absence for each PAC in the years following the Nuttall Complex Wildfire of 2004.

Routes 4505, 4516, 4521, 4522, 4554, and 4569 lead to dispersed recreation only, and so draw a quieter type of recreation. By providing dispersed camping areas, the Forest Service allows for

lower concentrations of recreationists overall, which is positive in terms of spotted owl management. Route 4529 is already gated and access should continue to be only administrative.

Route 4543 is the Cunningham Campground loop, and route 4577 is the Columbine Corrals Campground loop. These roads will likely be utilized for the Pinaleño Ecosystem Restoration Project as well. Route 4543 lies within a consistently-occupied PAC, for which the nesting area is approximately 1 mile away. Route 4577 actually draws people away from a nearby PAC location. Both roads are over ½ mile away from the nearest known nesting locations.

Forest Roads 507, 4505, 4516, 4521, 4522, 4543, and 4554 do occur within ½ mile of northern goshawk Post Fledging Areas (PFAs). Due to similarities in habitat preferences, the effects of keeping these roads will likely be similar to those for spotted owls. However, there seems to be some evidence on this district that goshawks may become acclimated to some human disturbance. Historical monitoring indicates that, of the known nesting sites, the most productive in terms of young actually falls within 2/10 of a mile of both roads and the most populated campground on the mountain range, Riggs Flat Lake. Other nesting areas are also regularly found in and directly beside camping areas, including a new nest site located this summer near Treasure Park campground. This is likely due to the variety of vegetation structures found near campsites; openings, densely-treed areas, and shrubby areas are generally juxtaposed in and around camping areas, which likely stimulates a higher and more diverse assemblage of small mammals and birds.

Cultural Resource Issues

Guidelines for conducting a Transportation Analysis suggest addressing three questions pertinent to heritage resources:

- How does the road system affect access to paleontological, archaeological, and historical sites?
- How does the road system affect cultural and traditional uses (such as plant gathering, and access to traditional and cultural sites) and American Indian treaty rights?
- How are roads that are historic sites affected by road management?

In addition to these questions, it is also pertinent to consider impacts the road system has had, continues to have, and could have in the future on heritage resource sites in the area. In general, road systems affect paleontological, archaeological and historical sites both positively and negatively. The primary positive effect of roads is the access provided for authorized visitation and site maintenance of a small number of sites. On the other hand a large number of archaeological sites have been adversely affected through physical damage to sites and the greater access by unauthorized artifact collectors.

A review of Coronado National Forest records shows that approximately one-hundred archaeological and historical sites have been recorded in this EMA. Archaeological sites range chronologically from Archaic-period artifact scatters to 20th century mining, ranching, and Forest

Service administrative sites. Precontact sites include habitations, artifact scatters, and rock art sites.

Direct impacts to heritage resource sites. It is clear that past road construction has to some extent damaged or disturbed a number of archaeological sites. A review of recorded sites in the Pinaleño EMA indicates that thirty-two archaeological sites are crossed by roads. Impacts of roads on sites are variable, depending on the extent of disturbance from road construction and the nature and depth of the archaeological deposits. In the majority of cases, damage to archaeological sites occurred in decades before the National Historic Preservation Act mandated cultural resource surveys to identify archaeological sites subject to damage by undertakings on Federal lands. In most cases, the damage was largely limited to the time of construction many years ago and is no longer an ongoing concern. This is typically the case with more major roads where the road bed has been built up and surfaced either with gravel or pavement. There are, however, a number of cases on smaller roads where cultural materials are evident in the road bed and adjacent ditches and are subject to on-going disturbance. This is particularly the case with small user-created roads where road construction activities were minimal or nonexistent and ground disturbance is limited to the surface and near-surface deposits. Several areas occur in this EMA and these areas are discussed below.

The Pinaleño EMA contains numerous archaeological sites, mostly in the lower elevations. One National Register of Historic Places District and two historic sites listed on the National Register of Historic Places occur within the EMA. In addition, the entire EMA has been determined eligible for the National Register of Historic Places as a Western Apache traditional cultural property. Thirty-two archaeological sites are crossed by existing roads, but only twelve of these sites may be subject to ongoing disturbances. These include:

Road 663 (1 archaeological site)

Road 661 (4 archaeological sites)

Road 266 (1 archaeological site)

Road 625 (1 archaeological site)

Road 4515 (accesses Marijilda Archaeological District))

Road 366 (1 archaeological site)

Road 665 (3 archaeological sites)

At this time there are no plans to move or close these existing roads. These sites should be monitored by a professional archaeologist to document on-going disturbances.

To date, one archaeological site has been noted to be crossed by one unauthorized road that is tentatively proposed for closure, or for nonsystem status. This includes the following road as designated in the TAP roads inventory.

Road 661-2.33L-1 (1 archaeological site)

In this case, closure of this road would reduce impacts to the cultural resource site. This site is located near where a closure would be placed. Accordingly, consultation with a Coronado NF archaeologist is strongly recommended to ensure that damage to cultural resources is minimized.

The effect of the road system on the Western Apache traditional cultural property has not yet been determined. It is hoped that continued consultations between the San Carlos Apache Tribe, the White Mountain Apache Tribe, and the Forest Service, initiated in July 2007, will help the determine the effects of the existing roads, and help the Forest Service design best practices for their management.

Access to Paleontological, Archaeological, and Historic Sites. At a general level, the road system provides access to all of the sites in the area. Access provided by the road system in the area can affect paleontological, archaeological and historical sites both positively and negatively. The primary positive affect of road system is the access provided for authorized visitation and site maintenance of a small number of sites. Without road access, many sites would be rarely visited by either the public or Forest Service personnel. It would be much more difficult to monitor sites and ascertain whether any damage is occurring. On the other hand, road access exposes sites to damage by unauthorized artifact collectors and vandalism.

One existing road is required for access to historic properties. The Swift Trail (FR 366) provides vehicular access to the Columbine Work Center (CCC) and the Heliograph Lookout and no plans currently exist to move this road.

Access to Traditional-Use Areas and Treaty Rights issues. As with heritage-resource sites, in a general sense, the road system provides to all areas of traditional and cultural use. The Pinaleno EMA has been determined eligible as a Traditional Cultural Property for the Western Apaches, and other sites within the EMA have traditional significance for the Hopi and the Zuni Tribes and the Tohono O'odham Nation. Existing FS 366, Swift Trail, provides access to the upper elevations of Mt. Graham and currently there are no plans to close the existing road. Members of the Western Apache Tribes also have used FR 507 to reach several sacred springs and would like to have continued access to this area.

Roads that are historic sites. Two roads have been recorded as cultural resource sites on the Pinaleno EMA. Swift Trail (FR 366) which accesses Mt. Graham and portions of the Stockton Pass Road (FR 266) have been determined eligible to the National Register of Historic Places. Routine maintenance and current use do not affect the historic qualities of these roads.

Fire Protection & Safety

How do the roads in the National Forest System affect fire suppression on the Safford Ranger District?

Road access is a critical issue for initial attack fire resources, when quick responses mean the difference between stopping a fire when it is small and having a large project fire. It is imperative that roads identified in the roads analysis as system roads are maintained in a proper manner to ensure that rapid ingress and egress are obtainable. Level 2 roads need to be maintained at an acceptable level for fire vehicular access. Firefighter safety is a main concern when accessing a road into an area. Maintenance Level 1 roads on the district, from an initial attack standpoint, will be assessed before committing any fire equipment onto the road and will probably be used for OHV access only.

How do roads in the National Forest system on the Safford Ranger District affect prevention, fire investigations and enforcement?

The ability to patrol and administer forest regulations and investigate fires on National Forest lands on the Safford Ranger District require that the district prevention and Forest Protection Officers be able to travel throughout the district on reasonably maintained roads (level 2 and 3). Due to the size of the district and small number of available personnel, rough roads establish smaller patrol areas per day and increase vehicle maintenance costs.

How do roads in the National Forest System affect fuels management activities on the Safford Ranger District?

Since 2003, fuels reduction on National Forest has become a priority. Safford Ranger District has incorporated force account, contractors, and Arizona Department of Corrections hand crews into the fuels program. Our ability to adequately administer fuels reduction projects on the district depends on being able to ferry fuels crews to work sites. Maintenance Level 2 and 3 roads are the main access points for crew vans that we use as crew shuttles. If these roads aren't maintained, it is impossible to administer our fuels program adequately.

How do the roads in the National Forest System affect firefighter and public safety?

Maintenance Level 3 and 4 roads on the district need to be adequately signed and maintained to allow for any emergency evacuations that may arise from a wildfire. Maintenance Level 1 and 2 roads need to have the proper signage to inform the public and emergency fire personnel as to the status of a road (example: Not maintained for passenger cars).

Responses to Specific Road Comments

While not officially Forest System roads, some non-system roads classified as unauthorized are currently being used by both the Forest Service and other agencies for administrative purposes and by the public. AGFD and Safford Ranger District personnel have recommended that some of these be evaluated for addition to the forest road system based on their value for purposes such as hunter and general recreation access, contingent upon appropriate environmental and social analysis. All roads on the district are vital for fire protection.

The following system roads are recommended to remain open authorized specifically for firefighting accessibility: 509 and 4569. Non-system road 266-2.68R-1 is recommended to be added to the system as open authorized specifically for firefighting accessibility. Road 4505 is recommended to be changed or maintained as restricted-access. Road 662 A is recommended to be decommissioned as it serves no purpose for fire access.

Step 5- Describing Opportunities and Setting Priorities

The purpose of this step is to:

- Describe the minimum road system
- Describe modifications to the existing road system that would achieve desirable or acceptable conditions

The Products of this step are:

- A map of the current and proposed road system

The Minimum Road System

36 CFR 2.2.5 (b) a portion of the Travel Management Rule states:

“...b) Road system—(1) Identification of road system. For each national forest, national grassland, experimental forest, and any other units of the National Forest System (Sec. 212.1), the responsible Official must identify the minimum road system (MRS) needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. In determining the minimum road system, the responsible Official must incorporate a science-based travel analysis at the appropriate scale and, to the degree practicable, involve a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments. The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.”

This step compares the current condition to a desired future condition to help identify the opportunities and need for change. This step provides the information to develop the Forest’s strategic intent for road management; that is, to balance the need for decommissioning or retaining unauthorized and authorized roads with the need to minimize risk to public safety and damage to natural resources. Before implementing any proposed actions the Forest will complete the NEPA process. During the NEPA process, however, roads may be added or deleted from the recommended system.

Another consideration in developing the minimum road system is maintenance. However, some maintenance level 2 roads only need routine maintenance every few years rather than annually. Creating a road system to match the available funds by simply closing roads will not result in a road system that meets the access needs for public or for administrative purposes.

The IDT analyzed the extent and current condition of roads on national forest system lands within the project area. The IDT recommended the minimum road system for this EMA using the direction in Title 36 CFR 212.5 (b). The recommendations and issues associated with the identified roads and motorized trails on this EMA are described in the table below.

Table 5.1 – Recommended Minimum Transportation System

Road Number	No Change	PROPOSED RECOMMENDATIONS										Pinaleño EMA
		OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
57	X											Marijilda
88	X											Webb Peak – to remain Admin Only
89	X											Treasure Park
103	X											Frye Mesa
103 A	X											Frye Mesa Reservoir
119	X											Dutch Henry
119-spur						0.36						Non-system road - recommend to decommission
119 J	X											Gillespie
119 J2	X											Veach
119 J3	X											Spring Canyon
137	X											Shannon CG
156	X											North Taylor

Road Number	No Change	PROPOSED RECOMMENDATIONS										Pinaleño EMA
		OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
156 J	X											Carter Sawmill Spring
156 J-4.50R-1		0.05										Non-system road - recommend to add as OA; ML2
157	X											Grant Creek Rd
180	X											Upper Turkey Flat
180A	X											Upper Turkey Flat
198	X											Stockton Pass CG
266	X											State Highway 266
266-2.68R-1		2.69										Non-system road - recommend to add as OA; ML2
266-6.89L-1		1.91										Non-system road - recommend to add as OA; ML2
266-8.60R-1		0.24										Non-system road - recommend to add as OA; ML2
266-8.60R-2			0.41									Non-system road - recommend to add as OAR; ML2

Road Number	No Change	PROPOSED RECOMMENDATIONS									DESCRIPTION	
		OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail		Located Within 300 Ft corridor
266-8.60L-1			0.07									Potential Stockton Pass Ranch Purchase - recommend to add as OAR; ML2
266-8.86L-1	X											On private - not analyzed but potential Stockton Pass Ranch Purchase
286	X											Tripp Canyon
286-Rd to Corral			0.03									Non-system road - recommend to add as OAR; ML2
286 A	X											Dry Lake
287	X											Riggs Flat Access
287 A	X											Riggs Flat CG
307	X											Un-named
351	X											Tripp Canyon Cutoff
352	X											Heliograph Lookout
366	X											State Highway 366
366-spur						0.13						Non-system road - recommend to decommission
472	X											Snowflat

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA	
	No Change	OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
507			4.93									High Peak - recommend last 4.93 miles as OAR (restricted)
508	X											Bible Camp
509			0.73									South Taylor - recommend to change to OAR because there is blocked public access
644	X											Un-named - previously converted to a Trail
645	X											Un-named - previously converted to a Trail
646	X											Un-named
646 B	X											Un-named
647	X											Un-named - previously converted to a Trail
648	X											Un-named - previously obliterated
650	X											Frye Mesa Canyon
652	X											Lower Hospital Flat CG
655	X											Arcadia CG
655 A	X											Upper Arcadia
655 B	X											Arcadia Overflow

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA	
	No Change	OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
656	X											Soldier Creek
656-0.28R-1		0.12										Non-system road - recommend to add as OA; ML2
661	X											Jernigan
661-1.42L-1			0.25									Non-system road - recommend to add as OAR; ML2
661-1.42L-2			0.18									Non-system road - recommend to add as OAR; ML2
661-2.33L-1			0.58									Non-system road - recommend to add as OAR; ML2
661-spur						1.34						Non-system road - recommend to decommission
661 A	X											Jernigan HQ
662				0.45								Dial - Recommend to change last 0.45 mi to ML1
662 A					0.67							Un-named - recommend to decommission
662 B	X											Un-named
662 C	X											Sycamore Spring

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA	
	No Change	OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
662 C-0.95R-1						1.08						Non-system road - recommend to decommission
662 D	X											Un-named
663	X											Oak Draw
663-3.18L-1			0.20									Non-system road - recommend to add as OAR; ML2
663-4.29L-1			0.50									Non-system road - recommend to add as OAR; ML2
664	X											O Bar O - All off Forest
665	X											Middle Stockton Pass
667	X											Noon Creek - Admin Only
668	X											All off Forest;
668 J	X											All off Forest;
669	X											Hawk Peak
673	X											Lindsey Canyon
673 A	X											Un-named - previously obliterated
674	X											Van Valer Spring -

Road Number	No Change	PROPOSED RECOMMENDATIONS									DESCRIPTION	
		OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail		Located Within 300 Ft corridor
675	X											Bellows Canyon
675-0.06R-1		0.27										Non-system road - recommend to add as OA; ML2
675-0.18R-1		0.43										Non-system road - recommend to add as OA; ML2
675-0.18R-2		0.10										Non-system road - recommend to add as OA; ML2
675-0.18R-3						0.08						Non-system road - recommend to decommission
675-0.58R-1		0.18										Non-system road - recommend to add as OA; ML2
675-0.93L-1		0.08										Non-system road - recommend to add as OA; ML2
676									2.72			Iron Tank Well - Recommend convert to OHV Trail
676-1.43R-1									1.54			Non-system road - recommend convert to OHV Trail
676-1.43R-2									0.14			Non-system road - recommend convert to OHV Trail

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA
	No Change	OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor
676-1.43R-3								0.04			Non-system road - recommend convert to OHV Trail
676 A								0.34			Eureka Tank - Recommend convert to OHV Trail
680		1.04									Non-system road - Recommend to add to system as ML2; OA
681	X										McEnary Tunnel
681 J	X										Shingle Mill
726	X										Wood Canyon
726-8.80R-1			0.30								Non-system road - recommend to add as OAR; ML2
726-10.61L-1			0.07								Non-system road - recommend to add as OAR; ML2
727	X										Gillman Canyon
730	X										Clark Peak Loop
730-0.37L-1						0.41					Non-system road - recommend to decommission
730-0.80L-1						0.06					Non-system road - recommend to

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA	
	No Change	OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
												decommission
803	X											Clark Peak
808	X											Noon Creek CG
819	X											Twilight
857	X											Cluff Dairy
861	X											Jacobson Overlook
1173			0.65									Gillespie Well - recommend to change to OAR; ML2
1173-0.54L-1			2.77									Non-system road - recommend to add as OAR; ML2 and label as 119 J
1173-0.54L-2			0.36									Non-system road - recommend to add as OAR; ML2
4505			0.89									Hell Road - recommend change to OAR; ML2
4513	X											Mother's Canyon
4514	X											Angle Orchard
4515	X											Lebanon Ditch

Road Number	No Change	PROPOSED RECOMMENDATIONS									DESCRIPTION	
		OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail		Located Within 300 Ft corridor
4516	X											Babcock Wood - ML 1 road
4519	X											Riggs Wood
4521	X											Hells Hole - recommend to renumber as 4505
4522	X											Grand View
4524	X											Soldier Spring -previously obliterated
4525	X											Soldier Creek Disp Camp
4527	X											Ash Ridge West Spur -
4529			0.34									Bible Tank Spur - Recommend change to OAR; ML2
4535	X											Un-named - previously obliterated
4539	X											Grant Hill - portion previously obliterated
4541	X											Hospital Ridge N Spur - previously obliterated; now a foot trail
4542	X											Cunningham CG
4543	X											Cunningham Loop
4547	X											Snow Flat Spur - ML 1 road

Road Number	PROPOSED RECOMMENDATIONS										Pinaleño EMA	
	No Change	OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
4554					0.11							Lower Treasure Park - recommend to decommission last 0.11 mi
4559	X											Snow Lure Spur
4559-0.37R-1		0.17										Non-system road - recommend to add as OA; ML2
4561	X											Upper Hospital Flat
4567	X											MGIO - Admin Only; under special use permit
4568	X											Field Camp - Admin Only; under special use permit
4569	X											Conservation Camp
4571	X											Bible School
4572	X											Trail Head - previously converted to a trail
4573	X											Columbine Spring - previously obliterated
4575	X											Old Columbine
4577	X											Columbine Corral
4597	X											Mother's Bypass

Road Number	No Change	PROPOSED RECOMMENDATIONS									DESCRIPTION	Pinaleño EMA		
		OA - Open Authorized (Miles)	OAR- Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail			Located Within 300 Ft corridor	
4998	X												Moonshine	
6099	X												Un-named	
6502	X												Un-named	
6502 A	X												Big Creek	
6599	X												Gibbs Tank	
6609	X												Two Troughs Spring Tank	
6609-7.88R-1									0.83				Non-system road - recommend to convert to OHV Trail	
6609-8.00R-1			0.02										Non-system road - recommend to add as OAR; ML2	
6609 A	X												Un-named - previously obliterated	
6610	X												North 2 Troughs Springs	
6611	X												Dead Steer Mesa	
6612	X												Un-named	
6612-0.66R-1						0.26							Non-system road - recommend to decommission	
6613	X												Un-named	

Road Number	No Change	PROPOSED RECOMMENDATIONS										Pinaleño EMA
		OA - Open Authorized (Miles)	OAR - Restricted Use (Miles)	ML1 - Maintenance Level 1 (Miles)	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads	Proposed New Construction	Existing OHV Trail	Convert to OHV Trail	Convert to Non-Motorized Trail	Located Within 300 Ft corridor	DESCRIPTION
6613 A	X											Un-named
6613 B	X											Un-named - off forest
6614	X											Left Hand Tank
6614 J	X											Dripping Spring Tank
6625	X											Shake - previously obliterated
6629	X											Deadman
6692	X											Grapevine Canyon - ML1 road
6693	X											Grapevine Spring - ML1 road
6694	X											Gold - ML1 road
6694 A	X											Un-named - ML1 road
6695	X											Gold Gulch - ML1 road
6696	X											Horse - ML1 road
TOTALS		7.28	13.28	0.45	0.78	3.72	0.00	0.00	5.61	0.00		

Step 6- Reporting

The Purpose of this step is to report the key findings of the analysis.

The products of this step are:

- A written report for this EMA and a Transportation Atlas showing existing routes and recommendations for the minimum road system.

Report

This report is available to the public, if requested and will become part of the EMA file. A map depicting all recommendations is in Appendix F.

Key Findings and Recommendations

The key findings and recommendations of this analysis which are based on Interdisciplinary Team (IDT) discussion, specialist expertise, and public input, include:

Open Authorized (OA)

The following roads are recommended to be added to the system as Open Authorized (OA) roads. It is recommended to add 7.28 miles of roads to the system.

Road Number	OA - Open Authorized (Miles)
156 J-4.50R-1	0.05
266-2.68R-1	2.69
266-6.89L-1	1.91
266-8.60R-1	0.24
656-0.28R-1	0.12
675-0.06R-1	0.27
675-0.18R-1	0.43
675-0.18R-2	0.10
675-0.58R-1	0.18
675-0.93L-1	0.08
680	1.04
4559-0.37R-1	0.17
TOTALS	7.28

Open Authorized and Restricted (OAR)

The following roads are recommended to be added to the system or changed to Open Authorized and Restricted (OAR) roads. It is recommended to add or change 13.28 miles of roads to the system. The roads shall be restricted to the public and only government officials or Special Use Permittees will be allowed use.

Road Number	OAR - Restricted Use (Miles)
266-8.60R-2	0.41
266-8.60L-1	0.07
286-Rd to Corral	0.03
507	4.93
509	0.73
661-1.42L-1	0.25
661-1.42L-2	0.18
661-2.33L-1	0.58
663-3.18L-1	0.20
663-4.29L-1	0.50
726-8.80R-1	0.30
726-10.61L-1	0.07
1173	0.65
1173-0.54L-1	2.77
1173-0.54L-2	0.36
4505	0.89
4529	0.34
6609-8.00R-1	0.02
TOTALS	13.28

Maintenance Level 1 (ML 1)

The following roads are recommended to be changed to Maintenance Level 1(ML 1) roads. These roads have future use but currently are not being used. No public funding will be expended for maintenance on these roads.

Road Number	ML1 - Maintenance Level 1 (Miles)
662	0.45
TOTALS	0.45

Decommission

The following roads are recommended to be **decommissioned**. Of the total, 0.78 miles of system roads and 3.72 miles of non-system roads are recommended to be decommissioned.

Road Number	Decommission (Miles)- System Roads	Decommission (Miles)- Non-System Roads
119-spur		0.36
366-spur		0.13
661-spur		1.34
662 A	0.67	
662 C-0.95R-1		1.08
675-0.18R-3		0.08
730-0.37L-1		0.41
730-0.80L-1		0.06
4554	0.11	
6612-0.66R-1		0.26
TOTALS	0.78	3.72

OHV Trail

The following roads are recommended to be **converted to OHV Trails**. 3.06 miles of system roads and 2.55 miles of non-system roads are recommended to be converted.

Road Number	System Roads - Convert to OHV Trail	Non-system Roads - Convert to OHV Trail
676	2.72	
676-1.43R-1		1.54
676-1.43R-2		0.14
676-1.43R-3		0.04
676 A	0.34	
6609-7.88R-1		0.83
TOTALS	3.06	2.55

Appendix A: Definitions

Road Definitions (36 CFR 212.1)

Authorized Road - Roads wholly or partially within or adjacent to National Forest system lands that are determined to be needed for long-term motor vehicle access, including state roads, county roads, privately owned roads, national forest system roads and other roads authorized by the Forest Service.

Unauthorized Road - Road on national forest system lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways and off-road vehicle tracks that have not been designated and managed as a trail and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

Temporary Roads - Roads authorized by contract, permit, lease, other written authorization or emergency operation not intended to be a part of the forest transportation system and not necessary for long-term resource management.

Road Decommissioning - Activities that result in the stabilization and restoration of unneeded roads to a more natural state or conversion to other non-road uses.

Road Reconstruction - Activities that result in improvement or realignment of an existing authorized road as defined below:

Road Improvement - Activity that results in an increase of an existing road's traffic service level, expansion of its capacity or a change in its original design function.

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

Access Rights: A privilege or right of a person or entity to pass over or use another person's or entity's travel way. (36 CFR 212.1, FSM 5460.5 - Rights of Way Acquisition)

Arterial Road: An NFS road that provides service to large land areas and usually connects with other arterial roads or public highways (7705 – DEFINITIONS).

Collector Road: An NFS road that serves smaller areas than an arterial road and that usually connects arterial roads to local roads or terminal facilities (FSM 7705 – DEFINITIONS).

Forest Road or Trail: A road or trail wholly or partly within or adjacent to and serving the NFS that the Forest Service determines is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources (36 CFR 212.1 – FSM 7705 – DEFINITIONS).

Local Road: An NFS road that connects a terminal facility with collector roads, arterial roads, or public highways and that usually serves a single purpose involving intermittent use (FSM 7705 – DEFINITIONS).

National Forest System Road: A forest road other than a road which has been authorized by a legally documented right-of-way held by a state, county, or local public road authority (FSM 7705 – DEFINITIONS – 36 CFR 212.1).

Public Road: A road under the jurisdiction of and maintained by a public road authority and open to public travel (23 U.S.C. 101(a) – (FSM 7705 – DEFINITIONS)).

Private Road: A road under private ownership authorized by an easement granted to a private party or a road that provides access pursuant to a reserved or outstanding right (FSM 7705 – DEFINITIONS).

Route: A road or trail (FSM 7705 – DEFINITIONS).

Appendix B: Best Management Practices

Federal agency compliance with pollution control is addressed through section 313 of the Clean Water Act, Executive Order 12580 (January 23, 1987), National Non-point Source Policy (December 12, 1984), USDA Non-point Source Water Quality Policy (December 5, 1986) and the Environmental Protection Agency (EPA) in their guidance "Non-point Source Controls and Water Quality Standards" (August 19, 1987). In order to comply with State and local non-point pollution controls the Forest Service will apply Best Management Practices (BMPs) to all possible non-point sources which may result from management activities proposed in any future decision document. These BMPs are described in the Region 3 Soil and Water Conservation Handbook 2509.22.

Best Management Practices are the primary mechanism for achievement of water quality standards (EPA 1987). This appendix describes the Forest Service BMP process in detail and lists the key Soil and Water Conservation Practices that may be employed when in the implementation of a selected action is determined in a Record of Decision.

Best Management Practices include but are not limited to structural and non-structural controls, operations, and maintenance procedures. BMPs can be applied before, during, or after pollution producing activities to reduce or eliminate the introduction of pollutants into receiving waters (40 CFR 130.2, EPA Water Quality Regulation). Usually, BMPs are applied as a system of practices rather than a single practice. BMPs are selected on the basis of site-specific conditions that reflect natural background conditions and political, economic, and technical feasibility.

BMP IMPLEMENTATION PROCESS

In cooperation with the State, the Forest Service's primary strategy for the control of non-point source pollution is based on the implementation of preventative practices (i.e., BMPs). The BMPs for this project have been designed and selected to protect the identified beneficial uses of the watershed.

The Forest Service non-point source management system consists of the following steps:

1. **BMP SELECTION AND DESIGN** - Water quality goals are identified in the Forest Plan. These goals meet or exceed applicable legal requirements including State water quality regulations, the Clean Water Act, and the National Forest Management Act. Environmental assessments for projects are tiered to Forest Plans using the National Environmental Policy Act (NEPA) process. The appropriate BMPs are selected for each project by an interdisciplinary team. In each new location, there is flexibility to design different BMPs depending on local conditions and values and downstream beneficial uses of water. The BMP selection and design are dictated by the proposed action, water quality objectives, soils, topography, geology, vegetation, and climate. Environmental impacts and water quality protection options are evaluated, and alternative mixes of practices considered. Final collections of practices are selected that not only protect water

quality but meet other resource needs. The final sets of selected practices constitute the BMPs for the project.

2. BMP APPLICATION - The BMPs are translated into contract provisions, special use permit requirements, project plan specifications, and so forth. This ensures that the operator or person responsible for applying the BMP actually is required to do so. Site-specific BMP prescriptions are taken from plan-to-ground by a combination of project layout and resource specialists (e.g., hydrology, soils, etc.). This is when final adjustments to fit BMP prescriptions to the site are made.
3. BMP MONITORING - When an activity begins (e.g., road building, mining, timber harvesting, etc.), engineering representatives, resource specialists, and others ensure that BMPs are implemented according to plan. BMP implementation monitoring is done before, during, and after resource activity implementation. This monitoring answers the question: "Did we do what we said we would do?" Once BMPs have been implemented, further monitoring is done to evaluate if the BMPs are effective in meeting management objectives and protecting beneficial uses. If monitoring indicates that water quality standards are not being met or that beneficial uses are not being protected, corrective action will consider the following:
 - o Is the BMP technically sound? Is it really best or is there a better practice which is technically sound and feasible to implement?
 - o Was the BMP applied entirely as designed? Was it only partially implemented? Were personnel, equipment, funds, or training lacking which resulted in inadequate or incomplete implementation?
 - o Do the parameters and criteria that constitute water quality standards adequately reflect human induced changes to water quality and beneficial uses?
4. FEEDBACK - Feedback on the results of BMP evaluation is both short- and long-term in nature. Where corrective action is needed, immediate response will be undertaken. This action may include modification of the BMP, modification of the activity, ceasing the activity, or possibly modification of the State water quality standard. Cumulative effects over the long-term may also lead to the need for possible corrective actions.

All roads will be maintained using Best Management Practices to reduce watershed impacts.

1. Use Best Management Practices with specific practices identified and implemented for specific sites.
2. Control sediment, particularly resulting from soil movement caused by roads.

Under both Alternative B and C, improved road miles through reconstruction and maintenance would be accomplished utilizing Best Management Practices to bring these miles to minimum Forest standards. Best management practices are a practice or a combination of practices that is determined by a State (or designated area-wide planning agency) after problem assessment, examination of alternative practices and appropriate public participation to be the most effective, practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by non-point sources to a level

compatible with Federal and State water quality goals and standards. Non-point source pollutants are generally carried over, or through, the soil and ground cover via stream flow processes.

Soil and Water Conservation Practices in the form of Best Management Practices (BMPs) will be implemented and monitored as directed in the Forest Plan. Through the use of BMPs the adverse effect of planned activities will be mitigated.

The following BMPs are applicable to all action alternatives:

Erosion Control Plan. Minimize erosion and sedimentation through effective planning prior to initiation of construction activities and through effective contract administration during construction.

Timing of Construction Activities. Schedule operations during periods when the probabilities for rain and runoff are low. Equipment shall not be operated when ground conditions are such that unacceptable soil compaction or displacement results. Erosion control work must be kept current when construction occurs outside of the normal operating season.

Road Slope Stabilization. Prevent on-site soil loss from exposed cut slopes, fill slopes, and spoil disposal areas. The level of stabilization effort needed must be determined on a case-by-case basis. Surface stabilization measures shall be periodically inspected, as necessary, to determine effectiveness. In some cases, additional work may be needed to ensure that the vegetative and/or mechanical surface stabilization measures continue to function as intended.

Dispersion of Subsurface Drainage from Cut and Fill Slopes. Minimize the possibilities of cut or fill slope failure and the subsequent production of sediment. Dispersal of collected water should be accomplished in an area capable of withstanding increased flows.

Control of Road Drainage. Minimize the erosive effects of concentrated water flows caused by road drainage features.

Timely Erosion Control Measures on Incomplete Roads and Stream Crossing Projects. Minimize erosion and sedimentation from road construction sites where final drainage structures have not been completed. Apply protective measures to all areas of disturbed, erosion-prone, unprotected ground that is not to be further disturbed in the present year. When conditions permit operations outside of the Normal Operating Season, erosion control measures must be kept current with ground disturbance to the extent that the affected area can be rapidly "closed" if weather conditions deteriorate. Do not abandon areas for the winter with remedial measures incomplete.

Construction of Stable Embankments (Fills). Construct embankments with materials and methods which minimize the possibility of failure and subsequent water quality degradation.

Control of Side Cast Material. Minimize sediment production from side cast material during road construction, reconstruction, or maintenance. Side casting is not an acceptable construction alternative in areas where it will adversely affect water quality. Prior to commencing

construction or maintenance activities, waste areas should be located where excess material can be deposited and stabilized.

Servicing and Refueling of Equipment. Prevent pollutants such as fuels, lubricants, bitumens, raw sewage, wash water, and other harmful materials from being discharged into or near rivers, streams, and impoundments, or into natural or man-made channels leading thereto. Selecting service and refueling areas well away from wet areas and surface water, and by using berms around such sites to contain spills. Spill prevention, containment, and countermeasures (SPCC) plans are required if the volume of fuel exceeds 660 gallons in a single container or if total storage at a site exceeds 1320 gallons. Any SPCC needs to be reviewed and certified by a registered professional engineer.

Controlling In-Channel Excavation. Minimize sedimentation and turbidity resulting from excavation for in-channel structures, so as to comply with state and Federal water quality standards.

Disposal of Right-of-Way and Roadside Debris. Construction debris and other newly generated roadside slash developed along roads near streams shall not be deposited in stream channels (including ephemeral and intermittent).

Maintenance of Roads. Maintain roads in a manner that provides for water quality protection by minimizing rutting, failures, side casting, and blockage of drainage facilities (all of which can cause sedimentation and erosion).

Road Surface Treatment to Prevent Loss of Materials. Minimize sediment production and erosion from road surface materials to comply with state and Federal water quality standards. Road surface treatments are prescribed based on traffic levels, road design standards, soils, and geology.

Decommissioning of Roads. Reduce sediment generated from unneeded roads, roads that run in streambeds and roads that are located in streamside zones by closing them to vehicle use and restoring them to productivity.

APPENDIX C – INTERDISCIPLINARY TEAM

Supervisor's Office

Curiel,	Eli	Engineering, Editor & ID Core Team Leader
Makansi	Kathy	Cultural Resources
Lefevre	Bob	Soils, Water, Air & Forestry
Emmett	Tami	Public Access Program Manager
McKay	George	Forest Lands Program Manager
White	Laura	Zone Recreation

District Office

D4 – Safford Ranger District		
Casey	Anne	Wildlife Biology/Recreation
Duncan	Chuck	Range Management Staff
Zale	Buddy	FMO
Glaspie	Scott	AFMO
Hennings	Lorean	District Recreation Area Manager

Arizona Game & Fish Department

Safford District		
Aubuchon	Duane	Wildlife

APPENDIX D – Interdisciplinary Team Discussion Notes

The notes in this section are included in an effort to provide a brief summary of why the TAP recommendations for changes to the road system were made. They do not replace the discussion in under Step 4 of the TAP document. While discussing the recommendations, the Interdisciplinary Team (IDT) reviewed comments that were collected during public meetings and from letters and e-mails submitted by many interest groups, individuals and other agencies. These comments were used to identify issues that needed to be weighed, along with many other factors, in the formation of the recommendations.

The TAP is a living document and therefore will be updated regularly. Line officers and IDTs will continue to consult the TAP as they are planning future projects. Since the TAP contains only recommendations, future projects will continue to receive public input that pertains to the Forest transportation system and may recommend decisions which are not consistent with the initial recommendations of the TAP. Modifications to the TAP's recommendations as a result of final decisions will be incorporated, after the appropriate NEPA procedures have been completed.

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
57	Marijilda - No other access here so this road is not recommended to be closed. Not Chiricahua leopard frog habitat.
88	Webb Peak - Recognize issue with road on 40% + slope but is only access to lookout tower. Admin only. OAR
89	Treasure Park -
103	Frye Mesa -
103 A	Frye Mesa Reservoir -
119	Dutch Henry -
119 J	Gillespie - Goes through to 266. No other road accesses this area. Pipeline, range improvement access.
119 J2	Veach - Hunter access, dispersed camping access.
119 J3	Spring Canyon -
137	Shannon CG -
156	North Taylor - Road has been recently maintained. Accept maintenance on 40%+ slope due to need for access to this area.
156 J	Carter Sawmill Spring. Recently maintained. Accept maintenance on 40%+ slope due to need for access to this area.
156 J-4.50R-1	Non-system road - recommend to add as OA; ML2. Within 300 ft. dispersed camping corridor. Don't add.
157	Grant Creek Rd -
180 A	Upper Turkey Flat -
198	Stockton Pass CG -
266	State Highway 266 -

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
266-2.68R-1	Non-system road - recommend to add as OA; ML2 AGFD supports for camping and hunting access. Pipeline and admin access.
266-6.89L-1	Non-system road - recommend to add as OA; ML2 for recreation, hunter, and range permittee access.
266-8.60R-1	Non-system road - recommend to add as OA; ML2 for trailhead, recreation, hunter, and range permittee access.
266-8.60R-2	Non-system road - recommend to add as OAR; ML2 for range improvement access.
266-8.60L-1	Non-system road
266-8.86L-1	Non-system road
286	Tripp Canyon -
286-Rd to Corral	Non-system road - recommend to add 0.04 miles as OAR; ML2 for range improvement access.
286 A	Dry Lake -
287	Riggs Flat Access -
287 A	Riggs Flat CG -
307	Un-named -
351	Tripp Canyon Cutoff
352	Heliograph Lookout OAR admin access only to Heliograph lookout. Frequent maintenance.
366	State Highway 366
366-spur	Non-system road - recommend to decommission. Not needed except for possible fuels project. Created by cabin owner.
472	Snow Flat -
507	High Peak - Reforest per AICA

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
508	Bible Camp - Accept maintenance on 40%+ slope etc. because needed for access to Bible Camp, trailhead.
509	South Taylor - Road locked on private. ML1. Not a public road. Pursue creating public access.
646	Un-named - Not redundant; Needed for range and recreation access.
646 B	Un-named - Needed for range and recreation, hunter access.
647	Un-named -
648	Un-named -
650	Frye Mesa Canyon - Accept maintenance on 40%+ slope etc. because needed for access to bottom of Frye Dam.
655	Arcadia CG -
655 A	Upper Arcadia -
655 B	Arcadia Overflow -
656	Soldier Creek -
656-0.28R-1	Non-system road - recommend to decommission Add OA. Part of campground. Goes to trailhead.
661-1.42L-1	Non-system road - recommend to add as OAR; ML2 Powerline, range permittee access.
661-1.42L-2	Non-system road - recommend to decommission. OAR needed for range, recreation or admin.
661-2.33L-1	Non-system road - recommend to decommission; OAR needed for powerline, range improvement access.
662	Dial - Recommend last 0.45 mi as ML1. Needed for range, recreation, fire admin access.
662 A	Un-named - Decommission. Not really there. Not needed.

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
662 B	Un-named -
662 C	Sycamore Spring - Needed for range improvement, hunter access.
662 C-0.95R-1	Non-system road - recommend to decommission. Goes to historic site but no need to keep.
662 D	Un-named -
663	Oak Draw - Needed for range, recreation admin access.
663-3.18L-1	Non-system road - recommend to add as OAR; ML2 for wildlife water access.
663-4.29L-1	Non-system road - recommend to add as OAR; ML2 for range improvement access.
665	Middle Stockton Pass - Needed for recreation, range admin access so accept responsibility for maintenance
667	Noon Creek - Admin Only
669	Hawk Peak - Off observatory road. OAR. Not open to public
673	Lindsey Canyon - ML1. Not open to public or admin.
673 A	Un-named - ML1. Not open to public or admin.
675	Bellows Canyon -
675-0.06R-1	Non-system road - recommend to add as OA; ML2. Dispersed camping access.
675-0.18R-1	Non-system road - recommend to add as OA; ML2 Dispersed camping access.
675-0.18R-2	Non-system road - recommend to add as OA; ML2 for dispersed camping access.
675-0.58R-1	Non-system road - recommend to add as OA; ML2 Dispersed camping access.
675-0.93L-1	Non-system road - recommend to add as OA; ML2 Dispersed camping access.
676	Iron Tank Well - Recommend to convert to OHV Trail. Mainly accessible only by ATVs.
676-1.43R-1	Non-system road -

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
676-1.43R-2	Non-system road -
676-1.43R-3	Non-system road -
676 A	Eureka Tank - Recommend to convert to OHV Trail; Mainly accessible only by ATVs.
681	Un-named -
681 J	Wood Canyon -
726	Wood Canyon - Keep for range and recreation access.
726-8.80R-1	Non-system road - recommend to add as OAR; ML2 for range improvement access.
726-10.61L-1	Non-system road - recommend to add as OAR; ML2 for range improvement access.
727	Gillman Canyon -
730	Clark Peak Flat - Loops back to Swift Trail. Dispersed camping. Bog needs to be addressed.
730-0.37L-1	Non-system road - recommend to decommission. Not needed for recreation, range or admin use.
730-0.80L-1	Non-system road - recommend to decommission. Not needed for recreation, range or admin use.
803	Clark Peak -
808	Noon Creek CG -
819	Twilight -
857	Cluff Dairy -
861	Jacobson Overlook - Does not affect riparian area. Accept maintenance because needed for access to helispot, recreation opportunities.
1173	Gillespie Well - Connects to 119J. Same road.
1173-0.54L-1	Non-system road - Recommend for OAR for permittee access to range improvement.
1173-0.54L-2	Non-system road -

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
4505	Hell Road - Need to change to OAR for admin access (PERP).
4513	Mother's Canyon- Need for range, recreation admin access.
4514	Angle Orchard -
4515	Lebanon Ditch -
4516	Babcock Wood - Need for recreation, admin (PERP) access. Minimal concern for effect on MSO, goshawk. Both nesting areas almost a mile away.
4519	Riggs Wood -
4521	Hells Hole - Need for recreation, admin (PERP) access. Negligible effect on MSO, Goshawk.
4522	Grand View - Need for recreation, admin (PERP) access. Negligible effects on MSO, Goshawk.
4525	Soldier Creek Disp Camp -
4529	Bible Tank Spur - Recommend change to ML1. Not drivable above water tank. Make OAR for PERP.
4539	Grant Hill -
4542	Cunningham CG -
4543	Cunningham Loop - Cunningham Loop access.
4554	Lower Treasure Park - Negligible effects on MSO, goshawk. Keep for dispersed recreation access. Need to end before creek to mitigate riparian impacts.
4559	Snow Lure Spur -
4559-0.37R-1	Non-system road -
4561	Upper Hospital Flat -
4561 A	Lower Hospital Flat -
4569	Conservation Camp - Need for access to gravel pit, dispersed recreation and admin access. Negligible effects on MSO.

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
4571	Bible School -
4574	Cabin Road -
4575	Old Columbine -
4577	Columbine Corral -
4597	Mother's Bypass -
4998	Moonshine -
6099	Un-named -
6502	Un-named -
6502 A	Big Creek -
6599	Gibbs Tank -
6609	Two Troughs Spring Tank -
6609-7.88R-1	Non-system road - recommend to convert to OHV Trail. Goes to old mine. Add for OHV recreation. Recommended by AGFD
6609-8.00R-1	Non-system road - recommend to add as OAR; ML2 for access to range improvement.
6609 A	Un-named - Originates on 6609. Already ML1.
6610	North 2 Troughs Springs - Accept maintenance because road is needed for recreation, permittee, admin access.
6611	Dead Steer Mesa - Accept maintenance because road is needed for recreation, permittee, admin access.
6612-0.66R-1	Non-system road - recommend to decommission. Accept maintenance because road is needed for recreation, permittee, admin access.

System roads highlighted	Pinaleño EMA
Road Number	DESCRIPTION
6613	Un-named - Keep for OHV recreation.
6613 A	Un-named -
6613 B	Un-named - Off forest.
6614 J	Dripping Spring Tank - Not Chiricahua leopard frog habitat. ML1. No change.
6625	Shake - ML1. No change.
6692	Grapevine Canyon - Recommend to change to ML1 . NO CHANGE
6693	Grapevine Spring - Recommend to change to ML1 . NO CHANGE
6694	Gold - Recommend to change to ML1 . NO CHANGE
6694 A	Un-named - Recommend to change to ML1 . NO CHANGE
6695	Gold Gulch - Recommend to change to ML1 . NO CHANGE
6696	Horse - Recommend to change to ML1 . NO CHANGE

APPENDIX E – FSM 7700

APPENDIX F – FOREST TRANSPORTATION ATLAS