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Draft Transportation Analysis Plan

Williams Ranger District, Kaibab National Forest

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Introduction

On November 9, 2005 the Forest Service published final travel management regulations governing off-highway vehicles (OHV) and other motor vehicles on national forests and grasslands. These regulations amended part 212, subpart B of part 251, subpart A of part 261, and removed part 295 of Title 36 of the Code of Federal Regulations (CFR). Together, these regulations are referred to as the Travel Management Rule (TMR). TMR requires designation of those roads, trails, and areas that are **open** to motor vehicle use (36 CFR 212.51). Designation may include the limited use of motor vehicles within a specified distance of designated routes solely for the purposes of dispersed camping or retrieval of a downed big game animal by an individual who has legally taken that animal (36 CFR 212.51(b)). TMR prohibits the use of motor vehicles off the designated system as well as use of motor vehicles on routes and in areas not consistent with the designations (36 CFR 212.50).

The Travel Management Rule includes a mandatory process called Travel Analysis. Travel Analysis is not a NEPA process; rather it is an integrated ecological, social, and economic approach to transportation planning, addressing both existing and future roads. Travel Analysis is a broad-scale analysis that encompasses an administrative unit (see Appendix D, Definitions). It will provide a comprehensive review and recommendations for the existing transportation system in accordance with the desired condition in the Forest Plan. Travel Analysis outcomes are a set of proposals for change to travel management direction and to the forest transportation system. These proposals will be evaluated through a subsequent NEPA process. Travel Analysis necessitates that broad-scale transportation issues be addressed in a public forum.

Travel management in the Forest Service was traditionally split between Engineering for road management and Recreation for motorized trails management. The recently revised regulations now combine the analysis of motorized trails and roads under Travel Analysis. The new travel management rule requires each administrative unit (National Forest, National Grassland, etc.) or Ranger District to designate those National Forest System (NFS) roads, NFS motorized trails, and areas on NFS lands that are open to motor vehicle use by class of vehicle and, if appropriate, by time of year (36 CFR 212.51). The key concept underlying the Travel Analysis approach is to focus on changes to:

- The forest transportation system; or
- Restrictions and prohibitions on motor vehicle use.

Travel Analysis requirements are described in *FSM 7703 (Travel Management); FSM 7710 (Travel Planning); FSM 7731 (Road Operation); FSM 7160 (Signs and Posters); FSM 2350 (Motorized trails); FSH 7709.56 (Transportation System Operations); FSH 7709.59 (Road Operations); EM-7100-15 (Sign and Poster Guidelines); and FSH 2309.18 (Motorized Trail Operations).*

Attached is the link to the complete FSM 7700 - Transportation System.
http://fsweb.wo.fs.fed.us/directives/html/fsm7000.shtml

Description of the General Process

Purpose and Objective

Travel Analysis helps to fulfill two major requirements of 36 CFR 212, subparts A and B:

1. To identify the minimum road system
2. To identify and subsequently designate a system of roads, motorized trails, and areas for motor vehicle use.

The objective of Travel Analysis is to provide Forest Service Line Officers with critical information to ensure that existing and developed road and motorized trail systems provide for user safety and convenience, are responsive to public needs and desires, provide sustainable access, are affordable within current and future expected budgets, are efficiently managed, have minimal negative ecological effects on the land, are administered in an environmentally responsible manner, are in balance with available funding for needed management actions, and are consistent with land management objectives. Travel Analysis will not change or modify any existing NEPA decisions, but information generated by the analysis might cause Line Officers to reconsider previous decisions and perhaps at some future date revise previous NEPA decisions.

Travel Analysis Overview

Travel Analysis is intended to identify opportunities for the national forest transportation system to meet current or future management objectives, and to provide information that allows integration of ecological, social, and economic concerns into future decisions. The process is intended to complement, rather than replace or preempt, other planning and decision processes. Travel Analysis was previously completed for Maintenance Level 3-5 roads on the Kaibab National Forest (Forest Level Roads Analysis Report, 2003) and for Maintenance Level 1-2 roads on the Williams Ranger District (Williams Roads Analysis Process, 2006). This analysis focuses on unauthorized and Maintenance Level 1-2 roads.

Travel Analysis is a six-step process that considers the landscape, site-specific conditions, and public input in identifying a set of relevant transportation-related issues and analysis questions (FS-643, *Roads Analysis: Informing Decisions about Managing the National Forest Transportation Syste*m). The process provides a set of possible road-related issues and analysis questions. Only those relevant questions and any additional suggestions or information needs and research findings that might apply to the project need to be addressed.

Six Step Process

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.

Travel Analysis Products

This Transportation Analysis Plan (TAP) is a product of the analysis process and documents the information and analyses used to identify opportunities and set priorities for future national forest road and motorized trail systems. A map and table is included in the TAP that displays the known road system and the needs and/or opportunities for each road (Appendix A, Map A-1; Appendix B, Table B-1, Existing Open and Table B-2, Existing Closed). There are no designated motorized trails (restricted to vehicles 50" or less) in the project area. This TAP will:

- Identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of NFS lands. The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the Forest Plan (36 CFR part 219).
- Identify roads on lands under Forest Service jurisdiction that are no longer needed to meet forest resource management objectives and that, therefore, should be decommissioned or considered for other uses, such as for trails.
- Identify road and motorized trail related social, environmental and public safety risks.
- Identify site-specific priorities and opportunities for road and motorized trail improvements.
- Identify areas of special sensitivity or any unique resource values.

This TAP will help managers address questions on road and motorized trail access related to ecosystem health and sustainability; commodity extraction; removal of forest products; recreation; social and cultural values; and administrative uses. It informs future management decisions on the merits and risks of constructing new roads and motorized trails; relocating, upgrading, or decommissioning existing roads and motorized trails; managing traffic; and enhancing, reducing, or discontinuing road and motorized trail maintenance. The 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 and motorized trail to the land management objectives and desire conditions.

Step 1- Setting Up the Analysis

Purpose, Scope and Objectives

The purpose of the project is to identify the road system needed to administer and utilize NFS resources within budget constraints. This TAP will support the Forest Plan Revision document. It will look at options concerning access needs, proliferation of unauthorized roads, un-needed roads, motorized mixed-use, density issues, and OHV use and access issues.

The scope of the analysis is the Williams Ranger District, Kaibab National Forest (KNF). Boundaries are indicated on maps included in Appendix A.

The objective of the analysis is to provide critical information for a road and motorized trail system that is safe and responsive to public needs and desires, is affordable, conforms to the Forest Plan, is efficiently administered, has minimal negative ecological effects on the land, and is in balance with available funding for needed management actions. All existing system roads within the project area are included in this TAP. Some roads shown on maps (Appendix A) are under Forest Service jurisdiction but are not currently considered system roads because they have not been entered in the INFRA database (see Information Needs discussion below).

Information Needs

- Accurate location and condition of all system roads within the analysis area. A complete inventory of unauthorized roads is not required; however 220 miles of these routes have been inventoried.
- For each road include the following information:
    1. Owner of the underlying land for each NFS road;
    2. Any easement dedication to the FS (if applicable);
    3. Any additional right-of-way required;
    4. Maintenance jurisdiction for the road (FS, County, Local, State)
- Soil, water resources, invasive species, environmental issues and biological communities.
- Public access or recreational needs and desires in the area, including access for all landowners.
- Best management practices for the area.
- Current forest plan and other management direction for the area.
- Agency objectives and priorities.
- State laws that regulate motor vehicle use on and off public roads.
- Examine applicable federal, state and local laws.
- Public and user group input.

Available Information for Completing the Analysis

1. Transportation System: 2007 GIS coverage of the roads in the INFRA database and other NFS roads data, including a 2005 inventory of 220 miles of unauthorized roads.
2. Soil and Watershed: GIS coverage and soil unit descriptions.
3. Wildlife: GIS coverage of northern goshawk and Mexican spotted owl territories and nest areas. Information from field observations about other wildlife habitats and use (i.e. grasslands, riparian areas, migration corridors etc.).
4. Existing information regarding management of motor vehicle travel on the District: current management objectives for roads and motorized trails, recent motorized travel decisions and policy, travel restricted areas, and wilderness.
5. Land ownership; some information on easements and rights-of-way.
6. Recreation Opportunity Spectrum (ROS)/Scenery Management System (SMS) Guidebook and GIS coverage of designations.
7. Map of developed recreation sites and some information about current dispersed recreational use.
8. Heritage: GIS coverage of areas with complete heritage survey (42%). Information on potential site density/risk for unsurveyed areas. Documentation of many heritage sites in unsurveyed areas.
9. Information about traditional cultural use areas and concern from local tribes regarding access to those areas.
10. Noxious weeds and rare plants: GIS coverage of known locations.

Data Gaps and Information Needs

1. The Forest Service roads database (INFRA) has many errors, including duplicate entries and missing or erroneous attributes. Efforts were made to clean the data during analysis; some roads need to be entered into the INFRA database and some attributes need to be changed.
2. Not all unauthorized roads are known; some were either missed during the 2005 inventory or have been created since.
3. Additional information is needed about agreements, easements and rights-of-way.
4. Northern goshawk GIS coverage is out-of-date; field verification is needed.
5. Field verification of road locations and resource conditions is needed.
6. GPS inventory to produce a GIS coverage of existing dispersed camping sites is needed.

Analysis Plan

1. Review existing open roads system. Identify the minimum road system needed to provide access and perform key operations.
2. Identify concerns regarding the existing condition
3. Work with the public, other agencies, tribes, and other stakeholders to identify concerns and opportunities.
4. Consider input, management objectives, and affected resources in an interdisciplinary setting. Make site-specific road recommendations.

5. Check consistency with the KNF Forest Plan, Forest Service regulation and policy, Executive Orders, Arizona vehicle laws, and other applicable federal laws.
6. Identify additional issues, concerns and opportunities with internal resource staffs and continued public involvement.
7. Assess the risks and trade-offs of various scenarios.
8. Recommend changes to the road system based on the findings of this Travel Analysis.

An Interdisciplinary Team (IDT) was established. The IDT members are listed below:

Ariel Leonard	ID Team Leader
Jacqueline Denk	Public Affairs
John O'Brien	Engineering
John Holmes	Timber
Neil Weintraub	Archaeology
Brian Poturalski	Recreation
Holly Kleindienst	Fuels and Fire Management
Tom Mutz	Lands and Special Uses
Jeff Waters	Range
Karlynn Huling	Noxious Weeds, Rare Plants, Soils and Watershed

Other Participants included:

Martie Schramm	Williams District Ranger
Stephen Best	Former Williams District Ranger
Richard Stahn	Former Acting District Ranger
Charlotte Minor	Landscape Architect
Andrew Espinoza	Engineering Technician
Ron Tissaw	Engineering Technician
Deirdre McLaughlin	Recreation
Joe Reinarz	Fire Management Officer
Steve Jenner	Lands and Minerals
Chip Ernst	Former NEPA Coordinator and ID Team Leader

Step 2- Describing the Situation

Project Area

The Williams Ranger District (District) is one of three ranger districts on the Kaibab National Forest. District boundaries encompass approximately 560,305 acres. The District is located in northern Arizona and bisected by Interstate 40; it surrounds the City of Williams (Appendix A, Map A-2). Motor vehicles are used to access and engage in a wide range of recreational activities, and are also used for administrative and commercial activities. Local residents make up a large percentage of the District's visitors; other visitors come from lower elevation areas (e.g., Phoenix, Las Vegas) to escape the summer heat.

Motorized vehicle travel is not currently prohibited off designated routes except by signed Forest Orders or legislation. Approximately 26,500 acres are closed to cross country travel, including designated wilderness areas (13776 acres) and areas designated as "travel restricted" (Appendix A, Map A-3; Appendix B, Table B-3).

Existing NFS Road System

The District has approximately 1400 miles of NFS roads open to public travel (Maintenance Level 2-4). There are approximately 400 miles of closed (Maintenance Level 1) NFS roads and 220 miles of documented unauthorized (user-created) routes. Maintenance levels are described as follows:

Level 1– Assigned to intermittent service roads during the time they are closed to vehicular traffic. The closure period must exceed 1 year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns. Planned road deterioration may occur at this level. Appropriate traffic management strategies are "prohibit" and "eliminate."

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

Level 2– Assigned to roads 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. Log haul may occur at this level. Appropriate traffic management strategies are either to (1) discourage or prohibit passenger cars or (2) accept or discourage high clearance vehicles.

Level 3 – Assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic

management strategies are either "encourage" or “accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

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

Level 5 – Assigned to roads that provide a high degree of user comfort and convenience. These roads are normally double lane, paved facilities. Some may be aggregate surfaced and dust abated. The appropriate traffic management strategy is "encourage." There are no Level 5 roads on the District

The existing District transportation system is described in Table 2-1 and in Appendix B, Table B-1, as generated from the INFRA database. Table B-1 also shows an additional 100 miles of NFS roads and 220 miles of unauthorized roads analyzed during this process and included in recommendations. Table 2-2 displays existing road densities.

Table 2-1. Existing District Transportation System (Miles)

Maintenance Level	NFS	Unauthorized
Level 1	403	
Level 2	1185	220
Level 3	184	
Level 4	5	
Totals = 1997	1777	220

Table 2-2. Existing Road Densities

District (876 sq. mi.)	All Roads	Open NFS	Open Unauthorized	Closed NFS
Miles/sq. mile	1997/876= 2.28	1374/876= 1.57	220/876= .25	403/876= .46

In unusually wet years, when deep snow or saturated soils raise concerns for public safety or road and resource damage from motor vehicles, wet weather travel restrictions are implemented on the District by official order. Signs are used to inform forest visitors of travel restrictions and open routes. When travel restrictions are in place, motorized travelers are required to stay on those designated routes until soils dry and the order is lifted. The Wet Weather travel system is displayed in Appendix A, Map A-4.

Existing Dispersed Camping

The Travel Management Rule Implementation Guide (Southwestern Region, 2007) directs each Forest to study not only NFS roads but also unauthorized routes leading to dispersed camping sites, as follows:

> National Forests in the Southwestern Region provide dispersed camping opportunities that are important to the public. Dispersed motorized camping is a legitimate recreation activity and forests will remain open to that opportunity in many locations. However, safety issues and/or resource conditions may exist on the ground which should be cause for us to consider precluding some locations adjacent to designated roads from being available for dispersed motorized camping activities.

Dispersed motorized camping should not be allowed adjacent to designated NFS roads where a public safety problem would be created. Examples include:

- areas where unmanaged ingress/egress, or roadside parking, represents a safety issue because of travel speed and/or sight distance;
- areas with a history of flash flooding;
- proximity to public shooting ranges;
- where natural and/or heritage resource conditions may be adversely impacted;
- when or where such use may increase the risk of adverse affects on adjacent values (e.g., areas with dangerous fuel conditions down slope/upwind of a community in the wildland-urban interface).

When safety and critical resource conditions have been considered, and it has been determined that dispersed motorized camping can take place, there are a number of options for managing the activity. More than one of these options may be used to best meet the intent of TMR. These options include:

- Designating terminal facilities, trailheads, parking lots, and turnouts associated with a designated NFS road.
- Designating specific NFS roads to access dispersed camping sites.
- Facilitating camping through roadside parking.
- Designating an area for cross-country use where dispersed camping would be allowed along with other cross-country motor vehicle use.
- Designating fixed distances from designated NFS roads allowing cross-country travel for the specific purpose of dispersed camping.

There is not a complete GPS inventory of dispersed camp sites for the District. Therefore, it is difficult to quantify the current level of dispersed camping use and the precise location of dispersed motorized camp sites. However, based on observations and historical knowledge of dispersed camping trends, there are no major issues with exceeding the carrying capacity at this time. There is an issue with dispersed motorized camping occurring in areas closed to motorized travel such as Little Pine Flat and other meadows. These areas are identified as Travel Restricted areas on the Forest map and are signed and posted accordingly.

Existing Laws, Regulations and Policies

Presidential Executive Orders:

Executive Order 11644 – Use of Off-road Vehicles on the Public Lands (1972)
Executive Order 11989 – Off-road Vehicles on Public Lands (1977)
Executive Order 13443 – Facilitation of Hunting Heritage and Wildlife Conservation (2007)

Forest Service Directives Pertaining to Roads and Trails:

Code of Federal Regulations – 36 CFR 212
Forest Service Manuals (FSM) – 2350: Recreation; 7700: Travel Management; 7710: Travel Planning
Forest Service Handbooks (FSH) – 7709.55, 10: Travel Planning; 7709.55, 20: Travel Analysis; 7709.55, 30: Engineering Analysis

FSM 7712.03 provides the following guidance for analyzing the transportation system:

- Assess economic costs and benefits along with social and ecological factors when identifying forest transportation facility options.
- Assess effects of forest transportation facility options on ecological processes and ecosystem health, diversity, and productivity.
- Consider the needs of all parties when developing transportation system opportunities in areas of intermingled ownership.
- Consider long- and short-term uses, including possible mechanized, non-mechanized, and off-highway vehicle uses, when analyzing forest transportation facilities.
- Actively engage the public in transportation analysis.

The KNF Land and Resource Management Plan as amended (Plan) directs managers to "provide and manage a serviceable road transportation system that meets needs for public access, land management, resource protection, and user safety". The Plan also directs managers to identify and obliterate unneeded roads.

Arizona State OHV Laws:

All-terrain and off-road recreational vehicles that operate only on dirt roads located in unincorporated areas of Arizona must be titled and have a plate, but are exempt from registration and insurance requirements. Both all-terrain and off-road recreational vehicles can be ridden, as allowed, cross country. Registered and insured all terrain vehicles can be used on public highways when operated by a licensed driver. Both the Arizona Game and Fish Department and Arizona State Parks websites contain additional information:

www.azgfd.gov/outdoor_recreation/off_highway.shtml
www.azstateparks.gov

Off-highway legislation is included in Title 17 (Game and Fish) and Title 28 (Transportation) of the Arizona Revised Statutes, as follows:

ARS 28-101: Definitions
"All-terrain vehicle" means a motor vehicle that satisfies all of the following:
(a) Is designed primarily for recreational nonhighway all-terrain travel.
(b) Is fifty or fewer inches in width.
(c) Has an unladen weight of eight hundred pounds or less.
(d) Travels on three or more low pressure tires.
(e) Has a seat to be straddled by the operator and handlebars for steering control.
(f) Is operated on a public highway.

"Off-road recreational motor vehicle" means a motor vehicle that is designed primarily for recreational non-highway all-terrain travel and that is not operated on a public highway. Off-road recreational motor vehicle does not mean a motor vehicle used for construction, building trade, mining or agricultural purposes.

ARS 28-1171: Definitions
"Off-highway vehicle":
(a) Means a motorized vehicle when operated off of highways on land, water, snow, ice or other natural terrain or on a combination of land, water, snow, ice or other natural terrain.
(b) Includes a two-wheel, three-wheel or four-wheel vehicle, motorcycle, four-wheel drive vehicle, dune buggy, amphibious vehicle, ground effects or air cushion vehicle and any other means of land transportation deriving motive power from a source other than muscle or wind.
(c) Does not include a vehicle that is either:
(i) Designed primarily for travel on, over or in the water.
(ii) Used in installation, inspection, maintenance, repair or related activities involving facilities for the provision of utility or railroad service.

ARS 28-1174: Operation restrictions; violation; classification
A. It is unlawful for a person to drive an off-highway vehicle with reckless disregard for the safety of persons or property.
B. A person who violates this section is guilty of a class 2 misdemeanor.
C. In addition to or in lieu of the fine prescribed by this section, a judge may order the person to perform at least eight but not more than twenty-four hours of community restitution or to complete an approved safety course, or both.

ARS 17-454: Prohibition against vehicle travel
No person shall drive a motor operated vehicle cross-country on public or private lands where such cross-country driving is prohibited by rule or regulation or, in the case of private lands, by proper posting.

Step 3- Identifying Issues

The TMR lists general criteria the responsible official must consider in the designation of roads, trails, and areas. These include natural and heritage resources, public safety, recreational opportunities, access needs, conflicts among forest users, the need for maintenance, and the availability of resources for maintenance. The TMR also lists specific criteria that will be considered, including effects to resources, road condition and use, access rights, and wilderness/primitive areas.

Answers to the following questions helped to identify the most important road-related issues for the project 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?

An initial set of system roads needed for forest administration and management was identified by the IDT; this is also known as the Minimum Road System (Table 3-1; Appendix A, Map A-5; Appendix B, Table B-4).

Table 3-1. Minimum Road System (Miles)

Maintenance Level	NFS
Level 2	466
Level 3	184
Level 4	5
Totals	655

Over a six month period, public individuals and representatives of various stakeholder groups, including Arizona Game and Fish Department, City of Williams, “Citizens for Road Input”, interested Indian Tribes, environmental groups, and OHV user groups provided feedback about system roads and proposed trails. A majority of the input was received as a result of the following public meetings:

- An Open House was held in Williams on September 18, 2006.
- An Open House was held in Williams on October 11, 2006.
- A Joint Forest Open House was held in Phoenix on October 17, 2006 with the Coconino National Forest.
- A Town Hall meeting was sponsored by the Williams City Council on January 18, 2007
- Two work sessions were held on March 1, 2007.

In general, off-route (cross country travel) can damage vegetation, interfere with livestock watering and/or grazing, cause soil erosion, disturb visitors seeking quiet, increase vandalism of constructed features, destroy heritage resources, and harass wildlife. Private land owners

bordering the District are creating private access points resulting in off-route use and resource damage. There is a lack of enforcement of existing policies, lack of education about the need for policies, and lack of information that promotes voluntary compliance. Penalties are not sufficient to deter misuse/abuse of District resources. Funding and resources to rehabilitate damaged areas are not adequate.

The key issues identified by the IDT and the public relate to:

- the District's ability to efficiently administer and manage NFS lands;
- access (private lands, dispersed recreation, developed recreation sites and trailheads);
- permitted uses (ranching operations, utility maintenance, research, firewood, etc.);
- impacts to resources;
- road maintenance costs.

The issues are summarized below.

Impacts to Resources

Heritage Resources: Some roads are directly impacting known resources. Some unauthorized roads provide direct access to resources. Damage may occur as a result of motorized vehicle use off of NFS roads.

Soils and Watershed: Some soil types are more susceptible to compaction and erosion when they are crossed by roads. Most of this risk is tied directly to periods when moisture is received. Damage is occurring as a result of motorized vehicle use off of NFS roads.

Wildlife: There are areas that provide important habitat needs for different species, including elk, deer, antelope (foraging and fawning areas), and the northern goshawk and Mexican spotted owl. Habitat damage is occurring as a result of motorized vehicle use off of NFS roads.

Access and Management Issues

Fire Management: An adequate road system is needed to provide safe and prompt access to fire locations. For natural ignitions that are determined to be within the confines of management prescriptions and are to be managed for resource benefits, too many roads restrict fire growth.

Range Management: The road system should provide access to the various range allotments for the movement of livestock, range allotment administration, and access to improvements.

Recreation Management: Viewing scenery and touring along forest roads puts a high value on an open road system, especially those roads going to developed recreation sites, trailheads, or points of interest. The roads provide access to dispersed camping areas and day use locations. There is no OHV motorized trail system.

Lands, Minerals and Special Use Management: Some roads access private lands, and private facilities and developments including a series of open quarries for mining flagstone rock.

Timber Management: Conventional timber sales require access roads to the sale areas and to remove fiber. Additional routes are needed to skid trees to log landings. Small sales such as firewood require access routes to where the trees are growing to allow for direct loading by hand into a truck. The District has a large personal use fuelwood program; of particular concern to the public is the collection of dead and down juniper and oak for fall and winter burning.

Road Maintenance and Availability of Funds

The District has approximately 40% of KNF roads and could be expected to have available 40% of the KNF roads budget. The KNF usually receives about $920,000 a year for road maintenance; forty percent of this would be $368,000, or approximately 20% of the money needed ($1.8 million) for annual maintenance, as shown in Table 3-2.

Table 3-2. District annual budget needed for road maintenance.

Maintenance Level	Miles of Roads	Cost Per Mile (Annual)	Total Maintenance Needs
1 - Basic Custodial Care (Closed)	403	$107	$43,121
2 – High Clearance Vehicles	1185	$420	$497,700
3 – Suitable for Passenger Cars	184	$6,751	$1,242,184
4 – Moderate Degree of User Comfort	5	$9,851	$49,255
Total	1777		$1,832,260

Step 4- Assessing Benefits, Problems and Risks

The purpose of this step is to:

- Assess the current transportation system and whether the goals, objectives, guidelines, suitability criteria, and establish desired conditions described in the Forest Plan can be met.
- Propose changes to the existing transportation system to better manage motor vehicle use on the District.

The products of this step are:

- A description of the analysis process that will lead to suggested changes.
- Summary of evaluation criteria developed by resource specialists.

Analysis Process

Travel Analysis is a science-based process. The IDT used and correctly interpreted relevant scientific literature to assess potential impacts of proposed recommendations. Any assumptions made during the analysis and limitations of the information on which the analysis is based will be described.

The following values and risks were identified (Table 4-1) using the issues and the considerations for route designation described in 36 CFR 212.55. Each route was evaluated for the appropriately identified values and risks. The principle use of the results of this analysis will be to make proposals which assist the IDT in developing a draft proposed action for travel management (TMR).

Table 4.1. Values and Risks

ISSUE	Evaluated for Value	Evaluated for Risk
Recreation Management	X	
Range Management	X	
Special Uses	X	
ROS		X
Soils/Watershed		X
Wildlife		X
Heritage Resources		X

This analysis was done with a very "broad-brush" approach to identify routes requiring more detailed evaluation by the IDT and the public. In most cases the Geographic Information System (GIS) was used to find routes which met certain criteria. In other cases, local resource knowledge was used with or without the aid of GIS. In each case the resource specialist was asked "how would you characterize value and/or risk using data we currently have at hand?"

Route-by-route assessments were previously completed for Maintenance Level 3-5 roads on the KNF at the forest scale (Forest Level Roads Analysis Report, 2003) and for Maintenance Level 1-2 roads at the District scale (Williams Roads Analysis Process, 2006). Each of these analyses provided responses to questions from FS-643, *Roads Analysis: Informing Decisions about Managing the National Forest Transportation Syste*m); these were shared with the IDT for

consideration during this analysis which focuses on NFS and unauthorized roads for purposes of eliminating cross country travel. The full text of the questions and the 2006 response is included in Appendix C.

Each route was evaluated by the IDT and a value and risk category was assigned. If a specific value or risk did not apply to a specific route, no category was assigned. The routes were finally grouped into four categories:

- High value/High Risk
- High Value/Low Risk
- Low Value/Low Risk
- Low Value/High Risk

See Appendix B, Table B-1, for route-by-route evaluations.

The value-risk assessment should rank roads based on risks (e.g., wildlife disturbance, impacts on heritage resources) and values (e.g., access to facilities and recreation opportunities). The following options are strategies that can be applied based on the assessment:

Low Risk/High Value is the best case scenario for supporting a change from currently closed (Maintenance Level 1) to an open road as part of the public transportation system.
Management Options: designation of the route; continue to manage in NFS

Low Risk/Low Value
Management Options: designation with mitigation, continue to manage in NFS with mitigation, closure, or conversion

High Risk/High Value
Management Options: conversion, continue to manage in NFS with mitigation, designation with mitigation

High Risk/Low Value is best case scenario for supporting proposal to close an existing open road or supporting the decision to not include a closed road as part of the public transportation system.
Management Options: closure, decommissioning (removal from NFS system)

Values

Recreation Opportunities

There are approximately 1400 miles of NFS roads on the District currently open to public travel. These roads provide access opportunities to developed recreation sites, trailheads, and points of interest. Viewing scenery and touring along forest roads are highly desired recreation activities on the District. Also, the roads provide access to dispersed camping areas and day-use locations, and are heavily used seasonally by hunters and woodcutters. Currently, a portion of the Great Western Trail, mostly located on NFS roads, is the only motorized trail on the District.

The District has a sufficient number and distribution of roads that provide access to developed recreation sites, and opportunities for dispersed camping, scenic driving, and other recreation related activities. In fact, there may be an abundance of roads when you calculate the total of NFS system and unauthorized routes. In many instances, there are parallel roads within ¼- ½ mile of each other often going to the same location.

Safety considerations for forest visitors should include speed, volume, and distribution of traffic on NFS roads. This is critical with associated recreation activities that occur adjacent to forest roads, such as dispersed camping. It is important to properly locate dispersed motorized campsites to mitigate this concern and to properly distribute dispersed motorized campsites so as to not compromise biological, archaeological, and watershed/soil concerns.

The following criteria were evaluated for recreation based activities related to the transportation system on the District:

- Forest Plan direction and the influence of ROS/SMS
- Public safety, resource protection, user demand, economic and social impacts
- Providing ample, quality developed and dispersed recreation opportunities
- Compatibility of motorized and non-motorized recreation activities

Range Access

The road system should provide access to the various range allotments for the movement of livestock, range allotment administration, and access to improvements. The road system is vital for efficient administration and management of permitted grazing allotments. Forest Service personnel must be able to monitor, inspect and evaluate range conditions on a regular basis to effectively administer existing grazing permits. The current road system allows for rapid access to allotments to react to the numerous public issues challenging the range program today.

Grazing permittees need reasonable vehicular access within allotments to maintain existing range improvements and to manage and care for permitted livestock. Care for livestock often includes transporting large trailers and truckloads of cattle and sheep on Forest Service roads.

Private and Permitted Uses Access

The road system provides access to many different types of landowners, hydroelectric facilities, power lines, and other special use permit sites. Some roads are included in cost-share agreements. The District recognizes the need to provide access for a variety of uses. The permitted activities include outfitter guide routes, research sites, quarries, and corrals. Access to these sites is under a variety of permitting authorities.

Fire/Fuels Access

The Fire/Fuels Value is not displayed in the tables in Appendix B; it was determined through a route-by-route assessment conducted by Fire personnel. High Value routes were indicated on maps and the IDT evaluated the selected routes against Risks. Routes were determined to have High Value if they provided access to meet District needs, described below.

The District has an average of 60 to 100 wildfires every year. An adequate road system is necessary to allow firefighters to respond to fires in a timely manner, especially during peak fire season running from May into July when the risk of high intensity stand replacing fires is high. Minimizing response time minimizes the size of the burned area. This is especially true in the ponderosa pine forested areas where public and private resource values are higher, and fuel beds allow for rapid growth. In lower elevation pinyon/juniper fuel types, fires on the District typically exhibit minimal growth regardless of season, and response times to fires is can be much longer without increasing risk to resource values.

Risks

Recreation Opportunity Spectrum

The Forest Plan direction for the Recreation Opportunity Spectrum (ROS) related to motorized travel is to:

> restrict motorized uses in semi-primitive non-motorized (SPNM) designated areas except for necessary minimal administrative activities, permitted activities, and emergency access needs, and to avoid construction of permanent or temporary roads in SPNM areas unless required by valid permitted activity. Construct and maintain roads with SPNM classes to lowest maintenance level required for the intended use. Roads should be obliterated when no longer needed.

The SPNM Risk Factor is a measure of the intersection of roads in areas designated as SPNM. The presence of a road indicates either a need to change the ROS class to a roaded condition or to remove the road to maintain the ROS designation.

The Forest Plan direction for the Scenery Management System (SMS) related to motorized travel is:

> Recreation/Wilderness and scenic management coordination will be accomplished for all management activities, and where existing conditions do no meet mapped ROS or Scenic Integrity (SIO) objectives, design and implement projects to move the area toward desired conditions.

Damage to Wildlife

In this report considerations related to wildlife resources and the existing road system and motorized travel on the District are discussed. Problems, benefits, and risks of the existing road system and travel management policies are assessed, and opportunities to reduce risks are described. Any wildlife species potentially affected by motorized travel was considered, but the

following species groups were given special consideration: animal species listed under the Endangered Species Act, Forest Service Sensitive species, and Management Indicator Species (Table 4-2).

Table 4-2. Animal species listed under the Endangered Species Act, Forest Service Sensitive species, and Management Indicator Species known or likely to occur on Williams Ranger District (RD).

Species	Distribution and Habitat
Species Listed Under Endangered Species Act	
Mexican spotted owl *Strix occidentalis lucida*	Protected Activity Centers (PACs) established on Kendrick Mtn., Sitgreaves Mtn., Bill Williams Mtn., and in Sycamore Canyon.
Forest Service Sensitive Species	
northern leopard frog *Rana pipiens*	Occurred on Williams RD in recent past but no known current populations.
bald eagle *Haliaeetus leucocephalus*	No known nests on Kaibab NF. Migrant and winter visitor on Williams RD: primarily feeds opportunistically on carrion, gut piles from hunter-killed deer and elk, as well as fish and waterfowl from larger water developments.
northern goshawk *Accipiter gentilis*	Nests in ponderosa pine dominated and mixed conifer stands on Williams RD. Preys on wide variety of bird and small mammal species.
American peregrine falcon *Falco peregrinus*	Nests on cliffs and preys on birds. Nested in the past on Bill Williams and Sitgreaves Mountains.
Merriam's shrew *Sorex merriami*	Occurs in dry, montane coniferous forests and woodlands (ponderosa pine forests and pinyon-juniper woodlands).
spotted bat *Euderma maculatum*	Found in wide variety of habitats. Associated with rocky areas and cliffs. Not known to occur on Williams RD, but has been reported in Grand Canyon.
Allen's lappet-browed bat *Idionycteris phyllotis*	Known to occur on Williams RD. Occurs in ponderosa pine, pinyon-juniper woodland, and other forest/woodland types. Roosts in snags and dead portions of live trees.
Townsend's big-eared bat *Corynorhinus townsendii*	Occurs in wide variety of habitats throughout AZ in summer. Roosts in caves and mines.
Mogollon vole *Microtus mogollensis*	Known to occur on Williams RD. Found in grassy areas in wide variety of forest types.
Management Indicator Species	
cinnamon teal *Anas cyanoptera*	Ponds, lakes, and tanks with emergent wetland vegetation.
northern goshawk *Accipiter gentilis*	Nests in ponderosa pine dominated and mixed conifer stands on Williams RD. Preys on wide variety of bird and small mammal species.
wild turkey *Meleagris gallopavo*	Occurs in wide variety of woodland and forest habitats on Williams RD.
Mexican spotted owl *Strix occidentalis lucida*	Protected Activity Centers (PACs) established on Kendrick Mtn., Sitgreaves Mtn., Bill Williams Mtn., and in Sycamore Canyon.
hairy woodpecker *Picoides villosus*	Occurs in wide variety of woodland and forest habitats on Williams RD.
red-naped sapsucker *Sphyrapicus nuchalis*	Primarily found in aspen stands on Williams RD.
juniper titmouse *Baeolophus ridgwayi*	Occurs primarily in pinyon-juniper woodlands.
pygmy nuthatch *Sitta pygmaea*	Occurs primarily in ponderosa pine forests.
elk *Cervus elaphus*	Occurs in wide variety of habitat types on Williams RD.
mule deer *Odocoileus hemionus*	Occurs in wide variety of habitat types on Williams RD.
pronghorn *Antilocapra americana*	Occurs in grasslands and open pinyon-juniper woodlands and open ponderosa pine stands on Williams RD.
red squirrel *Tamiasciurus hudsonicus*	Occurs in higher-elevation mixed conifer and spruce-fir forests.
Abert's squirrel *Sciurus aberti*	Occurs primarily in ponderosa pine forests.

Problems, Benefits, and Risks of the Existing Road System and Motorized Travel

Numerous papers have been published on the effects of roads and motorized travel on wildlife; literature reviews include Wisdom et al. (2000) and Brown et al. (2001). It is not the objective of

this report to summarize the vast amount of literature on this subject. The objective of this report is to 1) identify potential effects of motorized travel on wildlife species, 2) identify effects most likely to negatively affect wildlife species on the District (i.e., risks), and 3) describe opportunities for reducing risks to wildlife associated with motorized travel on the District.

For this assessment, motorized travel includes motorized travel on roads, cross-country motorized travel (including motorized big game retrieval), and motorized dispersed camping. Potential direct and indirect effects of roads and motorized travel that can have negative effects on wildlife include:

- habitat loss and fragmentation caused by roads,
- habitat degradation caused by cross-country motorized travel,
- barriers to animal movement caused by roads,
- animal mortality due to vehicle collisions,
- human disturbance of animals associated with motorized travel,
- habitat degradation associated with the loss of logs and snags due to fuelwood harvesting near roads,
- habitat degradation associated with the spread of noxious weeds by motor vehicles.

There is a total of 1,777 miles of NFS roads on the District; 403 miles are Maintenance Level 1 roads that are closed to public use. Thus, there is an open road density of approximately 1.57 miles/mile^2 on national forest lands on the District (1,374 miles of open roads/876 mile^2). Of the 1,374 miles of open NFS roads (Maintenance Levels 2-4), 1,185 miles (86%) are Maintenance Level 2. Maintenance Level 2 roads are open to use by high-clearance vehicles (typically not suitable for passenger cars), have native surface material, and do not receive regular maintenance. Level 2 roads are single lane and relatively narrow (10-15 feet wide) and are characterized by low traffic volumes and low vehicle speeds (Forest Service 2005:page 31). Maintenance Level 3 roads are open to passenger cars and are characterized by low- to moderate-traffic volumes and low speeds (Forest Service 2005: page 19).

Thus, NFS roads on the District are predominately Maintenance Level 2. These roads have fewer potential impacts to wildlife associated with them than do roads that are wider and characterized by higher traffic volumes and speeds. For example, it is rare to see dead animals along these Level 2 roads that have been killed by vehicle collisions. These roads also are unlikely to function as movement barriers for most vertebrate wildlife species on the district. Animals, including wild turkey, mule deer, elk, and pronghorn antelope, are frequently observed readily crossing these roads.

Motorized recreational use on the District has increased during the past 15 years. Motorized dispersed camping has also increased, especially in certain popular areas such as near Dogtown Reservoir, Whitehorse Lake, and Coleman Lake. OHV use on the District has increased greatly, both on roads and cross-country OHV use. Cross-country OHV use to collect shed elk and deer antlers has increased greatly in recent years. Increasing motorized recreational use on the District has implications for wildlife. The primary effects are increased levels of disturbance to wildlife and increased areas of habitat degradation caused by impacts to vegetation and soils due to cross-country vehicle travel.

For most of the focal species evaluated, key biological activities of mating, giving birth, and feeding are not concentrated in a few key areas, but are instead dispersed across available suitable habitats. Ponderosa pine forest and pinyon-juniper woodland are the most widespread habitat types on the District. Ponderosa pine forest covers approximately 217,000 or 39% of national forest lands on the District, and pinyon-juniper woodland covers approximately 215,000 acres, or 38% of the District. Grassland habitats are much less widespread (approximately 37,500 acres), especially large grasslands. Pronghorn antelope occur in open pinyon-juniper woodland and open ponderosa pine forest, but larger grasslands such as Garland Prairie and Government Prairie provide core pronghorn habitat that support relatively large pronghorn herds. Roads and motorized travel within Garland Prairie and Government Prairie were thus considered to present elevated risks of human disturbance to pronghorn antelope.

There are no perennial springs or streams on the District. Springs, streams, and water developments are ephemeral and most hold water only after there has been sufficient snowmelt or rain. Thus, during dry periods, water sources become critically important resources for wildlife on the Williams District. To reduce human disturbance to wildlife, Arizona state law prohibits camping within 1/4 mile of a natural water body or a man-made watering facility containing water in such a place that wildlife or domestic stock would be denied access to the only reasonably available water (Arizona Revised Statute 17-308).

Loss of logs and snags due to fuelwood harvesting is an indirect effect of motorized travel. Fuelwood harvesting (both legal and illegal) is closely associated with aspects of travel management such as road density and cross-country travel policy. After an extensive review of the literature, Wisdom et al. (2000) identified reduced densities of logs and snags as one of the negative effects on wildlife habitat associated with roads. Logs and snags function as important habitat components for a wide variety of wildlife species in different forest types, including ponderosa pine forests (Chambers and Germaine 2003: pages 271-272). Personal fuelwood harvesting is allowed on the District by permit. Because cross-country vehicle travel is currently allowed, there is no maximum distance from the road from which fuelwood can be harvested.

The Mexican spotted owl is listed as Threatened under the Endangered Species Act. There are six Mexican spotted owl Protected Activity Centers (PACs) that have been established on the District. The existing road GIS layer was overlaid on the PAC layer to evaluate road density within PACs. No open roads overlap five of the six PACs (two PACs are located in the Sycamore Canyon Wilderness and two are located in the Kendrick Mountain Wilderness). A short 1/2-mile segment of Forest Road 111 overlaps the edge of the large 1,000-acre PAC on Bill Williams Mountain. This road accesses the fire lookout and communications equipment on the summit of Bill Williams Mountain.

Although most potential effects on wildlife are negative, roads and motorized travel play an important role in certain aspects of wildlife management. For example, fire has significant effects on wildlife habitat, and roads and motorized travel play an important role in fire management (discussed in a separate report). High-severity wildfires can have substantial and long-lasting negative effects on wildlife habitat, and prescribed fire and wildland fire use can be used to improve wildlife habitat and achieve other ecological and natural resource management objectives. An adequate road system facilitates firefighter access to wildfires and increases firefighter safety.

Roads are important in fire management because they are used as control lines for wildfires, prescribed fires, and wildland fire use fires.

The road system and motorized travel also play an important role in hunting on the District. Hunting is not only one of the most common recreational activities on the district, but the key tool used by Arizona Game and Fish Department (AGFD) to manage populations of game species. For example, AGFD manages elk population density through the harvest of cow elk, and cow elk harvest is determined through AGFD's management of antlerless elk hunts. Population management of elk is an important issue on the District. Elk can have substantial impacts on various forage and browse plant species, in addition to impacts on other natural resources such as wildlife and livestock water developments. Browse impacts by elk are currently limiting aspen recruitment on the District, and aspen forest is an important habitat type for many native wildlife species on the District.

Hunters rely on a core system of NFS roads to access different parts of the District. The current road system provides extensive motorized access to different parts of the district. Many hunters rely on motorized dispersed camping during their hunt. There are several existing motorized travel-restricted areas on the District, but motorized dispersed camping is currently allowed across most of the district. In addition, most elk and deer hunters currently retrieve their harvested animal using cross-country motorized travel, which is currently allowed across most of the District.

Damage to Soils, Watershed and Vegetation

The road system was analyzed by using GIS to view an overlay of the roads, drainages, and water bodies on the Terrestrial Ecosystem Survey soil map units. A list was generated of roads located on highly erodible soils or wetland soils (i.e. hydric soils), and of roads that follow drainages and cross drainages. Additional field assessment of individual roads is needed to determine the degree of compaction, water interruption and redirection.

The District is covered by soils that formed mostly from basalt, rhyolite, and cinders. A few areas have soils that formed from sedimentary rocks such as limestone and sandstone. In general, these soils contain a high amount of clay and silt. The majority of the soils are moderately to highly erodible by water. It is important to maintain as much vegetative cover as possible on these soils in order to prevent accelerated rates of erosion. Roads constructed or created on highly erodible soils will increase sheet, rill, and gully erosion, if they are not covered with asphalt or gravel and designed with adequate drainage systems. Gullies could destroy the road and/or lead to erosion and loss of vegetative productivity on adjoining lands. The erosion process is more severe on slopes that exceed 15 percent.

The majority of soils on the District have low bearing strength when wet. Ruts are easily created on soils and roads. The driving surface is damaged and may concentrate water flow that can create gullies on adjoining land. The Wet Weather Roads Policy will help reduce the damage to roads and soils on adjoining lands by restricting wet weather travel to improved roads with hard surfaces and adequate drainage.

The erodibility of the soils was assessed from the data in the KNF Terrestrial Ecosystem Survey. If the potential rate of erosion (i.e. rate of erosion with no soil cover) exceeds the tolerance rate (i.e. rate of erosion that will allow for soil productivity to be sustained), then the soil is rated as highly erodible. Actual erosion rates may be need additional field surveys.

Low bearing strength of the soils was assessed from the data in the KNF Terrestrial Ecosystem Survey. Current rutting may be assessed in field surveys later.

Wetlands are not very common on the District, so they are especially important as wildlife habitat. Wetlands also store and filter water that eventually fills aquifers, springs, and streams. Roads that cross wetland soils alter the hydrology, so that some areas are too dry or too wet to support healthy vegetation. Roads also provide opportunities for vehicles to disturb wildlife. Low standard roads through wetlands may be wet and impassable for long periods of time in the spring and summer.

Perennial streams are extremely rare on the District. Ephemeral drainages contribute water and sediment to perennial streams, lakes, earthen ponds, and wetlands. Non-surfaced roads and roads with poor drainage systems cause soil erosion. Sediment is transported to drainages during spring snowmelt and monsoon thunderstorms. Water quality in streams and water bodies is negatively affected by sediment. Earthen ponds and lakes may fill in with sediment and hold less water. Roads that follow drainages may contribute the most sediment. These roads may also be damaged by flooding and erosion.

The location of wetland soils and drainages was assessed from the data in the KNF Terrestrial Ecosystem Survey and from GIS maps. Further refinement may be obtained by field surveys at a later date.

Noxious Weeds Issues

The presence of roads increases the risk of spread of existing and new noxious weeds to the Forest and surrounding landscapes. The higher the assigned maintenance level, the higher the frequency of road maintenance and increased traffic increases the chances for spread of exotic (noxious) plants into new areas. Invasive or noxious weeds may displace the habitat of existing native species. The end result is reduced ecosystem function that can be dramatically altered by the introduction and spread of noxious weeds and our road system can provide an opportunity for introduction of new species from other areas.

In November 2004 the Forest Supervisors from the Coconino, Kaibab and Prescott National Forests signed a Record of Decision for the Integrated Treatment of Noxious or Invasive Weeds on the Coconino, Kaibab and Prescott National Forests. Currently, there are scattered inventoried, known infestations of noxious or invasive weeds on the District. Several infestations were treated in 2005, 2006, and 2007, and will be retreated in 2008. New populations will be treated as they are discovered.

Damage to Heritage Resources

To assess road risk on heritage resources on the District, archaeologists first used the GIS system to create areas of “High” and “Low” risk. They developed a model across the forest based on known site densities. Areas that were intensively surveyed and had more than 10 sites per square mile were considered high risk and those with less than that considered low risk. Archaeologists considered areas with sparse inventory information high risk. As they delved further into the travel management process, they quickly realized that the roads themselves really had different risk levels. Many well maintained forest roads (including paved roads) transport users quickly through the Forest. While these roads may well pass through high site density areas, they pose little risk to heritage resources. Because of this, archaeologists re-tooled their process and felt it was more important to assess the risk of the user created roads that may be considered open on the District. Thus, if a user created road passed through a high site density area, then it was considered to be a high risk to cultural resources. Archaeologists considered the road as low risk if it passed through an area with at least 25 percent heritage survey and the area contained a low site density. In this manner, heritage specialists worked with the IDT to conduct a road-by-road analysis with regard to heritage risk. This process allowed archaeologist to suggest leaving certain user roads off the transportation map.

Step 5- Describing Opportunities and Setting Priorities

The purpose of this step is to:

- Facilitate comparison of the current transportation system with issues described in Step 4;
- Describe options for modifying the transportation system that would achieve or more closely match KNF land management goals, objectives, guidelines, suitability criteria, and desired conditions.

The products of this step are:

- Proposed Road System Map (Appendix A, Map A-6).
- A table with risk and value assessments made site-specifically (Appendix B, Table B-5, Proposed Open; Table B-6, Proposed Closed).

The travel analysis risk and value assessment was completed in a 2-step process. The IDT established the criteria and then worked in an interdisciplinary fashion to determine the need for change on a site-specific basis (see Step 4 for more information). During the "need for change" assessment, public comments were considered. The IDT is not making any decisions, but is identifying recommendations or proposals that will require a subsequent NEPA process if the responsible official concurs.

To prepare this TAP, the IDT analyzed the extent and current condition of roads on NFS lands within the Williams Ranger District. The TAP compares the current condition to a desired condition to help identify the opportunities and need for change. It provides information to develop the KNF strategic intent for road management; that is, what may happen to balance the need for to provide access to NFS lands with the need to minimize risk to public safety and damage to natural resources. Before implementing any proposed actions KNF will complete the NEPA process.

Recreation

A primary challenge with motorized travel on NFS lands is developing an effective and adequate transportation network of roads and trails that provide a quality recreation experience, while providing for the safety of the user and the protection of watersheds, archaeological sites, wildlife habitat, administrative access, and other resource concerns.

Increased motorized use on the District is a direct reflection of the increased population in the southwest. More forest visitors are seeking dispersed camping activities. Those activities include the use of motorized equipment such as ATVs and UTVs (i.e. Polaris Ranger, etc.). The issue is there are no dedicated motorized trails or areas for this type of activity and subsequently users are creating there own routes. These user-created routes often negatively impact the environment and other forest visitor experience, largely due to noise.

The increased use of ATVs and UTVs in northern Arizona reflects the need to provide a motorized trail system on the District. The conversion of roads to trails is a viable strategy, especially with roads that are currently closed or are targeted to be closed (Maintenance Level 1). This may

require some new sections of trail be constructed, with one objective to offer loops and long distance opportunities. A minimum length for a motorized trail system is between 20-30 miles. Motorized mixed-use is an issue and safety concern. Motorized mixed-use is described as use by both highway-legal and non-highway-legal motor vehicles on NFS roads. TMR provides that the designation of an NFS road for motorized mixed use will be advised by an engineering study or professional recommendation, as appropriate. The starting point for such designation is state traffic law. Where the responsible official proposes to depart from state traffic law by authorizing motorized mixed use where it would otherwise be prohibited, an engineering analysis is required.

There was a concern that the current interpretation and enforcement of the Arizona State law regarding non-highway legal vehicles on dirt roads in unincorporated areas may pose an unacceptable risk to unlicensed minors on certain roads. Currently, vehicles operating on Level 2 roads are not required to be highway legal. Because some roads were formerly Level 3 and have been downgraded, they are often high-use and high speed. To address this, the IDT made road specific recommendations for highway legal and all vehicle roads. Some recommendations are more restrictive than Arizona State Law, but none are less restrictive.

Dispersed camping by RVs, motorhomes, trailers, and other motorized vehicles is a highly desired recreation activity on the District, especially during summer holiday weekends (i.e. Memorial Day, 4th of July, and Labor Day) and hunting season. Many dispersed campers are from Kingman, Prescott, and the Phoenix metropolitan area seeking relief from the summer heat. They desire dispersed camping locations in ponderosa pine stands, often near open meadows for the viewshed, relatively close to lakes for water-based activities (i.e. fishing, boating, etc.), and in areas that can accommodate several vehicles. It is common for a large group of 5 – 15 RVs/trailers all congregated in one area during a busy holiday weekend. Currently there are particular road corridors where this type of dispersed motorized camping is more prevalent. For example, FR 140 from County road 73 to FR 132 (Dogtown Lake road), FR 108 from County road 73 to FR 42 (Jackass Flat area), FR 109 near White Horse Lake.

Possible economic impact to the Williams community is an issue. People visiting the Williams Ranger District often purchase camping supplies, food, gasoline and other goods in Williams or the surrounding area. Local hunting outfitter guides under special use permit with the FS rely on motorized access to the forest in order to provide their clients a quality hunting experience. A good motorized transportation system on the District will continue to benefit the local economy by providing opportunities for the local community and the tourist visiting the area.

A well designed and engineered motorized transportation system is important in providing a safe and highly valued recreation experience on the District. There is an opportunity to reduce the overall mileage of the motorized transportation system and continue to offer quality recreation activities. However, one necessary element is the design and development of a motorized trail system to accommodate vehicles 50” or less (i.e. ATV’s and UTV’s).

Range Management

As the road network on the District has advanced from a few maintained roads to many miles of good roads, so has the dependency on those roads for the commercial and recreational activities on

the forest. Range management and livestock grazing activities are certainly one of the many uses of the District that have grown dependent on the current road system to manage livestock operations to the intensity that is required today. Without these roads there is no doubt the cost of managing the range allotments would increase.

Beneficial consequences of NFS roads for grazing permittees include easy access to their livestock and to range improvements such as fences and waters. Roads have replaced stock driveways for transporting sheep and cattle to and from allotments. Undesirable consequences for a permittee may include disturbance to the herd and vandalism of range improvements by members of the public who have the same easy access to these sites.

Fire/Fuels

An adequate road system also increases firefighter safety. Well maintained access roads allow emergency equipment to mobilize to an area at reasonable speeds without undue risk of having a vehicle accident en route. Rapid access to fires also allows firefighters to attack fires when they are small, when flame lengths are lower, and rates of spread are slower, thus reducing firefighter exposure.

The District has an active hazardous fuels reduction program which treats an increasing number of acres every year. The majority of the acres are treated with broadcast burning. In fiscal year 2007 the District burned 6,717 acres to meet Forest target. Existing roads of all levels are used whenever possible as control lines. This minimizes the amount of dozer line constructed, and the associated impacts on heritage and soil resources caused by the use of heavy equipment.

The district also has a progressive wildland fire use (WFU) program which lets fire managers allow some naturally ignited wildland fires to grow, restoring the role of fire to the ecosystem and meeting resource objectives. In FY '07 the district treated 435 acres with WFU fires. In FY '08 nearly 3000 acres were treated with WFU fire. In some cases, Existing roads unduly restrict the growth of WFU fires, minimizing the benefit that could be gained from these natural starts. In other cases system roads have been convenient places to check and hold WFU fires to protect resources or curtail smoke production.

During peak fire season in the pine type, good access to within one mile of a fire provides timely access to most wildfires. From that distance, smaller fire engines often can work their way across country to access the fire edge. In urban interface areas, where private in holdings and public lands meet, access to within 0.5 miles of good access roads is preferred; larger fire engines on the district carry one half mile of attack hose or more to plumb fires even when they can't access the fire's edge directly.

Currently, most of the District lands are within ½ mile of an open NFS road. All areas within the urban interface are within ½ mile of an existing road. All of the pine type is within one mile of an existing system road with the exceptions of Sitgreaves and Bixler Mountains where a low road density is desirable for other resource reasons. Outside the pine type, the center of Garland Prairie, as well as several areas in lower elevation pinyon/juniper country on the far north and the west side of the District, are 1-2 miles from an existing road. Only one area in the remote southwest

portion of the District is between 2-4 miles from a system road. In this area fire occurrence is very low, and those fires that do occur remain at less than 1/10th of an acre with no suppression action taken.

A proposed action that includes the majority of existing NFS roads will adequately meet fire protection needs on this district. The inclusion of some unauthorized roads will not greatly increase or reduce fire response times. Existing NFS roads are generally of benefit to prescribed burning and WFU fire management as they provide good control lines without incurring the risks to resources associated with using heavy equipment to establish lines. Allowing most unauthorized roads to heal over, and curtailing increasing road density, would be beneficial to managing WFU fires. Increased road density interrupts the continuity of the fuel bed, and limits the growth potential of these beneficial fires.

Wildlife

Because many of the direct and indirect effects of roads on wildlife are negative, there is an opportunity to reduce impacts to wildlife by reducing the density of open roads on the District. Reducing open road density would result in reduced levels of human disturbance because there would be more areas inaccessible to motor vehicle travel. Habitat quality would be greater for a variety of wildlife species in these areas made more inaccessible to motor vehicle travel because there would be reduced road-associated habitat impacts such as loss of logs and snags from fuelwood harvest.

Closing nonessential roads in Garland Prairie and Government Prairie would be especially beneficial for pronghorn antelope because this would reduce human disturbance effects in important core pronghorn habitat on the District.

There is also an opportunity to reduce impacts to wildlife by restricting cross-country motorized travel. Similar to reducing open road density, restricting cross-country motorized travel would result in reduced levels of human disturbance to wildlife and increased habitat quality for various wildlife species.

Ensuring that district travel management policy is consistent with Arizona statute and prohibits dispersed camping within 1/4 mile of natural or man-made water developments containing water would reduce potential human disturbance at sites that are critically important to a wide variety of wildlife species, especially during extended dry periods.

Soils, Watershed and Vegetation

It is recommended that roads on highly erodible soils and slopes that exceed 15% be closed unless they are considered necessary. Some roads located on highly erodible soils that are on slopes less than 15% should also be considered for closing. When roads on highly erodible soils are retained, monitoring is recommended to determine if engineering changes are needed to reduce runoff and prevent erosion. It is also recommended that roads located on wetland soils or along drainages be closed unless they are considered necessary. Options to improve open roads include: hard

surfacing materials (e.g. asphalt, gravel, or rock), raised road bed with ditches and culverts, road crowning, insloping and outsloping, water spreading ditches, and waterbars.

The prevalence of soils with low bearing strength makes it necessary to avoid driving on low standard and low maintenance roads when they are wet. Safe, sustainable travel is possible on roads on these soils when dry. The Wet Weather Roads system will help reduce damage to roads and soils on adjoining lands by restricting wet weather travel to improved roads with hard surfaces and adequate drainage.

Noxious Weeds

It is recommended that the road density on the District be reduced in order to limit the opportunities for noxious weeds to be introduced and spread, especially near sensitive areas such as wilderness, scenic areas, research natural areas, special wildlife habitats, or areas with rare plants. Obliterate and revegetate unneeded roads in order to prevent noxious weeds from becoming established.

Heritage Resources

During the past 30 years, KNF Heritage Resource specialists in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended, have intensively inventoried 238,232 of the District's 560,305 acres (42%). Archaeologists have identified 4634 cultural resources, listed 11 of them on the National Register of Historic Places, and declared 766 eligible for the National Register of Historic Places. The majority of the sites are considered unevaluated at this time. Due to the great number of cultural resources on the District and the current condition of unmanaged cross country travel, many of the known and many more unknown sites are at risk.

The Advisory Council on Historic Preservation believes that any restriction of motorized travel to designated routes, and prohibition of unmanaged cross-country travel will serve to protect historic properties across a broad landscape (Advisory Council 2004). Furthermore, such a clearly designated system will "Protect natural and cultural resources". In this agreement, the Forest Service and State Historic Preservation Officers agree that designation of a system of roads and trails, already open for motor vehicle use, will have little or no potential to affect historic properties.

Any unauthorized roads left as open in the transportation system, designated areas of dispersed camping (including corridors and site specific locations), and permitted cross-country travel will be subject to compliance with the National Historic Preservation Act of 1966, as amended.

Road Maintenance and Availability of Funds

36 CFR 212.5(b) states:

> …the responsible official must identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. I determining the minimum road system, the responsible official must incorporate a science-based roads 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 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.

Developing a road system and balancing the needs between District resources and public wishes is a challenging task. As with many public land management regulations, the direction to identify a minimum road system suggests including interests that pull in opposite directions. The District has had a set of authorized roads in place for 20 years that seems to meet the needs of most users. The one thing that has not been achieved is a system that reflects long-term funding expectations. The road system that reflects long-term funding expectations would be about 26% of existing. The minimum road system identified in this TAP would be about 37% of existing.

Any reduction in the number of miles of road by maintenance level would make the system more affordable and reduce road density. An affordable road system may not meet all of the objectives of even a minimum road system (i.e., access for administration, utilization, and protection of NFS lands). The transportation system that meets resource and management objectives is recommended in this TAP; it reduces the current open road system 19% by changing 258 miles of NFS roads to Maintenance Level 1. Tables 5-1, 5-2, and 5-3 show the proposed transportation system, proposed road density, and proposed budget needs.

Table 5-1. Existing and Proposed Transportation System

Maintenance Level	NFS	
	Existing	Proposed
Level 1	403	661
Level 2	1185	938
Level 3	184	184
Level 4	5	5
Unauthorized	220	0
Totals	1997	1788

Table 5-2. Proposed Road Densities

District (876 sq. mi.)	All Roads	Open NFS	Closed NFS
Miles/sq. mile	1788/876= 2.04	1127/876= 1.29	661/876= .75

Table 5-3. Proposed District annual budget needed for road maintenance.

Maintenance Level	Miles of Roads	Cost Per Mile (Annual)	Total Maintenance Needs
1 - Basic Custodial Care (Closed)	661	$107	$70,727
2 – High Clearance Vehicles	938	$420	$393,960
3 – Suitable for Passenger Cars	184	$6,751	$1,242,184
4 – Moderate Degree of User Comfort	5	$9,851	$49,255
Total	1788		$1,756,126

Priorities

This Travel Analysis identifies management priorities for consideration in responding to TMR that provide a transportation system of designated roads that is managed and sustainable, and accommodates motorized access needs consistent with the KNF Forest Plan as amended (11/2004). The Forest Plan contains the following relevant guidance:

- Protect and maintain wilderness character and quality by focusing administrative effort in heavily used areas and along wilderness boundaries (p. 12).
- Protect and enhance the scenic and aesthetic values (p. 17).
- Identify and protect areas that contain threatened, endangered, and sensitive species of plants and animals (p. 18).
- Provide and manage a serviceable road transportation system that meets needs for public access, land management, resource protection, and user safety (p. 19).
- Maintain soil productivity and watershed condition. Protect wetlands and floodplains (p. 19, 50, 53).
- Manage specially designated areas according to the enabling orders and protect their special qualities (p. 20).
- Prevent any new noxious or invasive weed species from becoming established (p. 20).
- Road or trail building in Mexican spotted owl protected activity centers should be avoided (p. 23)
- In goshawk nest areas, manage road densities at the lowest level possible to minimize disturbance (p. 23).
- Provide integration and coordination for transportation in land and resource management planning and with other Federal, State, County, and other local transportation authorities (p. 51, 54)
- Identify and obliterate unneeded roads (p. 51, 54).

Management priorities are:

- Roads that pass through erodible or sensitive soils with potential impacts to watersheds or wetlands.
- Roads that are redundant (open roads are nearby) or serve no particular purpose.
- Roads with either no legal access or known rights-of-way.
- Roads in poor condition with deep gullies or ruts.
- Protection of heritage resources.
- Protection of wilderness values, particularly the prevention of noxious weeds and the reduction of motorized noise.
- Wildlife concerns, particularly impacts to antelope fawning habitat and motorized disturbance around wildlife waters.
- Areas where unmanaged ingress/egress, or roadside parking, represents a safety issue because of travel speed and/or sight distance;
- Areas with a history of flash flooding;
- Proximity to public shooting ranges;

- When or where such use may increase the risk of adverse affects on adjacent values (e.g., areas with dangerous fuel conditions down slope/upwind of a community in the wildland-urban interface).
- Conflicts between motor vehicle use and existing or proposed recreational uses.
- Conflicts between difference classes of motor vehicle uses.
- Actions that move toward the KNF Forest Plan desired conditions for recreation opportunities and scenery management.
- Monitoring the effects of motor vehicle use on designated roads and trails and in designated areas consistent with the KNF Forest Plan.

Step 6- Reporting

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

The product of this step is a list of recommendations, along with Tables B-5 and B-6, Appendix B, and Maps A-6 and A-7, Appendix A, that document proposed changes to the transportation system. Map A-6 displays "Proposed Open" NFS roads (N=1127 miles). Map A-7 display "Proposed Closed" NFS and unauthorized roads (N=467 miles). Unauthorized roads that are closed will not be included in the INFRA database, and, therefore, the District road system. Approximately 11 miles of unauthorized roads are proposed as open, as connectors or as possible motorized trail segments. If these unauthorized roads are not carried forward in a NEPA decision, they will not be included in the INFRA database, and, therefore, the District road system.

This report and more detailed maps are available to the public on the KNF website www.fs.fed.us/r3/kai/travelmanagement/index.shtml; it will become part of the Williams Travel Management Environmental Assessment project file. The IDT recommendations form the basis for the proposed action that will be carried forward into the NEPA planning process. Further public involvement and coordination with stakeholders will occur in the NEPA phase, identifying issues and developing alternatives as necessary.

Key Findings

The results of the value and risk assessment are detailed in Appendix B, Tables B-1 and B-2. Table B-1 displays the existing NFS road system recorded in INFRA; Table B-2 displays existing NFS roads not in INFRA and unauthorized roads included in this analysis. Although any or all roads could be changed, the assessment assists the District in prioritizing them. Low Value/High Risk roads are the first priority in identifying need for change. This Transportation Analysis Plan recommends that the Williams Ranger District take the following actions to address key issues identified in Step 3:

Issues

- Efficiently administer and manage NFS lands.
- Provide access to dispersed recreation, developed recreation sites and trailheads, permitted uses, and private lands (if no other access is available).
- Reduce impacts to resources.
- Reduce road maintenance costs.

Actions

- Designate a system of roads and trails open for vehicle use on the District that addresses the need to protect resources, provide access opportunities, provide for public safety, and reduce the annual maintenance needs.
- Identify a motorized trail system for vehicles 50 inches and less.

- Designate an NFS road system for use by highway-legal motor vehicles only; motorized mixed-use is prohibited by state traffic law on these roads.
- Maintain motorized vehicle access to existing dispersed camping sites where resource damage has not been identified as an issue and sites are within up to 300 feet of the designated road system, per Southwestern Region guidance.
- Designate terminal facilities, trailheads, parking lots, and turnouts associated with a designated NFS road when GPS inventory is completed and where resource damage has not been identified as an issue.
- Designate specific routes associated with a designated NFS road to access dispersed camping sites when GPS inventory is completed and where resource damage has not been identified as an issue.
- Designate fixed distances from designated NFS roads allowing cross-country travel for the specific purpose of dispersed camping when GPS inventory is completed where resource damage has not been identified as an issue and where such designation is the best option.
- Prohibit motorized travel off of designated routes on the District, unless authorized by an exemption.
- Improve the ability of field personnel to identify and properly implement appropriate traffic control techniques for greater closure efficacy and increased public acceptance.
- Implement patrols and field presence at appropriate times of the year, such as hunting season, holidays, weekends to curtail off-road driving
- Develop and implement an education plan to create understanding of the problems created by off road driving, including presentations and news releases.
- Develop and implement a sign plan for information and education, possibly using existing Wet Weather facilities. At a minimum, remove route identification markers for roads not included in the designated transportation system and post “no camping” in sensitive resource areas.

Designated Areas – ATV use only

The IDT did not recommend designating any areas open to off-road travel. Several existing cinder pits were considered as ATV areas, but site specific concerns prevented them from being included in the proposal. The IDT recommends that areas be considered for designation in the future depending upon funding and changes in special use permit status.

Motorized Mixed-Use

There was a concern that the current interpretation and enforcement of the state traffic laws regarding non-highway-legal vehicles operating on dirt roads in unincorporated areas may pose an unacceptable risk to unlicensed minors on certain NFS roads. Currently, motorized vehicles operating on Level 2 roads are not required to be highway-legal. Because some NFS roads were formerly Level 3, they are often high-use and high speed. To address this, the IDT made road specific recommendations for highway-legal and all vehicle roads. Some NFS road segments recommended for designation as “highway-legal” are more restrictive that state traffic law, but none are less restrictive.

Actions Outside the Scope of Travel Analysis

Dispersed Camping and Developing a Motorized Trail System

Providing a variety of dispersed camping and motorized trail opportunities are important parts of the District recreation niche. The IDT did not have major concerns related to existing dispersed camping use, but there was agreement that there are site-specific concerns that should be considered in authorizing dispersed camping and developing a motorized trail system. These include:

- Existing off road closure areas.
- Distance to wildlife waters.
- Heritage surveys and risks to heritage sites.
- ROS/SMS designations.

The purpose of this Travel Analysis is to identify the NFS road system needed to administer and utilize resources within budget constraints. In order to fully address dispersed camping and the development of a motorized trail system the IDT recommends a separate recreation planning process.

Permitted Uses

The IDT also recommends a separate planning process to address permitted uses. Permitted uses are described in TMR as “Exemptions”, specifically “Exemption 8”. TMR Exemption 8 includes access for range improvements, firewood cutting, gathering other forest products, ceremonial gathering by tribes, outfitter and guide services, maintenance of utility corridors, administrative use by other state or federal agencies, and special use permit events. These are outside the scope of the decision to designate roads, trails, and areas open to motor vehicle use.

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Appendix A: Maps

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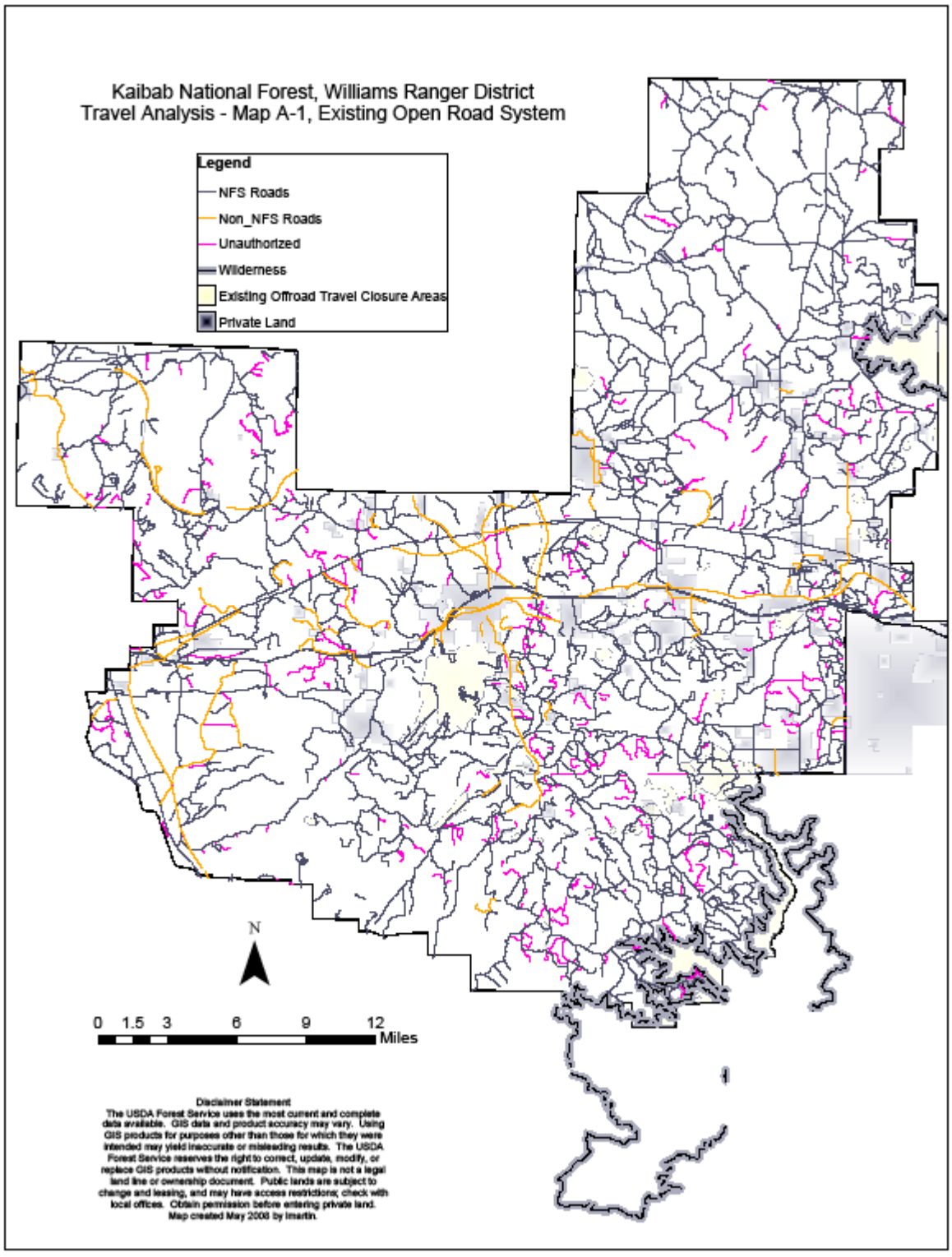
Kaibab National Forest, Williams Ranger District
Travel Analysis - Map A-1, Existing Open Road System
Legend
NFS Roads
Non_NFS Roads
Unauthorized
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
Disclaimer Statement
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Map created May 2008 by lmartin.

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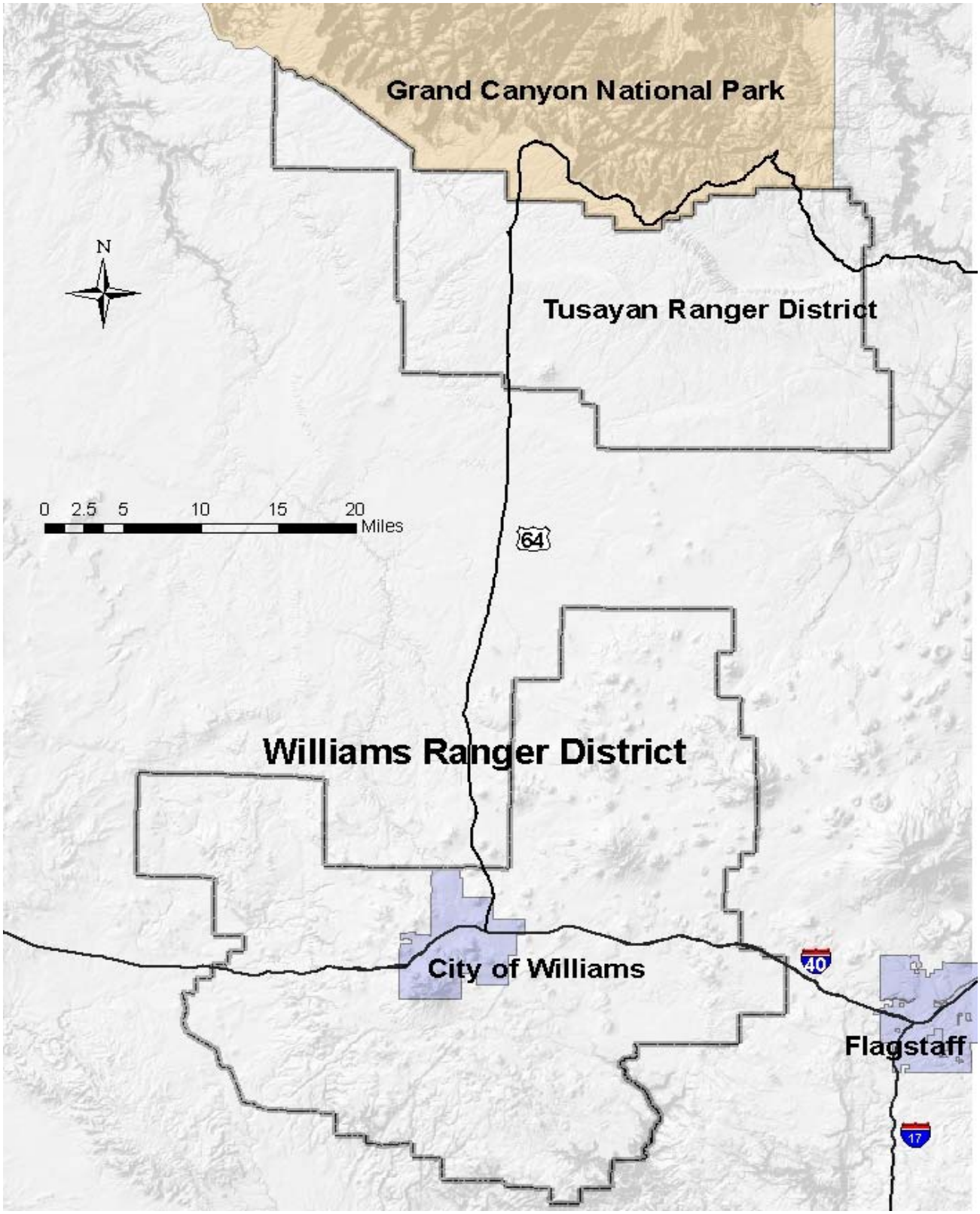
Kaibab National Forest – Williams Ranger District
Travel Analysis – Map A-2, Vicinity Map



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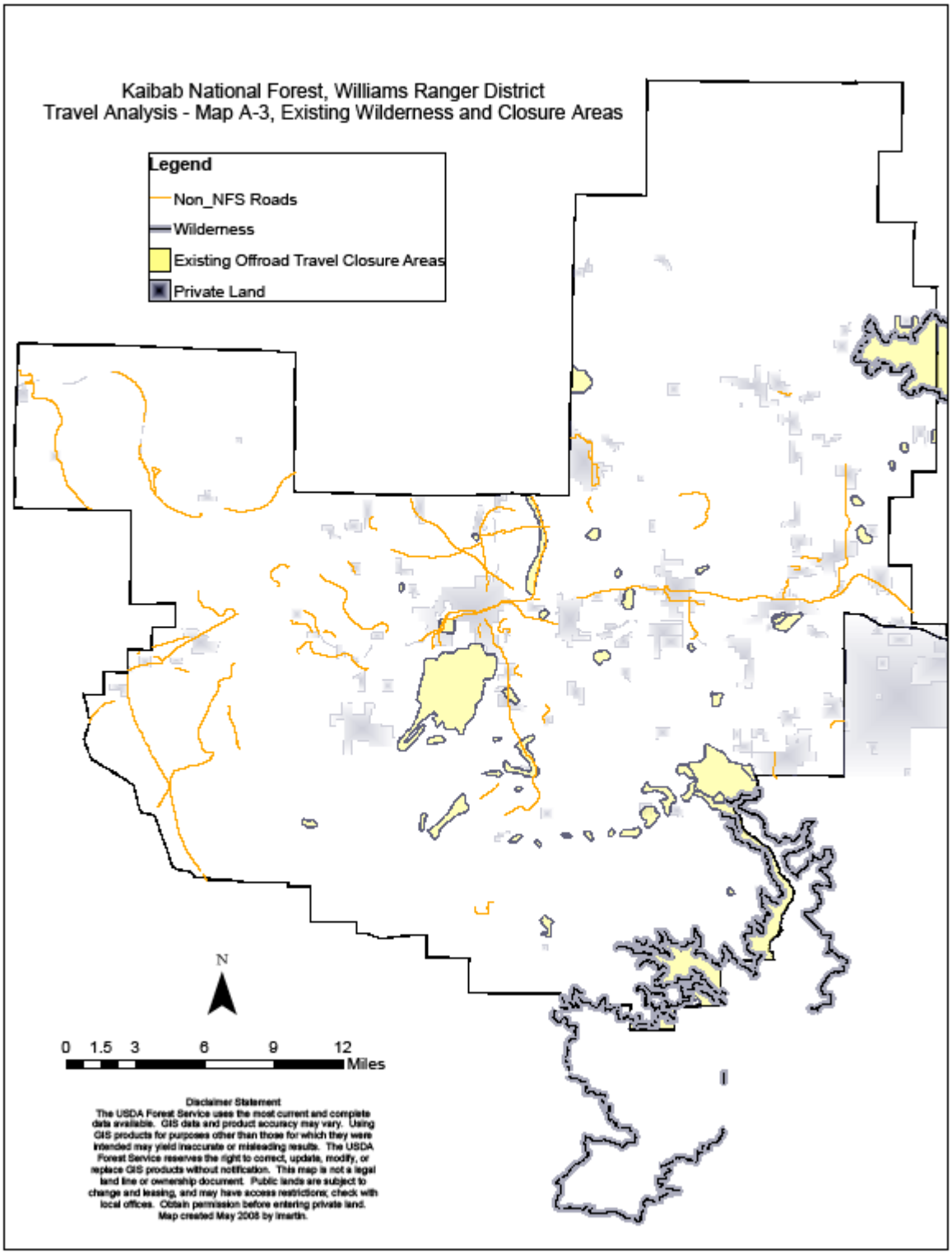
Kaibab National Forest, Williams Ranger District
Travel Analysis - Map A-3, Existing Wilderness and Closure Areas
Legend
Non_NFS Roads
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
Disclaimer Statement
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Map created May 2008 by lmartin.

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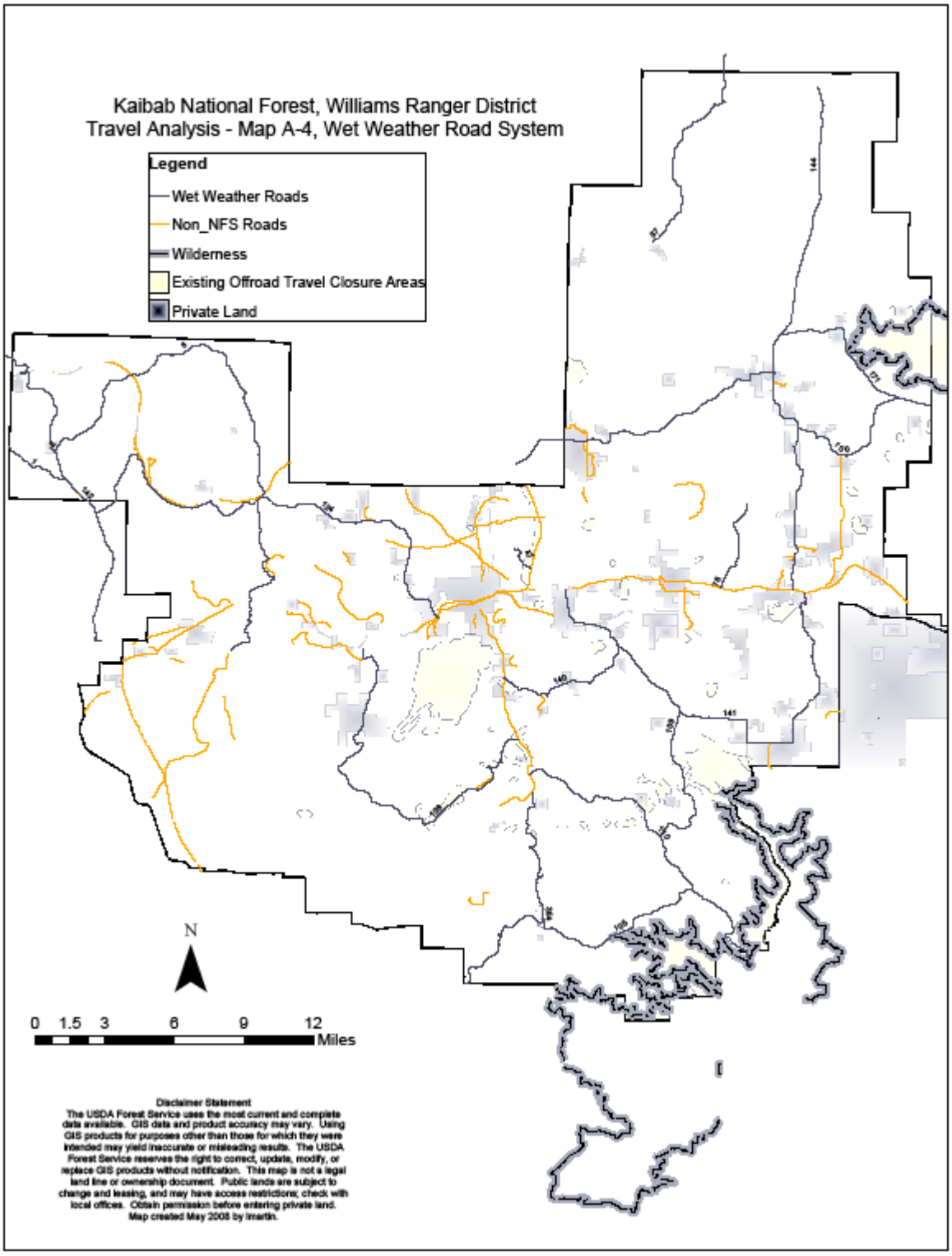
Kaibab National Forest, Williams Ranger District
Travel Analysis - Map A-4, Wet Weather Road System
Legend
Wet Weather Roads
Non_NFS Roads
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
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Map created May 2008 by lmartin.

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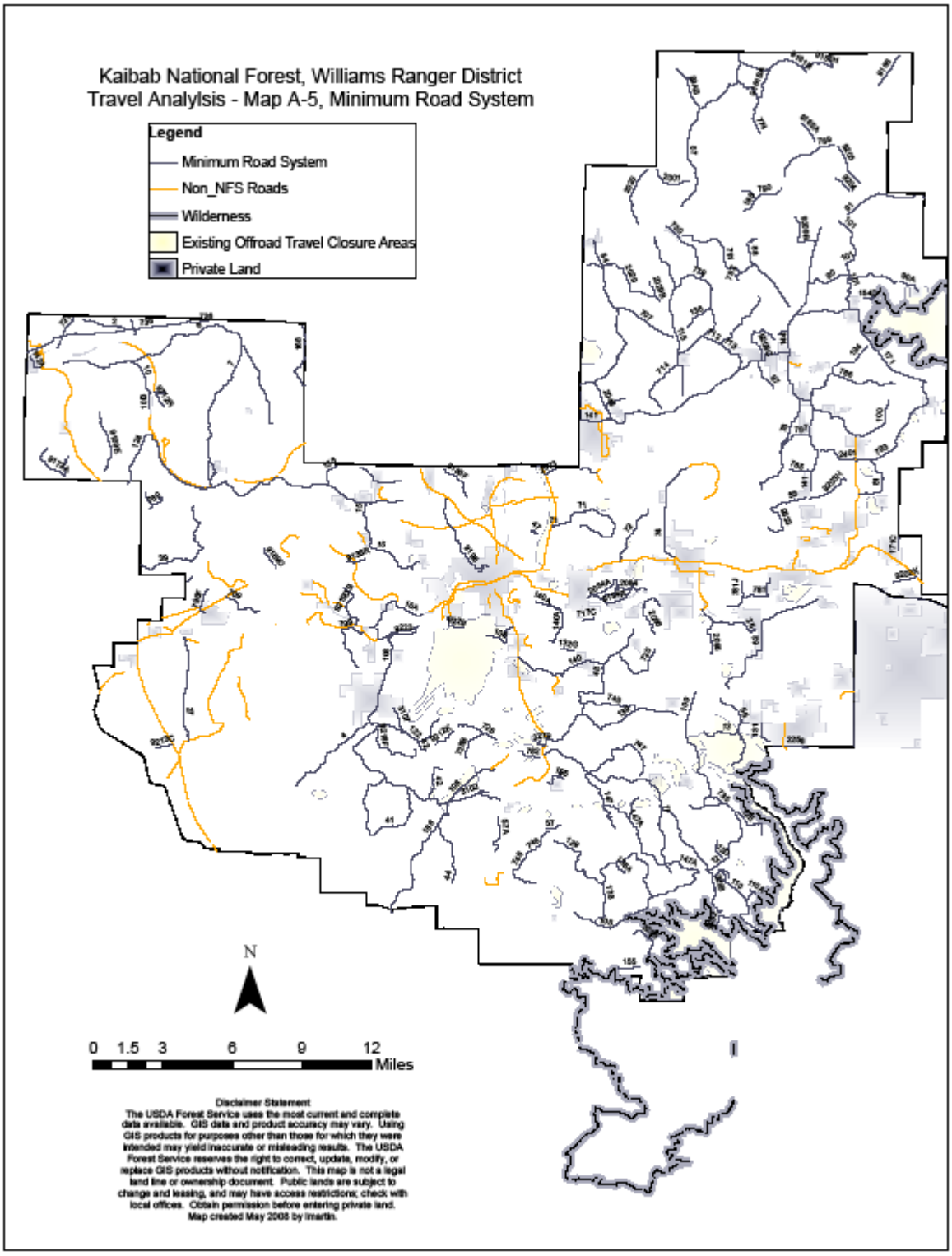
Kaibab National Forest, Williams Ranger District
Travel Analylsis - Map A-5, Minimum Road System
Legend
Minimum Road System
Non_NFS Roads
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
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Map created May 2008 by lmartin.

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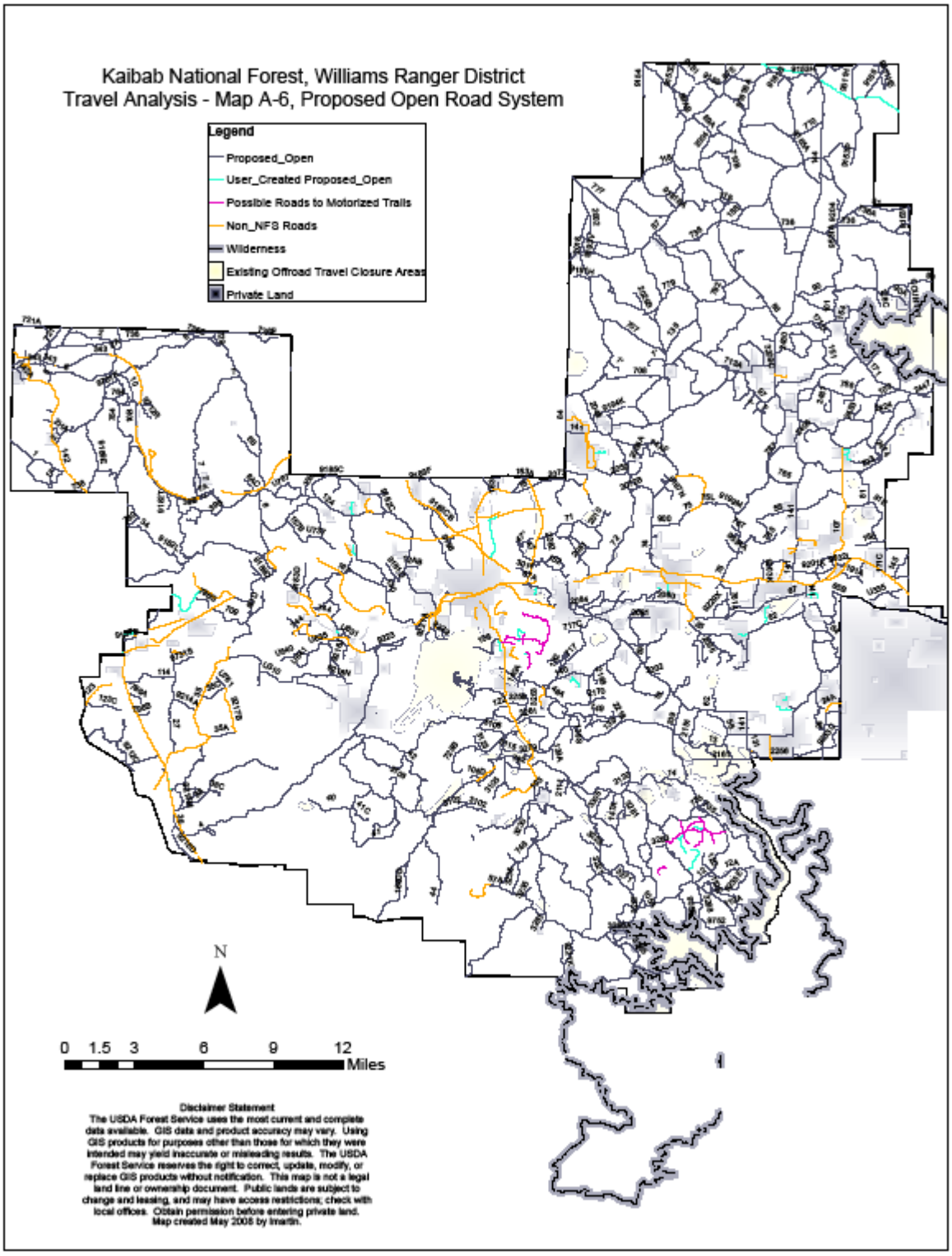
Kaibab National Forest, Williams Ranger District
Travel Analysis - Map A-6, Proposed Open Road System
Legend
Proposed_Open
User_Created Proposed_Open
Possible Roads to Motorized Trails
Non_NFS Roads
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
Disclaimer Statement
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Map created May 2008 by lmartin.

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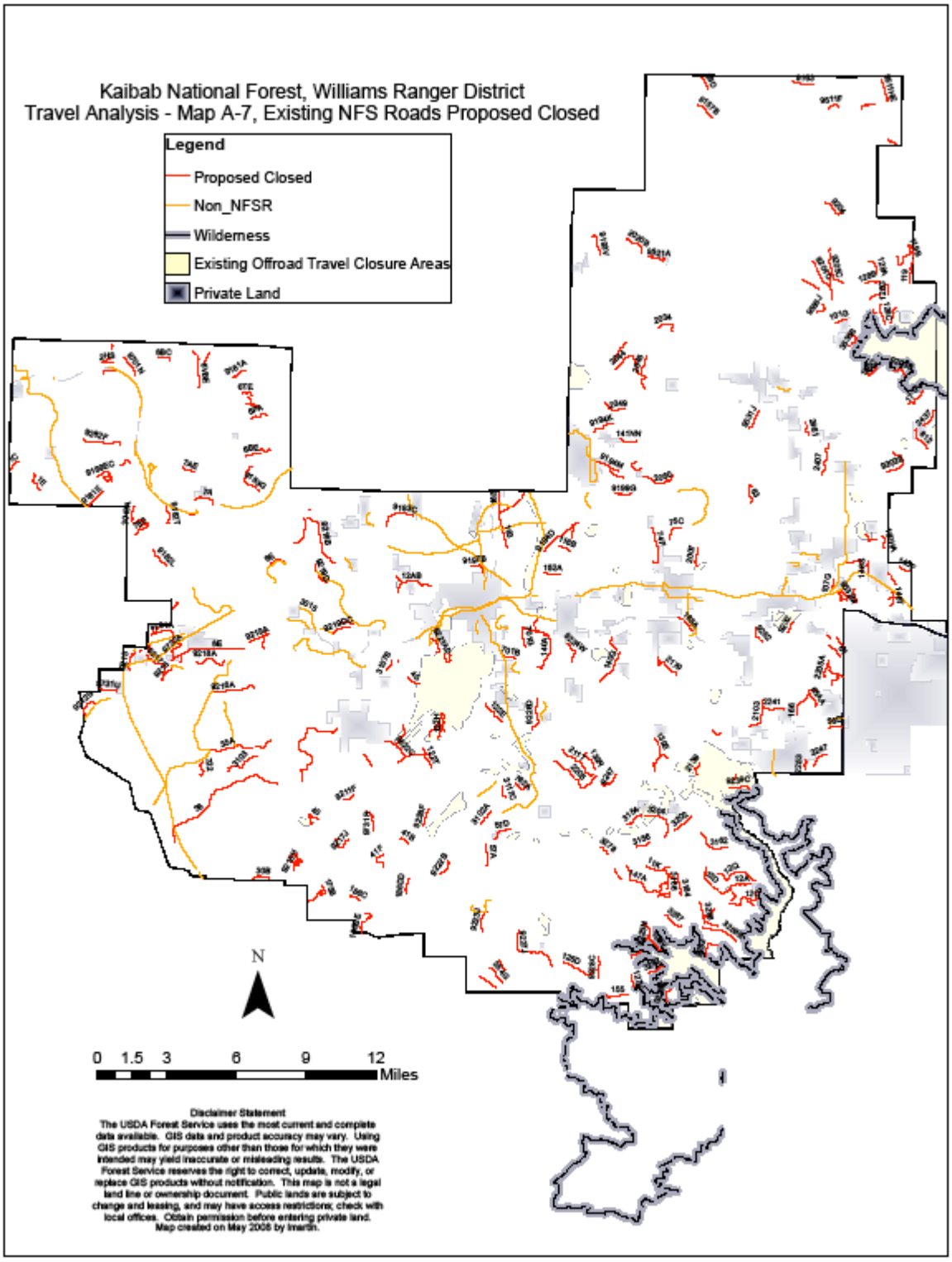
Kaibab National Forest, Williams Ranger District
Travel Analysis - Map A-7, Existing NFS Roads Proposed Closed
Legend
Proposed Closed
Non_NFSR
Wilderness
Existing Offroad Travel Closure Areas
Private Land
N
0 1.5 3 6 9 12
Miles
Disclaimer Statement
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Map created on May 2008 by lmartin.

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Appendix B: Analysis Tables

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	VALUES			RISKS					
RTE_NO	Sp_Uses	Range	REC	ROS	S/Water	Wildlife	Heritage	OPER_MAINT	GIS_MILES
10	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.839
100	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	4.68
100	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	1.981
100A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.31
101	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	1.756
101	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	1.979
101	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	0.067
101	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	0.919
101G	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.531
102A	HIGH	LOW	LOW		LOW	LOW	LOW	Level 2	0.468
102J	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.476
105	HIGH	HIGH	HIGH		HIGH	HIGH	HIGH	Level 2	8.264
105V	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.864
107G	HIGH	LOW	LOW		HIGH	LOW	LOW	Level 2	0.548
108D	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.476
10B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.993
11	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.32
110A	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.702
110E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.609
110E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.38
110E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.623
114	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0
115	HIGH	HIGH	HIGH	LOW	LOW	LOW	HIGH	Level 2	5.607
116B	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.612
118	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.507
119	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.316
119	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.848
119B	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	Level 2	1.741
11E	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.599
11H	LOW	LOW	LOW		HIGH	HIGH	HIGH	Level 2	1.175
11K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.444
11K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.163
122	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	0
122E	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.194
122H	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.388
122QA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.029
122QA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.749
122T	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.957
123C	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.725
124N	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.228
124U	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.639
125D	LOW	HIGH	LOW	LOW	HIGH	HIGH	HIGH	Level 2	0.508
125D	LOW	HIGH	LOW	LOW	HIGH	HIGH	HIGH	Level 2	1.049
127BC	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.548
127EE	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.512
127V	LOW	HIGH	HIGH	LOW	LOW	LOW	HIGH	Level 2	0.555
128	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.434
128B	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.086
128B	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.665
128C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.709

128C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.261
128C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.485
128G	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.511
129	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.822
12A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.632
12A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.137
12A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.819
12AB	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.455
12AB	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.32
12AB	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.066
12AB	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.611
12AB	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.588
12C	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.672
12CC	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.846
12D	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.118
12E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.223
12E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.078
12F	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	Level 2	0.7
12J	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.862
12M	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.513
12Q	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.105
13	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.712
13	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.886
130	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.348
130	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.335
130	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.963
132	LOW	HIGH	HIGH		HIGH	LOW	LOW	Level 2	1.417
134	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	3.399
135	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	3.212
136	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.185
138	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	7.084
138A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.734
139	LOW	HIGH	HIGH		HIGH	LOW	LOW	Level 2	7.408
139A	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.538
139B	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	2.223
139C	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.285
139C	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.228
139E	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	1.628
139R	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.308
139S	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.765
140A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.503
140A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.613
140A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.955
140B	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.833
140G	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	1.67
141NN	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.768
142A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.853
145	HIGH	HIGH	LOW		LOW	HIGH	LOW	Level 2	1.363
145	HIGH	HIGH	LOW		LOW	HIGH	LOW	Level 2	0.223
145C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.444
145F	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	0.537
146A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.561

146S	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.749
146T	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.789
146V	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.314
146V	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.444
147	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	5.126
147A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.423
147A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.879
147A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.934
147A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.01
147C	LOW	LOW	LOW		HIGH	LOW	LOW	Level 2	0.553
15	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.947
15	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.016
150	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.191
150	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.593
151	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.253
151A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.72
151B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.096
151B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.061
151B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.453
152	HIGH	HIGH	LOW		HIGH	HIGH	LOW	Level 2	2.205
152A	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.732
154	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.739
154	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.126
154D	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.549
157B	HIGH	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.879
158	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.255
15A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.524
15A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.444
15A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.92
160HA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.664
160HB	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.348
160HC	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	0.673
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.434
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.616
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.452
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.96
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.295
163	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.262
165A	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.689
165A	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.176
166	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.515
168	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.152
168	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.625
171C	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.141
175B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.724
18	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.212
182A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.34
186	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	6.347
186AC	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.143
186AC	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.085
186AC	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.043
186AC	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.342

186BE	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.647
186C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.614
186DD	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.629
186DD	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.649
188	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.896
190C	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.713
191A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.191
194	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 2	4.067
195	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.662
1C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.596
1E	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.934
1F	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.215
2	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.061
2	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.432
2	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.032
2	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.931
2001	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.438
2002	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	2.456
2004	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.626
2007	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.837
2010	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.956
2018	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	3.275
2018	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.619
2020	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.844
2020B	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.353
2021	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.423
2029	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	3.519
2029A	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.544
2029B	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.813
2029C	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.552
2034	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	Level 2	1.078
2044	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.435
2045	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.759
2048	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.81
2049	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.271
2056	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.807
2058	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.377
2058	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.864
2058	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.016
2058A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.805
2058A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.189
2058A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.725
2058A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.107
2059	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.592
2060	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.631
2072	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.286
2072	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.684
2073	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.54
2073	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.009
2074A	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.296
2076AB	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.589
2080	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.024

2080	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.324
2080	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.09
2081	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.618
2082	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	0.529
2084	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.691
2084	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.922
2084	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.243
2084A	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.78
2084E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.549
2086	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.534
2086	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.133
2091	HIGH	HIGH	LOW		HIGH	HIGH	LOW	Level 2	1.123
2091	HIGH	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.234
2095	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	1.491
2095	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.405
2096	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	1.752
2103	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.541
2109	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	0.683
2111	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.728
2113A	LOW	LOW	LOW		HIGH	LOW	LOW	Level 2	0.533
2117	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	2.289
2130	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	Level 2	1.463
2139	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.642
2142	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.831
2151	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	1.566
2161	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.892
2161	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.227
2163	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.277
2170	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.822
2179	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.612
2183	LOW	LOW	LOW		LOW	HIGH	LOW	Level 2	0.915
2185	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.879
2198	LOW	HIGH	LOW		LOW	HIGH	LOW	Level 2	1.79
2205	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	2.721
2209	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.821
2210	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.548
2215	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.497
2220	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	2.867
2235A	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.77
2235B	LOW	LOW	LOW		LOW	HIGH	LOW	Level 2	0.746
2235D	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.965
2241	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.702
2241	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.894
2245	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.439
2247	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.844
2253	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.594
2254	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.175
2256	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.748
24	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.438
24	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.564
24	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.971
2400	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.181

2401	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.8
2406	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.048
2414	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.587
2423	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	0.244
2427	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.552
2437	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.811
2447	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.8
2447	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.715
2449	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.839
2453	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.766
2461	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.692
2463	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.237
2473	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.335
2478	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.427
2480	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.005
24B	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.63
25	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	3.403
25C	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.413
25C	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.206
25C	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.417
27	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.075
27	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.778
2801	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	1.457
2A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.353
2A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.35
2HA	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.57
2HS	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.533
3002	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.869
3002A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.685
3010	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.405
3010	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.223
3010A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.76
3014	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.712
30A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.226
30B	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.061
30B	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.766
30E	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.682
30E	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.079
3102	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.092
3102	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.976
3102A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.772
3103	HIGH	LOW	LOW		HIGH	LOW	HIGH	Level 2	2.912
3105	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	Level 2	0.968
3106	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.587
3106A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.292
3107	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.633
3107	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.504
3107B	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.561
3107B	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.519
3108	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.328
3109	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.389
3110	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.163

3117	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.879
3117C	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.56
3123	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.732
3154	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.889
3156	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.657
3162	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.601
3162	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.557
3164	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.679
3166	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.992
3202	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.368
3204	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	1.751
3209C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.675
3221	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.808
3225	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.281
3230	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.39
3232	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	Level 2	0.596
3235	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	Level 2	0.497
3236	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.465
3251	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.526
3258	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.219
3258	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.531
3258	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.394
3259	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.842
3261	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.373
3262	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.78
3265	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.743
3267	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.442
3268	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.878
3268	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.516
3268A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.638
3268B	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.715
3269C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.655
3271	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.234
3273	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.817
3276	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.874
3278	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.554
3279	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.599
3281	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.612
3287	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.631
3292	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.558
34	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.328
34	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.041
343	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.57
343	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.529
343	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.473
343	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.518
354	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	7.159
354G	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.143
354H	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.557
35A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.221
35A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.516
35C	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.177

38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	5.806
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.587
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.084
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.082
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.501
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	4.845
38	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.563
38C	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.719
39	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	6.677
39B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.678
39B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.152
39B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.002
39B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.125
4	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	10.634
40	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.228
40	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.534
41	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	6.788
41B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.516
41C	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.136
41F	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.076
42	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.881
42	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.575
44	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.396
45	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.399
45	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.11
48	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	3.706
48A	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.476
48C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.883
4H	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.924
51A	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.586
56	LOW	HIGH	HIGH		HIGH	HIGH	HIGH	Level 2	3.942
56D	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.688
56D	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.544
56D	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.27
57	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	8.553
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.059
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.088
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.236
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.059
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.538
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.004
57A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.491
57D	HIGH	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.505
57D	HIGH	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.855
58	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.811
59	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.827
63	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.293
64	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.762
64A	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	1.6
64AA	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.533
64AA	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.212
64C	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.418

65	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	2.645
65	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	1.133
65AA	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.67
65B	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.427
6AB	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.579
6AC	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.574
6BC	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.571
6BE	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.738
6E	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.814
6E	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.948
6E	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.297
6EA	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.339
6EA	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.545
6PA	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	Level 2	1.114
6TB	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.652
6TC	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.55
6TE	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.584
6VBE	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.766
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.833
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.123
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.871
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	5.653
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.077
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.344
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.134
7	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.205
701	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.408
701B	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.596
701BA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.112
701BA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.221
701D	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.439
701G	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.892
701G	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.362
707	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	3.199
708	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.009
709	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.045
71	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.821
71	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.654
710	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.044
710	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	5.252
710B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.204
710B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.268
712	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	3.978
713	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.775
714	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.935
715	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	4.333
715	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.129
717	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.7
717	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.662
717C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.53
72	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	2.857
720	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	2.845

721	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.083
721	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.966
721A	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.254
721A	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.88
722	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	3.176
722	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.632
722A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.161
728	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.025
728B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.524
728B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.043
729	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.092
729	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.373
730	HIGH	HIGH	HIGH	LOW	HIGH	LOW	HIGH	Level 2	9.99
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	12.132
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.621
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.813
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.233
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	11.841
736	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.248
736A	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.315
736E	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.14
736P	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.348
74	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 2	7.527
745	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.484
746	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.288
746	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.638
747	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.453
749	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	2.692
749B	LOW	LOW	LOW		HIGH	LOW	LOW	Level 2	0.962
74A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	3.512
74AC	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.609
74AF	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.41
74AF	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.325
74AF	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.264
74AF	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.91
74F	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.8
754	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.145
754	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.877
754	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.192
75C	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.924
75L	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.006
75L	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.413
75L	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.715
76	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	4.509
764	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.722
774	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.914
777	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.12
777	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.539
778	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.575
778	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.224
778	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.148
779	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.578

780	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.869
780	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.637
781	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.489
781J	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.689
782	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.279
782A	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.713
785	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.479
787	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.075
789	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.549
789	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	3.279
790	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	2.076
790	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.171
791	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	4.443
792	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	Level 2	0.958
793	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	5.58
796A	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.971
796CC	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.18
796F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.037
796F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.341
796F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.149
796F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.147
796G	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.787
797	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 2	0.726
798	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.467
798	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.863
799	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	3.427
7A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.023
7A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0
7A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.811
7AE	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.584
81	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	2.764
812	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.212
812	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	1.32
81B	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.867
87	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	9.468
88	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	4.682
89A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.293
89A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.133
89A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.128
89AB	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.57
89C	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.634
89D	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.787
90	LOW	HIGH	HIGH	LOW	HIGH	LOW	HIGH	Level 2	4.328
90	LOW	HIGH	HIGH	LOW	HIGH	LOW	HIGH	Level 2	0.43
90	LOW	HIGH	HIGH	LOW	HIGH	LOW	HIGH	Level 2	0.247
90	LOW	HIGH	HIGH	LOW	HIGH	LOW	HIGH	Level 2	2.148
9023Q	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.428
905E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.485
90A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.098
91	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.773
9138R	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.97
9153	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.263

9153	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.196
9153	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.525
9153D	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.141
9153H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.52
9153HB	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.92
9153M	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	0.255
9153M	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	0.243
9153P	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.763
9153V	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.142
9153V	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.656
9153W	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.012
9157B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.892
9161B	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.986
9161B	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.554
9161B	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.667
9161BA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.174
9161BA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.739
9161BA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.488
9161C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.524
9161C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.236
9161C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.318
9162	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.446
9163	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.485
9163A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.72
9164A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.313
9165A	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.373
9166	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.678
9166	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.73
9172A	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.855
9174	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.896
9181A	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.666
9181D	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.789
9181E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.276
9182C	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.878
9182H	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.745
9182L	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.974
9182L	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.508
9182T	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.834
9182T	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.873
9183C	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	2
9183CB	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.027
9183CB	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.205
9183CB	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	1.457
9183D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.441
9183G	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.522
9183S	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.657
9183W	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.137
9183W	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.31
9183X	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.477
9183X	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.617
9183Y	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.732
9183Y	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.375

9183Y	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.941
9184B	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.307
9184B	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.489
9185CA	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.821
9187B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.375
9187B	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.39
9187BA	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.722
9187D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.005
9187D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.009
9187D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.437
9187E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.034
9188F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.603
9188F	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.457
9189D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.142
9189E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.681
9189E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.59
9189E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.173
9189EC	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.298
9189EC	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.059
9189EF	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.671
9189EJ	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.073
9189EJ	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.247
9189F	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.673
9189FA	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.313
9189FA	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.256
9191H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.075
9191H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.788
9191KA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.032
9191U	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.326
9191U	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.432
9193V	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.529
9193V	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.979
9194D	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	2.129
9194K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.463
9194K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.655
9194K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.527
9194K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.063
9194M	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.841
9194MA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.142
9194R	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.302
9196	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.487
9196	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.617
9196	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.414
9196	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.27
9197B	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.864
9197J	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.528
9197N	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.863
9197T	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.656
9198E	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.266
9198U	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.737
9198UA	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.766
9199G	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.746

9201A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.076
9201G	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.728
9201K	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.939
9202E	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	1.55
9202K	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.704
9203H	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.546
9203H	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.901
9203K	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.824
9204	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.07
9204	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.886
9204C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.003
9204K	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.998
9205	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.72
9205	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.066
9205C	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.005
9205H	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.465
9206J	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.195
9206J	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.666
9207K	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.728
9208C	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.259
9208C	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.307
9209B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.012
9209G	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.752
9209G	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.446
9209K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.698
9211BD	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.726
9211BD	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.155
9211F	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.548
9212B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.168
9212C	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.778
9212F	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	3.592
9212J	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.376
9212K	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.079
9212KA	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.979
9212KA	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.564
9213C	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.754
9213D	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	1.138
9214A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.145
9215	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.743
9215A	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.1
9215A	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.878
9215H	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.569
9215H	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.021
9215K	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.178
9215M	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.206
9216	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.815
9216A	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.281
9216A	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.258
9216A	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	2.286
9216E	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	2.371
9216J	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.779
9216N	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.18

9216N	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	0.512
9217	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.242
9217E	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.561
9217J	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.321
9218A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.56
9218F	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.371
9219A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.485
9219B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.697
9219D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.365
9219D	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.467
9219DB	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.446
9219DC	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.09
9219DD	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.75
9219G	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	2.058
9221AB	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.105
9221AB	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.133
9221AB	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.692
9221AD	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.262
9221AD	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.578
9221AD	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.093
9221K	LOW	HIGH	LOW	LOW	HIGH	HIGH	HIGH	Level 2	0.87
9222B	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	Level 2	0.785
9222R	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.374
9223	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.542
9223J	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.138
9223JA	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.321
9223JA	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.409
9223JA	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.26
9223JA	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.121
9224J	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.74
9224W	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.335
9225N	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.857
9226C	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.702
9226D	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.745
9226J	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.883
9226Q	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.361
9227D	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.678
9227J	LOW	HIGH	LOW	LOW	HIGH	HIGH	HIGH	Level 2	3.366
9228C	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.039
9228F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.861
9228F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.012
9228K	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	Level 2	0.675
9228P	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.386
9229	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.065
9229A	LOW	LOW	LOW		HIGH	HIGH	HIGH	Level 2	0.727
9229X	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.117
9232	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.581
9232W	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.327
9233C	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	1.602
9233G	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.981
9235E	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.982
9235E	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.456

9236F	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.276
9239C	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	Level 2	1.124
9245B	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.241
9245B	LOW	HIGH	LOW		HIGH	HIGH	LOW	Level 2	0.788
9247	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.212
9252	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.819
9282F	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.548
9282F	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.701
9502	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.122
9511F	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.61
9511H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.59
9511H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.971
9511HE	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.159
9511HE	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.022
9511HE	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.682
9511HE	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.471
9521A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.064
9521A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.578
9521A	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.334
9521H	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.168
9531A	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.816
9531E	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.095
9531E	LOW	LOW	LOW		LOW	LOW	LOW	Level 2	0.528
9531I	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.869
9531J	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	1.477
9531JA	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	Level 2	0.32
9531L	LOW	HIGH	LOW		HIGH	HIGH	HIGH	Level 2	1.953
9531T	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	Level 2	1.121
9532F	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.334
9532F	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	1.213
9532H	HIGH	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.012
9532H	HIGH	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.548
9532J	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.814
9532L	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.6
9532M	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.176
9532M	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.937
9532R	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	0.008
9532R	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 2	1.308
9533	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.175
9533	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.773
9534A	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.97
9536K	LOW	HIGH	LOW		LOW	HIGH	HIGH	Level 2	0.896
9536M	LOW	LOW	LOW		LOW	LOW	HIGH	Level 2	0.726
9586J	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.707
9611J	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.164
97	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	2.294
97	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.222
9701A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.534
9701H	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.711
9701K	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.645
9701K	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.038
9701N	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.058

9701T	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.527
9701U	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.551
9711F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.264
9711F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.484
9711N	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.074
9711N	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.464
9711Q	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.644
9711S	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.951
9712	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.806
9712R	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.83
9712V	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.891
9713A	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.523
9713A	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.669
9722A	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.73
9731A	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	1.678
9731AB	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.447
9731AB	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	1.109
9731B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.072
9731B	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.679
9731BA	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	0.565
9731C	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 2	3.042
9731R	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.988
9731S	LOW	HIGH	LOW		LOW	LOW	LOW	Level 2	0.914
9731T	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	0.626
9731U	HIGH	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.225
9744F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.156
9744F	LOW	LOW	LOW		HIGH	LOW	HIGH	Level 2	0.514
9752	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.611
9752	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	Level 2	0.953
9822C	LOW	HIGH	LOW		LOW	LOW	HIGH	Level 2	1.771
NFS9	HIGH	HIGH	LOW		LOW	LOW	LOW	Level 2	0.01
								Subtotal (miles)	1082.099
106	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	1.832
108	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.506
108	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	14.883
108	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	3.351
109	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	7.355
110	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	14.792
12	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	4.917
12	LOW	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.111
124	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.083
124	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	9.438
124	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	5.259
124	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	7.01
124	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.083
131	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 3	0.437
131	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 3	0.035
131	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 3	0.844
132G	LOW	HIGH	LOW		HIGH	LOW	LOW	Level 3	0.564
140	HIGH	HIGH	HIGH		HIGH	HIGH	HIGH	Level 3	6.711
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	20.062
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.488

141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	18.933
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.5
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.226
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	1.044
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.348
141	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	1.319
144	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	12.912
171	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	Level 3	8.365
49A	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 3	0.319
49A	HIGH	HIGH	HIGH		LOW	LOW	HIGH	Level 3	0.327
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.261
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.138
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	12.634
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.007
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	0.008
6	HIGH	HIGH	HIGH		HIGH	LOW	HIGH	Level 3	8.993
62	HIGH	HIGH	HIGH		HIGH	HIGH	HIGH	Level 3	1.088
62	HIGH	HIGH	HIGH		HIGH	HIGH	HIGH	Level 3	4.756
786	LOW	HIGH	HIGH		LOW	LOW	HIGH	Level 3	3.036
84	HIGH	HIGH	LOW		HIGH	LOW	HIGH	Level 3	9.584
								Subtotal (miles)	183.559
103	HIGH	HIGH	LOW		HIGH	LOW	LOW	Level 4	0.471
47	HIGH	HIGH	HIGH		LOW	LOW	LOW	Level 4	1.296
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.313
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.263
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.029
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.134
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.042
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.428
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.121
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.093
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.345
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.342
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.333
735	LOW	HIGH	LOW		HIGH	LOW	HIGH	Level 4	0.551
								Subtotal (miles)	4.761

RTE_NO_OLD	RTE_NO	BEGIN_TERM	END_TERMIN	GIS_MILES
4080915	101HA	4080913	90	1.2
4050534	102A	102	4050533	0.109
4050560	102D	102	4050524	1.18
4050535	102J	102	4050533	0.313
4066815	104	76	DEAD END	1.313
4066816	104B	104	DEAD END	0.009
4066816	104B	104	DEAD END	0.58
	106D	106	DEAD END	0.869
	106D	106	DEAD END	0.229
4066871	107L	107	DEAD END	0.112
4066871	107L	107	DEAD END	0.143
4066871	107L	107	DEAD END	0.982
4066871	107L	107	DEAD END	0.123
4066871	107L	107	DEAD END	0.23
4066871	107L	107	DEAD END	0.494
4030411	108A	108	DEAD END	0.535
4030557	108EE	108	4030555	0.602
4030554	108JJ	4030555	DEAD END	0.66
7350760	110A	7350701	7350797	0.301
7300168	110C	110	110	0.978
7300209	111B	73	111	0.004
7300209	111B	73	111	0.136
7300209	111B	73	111	0.61
7300209	111B	73	111	0.039
7300257	111D	111	7300209	1.578
8900303	114A	114	114	0.592
8900337	114C	114	DEAD END	0.521
6400170	119A	119	Dead End	0.542
7370652	11A	110	105	1.105
7350723	11G	147A	3156	1.065
7350723	11G	147A	3156	0.408
7300242	1225E	122Q	122S	1.158
7300242	1225E	122Q	122S	0.03
7300302	122AA	122	7300396	0.584
7300225	122C	122	7300222	0.697
7300229	122D	122	DEAD END	0.856
7300216	122EB	122	7300217	0.934
7300279	122F	122	DEAD END	0.962
7300244	122R	122	DEAD END	0.433
7300235	122S	122	7300245	1.956
7300303	122V	122	7300306	0.59
7300306	122VA	DEAD END	DEAN END	0.965
7300301	122W	122x	DEAD END	0.552
7300300	122X	122	DEAD END	0.846
4060240	1242C	124	124	0.5
4060723	124C	113	4060721	0.099
4060723	124C	113	4060721	0.6
4060729	124E	4060	4060723	0.602
4060915	124N	124	4000800-PIPELI	0.678
7370325	126A	126	DEAD END	0.026
7370325	126A	126	DEAD END	0.82
7370325	126A	126	DEAD END	0.1
7370962	126D	126	DEAD END	0.813
7370974	127BB	7370970	DEAD END	0.544
7370310	127C	127	127C	0.224
7370310	127C	127	127C	1.698
7370310	127C	127	127C	0.436
7370977	127JJ	7370981	7370970	0.629

4080930	128	90	DEAD END	1.481
4080941	128F	4080940	DEAD END	0.507
4080948	128H	4080930	DEAD END	1.099
4080952	128J	4080950	4080952	1.676
4080953	128JA	4080952	4080910	0.514
4080956	128JC	4080960	4080952	0.678
4080933	128K	90	4080938	0.894
7350789	12AA	7350785	7350791	0.499
7350789	12AA	7350785	7350791	0.028
7350789	12AA	7350785	7350791	0.008
7350774	12H	7350775	DEAD END	0.87
6410543	133	141	DEAD END	0.439
7300163	139N	139	DEAD END	0.734
4050605	141AA	141	165	1.534
4090309	141CC	141	DEAD END	0.598
4000035	141NN	141	141PP	0.072
4066851	143A	4066850	DEAD END	0.562
4080429	144A	144	DEAD END	0.553
4000097	146P	4066	4000086	1.928
	147C	147	DEAD END	0.021
7350423	14C	14	14	0.926
7370960	155	127	Bar Cross Cabi	1.842
1710785	156	81	812	2.131
1710785	156	81	812	0.902
4060216	158	168	DEAD END	0.023
4090003	159	62	62	4.077
	15B	15	124	0.558
4066886	160HB	107	4066889	0.322
4090010	166	141	141	0.082
4090010	166	141	141	0.489
	167C	Coc-73	Coc-73	1.591
4060222	168	9183L	Dead End	0.544
4060222	168	9183L	Dead End	1.285
4060222	168	9183L	Dead End	0.781
4060222	168	9183L	Dead End	0.244
1710639	171A	1710	DEAD END	1.422
1710622	171DD	171	DEAD END	0.659
7300625	173AB	73	DEAD END	0.885
4050230	18	141	139	0.667
4030582	186A	186	DEAD END	0.263
4030582	186A	186	DEAD END	1.355
4030582	186A	186	DEAD END	1.076
4000086	191A	4066	4000087	0.63
1800380	2004A	1800331	DEAD END	0.791
1800340	2020B	2022	736	0.038
1800342	2022	2020	2020	0.315
1800342	2022	2020	2020	0.285
6410272	2033	136	115	0.887
6410267	2042	115	730	0.927
6410298	2051	135	712	1.246
6410298	2051	135	712	0.458
6410292	2053A	2220	DEAD END	0.645
6410262	2054	141	DEAD END	1.506
6400035	2066	4000905-PIPELINE	4000800-PIPELI	1.149
4066839	2067	2007	DEAD END	1.203
4000052	2071	74	DEAD END	0.768
6410523	2076AB	6410522	DEAD END	0.976
4066803	2079	4066	4000047	1.027
4050523	2087	4050521	4050524	1.278

4050568	2091B	4050524	4050523	1.112
4050545	2100	4050543	DEAD END	0.603
4050543	2102	4050541	DEAD END	0.863
7300159	2121	139	4050235	1.655
7300169	2131	139	DEAD END	0.8
4090354	2132	141	2151	1.05
4090352	2163	717	140G	0.943
4090352	2163	717	140G	1.264
7300128	2164	140	DEAD END	0.727
4050225	2167	720	DEAD END	0.724
4050221	2178	720	720	1.489
4050551	2184	4050550	DEAD END	0.643
4050554	2185A	4050550	DEAD END	0.85
4050553	2188	4050552	DEAD END	0.658
4090027	2191	4090	DEAD END	0.755
7300143	2217	749	DEAD END	0.612
6410268	2220A	6410291	DEAD END	0.68
6410269	2220B	6410268	DEAD END	0.523
4090347	2229	56	DEAD END	0.726
4050591	2238	2161	2161	1.151
4090015	2242	2241	DEAD END	0.009
4090015	2242	2241	DEAD END	1.194
6410281	2261	779	DEAD END	1.184
4066877	2400	796CC	DEAD END	0.94
4066874	2402	2403	DEAD END	0.566
	2407	2401	2406	1.655
1710774	2412	1710751	DEAD END	0.516
1710773	2413	1710751	DEAD END	0.963
1710753	2423	134	2427	1.249
1710742	2427	100	100	0.712
1710752	2433	1710751	DEAD END	0.615
1710744	2450	1710743	DEAD END	0.754
1710727	2460	107	DEAD END	0.528
1710711	2471	1710710	DEAD END	0.577
4000900	27	I-40	35	0.786
4090351	2734	141	DEAD END	1.644
8900344	30	8900345	DEAD END	1.326
8900344	30	8900345	DEAD END	0.679
4000617	3015B	744	DEAD END	0.648
4000617	3015B	744	DEAD END	0.188
4000617	3015B	744	DEAD END	0.616
7300170	3099	73	DEAD END	0.753
8900311	3101A	3101	DEAD END	0.986
7300612	3104	73	DEAD END	0.116
7300612	3104	73	DEAD END	0.033
7300612	3104	73	DEAD END	0.459
7300614	3105A	7300610	DEAD END	0.702
4030430	3106A	108	3106A	1.258
7300265	3111	3110	DEAD END	0.43
	3116A	3116	Dead End	0.564
6410297	3209C	141	144	0.768
7370608	3215	147	7370600	1.276
7350754	3227S	11	DEAD END	0.665
7370921	3236A	3236	746	0.623
7370623	3237	7370622	DEAD END	0.734
7370620	3244	354	7370626	1.089
7370622	3244A	354	7370628	0.942
7370624	3244B	7370622	DEAD END	1.134
7370945	3255	105	125	0.799

7370967	3256	126	126	1.046
7370640	3270	105	DEAD END	1.851
7370644	3273B	7370642	7370642	0.598
	3277	COC-73	Dead End	0.586
7370607	3296	7370606	DEAD END	0.804
4020111	34	39	4020	2.122
4020111	34	39	4020	0.037
1710628	3536B	171	171	0.932
4000919	35B	35	DEAD END	0.466
4000919	35B	35	DEAD END	0.087
4000920	35BA	4000919	4000958	0.631
4000920	35BA	4000919	4000958	0.443
8900312	36A	4	DEAD END	0.565
8900332	38B	38	DEAD END	0.72
4030523	38BB	4030520	4030525	2.508
4020172	39A	4020100	4020164	0.623
4060438	4186A	4020500	4060439	1.579
4030542	41A	41	DEAD END	0.873
4030543	41BB	4030545	DEAD END	0.736
4030546	41BC	4030545	DEAD END	1.402
4030561	41BD	4030560	DEAD END	0.481
4060467	440			0.012
4030470	45	108	DEAD END	2.833
4030472	45A	45	DEAD END	0.504
7300248	47B	42	DEAD END	0.498
7300185	51A	57A	DEAD END	1.26
7300180	57A	57	746	0.642
7300180	57A	57	746	3.716
7300176	57AB	57	57A	1.005
7300178	57B	57	57G	1.229
	57C	354	51A	1.012
4080466	58A	4080464	DEAD END	0.554
4080465	58E	4080464	DEAD END	0.616
4080464	58G	4080460	DEAD END	1.321
4050531	59	102	DEAD END	1.329
4050548	59B	""""T's"" @ END OF 4"	DEAD ENDS	0.812
4090001	62	141	SHULTZ LAKE	1.543
4090025	62A	141	SCHOLZ LAKE	0.082
4090306	65A	141	4090310	0.922
4060408	6AB	4020595	DEAD END	0.632
4000826	6BB	6B	DEAD END	0.491
4000826	6BB	6B	DEAD END	0.144
4020567	6C	6	DEAD END	0.5
4000842	6D	6	DEAD END	1.008
4020565	6DA	6	DEAD END	0.535
4020580	6MB	6	DEAD END	0.646
4020575	6SA	6	DEAD END	0.508
7300195	700	700A	DEAD END	0.508
7300194	700A	167	DEAD END	0.263
7300194	700A	167	DEAD END	0.724
7300114	701D	7300108	DEAD END	0.117
4000072	704	74	DEAD END	0.511
4080402	710	118	789	1.122
4080403	710A	710	DEAD END	0.281
4080403	710A	710	DEAD END	0.118
4080403	710A	710	DEAD END	0.516
6410237	714C	714	6410236	0.691
	715E	715	180	1.38
	715E	715	180	0.964

6410579	716E	97	4066850	0.345
6410570	716J	6410579	DEAD END	0.602
6410571	716K	97	DEAD END	0.467
6400118	71B	6400117	DEAD END	0.639
4020338	721B	4020330	4020336	0.508
8900313	722D	8900314	DEAD END	0.555
8900317	727B	8900314	DEAD END	0.55
4030401	728	4030402	DEAD END	1.302
6410261	730F	730	DEAD END	0.582
6400162	736A	736	91	0.118
7370926	746G	746	746	0.495
7370912	746K	746	DEAD END	0.4
7370912	746K	746	DEAD END	0.12
7350415	747A	110	7350414	0.83
7300139	749A	749	DEAD END	1.852
4000079	74AB	4000041	4000079	0.72
4000074	74L	74	DEAD END	0.574
4080450	764	2	10	2.44
4066823	76CC	4066822	DEAD END	0.624
4066836	76G	4066850	DEAD END	0.699
4080441	787B	144	4080440	0.699
4080421	789A	4080420	4080420	1.021
1710762	793C	1710750	1710751	0.507
1710783	793D	1710750	DEAD END	0.894
6400109	796AA	796-PIPELINE	DEAD END	0.617
6400109	796AA	796-PIPELINE	DEAD END	0.377
8900309	796C	796-PIPELINE	DEAD END	0.095
8900309	796C	796-PIPELINE	DEAD END	0.079
8900309	796C	796-PIPELINE	DEAD END	1.207
8900309	796C	796-PIPELINE	DEAD END	1.588
8900309	796C	796-PIPELINE	DEAD END	0.149
4066876	796CC	796	priv. prop. De	0.222
4066876	796CC	796	priv. prop. De	1.177
4000655	797B	16	DEAD END	1.437
1710782	812A	1710781	1710783	0.969
4066889	81A	4066882	4066883	0.615
4066889	81A	4066882	4066883	0.334
0000089	89	87	118	3.018
0000089	89	87	118	3.883
0000089	89	87	118	0.036
	89AC	87	89	0.707
1800398	89DC	1800395	1800300	0.106
1800398	89DC	1800395	1800300	0.261
1800398	89DC	1800395	1800300	0.341
1800412	89E	89	89	0.674
1800412	89E	89	89	0.193
4080983	9012	4080910	DEAD END	0.415
4080991	90BF	4080986	DEAD END	0.595
4080999	90BN	4080986	TRAIL	0.552
4080965	90MA	4080964	DEAD END	0.619
4030436	9113	4030402	DEAD END	0.52
4000071	9123L	74	DEAD END	0.704
4000832	9131EA	4000831	DEAD ENDS	0.613
1800327	9153B	118	1800326	1.467
1800317	9153C	87	1800310	1.177
4080409	9153HC	144	DEAD END	0.687
4080935	9153N	4080903	4080905	0.623
4080935	9153N	4080903	4080905	0.375
1800316	9155	1800310	87	0.535

1800417	9155B	87	DEAD END	1.146
1800396	9155BB	87	1800389	0.742
1800326	9156B	87	DEAD END	0.579
1800326	9156B	87	DEAD END	0.17
4080428	9161BB	1800350	DEAD END	0.077
4080428	9161BB	1800350	DEAD END	0.149
4080428	9161BB	1800350	DEAD END	0.387
4080428	9161BB	1800350	DEAD END	0.515
4080428	9161BB	1800350	DEAD END	0.038
1800407	9161BC	1800330	1800425	0.663
4080420	9164AC	4080415	4080405	3.135
4060462	9181	4020530	4020520	0.736
4000833	9181B	4000831	DEAD END	0.499
4060493	9181EA	124	DEAD END	0.893
4060426	9182W	161	7	0.009
4060426	9182W	161	7	1.362
4020598	9182Y	4020595	DEAD END	1.016
4060442	9183	302	2718	0.35
4060477	9183B	4060470	DEAD END	0.509
4060472	9183F	9282F	754	0.697
4060472	9183F	9282F	754	0.473
4060226	9183L	124	4060224	1.008
4060911	9183M	124	DEAD END	1.071
4060201	9183V	124	9184B	0.599
4000827	9183YA	9183Y	DEAD END	0.939
4060218	9184C	124	4060284	1.533
4020134	9185E	4020100	4020111	3.031
4020553	9186	6	DEAD END	0.521
4020553	9186	6	DEAD END	1.51
4060447	9186C	4060480	4060444	0.661
4000840	9186D	9187D	9187D	1.343
4000840	9186D	9187D	9187D	0.078
4020592	9188B	9188	DE	1.876
4020592	9188B	9188	DE	0.623
4060702	9188BB	124	DEAD END	0.403
4060702	9188BB	124	DEAD END	0.141
4000846	9188D	6	745	0.739
	9188EB	161	OFF FOREST (ST	1.405
	9188EB	161	OFF FOREST (ST	1.069
4060224	9189B	113	4060245	2.29
4060923	9189C	124	4000800-PIPELI	0.955
4060923	9189C	124	4000800-PIPELI	0.778
4020312	9189EG	4020310	4020313	0.705
4060491	9189EJ	124	124	0.271
6410236	9191F	714	DEAD END	1.393
6410548	9191J	141	DEAD END	0.534
6410231	9191K	714	141	0.824
6410228	9191KA	9191K	9194K	1.31
4066804	9191R	4066803	SUBDIVISION	0.536
6410230	9191S	708	141	2.328
	9191T	730	730	0.658
4000660	9192A	163	DEAD END	0.417
6400008	9192D	4000905-PIPELINE	DEAD END	0.61
6410215	9192E	FOREST BOUNDARY	84	3.618
6400026	9194	163	DEAD END	1.546
6400004	9194B	161	DEAD END	0.797
6410522	9194M	74A	2076	0.959
6410515	9194MA	9194M	74A	0.508
4000646	9196C	16	DEAD END	0.982

6410532	9196M	6410528	6410529	0.743
4060249	9197	9188F	4060249	1.547
6400124	9197F	6400110	6400110	0.973
6410242	9197I	2045	Dead end	0.67
4000065	9197M	4000800-PIPELINE	75	2.222
4000063	9197MA	4000065	4000065	0.621
1800372	9198	9197	9197	0.548
1800372	9198	9197	9197	0.446
4000666	9198B	9196	DEAD END	0.281
4000666	9198B	9196	DEAD END	0.66
4080436	9201C	4080435	DEAD END	0.604
4080451	9201J	764	764	0.737
4080451	9201J	764	764	0.627
1710764	9202F	100	DEAD END	0.678
4000092	9202J	9095Z	9091Z	0.119
4000092	9202J	9095Z	9091Z	0.137
4000092	9202J	9095Z	9091Z	0.66
4080987	9202R	90B	DEAD END	0.797
1710635	9203B	1710630	DEAD END	0.718
4066855	9203K	4066	6400009	1.241
4080923	9205A	4080911	4080930	2.683
6410288	9206N	135	DEAD END	0.725
4066866	9208J	4066860	DEAD END	0.994
6400174	9209	6400160	DEAD END	1.026
4080475	9209KA	4080470	DEAD END	0.797
4000822	9211A	9183Y	160-PIPELINE	1.113
4000855	9211BA	9211B	6	2.532
4000855	9211BA	9211B	6	0.064
4000915	9211BE	I-40	I-40	1.215
8900324	9211D	4	DEAD END	0.957
4000625	9211E	167	130	1.206
8900209	9212	8900210	DEAD END	0.644
7300240	9212K	4030420	DEAD END	1.68
4000945	9214B	9216K	9216KB	0.258
	9214H	186	186B	2.519
	9216B	9216KB	DEAD END	0.781
4000626	9216K	35AB	DEAD END	1.473
4000626	9216K	35AB	DEAD END	1.712
4000934	9216KB	38	DEAD END	1.085
4000934	9216KB	38	DEAD END	1.98
4000933	9217A	35	9216KB	1.729
4000933	9217A	35	9216KB	0.202
8900328	9217C	4	4000945	1.159
8900328	9217C	4	4000945	2.781
4030524	9217F	4030525	DEAD END	0.641
4030594	9218FA	108	4030442	1.241
4030559	9218G	41	4030557	2.273
8900236	9219BA	9219b	Dead End	0.675
4030555	9219E	108	DEAD END	1.173
4030560	9219H	41	DEAD END	3.522
	9219J	9219H	41	1.106
	9221	121	11th St.	0.846
	9221	121	11th St.	0.387
4030465	9223B	4030460	4030464	0.45
	9223G	41	Dead End	0.498
7370606	9223U	7370600	129	2.148
7300198	9223W	7300190	4050207	0.733
7300199	9223WA	7300110	7300198	0.577
7300199	9223WA	7300110	7300198	0.092

4030568	9224G	41B	DEAD END	0.795
7370339	9224K	127	DEAD END	0.571
7370968	9224P	126	FOREST BDY. (P	0.433
4000205	9224W	4000192	DEAD END	0.326
4050206	9225W	4050200	DEAD END	0.524
7370651	9226AB	105	105	0.225
7370651	9226AB	105	105	0.356
7370994	9226M	7370995	7370993	0.542
7350722	9226S	7350720	7350723	0.802
7300121	9227	140	140	1.965
4030406	9228E	728b	DEAD END	1.174
7350753	9228S	7350752	DEAD END	0.903
7370616	9228V	129	138	1.216
7370633	9228W	138	129	1.899
4050516	9228X	102	9229x	1.686
4000986	9229	4000989	DEAD END	0.479
4000992	9229A	4000986	4000986	0.543
4000992	9229A	4000986	4000986	0.162
7370334	9229K	127	DEAD END	0.579
7370322	9229M	155	DEAD END	0.684
7370322	9229M	155	DEAD END	0.007
7370322	9229M	155	DEAD END	1.129
4000198	9232W	Dead End	Dead End	1.011
7350773	9236F	7350775	7350775	0.877
4350417	9247A	7350414	DEAD END	0.576
4030429	9255E	122	DEAD END	0.407
	9499L	141	141	0.638
1800389	9506	87	118	0.746
4000059	9521B	75	4000800	0.823
	9521I	75	DEAD END	1.362
6410546	9521K	141	DEAD END	0.546
4000069	9521N	75	DEAD END	0.639
6410211	9521S	84	DEAD END	0.563
6410575	9531D	97	97	1.096
4080920	9531G	4080927	4080927	0.557
6410556	9531I	97	DEAD END	0.839
6410559	9531IB	9531I	DEAD END	0.603
4080444	9532A	787	DEAD END	0.532
4066818	9532B	104	DEAD END	0.576
4066852	9534	HWY66	DEAD END	1.333
4066852	9534	HWY66	DEAD END	0.227
4066854	9534E	4066	DEAD END	0.548
4000192	9541B	4050202	DEAD END Rt. T	0.824
4050207	9541D	4050209	4050209	0.177
4050533	9541H	102	DEAD END	1.177
4080437	9636V	4080435	144	0.71
4020340	9701C	4020	4020500	0.82
4060465	9701F	4020522	FOREST BOUNDAR	0.602
4060465	9701F	4020522	FOREST BOUNDAR	0.796
4060461	9701J	4060480	4020520	1.042
4020519	9701L	4060480	4020500	1.157
4020540	9701P	4020500	DEAD END	0.984
4020555	9701R	4020500	DEAD END	0.539
4020509	9711BA	4020520	DEAD END	0.778
4020118	9711E	9185E	9711NA	1.077
4020514	9711EB	4020520	DEAD END	0.962
4020164	9712F	4060721	4020161	0.68
4020161	9712M	39	DEAD END	1.946
4060455	9712Y	9701N	9712V	1.128

4060455	9712Y	9701N	9712V	1.808
4000883	9722A	4000816	DEAD END	0.151
4000820	9731MA	709	160-PIPELINE	0.591
8900361	9744C	8900360	8900363	0.12
8900361	9744C	8900360	8900363	0.098
8900361	9744C	8900360	8900363	0.243
8900361	9744C	8900360	8900363	0.071
8900361	9744C	8900360	8900363	0.305
4080973	128A	128	128E	0.302
4080973	128A	128	128E	0.839
7370960	155	127	Bar Cross Cabin	1.892
1710731	2487	786	DEAD END	1.595
4030465	9223B	4030460	4030464	0.283
			Total (miles)	403.115

Name of Closure	Acres	Reason for Restriction	Restricted Vehicle Type
Tule Basin	60	Wetland	All
Sycamore Canyon	7125	Wilderness	All
Thumb Flat	40	Sensitive soil and vegetation	All except snow
Big Pine Flat	171	Sensitive soil and vegetation	All except snow
Turkey Flat	42	Wetland	All
Little Pine Flat	54	Sensitive soil and vegetation	All except snow
Stewart Springs	14	Wetland	All
Kunde Flat	101	Sensitive soil and vegetation	All except snow
MC Flat	179	Wetland	All
Jackass Flat	108	Sensitive soil and vegetation	All except snow
Holden Lake	185	Wetland	All
Three Mile Lake	23	Wetland	All
Highway 64 North	376	Sensitive visual corridor	All
Pouquette Hill	278	Sensitive soil	All
Bill Williams Mountain	5605	Sensitive soil	All except snow
Cedar Mountain	772	Sensitive soil	All
Kendrick Mountain	6651	Wilderness	All
Bull Basin	365	Protect wilderness values	All
Antelope Hills	100	Sensitive soil and vegetation	All
Government Knolls	519	Sensitive soil and vegetation	All
Klostermeyer Hill	143	Sensitive soil	All
Duck Lake	124	Wetland	All
Dry Lake	52	Wetland	All
Davenport Lake	198	Wetland	All
Depot Lake	40	Wetland	All
Camp Clover Admin Site	190	Protect facility investments	All
Davenport Hill	503	Sensitive soil	All
Mineral Lake	60	Wetland	All
Scholz Lake	418	Wetland	All
LO and Dow Springs	50	Sensitive soil and vegetation	All except snow
Sycamore Trail System	134	Sensitive vegetation	All
Double Tanks	54	Wetland	All
Pomeroy Tanks	137	Unique geology	All
Willow Springs	110	Wetland	All
Sunflower Flat	269	Wetland	All
JD Flat	117	Wetland	All
Hitt Springs	74	Wetland	All
Holloway Flat	38	Sensitive soil and vegetation	All except snow
Gobbler Springs	39	Wetland	All
Barney Flat	469	Sensitive soil and vegetation	All except snow
Coleman Lake	158	Wetland	All
Twin Springs	38	Wetland	All
Cougar Park	108	Sensitive soil and vegetation	All except snow
Sevier Flat	149	Sensitive soil and vegetation	All except snow
Garland Prairie RNA	300	Research Natural Area	All
Total Acres	26510		

OLD_RTE__	RTE__	GIS_MILES	Begin	End	OPER_MAINT
7370960	155	1.89200	127	Bar Cross Cabin	1 - BASIC CUSTO
4000070	10	1.83900	6	161	2 - HIGH CLEARA
1710740	100	1.98100	141	171	2 - HIGH CLEARA
1710740	100	4.68000			2 - HIGH CLEARA
1710610	101	1.97900	90	171	2 - HIGH CLEARA
1710610	101	0.91900			2 - HIGH CLEARA
1710610	101	1.75600			2 - HIGH CLEARA
0000105	105	8.26400	110	354	2 - HIGH CLEARA
4030417	108D	0.47600	108	DEAD END	2 - HIGH CLEARA
4060443	10B	0.99300	4060440	4060480	2 - HIGH CLEARA
7350750	11	4.32000	110	105	2 - HIGH CLEARA
7350760	110A	0.70200	7350701	7350797	2 - HIGH CLEARA
7350796	110E	0.62300	110	110	2 - HIGH CLEARA
7350796	110E	0.60900	110	110	2 - HIGH CLEARA
7350796	110E	0.38000	110	110	2 - HIGH CLEARA
8900300	114	0.00000	HWY 89	35	2 - HIGH CLEARA
6410250	115	5.60700	730	736	2 - HIGH CLEARA
7300200	122	0.00000	73	108	2 - HIGH CLEARA
7370610	129	3.82200	354	138	2 - HIGH CLEARA
7350782	12D	1.11800	12	DEAD END	2 - HIGH CLEARA
7350775	12E	2.22300	7350700	DEAD END	2 - HIGH CLEARA
7350775	12E	1.07800	7350700	DEAD END	2 - HIGH CLEARA
4090339	13	2.71200	109	141	2 - HIGH CLEARA
4090339	13	0.88600	109	141	2 - HIGH CLEARA
6410270	136	2.18500	115	730	2 - HIGH CLEARA
7370630	138	7.08400	105	105	2 - HIGH CLEARA
7370638	138A	0.73400	138	DEAD END	2 - HIGH CLEARA
7300150	139	7.40800	73	109	2 - HIGH CLEARA
7300110	140A	0.50300	140	700	2 - HIGH CLEARA
4020203	142A	0.85300	4020	4020440	2 - HIGH CLEARA
4066897	146V	0.31400	66	FOREST BDY	2 - HIGH CLEARA
4066897	146V	0.44400	66	FOREST BDY	2 - HIGH CLEARA
7350710	147	5.12600	7350	7370	2 - HIGH CLEARA
7350740	147A	3.01000	147	110	2 - HIGH CLEARA
7350740	147A	1.87900	147	110	2 - HIGH CLEARA
7350740	147A	1.93400	147	110	2 - HIGH CLEARA
7350740	147A	1.42300	124	124	2 - HIGH CLEARA
4060913	15	4.94700	124	124	2 - HIGH CLEARA
4060913	15	0.01600			2 - HIGH CLEARA
1710625	154D	0.54900	1710621	DEAD END	2 - HIGH CLEARA
7370960	155	1.84200	168	DEAD END	2 - HIGH CLEARA
4060216	158	1.25500	15	15	2 - HIGH CLEARA
4000631	15A	2.44400	15	15	2 - HIGH CLEARA
4060222	168	0.15200	9183L	Dead End	2 - HIGH CLEARA
4060222	168	2.62500	9183L	Dead End	2 - HIGH CLEARA
4066895	171C	1.14100	66	OFF FOREST	2 - HIGH CLEARA
4030580	186	6.34700	108	PRESCOTT N.F.	2 - HIGH CLEARA
6400169	188	0.89600	6400160	790	2 - HIGH CLEARA
1710725	194	4.06700	141	171	2 - HIGH CLEARA
7300601	195	1.66200	354	DEAD END	2 - HIGH CLEARA
	2	1.93100	142	9174	2 - HIGH CLEARA
	2	0.03200	142	9174	2 - HIGH CLEARA
	2	0.06100	142	9174	2 - HIGH CLEARA
	2	2.43200	142	9174	2 - HIGH CLEARA
1800346	2001	2.43800	118	87	2 - HIGH CLEARA
1800337	2020	3.84400	118	118	2 - HIGH CLEARA
6410256	2029	3.51900	84	6410250	2 - HIGH CLEARA
6410257	2029B	0.81300	6410256	DEAD END	2 - HIGH CLEARA

6410220	2048	1.81000	84	141	2 - HIGH CLEARA
6400130	2073	0.00900	HWY 64	2075	2 - HIGH CLEARA
6400130	2073	2.54000	HWY 64	2075	2 - HIGH CLEARA
4050500	2084	2.92200	141	102C	2 - HIGH CLEARA
4050500	2084	0.24300	141	102C	2 - HIGH CLEARA
4050500	2084	0.69100	141	102C	2 - HIGH CLEARA
4050503	2084A	1.78000	4050500	4050500	2 - HIGH CLEARA
4050521	2086	2.53400	102	4050524	2 - HIGH CLEARA
4050541	2096	1.75200	4050540	4050548	2 - HIGH CLEARA
4090352	2163	0.27700	717	140G	2 - HIGH CLEARA
4090337	2256	0.74800	527	4090336	2 - HIGH CLEARA
4066872	2401	1.80000	107	144	2 - HIGH CLEARA
4050540	25	3.40300	4050520	62	2 - HIGH CLEARA
4000900	27	0.07500	I-40	35	2 - HIGH CLEARA
4000900	27	4.77800	I-40	35	2 - HIGH CLEARA
4020525	3002	0.86900	4020522	FOREST BDY	2 - HIGH CLEARA
4020107	3010	0.40500	FOREST BDY	DEAD END	2 - HIGH CLEARA
4020107	3010	0.22300			2 - HIGH CLEARA
7300623	3102	1.97600	186	DEAD END	2 - HIGH CLEARA
7300623	3102	1.09200	186	DEAD END	2 - HIGH CLEARA
6410297	3209C	0.67500	141	144	2 - HIGH CLEARA
7370970	3265	1.74300	127	127	2 - HIGH CLEARA
7350725	3268	1.87800	110	7350735	2 - HIGH CLEARA
7350725	3268	0.51600			2 - HIGH CLEARA
7300608	3279	0.59900	73	7300615	2 - HIGH CLEARA
	354	7.15900	COC-73	PRESCOTT N.F.B	2 - HIGH CLEARA
4020100	39	6.67700	142	124	2 - HIGH CLEARA
8900319	4	10.63400	HWY 89	4030	2 - HIGH CLEARA
4030550	41	6.78800	108	108	2 - HIGH CLEARA
4030420	42	0.57500	122	9212K	2 - HIGH CLEARA
4030420	42	1.88100	122	9212K	2 - HIGH CLEARA
7300630	44	3.39600	186	73	2 - HIGH CLEARA
4030470	45	0.11000	108	DEAD END	2 - HIGH CLEARA
4030470	45	1.39900			2 - HIGH CLEARA
7300130	48	3.70600	139	140	2 - HIGH CLEARA
4090330	56	3.94200	141	TRAILHEAD	2 - HIGH CLEARA
7300175	57	8.55300	Coc-73	354	2 - HIGH CLEARA
7300180	57A	0.49100	57	746	2 - HIGH CLEARA
7300180	57A	0.64200	57	746	2 - HIGH CLEARA
7300180	57A	0.23600	57	746	2 - HIGH CLEARA
7300180	57A	0.05900	57	746	2 - HIGH CLEARA
7300180	57A	2.05900	57	746	2 - HIGH CLEARA
7300180	57A	0.53800	57	746	2 - HIGH CLEARA
4080460	58	1.81100	796	priv61	2 - HIGH CLEARA
4060423	7	0.83300	124	6	2 - HIGH CLEARA
4060423	7	0.87100	124	6	2 - HIGH CLEARA
4060423	7	0.12300	124	6	2 - HIGH CLEARA
4060423	7	0.20500	124	6	2 - HIGH CLEARA
4060423	7	0.34400	124	6	2 - HIGH CLEARA
4060423	7	5.65300	124	6	2 - HIGH CLEARA
6410251	707	3.19900	115	84	2 - HIGH CLEARA
4000819	709	2.04500	4000850	4000800-PIPELI	2 - HIGH CLEARA
6400107	71	0.82100	AZ64-WC	116A	2 - HIGH CLEARA
6400107	71	4.65400	AZ64-WC	116A	2 - HIGH CLEARA
6410290	712	3.97800	730	6410280	2 - HIGH CLEARA
6410294	713	1.77500	712	141	2 - HIGH CLEARA
6410235	714	2.93500	141	708	2 - HIGH CLEARA
4050203	717C	0.53000	4000205	4050200	2 - HIGH CLEARA
4066805	72	2.85700	4066	4000905-PIPELI	2 - HIGH CLEARA

4050220	720	2.84500	141	140	2 - HIGH CLEARA
4020330	721	1.08300	142	FOREST BDY	2 - HIGH CLEARA
4020330	721	1.96600	142	FOREST BDY	2 - HIGH CLEARA
4030401	728	2.02500	4030402	DEAD END	2 - HIGH CLEARA
4030405	728B	1.52400	4030401	DEAD END	2 - HIGH CLEARA
4030405	728B	0.04300	4030401	DEAD END	2 - HIGH CLEARA
6410286	730	9.99000	141	736	2 - HIGH CLEARA
6400173	736	12.13200	West F. BDY	East F. BDY	2 - HIGH CLEARA
6400173	736	4.62100	West F. BDY	East F. BDY	2 - HIGH CLEARA
6400173	736	0.81300	West F. BDY	East F. BDY	2 - HIGH CLEARA
6400173	736	0.23300	West F. BDY	East F. BDY	2 - HIGH CLEARA
6400173	736	11.84100	West F. BDY	East F. BDY	2 - HIGH CLEARA
6400173	736	0.24800	West F. BDY	East F. BDY	2 - HIGH CLEARA
4000050	74	7.52700	HWY 66	141	2 - HIGH CLEARA
7370910	746	1.28800	354	354	2 - HIGH CLEARA
7370910	746	3.63800	354	354	2 - HIGH CLEARA
7350410	747	4.45300	110	110	2 - HIGH CLEARA
7300135	749	2.69200	139	48 POQUETTE	2 - HIGH CLEARA
	76	4.50900	4066	144	2 - HIGH CLEARA
6410280	774	2.91400	710	87	2 - HIGH CLEARA
	779	1.57800	115	730	2 - HIGH CLEARA
4020101	780	0.86900	4020111	DEAD END	2 - HIGH CLEARA
4020101	780	0.63700			2 - HIGH CLEARA
4050515	781	4.48900	OLD 66	120	2 - HIGH CLEARA
4050518	781J	0.68900	40	4050515	2 - HIGH CLEARA
7300602	782	1.27900	73	7300605	2 - HIGH CLEARA
4080449	785	1.47900	141	76	2 - HIGH CLEARA
4080440	787	2.07500	141	76	2 - HIGH CLEARA
4080405	789	3.27900	736	144	2 - HIGH CLEARA
4080405	789	1.54900	736	144	2 - HIGH CLEARA
4080407	790	2.07600	118	789	2 - HIGH CLEARA
4080407	790	0.17100	118	789	2 - HIGH CLEARA
4080433	791	4.44300	791	736	2 - HIGH CLEARA
4080432	792	0.95800	88	135	2 - HIGH CLEARA
1710750	793	5.58000	4066870	1710	2 - HIGH CLEARA
4030510	799	3.42700	4030506	4030520	2 - HIGH CLEARA
4066882	81	2.76400	107	1710750	2 - HIGH CLEARA
1800334	87	9.46800	US 180	736	2 - HIGH CLEARA
4080430	88	4.68200	144	RED HILL LO	2 - HIGH CLEARA
1800363	89AB	1.57000	89B	87	2 - HIGH CLEARA
4080910	90	2.14800	144	FOREST BDY	2 - HIGH CLEARA
4080910	90	0.24700	144	FOREST BDY	2 - HIGH CLEARA
4080910	90	4.32800	144	FOREST BDY	2 - HIGH CLEARA
4080910	90	0.43000	144	FOREST BDY	2 - HIGH CLEARA
4080980	90A	1.09800	9080910	DEAD END	2 - HIGH CLEARA
6400161	91	3.77300	6400160	FOREST BDY	2 - HIGH CLEARA
4000618	9138R	0.97000	9219D	15A	2 - HIGH CLEARA
1800306	9153	0.52500	87	89C	2 - HIGH CLEARA
1800306	9153	1.26300	87	89C	2 - HIGH CLEARA
1800306	9153	1.19600	87	89C	2 - HIGH CLEARA
1800354	9153H	1.52000	180	1800350	2 - HIGH CLEARA
1800350	9161B	2.98600	87	710	2 - HIGH CLEARA
1800350	9161B	2.66700	87	710	2 - HIGH CLEARA
1800350	9161B	0.55400	87	710	2 - HIGH CLEARA
1800344	9161BA	1.48800	9161B	774	2 - HIGH CLEARA
1800344	9161BA	0.17400	9161B	774	2 - HIGH CLEARA
1800344	9161BA	0.73900	9161B	774	2 - HIGH CLEARA
4080412	9165A	1.37300	4080402	4080405	2 - HIGH CLEARA
1800368	9166	0.67800	180	FOREST BDY	2 - HIGH CLEARA

1800368	9166	1.73000	180	FOREST BDY	2 - HIGH CLEARA
4020229	9172A	2.85500	4020215	4020215	2 - HIGH CLEARA
4060246	9188F	2.60300	161	4060245	2 - HIGH CLEARA
4060246	9188F	0.45700	161	4060245	2 - HIGH CLEARA
4000837	9189D	1.14200	4000800-P	R.R. TRACKS	2 - HIGH CLEARA
4020310	9189E	0.17300	142	2	2 - HIGH CLEARA
4020310	9189E	2.59000	142	2	2 - HIGH CLEARA
4020310	9189E	0.68100	142	2	2 - HIGH CLEARA
4020313	9189EC	1.29800	9189E	9189EJ	2 - HIGH CLEARA
4020313	9189EC	0.05900			2 - HIGH CLEARA
6410216	9191H	0.78800	84	6410215	2 - HIGH CLEARA
6410216	9191H	0.07500	84	6410215	2 - HIGH CLEARA
6410224	9194K	1.06300	2048	DEAD END	2 - HIGH CLEARA
6410224	9194K	0.52700	2048	DEAD END	2 - HIGH CLEARA
6410224	9194K	0.65500	2048	DEAD END	2 - HIGH CLEARA
6410224	9194K	0.46300	4050500	DEAD END	2 - HIGH CLEARA
4050504	9194R	2.30200	4000101	9183CB	2 - HIGH CLEARA
4000642	9196	0.61700	4000101	9183CB	2 - HIGH CLEARA
4000642	9196	2.48700	4000101	9183CB	2 - HIGH CLEARA
4000080	9202K	0.70400			2 - HIGH CLEARA
4080869	9203H	1.90100	144	107	2 - HIGH CLEARA
4080869	9203H	0.54600	144	107	2 - HIGH CLEARA
4080905	9204	0.88600	144	91	2 - HIGH CLEARA
4080905	9204	1.07000	144	4080905	2 - HIGH CLEARA
4080906	9205	1.72000	144	4080905	2 - HIGH CLEARA
4080906	9205	1.06600	6410141	6410297	2 - HIGH CLEARA
6410296	9208C	2.30700	6410141	6410297	2 - HIGH CLEARA
4080435	9209B	2.01200	6400160	144	2 - HIGH CLEARA
7300240	9212K	1.07900	4030420	DEAD END	2 - HIGH CLEARA
8900310	9213C	0.75400	HWY 89	DEAD END	2 - HIGH CLEARA
4030483	9217E	1.56100	108	I-40	2 - HIGH CLEARA
4030442	9218F	3.37100	7300241	108	2 - HIGH CLEARA
4000621	9219DB	2.44600	744	9219D	2 - HIGH CLEARA
4030460	9223	1.54200	45	0LD 66	2 - HIGH CLEARA
4000986	9229	1.06500	4000989	DEAD END	2 - HIGH CLEARA
4066860	9533	1.17500	76	796 (4000800-P	2 - HIGH CLEARA
4066860	9533	1.77300	76	796 (4000800-P	2 - HIGH CLEARA
6410555	97	0.22200	144	6410141	2 - HIGH CLEARA
6410555	97	2.29400	144	6410141	2 - HIGH CLEARA
4020104	9711Q	0.64400	4020101	4020107	2 - HIGH CLEARA
4060450	9712R	0.83000	4060451	DEAD END	2 - HIGH CLEARA
4060451	9712V	0.89100	4060440	4060455	2 - HIGH CLEARA
4000806	9731AB	0.44700	4000800-P	DEAD END	2 - HIGH CLEARA
4000806	9731AB	1.10900			2 - HIGH CLEARA
7350735	9752	0.95300	7350701	DEAD END	2 - HIGH CLEARA
7350735	9752	0.61100			2 - HIGH CLEARA
Subtotal	(miles)	466.73400			
7300201	106	1.83200	73	WILLIAMS SKI A	3 - SUITABLE FO
0000108	108	3.35100	I-40	COC-73	3 - SUITABLE FO
0000108	108	14.88300			3 - SUITABLE FO
0000108	108	0.50600			3 - SUITABLE FO
0000109	109	7.35500	RD141	RD110	3 - SUITABLE FO
7350701	110	14.79200	COC-73	DE (sycamore	3 - SUITABLE FO
	12	4.91700	109	110	3 - SUITABLE FO
	12	0.11100	109	110	3 - SUITABLE FO
0004060	124	7.01000	I-40	142	3 - SUITABLE FO
0004060	124	5.25900	I-40	142	3 - SUITABLE FO
0004060	124	9.43800	I-40	142	3 - SUITABLE FO

0004060	124	0.08300	I-40	142	3 - SUITABLE FO
4090338	131	0.84400	141	527	3 - SUITABLE FO
4090338	131	0.43700	141	527	3 - SUITABLE FO
7300125	132	1.41700	140	CAMPGROUND	3 - SUITABLE FO
	132G	0.56400	132	DEAD END	3 - SUITABLE FO
0000140	140	6.71100	73	141	3 - SUITABLE FO
0000141	141	18.93300	I - 40	SR64-WC	3 - SUITABLE FO
0000141	141	1.04400	I - 40	SR64-WC	3 - SUITABLE FO
0000141	141	1.31900	I - 40	SR64-WC	3 - SUITABLE FO
0000141	141	0.48800	I - 40	SR64-WC	3 - SUITABLE FO
0000141	141	0.50000	I - 40	SR64-WC	3 - SUITABLE FO
0000141	141	20.06200	I - 40	SR64-WC	3 - SUITABLE FO
0004080	144	12.91200	141	0000018	3 - SUITABLE FO
0000171	171	8.36500	144	EAST FOREST	3 - SUITABLE FO
4000632	49A	0.32700	49	DEAD END	3 - SUITABLE FO
	6	12.63400	I - 40	721	3 - SUITABLE FO
	6	0.00800	I - 40	721	3 - SUITABLE FO
	6	0.00700	I - 40	721	3 - SUITABLE FO
	6	0.13800	I - 40	721	3 - SUITABLE FO
	6	0.26100	I - 40	721	3 - SUITABLE FO
	6	8.99300	I - 40	721	3 - SUITABLE FO
4090001	62	4.75600	141	SHULTZ LAKE	3 - SUITABLE FO
4090001	62	1.08800	141	SHULTZ LAKE	3 - SUITABLE FO
1710730	786	3.03600	100	194	3 - SUITABLE FO
6410210	84	9.58400	141	736	3 - SUITABLE FO
Subtotal	(miles)	183.96500			
7350771.	735	0.33300	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.31300	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.02900	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.13400	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.04200	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.42800	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.12100	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.09300	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.34500	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.26300	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.55100	109	CAMPGROUND	4 - MODERATE DE
7350771.	735	0.34200	109	CAMPGROUND	4 - MODERATE DE
	47	1.29600	HWY 64	KAIBAB LAKE	4 - MODERATE DE
Subtotal	(miles)	4.29000			

NFS Roads					
RTE_NO	NAME	BEGIN_TERM	END_TERMIN	OPER_MAINT	GIS_MILES
132	DOGTOWN C.	140	CAMPGROUND LOO		1.417
151B	NO NAME	151	2473		0.061
151B	NO NAME	151	2473		0.453
57	NO NAME	Coc-73	354		8.553
797	PRONGHORN	RD 16	CIVITAN		0.726
9223	NO NAME	45	0LD 66		1.542
100	"OLD ""100"""	141	171	Level 2	4.68
100	"OLD ""100"""	141	171	Level 2	1.981
100A	NO NAME	100	100	Level 2	2.31
101	NO NAME	90	171	Level 2	1.756
101	NO NAME	90	171	Level 2	1.979
101	NO NAME	90	171	Level 2	0.067
101	NO NAME	90	171	Level 2	0.919
103	CAMP CLOVE	4000972 (FRONTAG	CAMP CLOVER OF	Level 4	0.471
105	J D DAM RD	110	354	Level 2	8.264
106	SKI AREA R	73	WILLIAMS SKI A	Level 3	1.832
108	LOOP RD.	I-40	COC-73 (OLD 17	Level 3	0.506
108	LOOP RD.	I-40	COC-73 (OLD 17	Level 3	14.883
108	LOOP RD.	I-40	COC-73 (OLD 17	Level 3	3.351
108D	NO NAME	108	DEAD END	Level 2	0.476
109	WHITE HORS	RD141	RD110	Level 3	7.355
10B	NO NAME	4060440	4060480	Level 2	0.993
11	"OLD ""11"" R"	110	105	Level 2	4.32
110	SYCAMORE P	COC-73	DE (sycamore	Level 3	14.792
110A	NO NAME	7350701	7350797	Level 2	0.702
110E	NO NAME	110	110	Level 2	0.609
110E	NO NAME	110	110	Level 2	0.38
110E	NO NAME	110	110	Level 2	0.623
114	"OLD ""114"""	HWY 89	35	Level 2	0
115	"OLD ""115"""	730	736	Level 2	5.607
118	INDIAN TAN	88	736	Level 2	0.507
119	NO NAME	90	736	Level 2	0.316
11H	NO NAME	11	DEAD END	Level 2	1.175
12	RUIN MOUNT	109	110	Level 3	4.917
12	RUIN MOUNT	109	110	Level 3	0.111
122	TWIN SPRIN	73	108	Level 2	0
123C	NO NAME	89	C.R. 136	Level 2	1.725
124	DOUBLE A R	I-40	142	Level 3	0.083
124	DOUBLE A R	I-40	142	Level 3	9.438
124	DOUBLE A R	I-40	142	Level 3	5.259
124	DOUBLE A R	I-40	142	Level 3	7.01
124	DOUBLE A R	I-40	142	Level 3	0.083
124U	NO NAME	124	DEAD END	Level 2	0.639
127EE	NO NAME	7370955	7370955	Level 2	0.512
128	"OLD ""128"""	90	DEAD END	Level 2	2.434
128C	NO NAME	90	DEAD END	Level 2	0.709
129	"OLD ""129"""	354	138	Level 2	3.822
12A	NO NAME	12	DEAD END	Level 2	2.137
12A	NO NAME	12	DEAD END	Level 2	0.819
12AB		12A	Dead End	Level 2	0.455
12AB		12A	Dead End	Level 2	0.611
12D	NO NAME	12	DEAD END	Level 2	1.118
12E	NO NAME	7350700	DEAD END	Level 2	2.223
12E	NO NAME	7350700	DEAD END	Level 2	1.078
12F	NO NAME	7350785	7350790	Level 2	0.7
13	PART OF OL	109	141	Level 2	2.712
13	PART OF OL	109	141	Level 2	0.886
130	SIGNAL HIL	124	Dead End at Si	Level 2	0.335
130	SIGNAL HIL	124	Dead End at Si	Level 2	1.963
131	GARLAND PR	141	527	Level 3	0.437
131	GARLAND PR	141	527	Level 3	0.035
131	GARLAND PR	141	527	Level 3	0.844
132	DOGTOWN C.	140	CAMPGROUND LOO		1.417
132G	WATER TANK	132	DEAD END	Level 3	0.564
134	NO NAME	1710740	1710750	Level 2	3.399

136	"OLD ""136"""	115	730	Level 2	2.185
138	"OLD ""138"""	105	105	Level 2	7.084
138A	ROUND MT.	138	DEAD END	Level 2	0.734
139	ROSILDA SP	73	109	Level 2	7.408
139A	NO NAME	139	DEAD END	Level 2	0.538
139B	NO NAME	139	DEAD END	Level 2	2.223
139S	NO NAME	139	7300155	Level 2	0.765
140	DOGTOWN RD	73	141	Level 3	6.711
140A	NO NAME	140	700	Level 2	0.503
141	SPRING VLY	I - 40	SR64-WC	Level 3	20.062
141	SPRING VLY	I - 40	SR64-WC	Level 3	0.488
141	SPRING VLY	I - 40	SR64-WC	Level 3	18.933
141	SPRING VLY	I - 40	SR64-WC	Level 3	0.5
141	SPRING VLY	I - 40	SR64-WC	Level 3	0.226
141	SPRING VLY	I - 40	SR64-WC	Level 3	1.044
141	SPRING VLY	I - 40	SR64-WC	Level 3	0.348
141	SPRING VLY	I - 40	SR64-WC	Level 3	1.319
142A	NO NAME	4020	4020440	Level 2	0.853
144	MORITZ LAK	141	0000018 (HWY 1	Level 3	12.912
145	NO NAME	HWY 66	FOREST BOUNDAR	Level 2	1.363
146V	NO NAME	66	FOREST BOUNDAR	Level 2	0.314
146V	NO NAME	66	FOREST BOUNDAR	Level 2	0.444
147	GOBBLER SP	7350	7370	Level 2	5.126
147A	NO NAME	147	110	Level 2	1.423
147A	NO NAME	147	110	Level 2	1.934
147A	NO NAME	147	110	Level 2	3.01
147C	NO NAME	147	DEAD END	Level 2	0.553
15	NO NAME	124	124	Level 2	4.947
15	NO NAME	124	124	Level 2	0.016
150	NO NAME	90	101	Level 2	0.191
150	NO NAME	90	101	Level 2	1.593
151	NO NAME	194	DEAD END	Level 2	1.253
151A	NO NAME	144	194	Level 2	3.72
151B	NO NAME	151	2473		0.061
151B	NO NAME	151	2473		0.453
152	NO NAME	HWY 64	4050141	Level 2	2.205
154	NO NAME	171	DEAD END	Level 2	0.739
154	NO NAME	171	DEAD END	Level 2	0.126
154D	NO NAME	1710621	DEAD END	Level 2	0.549
157B	NO NAME	4060901	DEAD END	Level 2	0.879
158	NO NAME	168	DEAD END	Level 2	1.255
163	TRAIDING P	16	Dead End	Level 2	0.96
163	TRAIDING P	16	Dead End	Level 2	0.295
163	TRAIDING P	16	Dead End	Level 2	0.262
168	NO NAME	9183L	Dead End	Level 2	0.152
168	NO NAME	9183L	Dead End	Level 2	2.625
171	BELLEMONT-	144	EAST FOREST BO	Level 3	8.365
171C	"OLD ""171C"""	66	OFF FOREST	Level 2	1.141
18	NO NAME	141	139	Level 2	1.212
186	THIRTY-SIX	108	PRESCOTT N.F.	Level 2	6.347
186DD		186	Dead End	Level 2	1.649
188	NO NAME	6400160	790	Level 2	0.896
191A	NO NAME	4066	4000087	Level 2	1.191
194	PUMPKIN CE	141	171	Level 2	4.067
195	SUMMIT MTN	354	DEAD END AT TO	Level 2	1.662
1F	NO NAME	4020215	4020229	Level 2	1.215
2	"OLD ""2"" RD"	142	9174	Level 2	0.061
2	"OLD ""2"" RD"	142	9174	Level 2	2.432
2	"OLD ""2"" RD"	142	9174	Level 2	0.032
2	"OLD ""2"" RD"	142	9174	Level 2	1.931
2001	NO NAME	118	87	Level 2	2.438
2002	NO NAME	1800338	FOREST BOUNDAR	Level 2	2.456
2004	NO NAME	710	180033	Level 2	1.626
2010	NO NAME	6400110	6400009	Level 2	0.956
2018	NO NAME	2002	2020	Level 2	3.275
2018	NO NAME	2002	2020	Level 2	0.619
2020	NO NAME	118	118	Level 2	3.844

2021	NO NAME	118	87	Level 2	2.423
2029	NO NAME	84	6410250	Level 2	3.519
2029A	NO NAME	6410256	6410256	Level 2	0.544
2029B	NO NAME	6410256	DEAD END	Level 2	0.813
2029C	"OLD ""2005"""	2030	115	Level 2	0.552
2048	NO NAME	84	141	Level 2	1.81
2058	NO NAME	4000050	6410521	Level 2	0.377
2058	NO NAME	4000050	6410521	Level 2	2.864
2058	NO NAME	4000050	6410521	Level 2	0.016
2058A	NO NAME	2058A	74B	Level 2	0.805
2058A	NO NAME	2058A	74B	Level 2	0.189
2058A	NO NAME	2058A	74B	Level 2	0.725
2058A	NO NAME	2058A	74B	Level 2	0.107
2059	NO NAME	74A	6410523	Level 2	0.592
2072	NO NAME	160-PIPELINE	74A	Level 2	1.286
2072	NO NAME	160-PIPELINE	74A	Level 2	0.684
2074A	NO NAME	4000800-PIPELINE	2073	Level 2	1.296
2076AB	NO NAME	6410522	DEAD END	Level 2	0.589
2080	NO NAME	Private53	102C	Level 2	1.024
2080	NO NAME	Private53	102C	Level 2	0.324
2080	NO NAME	Private53	102C	Level 2	1.09
2081	NO NAME	71	6400110	Level 2	0.618
2082	NO NAME	6400110	DEAD END	Level 2	0.529
2084	NO NAME	141	102C	Level 2	0.691
2084	NO NAME	141	102C	Level 2	2.922
2084	NO NAME	141	102C	Level 2	0.243
2084A	NO NAME	4050500	4050500	Level 2	1.78
2084E	NO NAME	4050511	DEAD END	Level 2	0.549
2086	NO NAME	102	4050524	Level 2	2.534
2086	NO NAME	102	4050524	Level 2	0.133
2091	NO NAME	SUBDIVISION	DEAD END	Level 2	1.123
2091	NO NAME	SUBDIVISION	DEAD END	Level 2	0.234
2095	NO NAME	DEAD END	DEAD END	Level 2	1.491
2096	NO NAME	4050540	4050548	Level 2	1.752
2111	"OLD ""2111"""	110	DEAD END	Level 2	0.728
2113A	NO NAME	7350705	DEAD END	Level 2	0.533
2130	NO NAME	139	DEAD END	Level 2	1.463
2142	NO NAME	720	DEAD END	Level 2	1.831
2151	NO NAME	139	4090352	Level 2	1.566
2161	POWERLINE	109	131	Level 2	2.892
2163	NO NAME	717	140G	Level 2	0.277
2170	NO NAME	7300130	DEAD END	Level 2	0.822
2183	NO NAME	4050550	DEAD END	Level 2	0.915
2185	NO NAME	4050540	DEAD END	Level 2	1.879
2198	NO NAME	141	DEAD END	Level 2	1.79
2209	NO NAME	749	139	Level 2	0.821
2210	NO NAME	749	DEAD END	Level 2	0.548
2220	NO NAME	730	141	Level 2	2.867
2245	NO NAME	24	24	Level 2	1.439
2254	NO NAME	141	OFF FOREST	Level 2	0.175
2256	NO NAME	527	4090336	Level 2	0.748
24	"OLD ""24"" R"	141	FOREST BOUNDAR	Level 2	2.438
24	"OLD ""24"" R"	141	FOREST BOUNDAR	Level 2	0.564
24	"OLD ""24"" R"	141	FOREST BOUNDAR	Level 2	1.971
2401	NO NAME	107	144	Level 2	1.8
2406	NO NAME	107	DEAD END	Level 2	1.048
2414	NO NAME	1710751	1710772	Level 2	0.587
2427	NO NAME	100	100	Level 2	0.552
2447	NO NAME	786	DEAD END	Level 2	0.8
2447	NO NAME	786	DEAD END	Level 2	0.715
2449	NO NAME	786	DEAD END	Level 2	0.839
2453	NO NAME	1710743	DEAD END	Level 2	0.766
2463	NO NAME	194	194	Level 2	1.237
2473	NO NAME	171	Dead End	Level 2	2.335
2478	NO NAME	144	1710715	Level 2	2.427
2480	NO NAME	2478	Dead End	Level 2	1.005
2487	SOUTHSIDE	786	DEAD END	Level 1	1.595

24B	NO NAME	24	4090327	Level 2	0.63
25	"OLD ""25"" R"	4050520	62	Level 2	3.403
27	"OLD ""27"" R"	I-40	35	Level 2	0.075
27	"OLD ""27"" R"	I-40	35	Level 2	4.778
2801	NO NAME	152	152	Level 2	1.457
2A		2	736	Level 2	0.353
2HA	NO NAME	4020	4020520	Level 2	0.57
3002	NO NAME	4020522	FOREST BOUNDAR	Level 2	0.869
3010	NO NAME	FOREST BOUNDARY	DEAD END	Level 2	0.223
3014	NO NAME	64	DEAD END	Level 2	0.712
3102	NO NAME	186	DEAD END	Level 2	1.092
3102	NO NAME	186	DEAD END	Level 2	1.976
3105	NO NAME	73	7300605	Level 2	0.968
3106	NO NAME	4030435	DEAD END	Level 2	0.587
3107	NO NAME	108	122	Level 2	0.633
3107	NO NAME	108	122	Level 2	1.504
3108	NO NAME	108	DEAD END	Level 2	1.328
3109	NO NAME	108	7300602	Level 2	1.389
3110	NO NAME	73	122	Level 2	1.163
3117	NO NAME	73	4030590	Level 2	1.879
3123	SOUTHSIDE	728	2122	Level 2	0.732
3209C		141	144	Level 2	0.675
3221	NO NAME	138	DEAD END	Level 2	0.808
3225	NO NAME	147	DEAD END	Level 2	1.281
3230		354	U651	Level 2	0.39
3232	NO NAME	746	DEAD END	Level 2	0.596
3235	NO NAME	746	DEAD END	Level 2	0.497
3236	"OLD ""915"""	746	746	Level 2	1.465
3251	NO NAME	105	DEAD END	Level 2	0.526
3258	NO NAME	73	140	Level 2	0.219
3258	NO NAME	73	140	Level 2	1.531
3258	NO NAME	73	140	Level 2	0.394
3259	NO NAME	73	3258	Level 2	0.842
3261	NO NAME	7300149	DEAD END	Level 2	1.373
3265	NO NAME	127	127	Level 2	1.743
3268	NO NAME	110	7350735	Level 2	1.878
3269C	"OLD ""3269C"	144	DEAD END	Level 2	0.655
3271	NO NAME	138	147	Level 2	1.234
3273	NO NAME	105	105	Level 2	1.817
3279	NO NAME	73	7300615	Level 2	0.599
3281	NO NAME	7350740	DEAD END	Level 2	0.612
343	NO NAME	302	305A	Level 2	0.57
343	NO NAME	302	305A	Level 2	0.529
343	NO NAME	302	305A	Level 2	0.473
343	NO NAME	302	305A	Level 2	2.518
354	"OLD ""354"""	COC-73	PRESCOTT N.F.B	Level 2	7.159
35A	NO NAME	4000912	DEAD END	Level 2	1.221
35C	NO NAME	35	35A	Level 2	1.177
38	NO NAME	798	DEAD END	Level 2	5.806
38	NO NAME	798	DEAD END	Level 2	0.587
38C	NO NAME	8900330	DEAD END	Level 2	0.719
39	"OLD ""39"" R"	142	124	Level 2	6.677
39B	NO NAME	39	9712-124	Level 2	0.678
39B	NO NAME	39	9712-124	Level 2	1.125
4	"OLD ""4"" RD"	HWY 89	4030	Level 2	10.634
40	NO NAME	4030550	DEAD END	Level 2	2.228
41	COW TANK	108	108	Level 2	6.788
41C	NO NAME	4030550	4030555	Level 2	1.136
42	NO NAME	122	9212K	Level 2	1.881
42	NO NAME	122	9212K	Level 2	0.575
44	NO NAME	186	73	Level 2	3.396
45	BIXLER SAD	108	DEAD END	Level 2	0.11
47	KAIBAB LK	HWY 64	KAIBAB LAKE	Level 4	1.296
48	POQUETTE H	139	140	Level 2	3.706
48A	"OLD ""48A"""	48C	3253	Level 2	1.476
48C	NO NAME	749	749	Level 2	1.883
49A	CATARACT L	49	DEAD END	Level 3	0.319

49A	CATARACT L	49	DEAD END	Level 3	0.327
56	DOUBLE TAN	141	TRAILHEAD	Level 2	3.942
56D	NO NAME	56	56	Level 2	0.688
57	NO NAME	Coc-73	354		8.553
57A		57	746	Level 2	2.059
57A		57	746	Level 2	0.088
57A		57	746	Level 2	0.236
57A		57	746	Level 2	0.059
57A		57	746	Level 2	0.538
57A		57	746	Level 2	0.004
57A		57	746	Level 2	0.491
58	"OLD ""58"" R"	796	priv61	Level 2	1.811
59	"OLD ""531"""	102	DEAD END	Level 2	0.827
6	"OLD""6"" RD"	I - 40	721	Level 3	0.261
6	"OLD""6"" RD"	I - 40	721	Level 3	0.138
6	"OLD""6"" RD"	I - 40	721	Level 3	12.634
6	"OLD""6"" RD"	I - 40	721	Level 3	0.007
6	"OLD""6"" RD"	I - 40	721	Level 3	0.008
6	"OLD""6"" RD"	I - 40	721	Level 3	8.993
62	"OLD ""62"" R"	141	SHULTZ LAKE	Level 3	1.088
62	"OLD ""62"" R"	141	SHULTZ LAKE	Level 3	4.756
64A	MONTEZUMA	141	65	Level 2	1.6
64AA	NO NAME	64A	DEAD END	Level 2	0.212
64C	NO NAME	141	4090305	Level 2	2.418
65	NO NAME	R.R. MAINTENANCE	DEAD END	Level 2	2.645
65	NO NAME	R.R. MAINTENANCE	DEAD END	Level 2	1.133
65B	NO NAME	4090300	FOREST BOUNDAR	Level 2	0.427
6AB	NO NAME	4020595	DEAD END	Level 2	0.579
6AC	NO NAME	4060408	DEAD END	Level 2	0.574
7	MARTIN DAM	124	6	Level 2	0.833
7	MARTIN DAM	124	6	Level 2	0.123
7	MARTIN DAM	124	6	Level 2	0.871
7	MARTIN DAM	124	6	Level 2	5.653
7	MARTIN DAM	124	6	Level 2	1.077
7	MARTIN DAM	124	6	Level 2	0.344
7	MARTIN DAM	124	6	Level 2	0.134
7	MARTIN DAM	124	6	Level 2	0.205
707	"OLD ""707"""	115	84	Level 2	3.199
708	"OLD ""708"""	84	730	Level 2	3.009
709	NO NAME	4000850	4000800-PIPELI	Level 2	2.045
71	NO NAME	AZ64-WC	116A	Level 2	0.821
71	NO NAME	AZ64-WC	116A	Level 2	4.654
710B	NO NAME	710	DEAD END	Level 2	1.268
712	NO NAME	730	6410280	Level 2	3.978
713	"OLD ""713"""	712	141	Level 2	1.775
714	"OLD ""714"""	141	708	Level 2	2.935
715	NO NAME	144	180	Level 2	4.333
715	NO NAME	144	180	Level 2	0.129
717C	NO NAME	4000205	4050200	Level 2	0.53
72	"OLD ""72"" R"	4066	4000905-PIPELI	Level 2	2.857
720	"OLD ""720"""	141	140	Level 2	2.845
721	NO NAME	142	FOREST BOUNDAR	Level 2	1.083
721	NO NAME	142	FOREST BOUNDAR	Level 2	1.966
721A	NO NAME	4020330 (721)	FOREST BOUNDAR	Level 2	0.254
721A	NO NAME	4020330 (721)	FOREST BOUNDAR	Level 2	1.88
722	NO NAME	4000912	DEAD END	Level 2	3.176
722A	NO NAME	8900314	8900316	Level 2	1.161
728	NO NAME	4030402	DEAD END	Level 2	2.025
728B	NO NAME	4030401	DEAD END	Level 2	1.524
728B	NO NAME	4030401	DEAD END	Level 2	0.043
729		6	Forest Boundar	Level 2	0.092
729		6	Forest Boundar	Level 2	0.373
730	SQUAW	141	736	Level 2	9.99
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.313
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.263
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.029
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.134

735	WHITEHORSE	109	CAMPGROUND	Level 4	0.042
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.428
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.121
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.093
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.345
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.342
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.333
735	WHITEHORSE	109	CAMPGROUND	Level 4	0.551
736	A T & T CA	West F. BDY	East F. BDY	Level 2	12.132
736	A T & T CA	West F. BDY	East F. BDY	Level 2	4.621
736	A T & T CA	West F. BDY	East F. BDY	Level 2	0.813
736	A T & T CA	West F. BDY	East F. BDY	Level 2	0.233
736	A T & T CA	West F. BDY	East F. BDY	Level 2	11.841
736	A T & T CA	West F. BDY	East F. BDY	Level 2	0.248
736A	NO NAME	736	91	Level 2	1.315
736E	NO NAME	736	Dead End	Level 2	1.14
74	FRENCHY SP	HWY 66	141	Level 2	7.527
745	NO NAME	4000850	4020100	Level 2	4.484
746	"OLD ""746"""	354	354	Level 2	1.288
746	"OLD ""746"""	354	354	Level 2	3.638
747	LITTLE RIM	110	110	Level 2	4.453
749	"OLD ""749"""	139	48 POQUETTE HO	Level 2	2.692
749B	NO NAME	749	2210	Level 2	0.962
74A	"OLD ""74A"""	74	2058	Level 2	3.512
74AC	NO NAME	74	DEAD END	Level 2	0.609
74AF	NO NAME	74A	74A	Level 2	0.41
74AF	NO NAME	74A	74A	Level 2	1.325
74AF	NO NAME	74A	74A	Level 2	0.264
74AF	NO NAME	74A	74A	Level 2	0.91
754	NO NAME	2	9282F	Level 2	0.877
754	NO NAME	2	9282F	Level 2	0.192
75L		75	9197M	Level 2	0.006
75L		75	9197M	Level 2	0.413
75L		75	9197M	Level 2	0.715
76	NO NAME	4066	144	Level 2	4.509
774	NO NAME	710	87	Level 2	2.914
777		2020	Forest Boundar	Level 2	2.539
778	BUCK MTN	87	118	Level 2	2.575
778	BUCK MTN	87	118	Level 2	0.224
778	BUCK MTN	87	118	Level 2	0.148
779	COXCOMBS	115	730	Level 2	1.578
780	NO NAME	4020111	DEAD END	Level 2	0.637
781	SPITZ SPRI	OLD 66	120	Level 2	4.489
781J	NO NAME	40	4050515	Level 2	0.689
782	NO NAME	73	7300605	Level 2	1.279
785	GOVT. HILL	141	76	Level 2	1.479
786	NO NAME	100	194	Level 3	3.036
787	NO NAME	141	76	Level 2	2.075
789	"OLD ""789"""	736	144	Level 2	1.549
789	"OLD ""789"""	736	144	Level 2	3.279
790	"OLD ""790"""	118	789	Level 2	2.076
790	"OLD ""790"""	118	789	Level 2	0.171
791	NO NAME	791	736	Level 2	4.443
792	NO NAME	88	135	Level 2	0.958
793	NO NAME	4066870	1710	Level 2	5.58
796A	NO NAME	8900306-PIPELINE	DEAD END	Level 2	0.971
796F	NO NAME	DEAD END/NORTH	DEAD END/SOUTH	Level 2	0.037
796F	NO NAME	DEAD END/NORTH	DEAD END/SOUTH	Level 2	1.341
796F	NO NAME	DEAD END/NORTH	DEAD END/SOUTH	Level 2	0.149
796F	NO NAME	DEAD END/NORTH	DEAD END/SOUTH	Level 2	0.147
796G	NO NAME	4000800-PIPELINE	DEAD END	Level 2	0.787
797	PRONGHORN	RD 16	CIVITAN		0.726
798	"OLD ""38"" R"	108	108	Level 2	1.467
798	"OLD ""38"" R"	108	108	Level 2	2.863
799	NO NAME	4030506	4030520	Level 2	3.427
7A	NO NAME	4060420	4060420	Level 2	0
7A	NO NAME	4060420	4060420	Level 2	0.811

81	NO NAME	107	1710750	Level 2	2.764
81B	NO NAME	4066882	OFF FOREST	Level 2	0.867
84	"OLD ""84"" R"	141	736	Level 3	9.584
87	WINTER CAM	US 180	736	Level 2	9.468
88	RED HILL L	144	RED HILL LOOKO	Level 2	4.682
89A	NO NAME	87	2004	Level 2	0.293
89A	NO NAME	87	2004	Level 2	1.133
89AB	NO NAME	89B	87	Level 2	1.57
89C	NO NAME	1800300	1800301	Level 2	1.634
90	"OLD ""90"" R"	144	FOREST BOUNDAR	Level 2	4.328
90	"OLD ""90"" R"	144	FOREST BOUNDAR	Level 2	0.43
90	"OLD ""90"" R"	144	FOREST BOUNDAR	Level 2	0.247
90	"OLD ""90"" R"	144	FOREST BOUNDAR	Level 2	2.148
905E	NO NAME	105	DEAD END	Level 2	1.485
90A	NO NAME	9080910	DEAD END	Level 2	1.098
91	NO NAME	6400160	FOREST BOUNDAR	Level 2	3.773
9138R	NO NAME	9219D	15A	Level 2	0.97
9153	NO NAME	87	89C	Level 2	1.263
9153	NO NAME	87	89C	Level 2	1.196
9153	NO NAME	87	89C	Level 2	0.525
9153D	NO NAME	1800300	1800305	Level 2	1.141
9153H	NO NAME	180	1800350	Level 2	1.52
9153HB	NO NAME	144	DEAD END	Level 2	0.92
9153M	NO NAME	4080402	4080402	Level 2	0.255
9153M	NO NAME	4080402	4080402	Level 2	0.243
9153P	NO NAME	715	DEAD END	Level 2	0.763
9153V	NO NAME	6400161	6400160	Level 2	0.142
9153V	NO NAME	6400161	6400160	Level 2	0.656
9161B	NO NAME	87	710	Level 2	2.986
9161B	NO NAME	87	710	Level 2	0.554
9161B	NO NAME	87	710	Level 2	2.667
9161BA		9161B	774	Level 2	0.174
9161BA		9161B	774	Level 2	0.739
9161BA		9161B	774	Level 2	1.488
9161C	NO NAME	89	87	Level 2	0.524
9162	NO NAME	1800361	DEAD END	Level 2	1.446
9163A	NO NAME	144	4080906	Level 2	0.72
9164A	NO NAME	4080405	144	Level 2	1.313
9165A	NO NAME	4080402	4080405	Level 2	1.373
9166	NO NAME	180	FOREST BOUNDAR	Level 2	0.678
9166	NO NAME	180	FOREST BOUNDAR	Level 2	1.73
9172A	NO NAME	4020215	4020215	Level 2	2.855
9174	NO NAME	4020235	FOREST BOUNDAR	Level 2	0.896
9181D		15	Dead End	Level 2	0.789
9182C	NO NAME	124	4060222	Level 2	0.878
9182L	NO NAME	9711N	9713AE	Level 2	0.974
9182T	NO NAME	4060	DEAD END	Level 2	0.873
9183CB	NO NAME	4060200 RAILROAD	DEAD END	Level 2	0.027
9183CB	NO NAME	4060200 RAILROAD	DEAD END	Level 2	0.205
9183CB	NO NAME	4060200 RAILROAD	DEAD END	Level 2	1.457
9183D	NO NAME	4000611	4000800-PIPELI	Level 2	1.441
9183S	NO NAME	4000611	4000609	Level 2	1.657
9183W	NO NAME	9187E	15A	Level 2	0.137
9183Y	NO NAME	9183YA	Private Proper	Level 2	0.732
9184B	NO NAME	124	DEAD END	Level 2	0.489
9185CA	NO NAME	4060222	4060218	Level 2	0.821
9187B	NO NAME	124	DEAD END	Level 2	0.375
9187BA	NO NAME	4060212	DEAD END	Level 2	0.722
9187D	NO NAME	124	9186DA	Level 2	0.005
9187D	NO NAME	124	9186DA	Level 2	3.009
9187D	NO NAME	124	9186DA	Level 2	0.437
9187E	NO NAME	15	130	Level 2	2.034
9188F	NO NAME	161	4060245	Level 2	2.603
9188F	NO NAME	161	4060245	Level 2	0.457
9189D	NO NAME	4000800-PIPELINE	R.R. TRACKS	Level 2	1.142
9189E	NO NAME	142	2	Level 2	0.681
9189E	NO NAME	142	2	Level 2	2.59

9189E	NO NAME	142	2	Level 2	0.173
9189EC	NO NAME	9189E	9189EJ	Level 2	0.059
9189F	NO NAME	9189E	9189FA	Level 2	0.673
9189FA	NO NAME	4060494	4020212	Level 2	0.256
9191H	NO NAME	84	6410215	Level 2	0.075
9191H	NO NAME	84	6410215	Level 2	0.788
9191U	NO NAME	710	DEAD END	Level 2	1.326
9193V	NO NAME	736	1800322	Level 2	0.529
9194K	NO NAME	2048	DEAD END	Level 2	0.463
9194K	NO NAME	2048	DEAD END	Level 2	0.527
9194K	NO NAME	2048	DEAD END	Level 2	1.063
9194R	NO NAME	4050500	DEAD END	Level 2	2.302
9196	NO NAME	4000101	9183CB	Level 2	2.487
9196	NO NAME	4000101	9183CB	Level 2	0.617
9196	NO NAME	4000101	9183CB	Level 2	0.414
9196	NO NAME	4000101	9183CB	Level 2	1.27
9197N	NO NAME	74	DEAD END	Level 2	0.863
9197T	NO NAME	1800334	118	Level 2	0.656
9198U	NO NAME	74A	6410527	Level 2	0.737
9201A	NO NAME	4066	DEAD END	Level 2	1.076
9201G	NO NAME	4066848	4066844	Level 2	0.728
9201K	NO NAME	144	107	Level 2	1.939
9202K	NORTHSIDE			Level 2	0.704
9203H	NO NAME	144	107	Level 2	0.546
9203H	NO NAME	144	107	Level 2	1.901
9203K	MOONSET PI	4066	6400009	Level 2	0.824
9204	NO NAME	144	91	Level 2	1.07
9204K	NO NAME	40	DEAD END	Level 2	0.998
9205	NO NAME	144	4080905	Level 2	1.72
9205	NO NAME	144	4080905	Level 2	1.066
9205H	NO NAME	4066883	4000905-PIPELI	Level 2	1.465
9206J	NO NAME	144	107	Level 2	0.195
9206J	NO NAME	144	107	Level 2	0.666
9208C	NO NAME	6410141	6410297	Level 2	0.259
9208C	NO NAME	6410141	6410297	Level 2	2.307
9209B	NO NAME	6400160	144	Level 2	2.012
9212C	NO NAME	8900212	DEAD END	Level 2	1.778
9212F	NO NAME	4030520	DEAD END	Level 2	3.592
9212J	NO NAME	HWY 89	DEAD END	Level 2	3.376
9212K	NO NAME	4030420	DEAD END	Level 2	1.079
9212KA	NO NAME	4030430	7300240	Level 2	0.979
9212KA	NO NAME	4030430	7300240	Level 2	0.564
9213C	NO NAME	HWY 89	DEAD END	Level 2	0.754
9213D	NO NAME	8900319	8900321	Level 2	1.138
9214A	NO NAME	27	35	Level 2	1.145
9215A	NO NAME	4000800-PIPELINE	4000902	Level 2	0.1
9215A	NO NAME	4000800-PIPELINE	4000902	Level 2	0.878
9215K	NO NAME	8900330	8900330	Level 2	1.178
9215M	NO NAME	8900314	8900330	Level 2	1.206
9216A	NO NAME	35	DEAD END	Level 2	0.281
9216E	NO NAME	4030510	4030513	Level 2	2.371
9216J	NO NAME	4030510	DEAD END	Level 2	0.779
9216N	NO NAME	4030510	4030512	Level 2	0.18
9216N	NO NAME	4030510	4030512	Level 2	0.512
9217E	"OLD RTE. """	108	I-40	Level 2	1.561
9218F	NO NAME	7300241	108	Level 2	3.371
9219B	NO NAME	89	FOREST BOUNDAR	Level 2	0.697
9219D	NO NAME	4000611	DEAD END	Level 2	2.467
9219DB	NO NAME	744	9219D	Level 2	2.446
9219G	NO NAME	4030550	4030550	Level 2	2.058
9221K	NO NAME	125	7370944	Level 2	0.87
9223	NO NAME	45	0LD 66		1.542
9223JA	NO NAME	57A	R.R. TRACKS	Level 2	0.121
9227D	NO NAME	122	7300310	Level 2	0.678
9228P	NO NAME	7350760	7350783	Level 2	1.386
9229	NO NAME	4000989	DEAD END	Level 2	1.065
9229X	NO NAME	781	4050518	Level 2	1.117

9233C	NO NAME	24	4090325	Level 2	1.602
9233G	NO NAME	141	4090304	Level 2	0.981
9235E	NO NAME	7350792	DEAD END	Level 2	0.456
9282F	NO NAME	4020520	4060	Level 2	1.548
9511H	NO NAME	180	1800368	Level 2	1.59
9511H	NO NAME	180	1800368	Level 2	0.971
9511HE	NO NAME	180	DEAD END	Level 2	1.159
9531A	NO NAME	6400160	4080911	Level 2	0.816
9531I	NO NAME	97	DEAD END	Level 2	0.869
9531L	NO NAME	6410141	97	Level 2	1.953
9532F	NO NAME	793	DEAD END	Level 2	0.334
9532F	NO NAME	793	DEAD END	Level 2	1.213
9532J	NO NAME	4066	4000086	Level 2	0.814
9532L	NO NAME	4066	DEAD END	Level 2	0.6
9533	NO NAME	76	796 (4000800-P	Level 2	1.175
9533	NO NAME	76	796 (4000800-P	Level 2	1.773
9534A	NO NAME	4000905-PIPELINE	DEAD END	Level 2	0.97
9611J	NO NAME	DEAD END	DEAD END	Level 2	1.164
97	BEALE WAGO	144	6410141	Level 2	2.294
97	BEALE WAGO	144	6410141	Level 2	0.222
9701K	NO NAME	2	9711G	Level 2	0.645
9701K	NO NAME	2	9711G	Level 2	0.038
9711F	NO NAME	9711G	764	Level 2	0.484
9711Q	NO NAME	4020101	4020107	Level 2	0.644
9712	NO NAME	4020172	4060739	Level 2	1.806
9712R	NO NAME	4060451	DEAD END	Level 2	0.83
9712V	NO NAME	4060440	4060455	Level 2	0.891
9713A	NO NAME	9713A	9182L	Level 2	0.523
9713A	NO NAME	9713A	9182L	Level 2	1.669
9731AB	NO NAME	4000800-PIPELINE	DEAD END	Level 2	1.109
9731B	NO NAME	9731BA	DEAD END	Level 2	0.072
9731C	NO NAME	35	DEAD END	Level 2	3.042
9731S	NO NAME	27	DEAD END	Level 2	0.914
9752	NO NAME	7350701	DEAD END	Level 2	0.953
priv32	NO NAME	144	DEAD END	Level 2	0.97
				Subtotal (miles)	974.845
	Existing Closed Roads	**Proposed Open**			
10	NO NAME	6	161	Level 2	1.839
124N	NO NAME	124	4000800-PIPELI	Level 2	0.228
135	MARTEEN DA	730	88	Level 2	3.212
155	"OLD ""126"""	127	Bar Cross Cabin	Level 1	1.892
15A	NO NAME	15	15	Level 2	0.524
15A	NO NAME	15	15	Level 2	2.444
15A	NO NAME	15	15	Level 2	3.92
2073	NO NAME	HWY 64	2075	Level 2	2.54
2073	NO NAME	HWY 64	2075	Level 2	0.009
2400	NO NAME	796CC	DEAD END	Level 2	0.181
2423	NO NAME	134	2427	Level 2	0.244
3106A	NO NAME	108	3106A	Level 2	0.292
34	NO NAME	39	4020	Level 2	1.328
34	NO NAME	39	4020	Level 2	0.041
51A	NO NAME	57A	DEAD END	Level 2	1.586
710	NO NAME	118	789	Level 2	4.044
710	NO NAME	118	789	Level 2	5.252
717	NO NAME	141	140	Level 2	1.7
717	NO NAME	141	140	Level 2	1.662
764	NO NAME	2	10	Level 2	1.722
796CC		796	priv. prop. De	Level 2	0.18
9189EJ	NO NAME	124	124	Level 2	0.073
9189EJ	NO NAME	124	124	Level 2	0.247
9209K	NO NAME	144	4066858	Level 2	1.698
9221AB	NO NAME	9221A	9229	Level 2	0.105
9221AB	NO NAME	9221A	9229	Level 2	0.133
9221AB	NO NAME	9221A	9229	Level 2	0.692
9502		89	9153	Level 2	1.122
				Subtotal (miles)	38.91

Roads Not Currently in INFRA Proposed Open

		VALUES			RISKS			
RTE_NO	GIS_MILES	Sp_Uses	Range	REC	ROS	S/Water	Wildlife	Heritage
1	3.03	LOW	HIGH	LOW		HIGH	LOW	HIGH
1'	1.004	HIGH	HIGH	LOW		HIGH	LOW	HIGH
1'	0.741	HIGH	HIGH	LOW		HIGH	LOW	HIGH
1'	0.323	HIGH	HIGH	LOW		HIGH	LOW	HIGH
1'	0.734	HIGH	HIGH	LOW		HIGH	LOW	HIGH
107B	0.147	LOW	HIGH	LOW		HIGH	HIGH	HIGH
107J	0.4	HIGH	HIGH	LOW		HIGH	LOW	LOW
108E	0.242	LOW	LOW	LOW		LOW	LOW	HIGH
109A	0.168	LOW	HIGH	LOW		LOW	LOW	LOW
109A	0.159	LOW	HIGH	LOW		LOW	LOW	LOW
110B	0.209	LOW	HIGH	LOW		HIGH	LOW	HIGH
11D	0.275	LOW	HIGH	LOW		LOW	LOW	HIGH
11M	0.392	LOW	HIGH	LOW		HIGH	LOW	HIGH
122N	0.304	LOW	LOW	LOW		HIGH	LOW	LOW
122NA	0.173	LOW	LOW	LOW		HIGH	LOW	LOW
122NB	0.063	LOW	LOW	LOW		HIGH	LOW	LOW
124L	0.087	LOW	LOW	LOW		LOW	LOW	HIGH
124V	0.087	HIGH	HIGH	LOW		LOW	LOW	HIGH
131B	0.201	LOW	HIGH	LOW		LOW	LOW	HIGH
132-A	0.396	LOW	HIGH	LOW		LOW	LOW	LOW
132-B	0.491	LOW	HIGH	LOW		HIGH	LOW	LOW
132-C	0.275	LOW	HIGH	LOW		LOW	LOW	LOW
132D	0.075	LOW	HIGH	LOW		LOW	LOW	LOW
132F	0.137	LOW	HIGH	LOW		LOW	LOW	LOW
138B	0.031	LOW	LOW	LOW		LOW	LOW	HIGH
14	2.965	HIGH	HIGH	LOW		HIGH	LOW	HIGH
140C	0.176	LOW	HIGH	LOW		HIGH	LOW	LOW
141JJ	0.083	LOW	HIGH	LOW		LOW	LOW	LOW
141KK	0.138	LOW	HIGH	LOW		LOW	LOW	LOW
142F	0.316	LOW	HIGH	LOW		LOW	LOW	HIGH
146W	0.493	LOW	HIGH	LOW		LOW	LOW	LOW
14A	0.44	LOW	HIGH	LOW		HIGH	LOW	HIGH
160A	0.462	LOW	HIGH	LOW		LOW	LOW	LOW
163A	0.314	HIGH	HIGH	LOW		LOW	LOW	HIGH
171D	0.319	LOW	LOW	LOW		LOW	LOW	HIGH
171E	0.381	LOW	LOW	LOW		LOW	LOW	LOW
173AA	0.24	LOW	HIGH	LOW		LOW	LOW	HIGH
173B	0.206	HIGH	HIGH	LOW		HIGH	LOW	HIGH
173C	0.121	LOW	HIGH	LOW		LOW	LOW	LOW
186E	0.256	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH
190	3.333	LOW	HIGH	HIGH	LOW	HIGH	LOW	HIGH
2	1.931	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2	0.032	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2	0.061	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2	2.432	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2'	3.561	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2010A	0.376	LOW	HIGH	LOW		LOW	LOW	LOW
2012	0.196	LOW	HIGH	LOW		LOW	LOW	LOW
2029D	0.739	LOW	HIGH	HIGH		LOW	LOW	LOW
2057	0.49	HIGH	HIGH	LOW		LOW	LOW	HIGH
2069	0.232	HIGH	HIGH	LOW		LOW	LOW	LOW
2072B	0.419	LOW	HIGH	LOW		LOW	LOW	HIGH
2073A	0.165	LOW	HIGH	LOW		LOW	LOW	HIGH
2076AA	0.229	LOW	HIGH	LOW		LOW	LOW	HIGH
2084H	0.143	HIGH	HIGH	LOW		LOW	LOW	HIGH
2120	0.402	LOW	HIGH	LOW		HIGH	LOW	HIGH
2168	0.537	LOW	LOW	LOW		LOW	LOW	LOW
2185B	0.254	LOW	LOW	LOW		LOW	LOW	LOW
2185C	0.318	LOW	HIGH	LOW		LOW	LOW	LOW
2202	0.341	LOW	HIGH	LOW		LOW	LOW	LOW
2210A	0.311	LOW	LOW	LOW		LOW	HIGH	LOW
2218	0.34	LOW	LOW	LOW		LOW	LOW	LOW
2235	0.264	HIGH	HIGH	LOW		LOW	LOW	LOW
2249	0.186	HIGH	HIGH	LOW		LOW	LOW	LOW

2249	0.428	HIGH	HIGH	LOW		LOW	LOW	LOW
2249	0.428	HIGH	HIGH	LOW		LOW	LOW	LOW
2286	0.481	LOW	HIGH	LOW		LOW	LOW	HIGH
2414A	0.449	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
2424	0.355	LOW	HIGH	LOW		LOW	LOW	LOW
2454	0.26	LOW	LOW	LOW		LOW	LOW	HIGH
2467	0.01	HIGH	HIGH	LOW		HIGH	LOW	HIGH
2HC	0.206	LOW	HIGH	LOW		HIGH	LOW	HIGH
2HE	0.173	LOW	LOW	LOW		LOW	LOW	HIGH
3101	0.143	LOW	HIGH	LOW		HIGH	LOW	HIGH
3102B	0.318	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH
3114A	0.265	LOW	HIGH	LOW		HIGH	LOW	HIGH
3115	0.367	LOW	HIGH	LOW		HIGH	LOW	HIGH
3221A	0.226	LOW	HIGH	LOW		HIGH	LOW	LOW
3265A	1.023	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH
3265A	0.378	HIGH	HIGH	LOW	LOW	HIGH	LOW	HIGH
3283	0.471	LOW	HIGH	LOW		HIGH	LOW	HIGH
3297	0.357	LOW	HIGH	LOW		HIGH	LOW	HIGH
3306	1.458	LOW	HIGH	LOW		HIGH	LOW	LOW
35	8.777	HIGH	HIGH	LOW		HIGH	LOW	HIGH
354'	5.793	LOW	HIGH	HIGH	HIGH	HIGH	LOW	HIGH
36B	0.153	LOW	HIGH	LOW		LOW	LOW	LOW
45E	0.525	LOW	LOW	LOW		LOW	HIGH	HIGH
47	1.296	HIGH	HIGH	HIGH		LOW	LOW	LOW
47'	0.122	LOW	HIGH	HIGH		LOW	LOW	LOW
47'	0.233	LOW	HIGH	HIGH		LOW	LOW	LOW
47'	0.053	LOW	HIGH	HIGH		LOW	LOW	LOW
47'	0.565	LOW	HIGH	HIGH		LOW	LOW	LOW
47'	0.547	LOW	HIGH	HIGH		LOW	LOW	LOW
49B	0.165	LOW	LOW	HIGH		LOW	LOW	LOW
54	0.508	LOW	HIGH	LOW		HIGH	LOW	HIGH
6'	2.844	LOW	HIGH	LOW		HIGH	LOW	HIGH
67	3.913	HIGH	HIGH	LOW		LOW	LOW	LOW
6B	1.381	HIGH	HIGH	LOW		HIGH	LOW	HIGH
6BJ	0.336	LOW	HIGH	LOW		HIGH	LOW	HIGH
6BK	0.291	LOW	HIGH	LOW		HIGH	LOW	HIGH
6DD	0.058	HIGH	HIGH	LOW		HIGH	LOW	HIGH
6DD	1.518	HIGH	HIGH	LOW		HIGH	LOW	HIGH
6F	0.057	HIGH	HIGH	LOW		HIGH	LOW	LOW
6LA	0.156	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
713A	0.266	HIGH	HIGH	LOW		LOW	LOW	HIGH
713A	0.728	HIGH	HIGH	LOW		LOW	LOW	HIGH
716	2.082	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH
7280	0.189	LOW	HIGH	LOW		HIGH	LOW	HIGH
728E	0.552	LOW	HIGH	LOW		HIGH	LOW	HIGH
730A	0.279	LOW	HIGH	LOW		LOW	LOW	HIGH
736C	0.403	HIGH	HIGH	LOW		HIGH	LOW	HIGH
736CA	0.147	HIGH	HIGH	LOW		HIGH	LOW	HIGH
749C	0.248	LOW	LOW	LOW		LOW	LOW	LOW
749E	0.004	HIGH	HIGH	LOW		LOW	LOW	HIGH
74AA	0.366	LOW	HIGH	LOW		LOW	LOW	HIGH
74G	0.332	LOW	HIGH	LOW		HIGH	LOW	LOW
76'	1.575	LOW	HIGH	LOW		HIGH	LOW	LOW
76'	3.041	LOW	HIGH	LOW		HIGH	LOW	LOW
765	0.379	LOW	HIGH	LOW		LOW	LOW	HIGH
76S	0.377	LOW	HIGH	LOW		LOW	LOW	LOW
76T	0.37	LOW	HIGH	LOW		LOW	LOW	LOW
796B	0.637	LOW	HIGH	LOW		LOW	LOW	HIGH
87A	0.143	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH
87E	1.204	HIGH	HIGH	LOW		HIGH	LOW	HIGH
8850	0.347	HIGH	HIGH	LOW		HIGH	LOW	LOW
900	1.298	LOW	HIGH	LOW		LOW	LOW	HIGH
9153G	0.059	LOW	HIGH	LOW		LOW	LOW	LOW
9153G	0.193	LOW	HIGH	LOW		LOW	LOW	LOW
9153PA	0.119	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
9164AA	0.198	LOW	LOW	LOW		LOW	LOW	LOW
9171	0.367	LOW	HIGH	LOW		HIGH	LOW	HIGH

9171A	0.372	LOW	LOW	LOW		HIGH	LOW	LOW
9177A	0.186	LOW	HIGH	LOW		HIGH	LOW	HIGH
9177A	0.122	LOW	HIGH	LOW		HIGH	LOW	HIGH
9183CA	0.373	HIGH	HIGH	LOW		LOW	LOW	LOW
9185C	0.524	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9189DA	0.291	LOW	HIGH	LOW		LOW	LOW	HIGH
9191SA	0.316	LOW	HIGH	LOW		HIGH	LOW	HIGH
9193B	0.125	HIGH	HIGH	LOW		HIGH	LOW	LOW
9194W	0.533	LOW	HIGH	LOW		HIGH	LOW	HIGH
9197MB	0.125	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
9199M	1.17	LOW	HIGH	LOW		LOW	LOW	HIGH
9202D	0.477	LOW	HIGH	LOW		LOW	LOW	HIGH
9203KA	0.068	LOW	HIGH	LOW		HIGH	LOW	HIGH
9207J	0.355	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9212JB	0.077	LOW	HIGH	LOW		LOW	LOW	HIGH
9215D	1.353	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9215D	0.035	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9217B	2.098	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9217B	2.098	HIGH	HIGH	LOW		HIGH	LOW	HIGH
9217EC	0.076	LOW	HIGH	LOW		LOW	LOW	HIGH
9219BB	0.295	LOW	HIGH	LOW		LOW	LOW	HIGH
9222Q	0.195	LOW	LOW	LOW		LOW	LOW	LOW
9227K	0.154	LOW	LOW	LOW	LOW	LOW	LOW	HIGH
9503	0.387	LOW	HIGH	LOW		HIGH	LOW	HIGH
9511B	0.303	LOW	HIGH	LOW		LOW	LOW	HIGH
9521Z	0.29	LOW	HIGH	LOW		LOW	LOW	LOW
9531R	0.245	LOW	HIGH	LOW		HIGH	LOW	LOW
9536A	0.204	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
9701B	0.321	LOW	LOW	LOW		LOW	LOW	HIGH
9711FA	0.038	LOW	LOW	LOW		HIGH	LOW	HIGH
9711FA	0.125	LOW	LOW	LOW		HIGH	LOW	HIGH
9713AE	0.319	LOW	LOW	LOW		HIGH	LOW	LOW
9781E	0.669	LOW	HIGH	LOW		HIGH	LOW	HIGH
Subtotal	101.655							
Unauthorized Proposed Open	Routes							
U310	0.36	HIGH	HIGH	LOW		HIGH	LOW	HIGH
U335	1.013	LOW	HIGH	LOW		HIGH	LOW	LOW
U369	0.416	HIGH	HIGH	LOW		LOW	LOW	LOW
U371	0.508	HIGH	HIGH	LOW		LOW	LOW	LOW
U385	0.271	LOW	LOW	LOW		LOW	LOW	LOW
U392	0.209	LOW	HIGH	LOW		HIGH	LOW	LOW
U477	0.256	LOW	HIGH	LOW		LOW	LOW	LOW
U479	0.764	LOW	LOW	LOW		LOW	LOW	LOW
U630	0.186	HIGH	HIGH	LOW		HIGH	LOW	LOW
U631	0.401	HIGH	HIGH	LOW		HIGH	LOW	LOW
U635	0.948	LOW	HIGH	LOW		LOW	LOW	LOW
U637	0.259	LOW	LOW	LOW		LOW	LOW	LOW
U639	0.83	LOW	HIGH	LOW		LOW	LOW	HIGH
U640	0.742	LOW	HIGH	LOW		LOW	LOW	LOW
U641	0.98	LOW	HIGH	LOW		LOW	LOW	LOW
U694	0.239	LOW	HIGH	LOW		LOW	LOW	HIGH
U719	0.199	LOW	LOW	LOW		HIGH	LOW	HIGH
U737	0.506	LOW	HIGH	LOW		LOW	LOW	LOW
U740	0.858	LOW	HIGH	LOW		LOW	LOW	HIGH
U761	0.618	LOW	HIGH	LOW		HIGH	LOW	LOW
U767	0.427	LOW	HIGH	LOW		LOW	LOW	HIGH
Total	10.99							

RTE_NO	BEGIN_TERM	END_TERMIN	OPER_MAINT	GIS_MILES
102J	102	4050533	Level 2	0.476
105V	7370986	DEAD END	Level 2	0.864
107G	107	DEAD END	Level 2	0.548
116B	6400110	6400110	Level 2	0.612
119	90	736	Level 2	1.848
119B	6400170	6400173	Level 2	1.741
11E	11	7350720	Level 2	0.599
11K	11	110	Level 2	0.444
11K	11	110	Level 2	1.163
122E	122	111	Level 2	1.194
122H	122	7300235	Level 2	2.388
122QA	122	Dead End	Level 2	1.029
122QA	122	Dead End	Level 2	0.749
122T	122	7300240	Level 2	0.957
125D	125	9221K	Level 2	0.508
125D	125	9221K	Level 2	1.049
127BC	7370972	DEAD END	Level 2	0.548
127V	127	126	Level 2	0.555
128A	128	128E	Level 1	0.302
128A	128	128E	Level 1	0.839
128B	4080930	DEAD END	Level 2	0.086
128B	4080930	DEAD END	Level 2	0.665
128C	90	DEAD END	Level 2	1.261
128C	90	DEAD END	Level 2	0.485
128G	90	DEAD END	Level 2	1.511
12A	12	DEAD END	Level 2	0.632
12AB	12A	Dead End	Level 2	0.32
12AB	12A	Dead End	Level 2	1.066
12AB	12A	Dead End	Level 2	0.588
12C	7350790	7350789	Level 2	0.672
12CC	7350785	7350783	Level 2	0.846
12Q	7350700	DEAD END	Level 2	2.105
130	124	Dead End at Si	Level 2	0.348
139C	139	DEAD END	Level 2	0.285
139C	139	DEAD END	Level 2	0.228
139E	139	4050235	Level 2	1.628
139R	7300155	139	Level 2	1.308
140G	140	140	Level 2	1.67
141NN	141	141PP	Level 2	0.768
145	HWY 66	FOREST BOUNDAR	Level 2	0.223
145C	4066896	DEAD END	Level 2	0.444
145F	145B	DEAD END	Level 2	0.537
146A	4066	4000905-PIPELI	Level 2	0.561
146S	4066	DEAD END	Level 2	0.749
146T	4000080	4066	Level 2	0.789
147A	147	110	Level 2	1.879
151B	151	2473		1.096
152A	152	2801	Level 2	0.732
160HA	4066884	DEAD END	Level 2	0.664
160HB	107	4066889	Level 2	0.348
160HC	4066886	DEAD END	Level 2	0.673
163	16	Dead End	Level 2	0.434
163	16	Dead End	Level 2	0.616
163	16	Dead End	Level 2	2.452
165A	4000190	4000190	Level 2	0.689
165A	4000190	4000190	Level 2	0.176
166	141	141	Level 2	1.515
175B	PRESCOTT N.F.	DEAD END	Level 2	1.724

182A	4060	4060440	Level 2	0.34
186AC	8900375	DEAD END	Level 2	0.143
186AC	8900375	DEAD END	Level 2	0.085
186AC	8900375	DEAD END	Level 2	0.043
186AC	8900375	DEAD END	Level 2	0.342
186BE	4030575	4030575	Level 2	0.647
186C	4030575	DEAD END	Level 2	0.614
186DD	186	Dead End	Level 2	0.629
190C	1710631 & 171063	DEAD ENDS	Level 2	0.713
1C	4020215	FOREST BOUNDAR	Level 2	0.596
1E	4020215	DEAD END	Level 2	0.934
2007	4000905-PIPELINE	DEAD END	Level 2	0.837
2020B	2022	736	Level 2	1.353
2034	115	DEAD END	Level 2	1.078
2044	707	84	Level 2	1.435
2045	708	2044	Level 2	2.759
2049	6410221	6410230	Level 2	1.271
2056	2056	Private Proper	Level 2	0.807
2060	74	6410528	Level 2	1.631
2095	DEAD END	DEAD END	Level 2	0.405
2103	141	4090015	Level 2	1.541
2109	141	4050215	Level 2	0.683
2117	139	747	Level 2	2.289
2139	139	4050590	Level 2	0.642
2161	109	131	Level 2	0.227
2179	102	DEAD END	Level 2	1.612
2205	139	7300155	Level 2	2.721
2215	139	DEAD END	Level 2	0.497
2235A	4090306	DEAD END	Level 2	0.77
2235B	2235A	2235D	Level 2	0.746
2235D	4090310	4090310	Level 2	0.965
2241	4090018	4090010	Level 2	0.702
2241	4090018	4090010	Level 2	0.894
2247	24	4090365	Level 2	0.844
2253	4090365	DEAD END	Level 2	0.594
2437	1710783	1710	Level 2	0.811
2461	107	DEAD END	Level 2	0.692
25C	102	4050540	Level 2	0.413
25C	102	4050540	Level 2	0.206
25C	102	4050540	Level 2	0.417
2A	2	736	Level 2	0.35
2HS	4020420	4020532	Level 2	0.533
3002A	4020525	DEAD END	Level 2	0.685
3010	FOREST BOUNDARY	DEAD END	Level 2	0.405
3010A	4020104	DEAD END	Level 2	0.76
30A	4000930	4000930	Level 2	0.226
30B	4000930	DEAD END	Level 2	0.061
30B	4000930	DEAD END	Level 2	0.766
30E	8900345	8900345	Level 2	0.682
30E	8900345	8900345	Level 2	0.079
3102A	7300620	DEAD END	Level 2	0.772
3103	4000946	8900314	Level 2	2.912
3107B	3107	9822C	Level 2	0.561
3107B	3107	9822C	Level 2	0.519
3117C	7300605	7300606	Level 2	0.56
3154	110	7350740	Level 2	0.889

3156	11	DEAD END	Level 2	0.657
3162	3166	11C	Level 2	0.557
3164	7350720	7370663	Level 2	0.679
3166	7370660	7350720	Level 2	0.992
3202	109	109	Level 2	1.368
3204	110	DEAD END	Level 2	1.751
3262	7370310	DEAD END	Level 2	0.78
3267	105	905E	Level 2	1.442
3268	110	7350735	Level 2	0.516
3268A	7350725	DEAD END	Level 2	0.638
3268B	7350701	7350725	Level 2	1.715
3278	147	DEAD END	Level 2	0.554
3287	110	7350725	Level 2	0.631
3292	147	DEAD END	Level 2	0.558
354G	354	DEAD END	Level 2	1.143
354H	354	DEAD END	Level 2	0.557
35A	4000912	DEAD END	Level 2	1.516
38	798	DEAD END	Level 2	0.084
38	798	DEAD END	Level 2	0.501
38	798	DEAD END	Level 2	4.845
38	798	DEAD END	Level 2	0.563
39B	39	9712-124	Level 2	0.152
39B	39	9712-124	Level 2	0.002
40	4030550	DEAD END	Level 2	0.534
41B	41	DEAD END	Level 2	0.516
41F	4030550	DEAD END	Level 2	1.076
45	108	DEAD END	Level 2	1.399
4H	110	7370662	Level 2	0.924
56D	56	56	Level 2	0.544
56D	56	56	Level 2	0.27
57D	57	57	Level 2	0.505
57D	57	57	Level 2	0.855
63	76	Dead End	Level 2	1.293
64	4090301	DEAD END	Level 2	0.762
64AA	64A	DEAD END	Level 2	0.533
65AA	141	4090010	Level 2	0.67
6BC	4020500	DEAD END	Level 2	0.571
6BE	6	4020595	Level 2	0.738
6E	6	DEAD END	Level 2	0.814
6E	6	DEAD END	Level 2	2.948
6E	6	DEAD END	Level 2	0.297
6EA	6	DEAD END	Level 2	0.339
6EA	6	DEAD END	Level 2	0.545
6PA	6	DEAD END	Level 2	1.114
6TB	4020563	DEAD END	Level 2	0.652
6TC	4020561	DEAD END	Level 2	0.55
6TE	4020500	4020561	Level 2	0.584
6VBE	4020500	DEAD END	Level 2	1.766
701G	7300110	7300195	Level 2	0.892
710B	710	DEAD END	Level 2	0.204
722	4000912	DEAD END	Level 2	0.632
736P	736	2	Level 2	0.348
74F	4000050	COMPRESSOR STA	Level 2	1.8
754	2	9282F	Level 2	0.145
75C	75	Dead end	Level 2	0.924
777	2020	Forest Boundar	Level 2	0.12
780	4020111	DEAD END	Level 2	0.869
782A	7300602	7300602	Level 2	0.713
7A	4060420	4060420	Level 2	1.023

7AE	4060420	DEAD END	Level 2	0.584
812	1710750	1710	Level 2	0.212
812	1710750	1710	Level 2	1.32
89A	87	2004	Level 2	0.128
89D	1800300	FOREST BOUNDAR	Level 2	0.787
9023Q	715E	9023K	Level 2	0.428
9153W	736	FOREST BOUNDRY	Level 2	0.012
9157B	87	1800313	Level 2	0.892
9161C	89	87	Level 2	0.236
9161C	89	87	Level 2	0.318
9163	9162	DEAD END	Level 2	1.485
9181A	4020500	DEAD END	Level 2	0.666
9181E	4020	4060493	Level 2	1.276
9182H	4060470	DEAD END	Level 2	0.745
9182L	9711N	9713AE	Level 2	0.508
9182T	4060	DEAD END	Level 2	0.834
9183C	4060226	PVT. LAND	Level 2	2
9183G	4060409	4020595	Level 2	1.522
9183W	9187E	15A	Level 2	0.31
9183X	124	15	Level 2	0.477
9183X	124	15	Level 2	0.617
9183Y	9183YA	Private Proper	Level 2	0.941
9184B	124	DEAD END	Level 2	0.307
9187B	124	DEAD END	Level 2	0.39
9189EC	9189E	9189EJ	Level 2	1.298
9189EF	4020303	4020312	Level 2	0.671
9189FA	4060494	4020212	Level 2	0.313
9191KA	9191K	9194K	Level 2	0.032
9191U	710	DEAD END	Level 2	0.432
9193V	736	1800322	Level 2	0.979
9194D	6400110	4000905-PIPELI	Level 2	2.129
9194K	2048	DEAD END	Level 2	0.655
9194M	74A	2076	Level 2	0.841
9194MA	9194M	74A	Level 2	1.142
9197B	16	DEAD END	Level 2	0.864
9197J	6400110	6400112	Level 2	0.528
9198E	707	2044	Level 2	1.266
9198UA	6410538	6410538	Level 2	0.766
9199G	74A	6410523	Level 2	0.746
9202E	793	793	Level 2	1.55
9204	144	91	Level 2	0.886
9204C	90	DEAD END	Level 2	2.003
9205C	4080911	4080911	Level 2	2.005
9207K	107	4000800-PIPELI	Level 2	0.728
9209G	191A	DEAD END	Level 2	0.752
9209G	191A	DEAD END	Level 2	0.446
9211BD	4000816	DEAD END	Level 2	0.726
9211BD	4000816	DEAD END	Level 2	0.155
9211F	108	DEAD END	Level 2	0.548
9212B	C.R. 136	C.R. 136	Level 2	1.168
9215	9187D	Dead End	Level 2	0.743
9215H	PRESCOTT N.F.	8900345	Level 2	1.569
9215H	PRESCOTT N.F.	8900345	Level 2	1.021
9216	27	DEAD END	Level 2	0.815
9216A	35	DEAD END	Level 2	0.258
9216A	35	DEAD END	Level 2	2.286
9217	27	FOREST BOUNDAR	Level 2	1.242
9217J	41	Dead End	Level 2	1.321
9218A	I-40	I-40	Level 2	1.56

9219A	4000850	DEAD END	Level 2	1.485
9219D	4000611	DEAD END	Level 2	1.365
9219DC	4000619	4030599	Level 2	1.09
9219DD	4000621	4000616	Level 2	0.75
9221AD	4000972	DEAD END	Level 2	0.262
9221AD	4000972	DEAD END	Level 2	0.578
9221AD	4000972	DEAD END	Level 2	0.093
9222B	44	DEAD END	Level 2	0.785
9223B	4030460	4030464	Level 1	0.283
9223J	7300183	DEAD END	Level 2	1.138
9223JA	57A	R.R. TRACKS	Level 2	0.321
9223JA	57A	R.R. TRACKS	Level 2	0.409
9223JA	57A	R.R. TRACKS	Level 2	0.26
9224J	7300190	7300110	Level 2	0.74
9224W	4000192	DEAD END	Level 2	1.335
9225N	105	DEAD END	Level 2	0.857
9226C	122	DEAD END	Level 2	0.702
9226D	73	140	Level 2	1.745
9226J	354	DEAD END	Level 2	0.883
9227J	354	7370943	Level 2	3.366
9228C	105	DEAD END	Level 2	1.039
9228F	108	DEAD END@QUAD	Level 2	0.861
9228F	108	DEAD END@QUAD	Level 2	0.012
9228K	127	DEAD END	Level 2	0.675
9229A	4000986	4000986	Level 2	0.727
9232	62	DEAD END	Level 2	0.581
9232W	Dead End	Dead End	Level 2	0.327
9235E	7350792	DEAD END	Level 2	0.982
9236F	7350775	7350775	Level 2	0.276
9239C	56	DEAD END	Level 2	1.124
9245B	109	DEAD END	Level 2	0.241
9245B	109	DEAD END	Level 2	0.788
9247	747	747	Level 2	1.212
9252	RAILROAD	62	Level 2	0.819
9282F	4020520	4060	Level 2	1.701
9511F	144	DEAD END	Level 2	0.61
9511HE	180	DEAD END	Level 2	0.022
9511HE	180	DEAD END	Level 2	0.682
9511HE	180	DEAD END	Level 2	0.471
9521A	6410286	736	Level 2	0.064
9521A	6410286	736	Level 2	0.578
9521A	6410286	736	Level 2	0.334
9521H	84	Dead End	Level 2	0.168
9531E	4080930	DEAD END	Level 2	0.095
9531E	4080930	DEAD END	Level 2	0.528
9531J	97	DEAD END	Level 2	1.477
9531JA	6410563	DEAD END	Level 2	0.32
9531T	90A	DEAD END		1.121
9532H	HWY 66	DEAD END	Level 2	0.012
9532H	HWY 66	DEAD END	Level 2	0.548
9532M	4066	DEAD END	Level 2	0.176
9532M	4066	DEAD END	Level 2	0.937
9532R	171C	4066895	Level 2	0.008
9532R	171C	4066895	Level 2	1.308
9536K	144	DEAD END	Level 2	0.896
9536M	4080927	DEAD END	Level 2	0.726
9586J	90	DEAD END	Level 2	0.707
9701A	4020203	FOREST BOUNDAR	Level 2	0.534
9701H	4020520	DEAD END	Level 2	0.711

9701N	2A	9712Y	Level 2	1.058
9701T	4020500	4929547	Level 2	0.527
9701U	4020520	DEAD END	Level 2	0.551
9711F	9711G	764	Level 2	0.264
9711N	9711E	34D		1.074
9711N	9711E	34D		0.464
9711S	4020101	4020104	Level 2	0.951
9722A	4000816	DEAD END	Level 2	0.73
9731A	4000806	DEAD END	Level 2	1.678
9731AB	4000800 - P	DEAD END	Level 2	0.447
9731B	9731BA	DEAD END	Level 2	0.679
9731BA	COUNTY LINE	4000800-PIPELI	Level 2	0.565
9731R	41	9218G	Level 2	0.988
9731T	4000806	FOREST BOUNDAR	Level 2	0.626
9731U	114	DEAD END	Level 2	1.225
9744F	4030575	DEAD END	Level 2	0.156
9744F	4030575	DEAD END	Level 2	0.514
9752	7350701	DEAD END	Level 2	0.611
9822C	122Q	DEAD END	Level 2	1.771
NFS9	89	89	Level 2	0.01
38	798	DEAD END	Level 2	0.082
			Total	256.799

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Appendix C: Documentation for Travel Analysis Process

FS-643 Questions and Responses – Williams Ranger District Roads Analysis (2006)

Ecosystem Functions and Processes (EF)

EF(1): What ecological attributes, particularly those unique to the region, would be affected by roading of current un-roaded areas?

There are no plans to build roads within inventoried roadless areas. There are no Inventoried Roadless Areas on the Williams Ranger District. In addition, no other un-roaded areas are planned to have permanent roads built. The ecological attributes of these areas will continue to be protected by the Forest Plan and project-level design features.

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

The presence of roads increases the risk of spread of existing and new noxious weeds to the Forest and surrounding landscapes. The higher the assigned maintenance level, the higher the frequency of road maintenance and increased traffic increases the chances for spread of exotic (noxious) plants into new areas. Invasive or noxious weeds may displace the habitat of existing native species. The end result is reduced ecosystem function that can be dramatically altered by the introduction and spread of noxious weeds and our road system can provide an opportunity for introduction of new species from other areas.

In November 2004 the Forest Supervisors from the Coconino, Kaibab and Prescott National Forests signed a Record of Decision for the Integrated Treatment of Noxious or Invasive Weeds on the Coconino, Kaibab and Prescott National Forests. Currently, there are scattered inventoried, known infestations of noxious or invasive weeds on the Williams District. Several infestations have been treated in both FY 05 and 06.

EF(3): To what degree do the presence, type, and location of roads contribute to the control of insects, diseases, and parasites?

The presence of roads allows access to the forest for many types of treatment, including, mechanical, chemical, and burning.

The road system is the primary vector of introduction of many of these same insects, diseases, parasites, and noxious or invasive weeds.

EF(4): How does the road system affect ecological disturbance regimes in the area?

The disturbance these roads cause occurred during the construction of the roads, and most are well-established roads. Some of the unauthorized routes created by forest users are less established. These existing roads have already created the disturbance and now we deal with the effects of the presence, use and maintenance of the roads.

The most common disturbance regimes on the Kaibab National Forest are fire, drought, insects and disease in the Ponderosa Pine and coniferous forest types. These regimes are interrelated since drought often leads to increased incidences of fire and outbreaks of insects and disease. Fire is considered to be the most significant disturbance regime.

Road access provides risk for human-caused fires on the Forest, roads also allow rapid response opportunity for fire suppression activities. Even though it is acknowledged that road access in the Forest increases risk for human caused fire, this risk can be minimized through administrative means such as smoking and campfire restrictions and complete closures during high and extreme fire danger periods.

In the event of prescribed natural fires, some roads can hamper the development and spread of the burn.

EF(5): What are the adverse effects of noise caused by developing, using, and maintaining roads?

Noise from developing, using and maintaining roads may affect people and wildlife within hearing distance. There is no specific data on the effects of noise from KNF roads on people. During this project, the travel management work that is on-going for the Tusayan Ranger District and revision efforts to the Kaibab Land and Resource Management Plan, there have been a series of public meetings and open houses. The issue of noise pollution and specifically noise from off-highway vehicles, motorcycles, recreational vehicles and how it impacts the quality of experience for forest visitors is coming up more often.

Aquatic, Riparian Zone, and Water Quality (AQ)

AQ(1): How and where does the road system modify the surface and subsurface hydrology of the area?

Roads have three main effects on water: 1) they intercept rainfall directly on the road surface and road cutbanks and subsurface water moving down the hillslope or springs; 2) they concentrate flow, either on the surface or in an adjacent ditch or channel; and 3) they divert or reroute water from normal flow paths had the roads not been built. Increasing road density increases the impact to a watershed and it's waterways. For example, by intercepting surface and subsurface flow, and concentrating and diverting it into culverts, ditches, gullies, and channels, road systems effectively increase the density of streams in the landscape, thereby changing the amount of time it takes for water to enter a stream channel, altering the timing of peak flows and hydrograph shape. Usually the change in the hydrograph's shape is a quicker runoff response time (i.e. "flashier" flow response), which produces a taller and sharper shape in the hydrograph's peak flow design.

AQ(2): How and where does the road system generate surface erosion?

Different parts of the road system and their adjoining cutbanks and fillslopes behave quite differently hydrologically. All roads do not perform equally during storms, and the same road segment may behave quite differently during storms of different magnitudes. As storms become larger or soil becomes wetter, more of the road system contributes water and sediment directly into streams. Road gradient has a profound effect on the magnitude of hydrologic change on roads and to surrounding areas. Discharge from hillslopes, cutbank height, density of stream crossings, soil properties, and response to storms all differ by slope position or watershed aspect. The most important consideration of how roads or dirt. The number of miles of roads per area in a watershed is known as road density. The greater the road density value, the greater the potential impact to a watershed and its hydrologic system caused by those roads. Proper design and maintenance of roads can reduce the amount of sedimentation. The amount of traffic on a road can affect the FS ability to properly maintain the road.

AQ(3): How and where does the road system affect mass wasting?

There is no known incidence of mass wasting due to roads on the Williams Ranger District or the Kaibab National Forest. Concentration and diversion of flow into headwater areas can cause incision of previously unchanneled portions of the landscape and initiate slides in colluvial hollows. Diversion of stream flow at road-stream crossings, road proximity next to stream channels, and the culvert placements and frequencies are key factors contributing to road failure and other landscape erosional consequences during large flood events. Another potential factor would be the unusually high antecedent moisture content in the soils as a result of above normal wet years or heavy snow pack allowing increased risk for slumping or small landslides along, usually, cutbanks and less often on fillslopes.

AQ(4): How and where do road-stream crossings influence local stream channels and water quality?

Road stream crossings can be a major source of sediment to streams, resulting from channel fill around culverts, subsequent road-crossing failures, and subtle or major changes in stream morphology caused by aggradations such as the increase number of point bars in stream channels. Greater road density will have a greater number of road-stream crossings and thereby increasing the likelihood of impact on stream water quality as a result of increasing amount of fine sediment or sand entering streams at those juncture points. Stream crossings such as ford crossings allow greater sediment delivery to streams because of the direct connection from a road to a stream as compared to culvert crossings or bridges. The greater number of traffic or higher road density of non-paved roads will have a greater propensity for sedimentation to streams and potentially increasing the impact to water quality, fishes, and/or macro-invertebrates.

AQ(5): How and where does the road system create potential for pollutants, such as chemical spills, oils, de-icing salts, or herbicides, to enter surface waters?

Clear and open pathways for pollutants to enter surface waters are either at road crossings such as fords and roadside culverts that pipe near or directly into surface waters. The potential for pollutants to enter surface waters is also based upon the design of the road system such as out-sloped vs. in-sloped road designs, the incorporation of broad road dips, and the number of culvert installations along road-side ditches. Other factors are the roads' proximity to streams and the amount of vegetation such as grasses that can serve as "pollutant traps" between the road and stream water. If the road is designed poorly or there is a lack of vegetation materials to serve as a "buffer strip" between the road and stream water, movement of pollutants into surface waters is likely to occur. Proximity of the road to a stream is the strongest controlling variable in determining problems on water quality in streams. However, paved road systems are likely to be the pollution source areas due to the higher public vehicular use, greater attention on road maintenance requirements, and accidental spills, while unpaved road system are likely to be the source for sedimentation problems to nearby streams. Since there are few live streams and limited surface waters on the Williams District and the Kaibab National Forest, this potential impact is minimal.

AQ(6): How and where is the road system "hydrologically connected" to the stream system? How do the connections affect water quality and quantity (such as, the delivery of sediments and chemicals, thermal increases, elevated peak flows)?

See AQ(1), (2), (3), and (4) for additional information. The Kaibab is unique, in that it has the fewest miles of perennial streams of any national forest in the National Forest System. The longest stretch of perennially flowing stream is in the Saddle Mountain Wilderness on the North Kaibab Ranger District. Most surface flow on the Forest is for a short period (1 to 4 weeks) during and after snow melt in the spring, and very briefly(1-12 hours) following summer thunderstorms.

AQ(7): 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?

Recreational uses such as fishing, water diversions for range uses, drinking water, stock ponds, and impoundments are the beneficial uses. One perennial stream system supports aquatic and wildlife species, and riparian plant species. Intermittent streams may support these as well during wetter seasons.

The continued increase in population in the west in communities in and around the Williams Ranger District has been observed and will likely generate an increase in recreational and transportation needs as result. These increases will likely cause additional impact to both paved and non-paved road systems throughout the National Forest.

AQ(8): How and where does the road system affect wetlands?

Wetland roads are quite different from upland sites with regard to erosion potential and processes. Low gradients, high water tables, ample soil developments, water-loving plants, and poorly defined natural drainage and sheet flow areas during heavy rainfall events often define wetland areas. The mobilization of fine sediment produces little impact immediately in the wetland areas but may be potentially impacted from upland sources and where floodwater could impact wetlands. However, wetlands on the Williams Ranger District are rare. Wetlands are likely to be found near spring areas, or along flat valleys.

AQ(9): 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?

Roads affect geomorphic and channel dynamics from four different mechanisms: 1) accelerating erosion from the road surface and prism itself by both mass and surface erosion processes that adds or changes the equilibrium dynamics in a channel through sediment loading and the erosion processes; 2) directly affecting channel structure and geometry by constraints to the floodplain or stream that have a natural tendency for lateral (or vertical) migration; 3) altering of surface flow paths and increasing stream density, leading to increased landscape dissection or channelization onto previously unchannelized portions of the landscape; and 4) causing complex interactions among water, sediment, and woody materials (see question #5 also about woody materials and roads) where an increase in sediment movements, road side failures, slumpings, stream bank failures, landslides, and changes in streamflow dynamics will occur. These mechanisms involve different physical processes, have varying effects on erosion rates, and are not uniformly distributed either within or among landscapes or watersheds. As variable as climatic results will occur, so will the responses of a watershed or landscape containing a road system.

AQ(10): How and where does the road system restrict the migration and movement of aquatic organisms? What aquatic species are affected and to what extent?

Road systems affect the migration and movement of aquatic organisms by blocking access to spawning grounds or suitable habitats through inappropriately installed culverts, poorly designed low water crossings, or changes in water velocities in a stream. Movement of fish within a stream or river system is not an issue on the Kaibab, but movement of amphibians may be. On the Kaibab National Forest, there are no known restrictions of migration or movement of aquatic organisms. No surveys of culverts or low water crossings have been conducted to determine where conflicts with aquatic organisms might exist. This information still needs to be obtained. Due to the limited amount of perennial streams on the Kaibab, we assume that restrictions are limited.

AQ(11): How does the road system affect shading, litterfall, and riparian plant communities?

See AQ(5). The nature, frequency, and intensity of organic or non-organic materials inputs in different zones between road and riparian areas occur as a result in the introduction of a road system in a natural setting. A road ecosystem does exist and may provide ecological niche areas for plant communities in some locations as a result. A road system can exacerbate conditions by altering an already dynamic environment. For example, road systems can increase noxious weeds or non-native plants into riparian areas introduced via vehicles or people. Or cause a change in the nature of lateral migration in a channel affecting riparian plant communities.

AQ(12): How and where does the road system contribute to fishing, poaching, or direct habitat loss for at-risk aquatic species?

The existing road system on the Kaibab National Forest is considered to be adequate for access to the limited fishing waters by sportsmen. It is unknown how much poaching of fish occurs on the Kaibab National Forest. Due to the limited amount of fisheries, it is assumed to be negligible.

AQ(13): How and where does the road facilitate the introduction of non-native aquatic species?

The introduction of non-native aquatic species will likely be greater where access to waters is made easier. The introduction of non-natives, such as bullfrogs, goldfish, sunfish, and bait bucket minnows often occurs where access is easier and faster. Waters located along passenger roads are more likely to receive non-native introduced species than waters located in back country areas or along more rugged high clearance roads. In addition, waters with high recreational fishing use will tend to receive more bait bucket introductions than waters located in back country areas where access is limited to foot travel.

The status of non-native aquatic species has not been fully assessed on the Kaibab.

AQ(14): 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?

Analyses as to the extent in which roads overlap with areas of exceptionally high aquatic diversity or productivity have not been conducted to date on the Kaibab National Forest.

Terrestrial Wildlife (TW)

TW(1): What are the direct affects of the road system on terrestrial species habitat?

Direct affects to terrestrial species habitat from the Williams Ranger District road system include: 1) loss of habitat due to conversion of native vegetation to a particular road surface (paved, gravel, dirt), 2) fragmentation of habitats due to road system development, 3) interruption in migratory patterns of wildlife to reach breeding habitat or winter range habitat, and 4) lack of habitat use by wildlife due to disturbance caused by use of the road system.

Lack of wildlife use in habitats along roads can also be correlated to the level of use a road receives over a period of time. Low use roads may tend to have wildlife using road side habitats more frequently than roads with high traffic volume.

TW(2): How does the road system facilitate human activities that affect habitat?

Human activities that affect habitat and are facilitated by the existing road system include; 1) Off road vehicle travel, 2) Dispersed shooting or target practice, 3) Dispersed camping, 4) Large group special uses, 5) Forest Service commodity production (i.e. livestock, timber and mining).

Off-road vehicle travel on undesignated routes (i.e. cross country) is facilitated from existing roads, whether it's a level 2 or a level 5 road. Off-road vehicle travel affects habitat through trampling of vegetation, compaction of soil, loss of vegetation and soil, and contributing sediment to stream waters. Impacts to habitat can either be short term or long term. Short term impacts maybe where an off-road vehicle makes one pass across a stream and the resulting sediments clear up in a few minutes. Long term impacts are where multiple passes occur across the stream resulting in eroded banks and loss of vegetation and soils for an extended period of time (i.e. years).

Recreational uses such as dispersed shooting areas, camping or large group events also impact wildlife habitat to varying degrees. For example, large group events occur periodically and over a short period of time. Most often, they occur over a weekend and result in trampling of vegetation in a meadow. The effects of such an activity are likely to last only a short period of time, a few days or weeks. Other affects include displacement of wildlife due to noise associated with the discharge of firearms.

Past Forest Service commodity production has resulted in the existing road system and network present today. Human activities such as timber harvest and livestock management affect wildlife to varying degrees. Wildlife forage, nesting, and thermal cover habitat are affected by these activities to varying degrees, depending on the degree of timber and forage extraction that occurs.

TW(3): 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 affects on wildlife species?

The existing road system influences both legal and illegal human activities. Legal activities such as hunting and trapping are facilitated by the existing road system. The road system facilitates hunting and trapping by making access to areas easier and faster, and also helps distribute road hunters (sportsmen who hunt from their vehicles or along road ways) over a greater area. In addition, level 2 roads and above also facilitate access for sportsmen with disabilities. In contrast, the same benefits of roads for legal activities such as hunting and trapping also help facilitate some illegal activities such as poaching. Poachers may benefit and find it easier to take wildlife in areas with a well-established road system.

Too many roads (high road densities) can also affect wildlife negatively through harassment, displacement, or vulnerability to hunters and poachers. The Rocky Mountain Elk Foundation has funded several studies on the effects of road on elk, and in particular to effects on mature bulls (Stalling, 1994). These studies have found that hunter densities increase in proportion to road densities. The more roads you have in an area, the more hunters you will have, resulting in more hunting pressure and harvesting of mature bulls. Stalling (1994) summarized one study that looked at elk mortality in three different areas; 1) High density of open roads, 2) Roads closed to motorized vehicles during hunting season, and 3) area with no roads. In the area with a high density of open roads, only 5% of all bulls lived to maturity (4.5 years). None of the bulls lived past 5.5 years, and the herd contained about 10 bulls for every 100 cows. In the area with roads closed during the hunting season, 16% of the bulls lived past maturity, most reaching 7.5 years. The herd contained 20 bulls for every 100 cows. In the area with no roads, 30% of the bulls lived to maturity, most reaching 10 years. This herd contained 35 bulls per 100 cows. The study found that as road access increases, elk become increasingly vulnerable to hunting mortality. This trend could result in elk populations with undesirable sex and age structure, increasingly complex and restrictive hunting regulations to protect elk herds, and a loss of recreational opportunity.

TW(4): How does the road system directly affect unique communities or special features in the area?

While the Kaibab National Forest has numerous Endangered Species Act listed plants and Regional Forester designated sensitive plants, the Williams Ranger District has only a few designated sensitive plant populations. The habitats of these are usually away from roads. The effect of the road will vary by species. Where habitat includes a road, some habitat is lost to the road surface. Sometimes the road's drainage design can be beneficial to existing rare plants.

Economics (EC)

EC(1): How does the road system affect the agency's direct costs and revenues? What, if any, changes in the road system will increase net revenue to the agency by reducing cost, increasing revenue, or both?

At the Forest scale, this question can be answered in broad terms as a detailed cost/benefit economic assessment is not feasible. The team conducting the Williams Ranger District RAP addressed this question by developing the Road Value versus Risk matrix and used this tool to determine what roads fell into which Road Management Category.

This Williams Ranger District RAP only considers maintenance level 1 and 2 roads. Most of these roads were developed over the years for a variety of access needs. While some of the roads were designed and required considerable capitol investment to develop, others were user created by continuous use over a periods of days, weeks months or years.

The team's challenge was to develop a process to sort out the roads that might not be meeting current and future access and land management needs.

Commodity Production
Timber Management (TM)

TM(1): How does road spacing and location affect logging system feasibility?

Most harvest activities are conducted with ground-based equipment. The trees are either felled by hand with chain saws or cut mechanically and transported to a landing using rubber-tired or tracked skidders. In general, a road spacing of 2,000 to 3,000 feet would be economical for ground-based skidding.

In general, closer road spacing results in quicker round trip times and higher production that reduces harvest costs and increases stumpage value. Although closer road spacing can increase the total road cost due to more roads, this total cost can be reduced with the use of temporary roads.

Generally, road construction is only allowed where it is determined to be economically and technically necessary to achieve resource management objectives. The most efficient road spacing that would maximize timber stumpage values is not acceptable because it usually conflicts with other resource management objectives.

TM(2): How does the road system affect managing the suitable timber base and other lands?

The road system on much of the district was created to access the timber resource. With timber harvest activities decreasing over the last 10 years, the existing road system is more than adequate for accessing

the timber resource in most parts of the district. Prior to a sale, the road system that is to be utilized might require some maintenance and repair, which might affect the economics of a given timber sale.

TM(3): How does the road system affect access to timber stands needing silvicultural treatment?

In addition to the above discussion concerning acres of suitable timber lands for logging, there is a new emphasis on management of the woodland component. This zone includes pinyon pine, juniper, oak and other species. Management in this zone has the greatest need for watershed improvements and also the greatest potential for increased water yield and biomass production. Historically, this area has had limited emphasis in regard to road construction and transportation planning. Future transportation planning should address this area in addition to the above commercial timber lands

Minerals Management (MM)

MM(1): How does the road system affect access to locatable, leasable, and salable minerals?

Currently, there are limited minerals projects on-going on the Williams Ranger District. Access to most parts of the district is good. As the demand for minerals increases, it may be necessary to upgrade the access into the site where the mineral is located and/or upgrade the transportation route between that site and where the minerals are processed or utilized. There is substantial demand for flagstone rock material in the Drake and Ash Fork areas. Most access within these areas is by temporary roads created by the permittees.

Range Management (RM)

RM(1): How does the road system affect access to range allotments?

The road system is vital for efficient administration and management of permitted grazing allotments. Forest Service personnel must be able to monitor, inspect and evaluate range conditions on a regular basis to effectively administer existing grazing permits. The current road system allows for rapid access to allotments to react to the numerous public issues challenging the range program today.

Grazing permittees need reasonable vehicular access within allotments to maintain existing range improvements and to manage and care for permitted livestock. Care for livestock often includes transporting large trailers and truckloads of cattle and sheep on Forest Service roads.

As the road network on the Williams Ranger District has advanced from a few maintained roads to many miles of good roads, so has the dependency on those roads for the commercial and recreational activities on the forest. Range management and livestock grazing activities are certainly one of the many uses of the Williams Ranger District that have grown dependent on the current road system to manage livestock operations to the intensity that is required today. Without these roads there is no doubt the cost of managing the range allotments would increase.

Water Production (WP)

WP(1): How does the road system affect access, constructing, maintaining, monitoring, and operating water diversions, impoundments, and distribution canals or pipes?

There are only a few of these situations on the Williams Ranger District, but the road system (including the Maintenance Level 3, 4 & 5 roads) provides the necessary access to them.

WP(2): How does road development and use affect water quality in municipal watersheds?

Road development can impact nearby streams when new construction or reconstruction of roads is required. Temporary impact to stream waters can be seen from ground disturbing activities during road development. Road development has the potential to impact water quality but not necessarily affect water supply quality in a municipal watershed. Its significance in impact to water quality is dependent on the amount of road use, seasonal weather events, and road density values.

Municipal watersheds that have high road density values whose roads are unpaved can increase the potential for sedimentation and turbidity to streams and impounded waters such as dams. This is due in part to the greater acreage of exposed roads that are subject to erosion and vehicle use releasing sediment or fines into stream waters during heavy precipitation events. During dry periods where roads are accessed often by the public where swirls of dust from passing vehicles settle out on nearby plants and are subsequently released into the streams during rainfall events.

Watersheds with high road density values can also increase the timing and flow of stream waters increasing the potential for sedimentation impact from the scouring effects of flowing stream waters against banks and greater carrying capacity of sedimentation by streams. This may increase the need for dredging of sediments from dams or increased filtration requirements for piped-in drinking water supply. Roads in close proximity to streams have an added but increased risk in the introduction of sedimentation and fines into stream channels. Paved roads may contribute water quality problems from oils from passing cars, salting of roads during winter to help keep roads free from snow and ice, and the increased risk of accidents due to higher speed limits where cars, trucks, or tractor trailers may contribute the release of harmful liquids into nearby streams.

The north and eastern sides of Bill Williams Mountain make up the Williams Municipal Watershed. Motorized access has been limited to system roads only and the number of system roads that are available to the public has been minimized to maintain water quality and reduce negative impacts to the water resource.

WP(3) How does the road system affect access to hydroelectric power generation?

There is no hydroelectric power production on the Williams Ranger District.

Special Forest Products (SP)

SP(1): How does the road system affect access for collecting special forest products?

The current road system provides adequate access for collecting special forest products such as pinyon nuts, Christmas trees, firewood, ceremonial plants, etc. If road closures or seasonal closures are considered in a project or watershed analysis, access for special forest products are generally considered.

There have been district wide permits for dead and down fuelwood collection provided to the public. Generally, the fuelwood collectors favor oak or dead alligator juniper for ease of harvest and heat produced. The collection of these species has generated many of the unauthorized user created routes across the forest. While firewood permits will continue to be available, it will be difficult to allow fuelwood collectors to continue to travel cross-country to gather their winter's wood supply.

Special-Use Permits (SU)

SU(1): How does the road system affect managing special-use permit sites (concessionaires, communications sites, utility corridors, and so on)?

Many of the roads in this analysis provide access to these features. In most case, the access is adequate. Access to some utility corridors could be improved, problems with electric lines frequently occur during bad weather, and some of the access is marginal during wet weather or blizzard conditions.

General Public Transportation (GT)

GT(1): How does the road system connect to public roads and provide primary access to communities?

County roads, U.S. and State highways give communities, tourists, and industries access to the National Forest. These roads connect to arterial, collector, and some local FS roads, where traffic is dispersed into the forest for a variety of uses. Some county roads and state highways traverse into or through the National Forest, as shown on the maps, and listed in the tables.

National Forest system roads connect to numerous public roads managed and operated by the Arizona DOT and Coconino County governments, the US BLM and the National Park Service. Forest Service jurisdiction roads create the sole or primary access to some parcels of private land within the Forest Boundary and to bordering tribal land.

These roads and others are important to and used by the people living in smaller communities around the District. Many people in these communities rely on access to the forest for their livelihood as well as for recreation. The forest is important for recreation, timber, ranching, and mining.

GT(2): How does the road system connect large blocks of land in other ownership to public roads (ad hoc communities, subdivisions, in-holdings and so on)?

Private lands are widely interspersed within the Williams Ranger District. In addition to private ownership, the district is bordered by or surrounded by lands owned or administered by private individuals, Bureau of Land Management, City of Williams, and the State of Arizona.

Much of the private or tribal lands are accessed by arterial and collector public roads. However, some are accessed by local FS roads and some by no roads at all. Access needs to in-holdings are addressed on an individual basis as requests are received. Forest Service policy is that access will be provided to a level that is reasonable and suitable for the uses occurring on the land. When landowners desire access, they are asked to apply for a special use or road use permit. The application is then analyzed through the NEPA process to determine possible environmental effects and the level of reasonable access required. When subdivision occurs on larger private parcels, the Forest policy is to request 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. Responsibilities for improvements and maintenance should be determined through a commensurate share process. 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 the National Forest, agency policy is to pursue turning jurisdiction of the Forest road over to a public road authority such as the county or state.

GT(3): How does the road system affect managing roads with shared ownership or with limited jurisdiction? (RS 2477, cost-share, prescriptive rights, FLPMA easements, FRTA easements, DOT easements)

The amount of private land inside or bordering the Williams Ranger District and the pattern of population growth indicate a need to increase road management cooperation, and refine road jurisdictions and maintenance responsibilities.

Many roads on the Williams Ranger District call for a higher level of maintenance and construction for the private lands that they access. Use and management of the national forest often requires only access by high clearance vehicle, while access to private lands may dictate a need for passenger car access.

Numerous roads crossing the district fall under the jurisdiction of State, County or private organizations. When desirable, cooperative agreements should be established to share road improvement and maintenance responsibilities when all partners can benefit.

The Forest Service, Federal Highway Administration and the Arizona Department of Transportation have signed a Memorandum of Understanding (MOU). This document set forth general procedures for planning, programming, environmental studies, design, construction and maintenance of highways.

The Kaibab National Forest has cooperative road maintenance agreements with Coconino County. While there are some county roads on the Williams Ranger District, none are within the scope of this analysis.

The Kaibab National Forest has several road use and maintenance agreements with private landowners on the district.

Rights of access by law, reciprocal rights, or easements are recorded in Forest files and county courthouse documents. The Forest recognizes these rights and works with the owners to preserve access while protecting the natural resources and facilities on adjacent National Forest Lands. There is also an understanding by the Forest Service that individuals or entities may have established valid rights, unknown to the Forest Service at this time, to occupy and use National Forest lands and roads. The courts have established that such valid outstanding rights may be subject to some federal regulation. See Sierra Club v. Hodel, 848 F 2d. 1068 (10 th Circuit, 1988). This analysis recognizes that such valid outstanding rights may exist and the Forest Service will certainly honor such rights when it is subsequently determined that the specific facts surrounding any claim to such rights meet the criteria set forth in any respective statute granting such occupancy and use (see Washington County v. The United States, 903 F. Supp. 40 [D. Utah, 1955]).

GT(4): How does the road system address the safety of road users?

In 1975, the Forest Service developed a Memorandum of Understanding with the Federal Highway Administration that required the Forest Service to apply the requirements of the National Highway safety program, established by the Highway Safety Act, to all roads open to public travel. In 1982, this agreement was modified to define "open to public travel" as "those roads passable by four-wheeled standard passenger cars and open to general public use without restrictive gates, prohibitive signs..." Most roads maintained at level 3, 4, and 5 meet this definition, few roads within the scope of this analysis (maintenance level 2) do. Design, maintenance, and traffic control on the maintenance level 3, 4, 5 roads emphasizes user safety and economic efficiency. The maintenance level 2 roads do not always emphasize the same level of economic efficiency.

The largest proportion of road maintenance and improvement funds allocated to the Forest is spent on the maintenance level 3, 4, and 5 roads. Safety work such as surface maintenance, roadside clearing and installation and maintenance of warning and regulatory signs are performed on an annual basis. Limited maintenance is done on maintenance level 2 roads. Traffic control signing follows standards set forth in the

Manual on Uniform Traffic Control Devices (MUTCD). Funding for road maintenance is not adequate to address safety needs on all roads. Road condition surveys conducted in 1999 and 2000 reveal a total maintenance backlog of $43.5 million, $.7 million (1.6%) of that is critical health and safety items. The condition surveys document a need of about $6.6 million annually to maintain all roads in the KNF system, of this $232,000 is critical health and safety related (about 3.5%). Annual funding for road maintenance on the Kaibab National Forest ranges from about $500,000 to $1 million of which a fraction is spent on the Williams Ranger District maintenance level 2 roads.

When accidents occur on Forest roads, often the Forest Service may not be immediately informed. Accidents are usually reported to the local sheriff or state Department of Public Safety, if reported at all. When the Forest becomes aware of an accident, an investigation will be initiated to attempt to identify the cause. If a feature of the road is found to be unsafe, addressing the condition becomes a high priority. Presently, there is no comprehensive program on the Kaibab National Forest for identifying or tracking accident locations and for maintaining surveillance of those locations having high accident rates or losses as is required by Highway Safety Act. The Forest is working to address this area of non-compliance.

There has been emphasis to reduce the maintenance level of some roads to Level 2. This reduces liability and comes closer to meeting the road maintenance budget. This does have some coordination needs. As a Level 3 road becomes a Level 2, more unlicensed vehicles begin to use the roads. Since they were designed as a level 3 road, they are generally capable of higher speeds. Mixed motorized use on these roads has a potential for increasing the incidence of accidents, so in conjunction with the Travel Management Project, Forest Supervisor Mike R. Williams made the decision to prohibit mixed motorized use. Since there is demand by unlicensed vehicles to recreate in the forest, some trail systems for OHVs less than 50” are being considered for designation so that mixed motorized use does not occur on the main travel routes.

In recent months, the State of Arizona has initiated the Copper Sticker program. If passed by the State Houses of Government, all OHVs will be licensed making the mixed motorized use issue a non-issue. At present (4-6-07) the Bill has passed the House and the Senate Committee. It will be debated within the next few weeks by the entire Senate. There is widespread support of this bill and it is anticipated that it will pass and become law. There is still interest in separate OHV trails and these will continue to be considered as part of the Kaibab Travel Management project.

Administrative Use (AU)

AU(1): How does the road system affect access needed for research, inventory, and monitoring?

The road system appears to provide adequate access for research, inventory, and monitoring.

AU(2): How does the road system affect investigative or enforcement activities?

The level 3, 4, and 5 road system on the Williams Ranger District generally provides good access for investigative and enforcement activities. These roads provide access to developed and dispersed recreation sites where many common violations occur. These roads also provide access to the many developed trailhead-parking areas for the trail system that provides backcountry access. While the road system provides access to perform investigative and enforcement activities, it also provides access for increasing public use of the National Forest System lands.

The Level 1 and 2 roads provide further access to both the public and law enforcement.

Protection (PT)

PT(1): How does the road system affect fuels management?

The roads in this analysis provide adequate access to the general areas where fuels management activities occur. To access areas for efficient fuels management, sometimes a closed road must be opened or a short temporary access road must be constructed. Many of the most critical fuels management project areas are in the Wildland Urban Interface (WUI), and access to them may be gained through the bordering private lands. Road use agreements with private lands owners are negotiated in these cases.

PT(2): How does the road system affect the capacity of the Forest Service and cooperators to suppress wildfires?

Minimizing response time to suppress wildfires is very important to minimizing the size of the burned area. Road condition affects the response time to wildfires.

There are areas of the Williams Ranger District and bordering private lands that have only one main access route (dead end road). It is possible that a wildfire burning close to these single access routes could delay response to the area or prevent a more aggressive response, allowing the fire to burn longer.

PT(3): How does the road system affect risk to firefighters and to public safety?

The road system affects risk by its ability to provide evacuation routes and by its level of safety for the vehicles using the road. While most emergency road traffic is on the maintenance level 3, 4 and 5 roads, some activities do occur on the maintenance level 2 roads.

Kaibab National Forest jurisdiction roads provide the main access to several blocks of occupied private land. Location, rate and direction of travel of a fire and inadequate road conditions could combine to create a dangerous situation for the safety of occupants of these private lands and the firefighters responding to suppress the wildfire or protect the structures in its path. In the situation where a primary access is blocked, level 2 roads may provide an alternative means of escape for the private land occupants.

Driver safety can be affected by the road construction/design and by its condition, including those drivers who are firefighters responding to suppress a fire. See GT(4) for a discussion of the safety of road users.

PT(4): How does the road system contribute to airborne dust emissions resulting in reduced visibility and human health concerns?

Unpaved roads whether native soil or graveled can contribute airborne dust during times of dry weather conditions, especially during extended drought periods. Dust emissions also increase with traffic and vehicle weight. Winds can pick up fine dust from unpaved roads and release them whenever winds die out. Winds can also transport fine dust at appreciable distances close to active road use areas such as nearby resident houses or campgrounds affecting those who are particularly sensitive to the fine dust. Reduced visibility may result from unpaved roads, especially graveled roads, during windy periods. Higher road density values of graveled roads have the potential to reduce visibility and, in some cases, increase health concerns in localized areas. Some FS jurisdiction roads on the KNF also provide primary access to private land. With subdivision of these lands, traffic may increase from these Forest roads, increasing the dust emissions. Dust emissions can be reduced with dust abatement, or paving unpaved roads.

Recreation

Un-roaded Recreation (RR)

UR(1): Is there now or will there be in the future excess supply or excess demand for un-roaded recreation opportunities?

Motorized recreation is on the increase on the Kaibab. As more motorized visitors use the forest, it displaces some non-motorized visitors who enjoyed solitude within the general forest area. These people are now moving to Inventoried Roadless Areas (IRAs) and wilderness to find the levels of solitude that were previously available in the general forest. Use and impacts to IRAs and wilderness is increasing. While current levels of use are probably within general Limits of Acceptable Change, this migration of users into the wilderness will necessitate monitoring.

UR(2): Is developing new roads into un-roaded areas, decommissioning of existing roads, or changing the maintenance of existing roads causing substantial changes in the quantity, quality, or type of un-roaded recreation opportunities?

There are no large un-roaded areas or designated IRAs on the Williams Ranger District. There have been and will continue to be de-commissioning efforts on roads that are no longer needed or that are causing resource concerns. There have been a couple of areas on the Williams RD that had substantial road de-commissioning efforts in recent years. The area around Sitgreaves Mountain was part of the Radio Hill project where approximately 40 unauthorized user created roads and some system roads were closed and or de-commissioned. The second area was along the FS # 6 road northwest of Williams. This area had numerous routes created during firewood harvesting and the roads perpetuated for many years. In 2005 and 2006, major efforts to close and/or decommission many of these routes occurred.

UR(3): What are the adverse effects of noise and other disturbances caused by developing, using, and maintaining roads, on the quantity, quality, and type of un-roaded recreation opportunities?

While roads provide access to the forest, they can provide negative impacts to the overall quality of the experience for the forest visitor that is seeking complete solitude.

UR(4): Who participates in un-roaded recreation in the areas affected by constructing, maintaining, and decommissioning roads?

All Forest users (such as hunters, bicycles, OHVr's) travel the arterial/collector roads (level 3-5 maintenance levels). Level 2 roads give dispersed recreationists access into otherwise inaccessible areas. Many bicyclists and horseback riders, for instance, use these roads for riding. Road decommissioning may be contentious for these users, depending on the road although they will probably still use the corridor.

UR(5): What are these participants' attachments to the area, how strong are their feelings, and are alternative opportunities and locations available?

Discussions with various users during public meetings and private conversations during the project indicated a plethora of opinions across the spectrum about roads, road uses, and roads users. Some people felt that there were too many roads. Some people felt that there weren't enough roads. Some felt there were too many spur roads. Some OHV enthusiasts felt that the user created roads provided important access to recreational experiences that many of the other routes did not offer. Work with environmental groups, motorized use groups, the City of Williams Task Force, and the general public

indicates strong feelings towards current use patterns on the Kaibab. While many want things to stay the same and allow unrestricted access to anywhere at any time, others feel that there is too much freedom to go anywhere with any type of vehicle for any purpose.

There are various alternative locations available for OHV travel and for forest products collections although these are historic uses of the Williams District.

Road-Related Recreation (RR)

RR(1): Is there or will there be in the future excess supply or excess demand for roaded recreation opportunities?

There may be an excess supply of roaded recreational opportunities, except for limited time periods (opening weekend of big game hunting seasons, or summertime three day weekends). It is assumed that demand for roaded recreational opportunities will increase in the future to meet or exceed the supply.

RR(2): Is developing new roads into un-roaded areas, decommissioning of existing roads, or changing maintenance of existing roads causing substantial changes in the quantity, quality, or type of roaded recreation opportunities?

New roads are not being developed into un-roaded areas. The level of decommissioning roads is impacting the users of the roads that are being impacted, but overall, there are still ample road based recreation opportunities.

RR(3): 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 recreation opportunities?

Generally, those that are looking for roaded recreation experiences are less impacted by road maintenance, construction, or reconstruction activities. As with most activities on these lower maintenance level roads, any delay that may be encountered will be of short duration and so localized that its impact is minimal.

RR(4): Who participates in roaded recreation in the areas affected by road construction, changes in road maintenance, or road decommissioning?

Sightseers, hunters, Outfitter Guide tour participants, campers, hikers, and almost all forest users.

RR(5): What are these participants' attachments to the area, how strong are their feelings, and are alternative opportunities and locations available?

Participant’s feelings are across the spectrum on their attachments to the roads and areas. If they feel that they are being unfairly impacted, it is negative. If they are being impacted minimally, their attachment may be non-existent. All phases of attachment between these extremes can be realized too.

Passive-Use Value (PV)

PV(1): Do areas planned for road construction, closure, or decommissioning have unique physical or biological characteristics, such as unique features and threatened or endangered species?

There are no unique physical or biological characteristics on the Williams Ranger District that are the basis for any of these activities.

PV(2): Do areas planned for road construction, closure, or decommissioning have unique cultural, traditional, symbolic, sacred, spiritual, or religious significance?

Several Native American tribes have identified various parts of the Williams Ranger District as having great cultural, spiritual and religious significance. Local ranchers have expressed a value for their traditional land-based lifestyle. Many "traditional cultural properties" (TCPs) have been identified. The protection of some of these is basis for recommended closures of several roads.

PV(3): What, if any, groups of people (ethnic groups, subcultures, and so on) hold cultural, symbolic, spiritual, sacred, traditional, or religious values for area planned for road entry or road closure?

Parts of the Williams Ranger District are sacred to numerous Indian Tribes such as the Navajos, Hopis, Havasupai, and Hualapai. Of specific importance to the tribes are the mountains and especially those portions that provide a visual connection with the san Francisco Peaks to the east. Motorized access to these areas is being considered, but until additional discussions with the tribes occurs, limited closures will happen. Consultation with the tribes is on-going and will continue as the NEPA project is initiated.

PV(4): Will constructing, closing, or decommissioning roads substantially affect passive-use value?

The closing of some roads could affect some changes in future uses of the lands. Some of the user created roads a causing damage to cultural resource properties. These roads are utilized during the collection of pinyon nuts or firewood. While motorized vehicular access may be reduced, the opportunities to collect pinyon nuts and other forest products will still be available.

Social Issues (SI)

SI(1): What are people's perceived needs and values for roads? How does road management affect people's dependence on, need for, and desire for roads?

People's needs and values for roads are very diverse. Some people become very attached to the road access that is available, and tend to desire the status quo. Some people prefer that roads be available, but be in a condition that makes driving them a challenge. Some people would like to reduce the amount of roads, and therefore vehicles and other people in the Forest. Some people want certain roads improved. Many people hold deep and strong feelings about roads and road management. Change in road management is often upsetting to some people if it results in a change in that particular road user's previous behavior.

SI(2): What are people's perceived needs and values for access? How does road management affect people's dependence on, need for, and desire for access?

People's needs and values for access are diverse. They range from people who want to be able to access all areas of the National Forest on motorized vehicles to people who want no (human) access at all. Most people's needs or values fall somewhere in the middle, valuing a mix of motorized and non-motorized access. Many people hold deep and strong feelings about roads and road management. Change in road management is often upsetting to some people if it results in a change in one's previous behavior. Road access also provides recreation opportunities including hunting for people of all abilities, including the disabled.

SI(3): How does the road system affect access to paleontological, archaeological, and historical sites?

The existing Kaibab National Forest road system allows for access to both identified and unidentified historic and archaeological sites because many of the forest system roads are located near adjacent sites. However, uncontrolled route proliferation and off route driving is the largest threat to the sites due to increased damage from vehicles and increased access to sites that can result in and increase in vandalism, illegal collection activities, and possibly illegal excavation of historic or archaeological resources.

SI(4): 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?

The tribes use the existing road system to access cultural and traditional use areas, traditional collections area, as well as for collecting fuel wood. The tribes have, through consultation, expressed concerns regarding some of the exiting routes specifically regarding the maintenance and up keep of the roads and continued future access to traditional use and collection areas as well as the Forest system roads that allow for access to portions of the reservations that abut the forests.

SI(5): How are roads that constitute historic sites affected by road management?

As a general rule, if the historic roads are part of the existing road system, road management has a positive benefit on the roads in that the forest receives funds to maintain the actively used historic roads on a regular basis.

SI(6): How is community social and economic health affected by road management (for example, lifestyles, businesses, tourism industry, infrastructure maintenance)?

Road management is subtle, yet necessary to forest management. Use of the Kaibab National Forest is dependent on proper, timely road management. Commodity users rely on the existing road system, just as pleasure seekers do. For many communities in the West, the road system is the backbone of commerce, providing for the movement of products, services, and people through the Forest. Most of the roads on the Forest were built to facilitate log hauling or accessing homesteads. Today, recreation traffic is added to the importance of these roads.

Access to the Kaibab National Forest and the Williams Ranger District by tourists is an amenity advertised by chamber of commerce departments of local communities and is important to economic health. Recreation traffic includes local and non-local users, many of whom are sight seeing. Across the National Forest system, managers have indicated that nearly 40% of Forest use is by people who never get out of their vehicles. Of the millions of people that visit Northern Arizona each year, only a small percentage of them visit the Kaibab National Forest .

SI(7): What is the perceived social and economic dependency of a community on an un-roaded area versus the value of that un-roaded area for its intrinsic existence and symbolic values?

Un-roaded areas within the Kaibab National Forest have a variety of social values. Some people value natural resources existing in un-roaded areas for the economic contribution that could be afforded by their extraction such as timber, minerals, and roaded access. Other people value roadless areas for the contributions they provide in an undeveloped state such as increased solitude, quiet, and refuge for plants and animals.

SI(8): How does road management affect wilderness attributes, including natural integrity, natural appearance, opportunities for solitude, and opportunities for primitive recreation?

There are two wilderness areas on the Williams Ranger District. Kendrick Mountain and Sycamore Creek are possibly impacted by roads in proximity to their borders. Since the transportation system is generally limited near these areas, the impacts are limited. It is likely that future impacts could increase as off-highway vehicles intrude on more areas around the boundaries of these areas. For the areas that are zoned semi primitive non-motorized, access into the area is a necessity, but additional routes and motorized travel through the zones can be detrimental to the quality of a person's visit.

SI(9): What are traditional uses of animal and plant species in the area of analysis?

Grazing, firewood collection, collection of plants for ceremonial and medicinal purposes are the main uses of plants. Viewing wildlife and hunting for pleasure and food are the main use of animals.

SI(10): How does road management affect people's sense of place?

People's sense of place is directly tied to the aspects of an area, including the area within a road corridor, that invoke a special feeling or attachment to the area. Factors include the area's vegetation, the amount of sunlight available, the views, the solitude, the opportunities that make it a destination, and the overall familiarity. The road itself facilitates a person's enjoyment of the area by providing for driving comfort, the amount and type of use, and any number of aesthetic attributes visible alongside the road. These attributes are directly related to road management. Any change in road management of the development of a road without taking these things into consideration will create a change in current use.

Examples of these effects include those used in the discussion in recreation. If a road is managed as a Level 3 and the decision is made to upgrade it, different users might begin to use the area. This will change the character for users who previously considered the area to be special; it will change their experience and may displace them to other areas for their recreation. Likewise, if a road is currently managed as a Level 2 and the decision is made to downgrade maintenance, the road will not be drivable, and the area becomes inaccessible for some current users.

SI(11): How does road location and road maintenance affect historic sites

Roads providing access to a site may be important to fully understand why the site was used in the first place. Many time the trip to a destination can be as important if not more important than the destination. At the same time, some forest roads pass through cultural resources resulting in direct impacts to the site. Road maintenance within the boundary of cultural sites has the potential to directly affect these resources; conversely, the lack of maintenance within site boundaries can also result in site damage due to water erosion.

Civil Rights and Environmental Justice (CR)

CR(1): How does the road system, or its management, affect certain groups of people (minority, ethnic, cultural, racial, disabled, and low-income groups)?

The road system is used by many different groups of people. Since the Kaibab has been open to all with any type of vehicles at all times of the year, some people feel that the implementation of any rules or regulations restricting their use is negative. The majority of the people see the need for the restrictions as they have gotten stuck or seen the problems that others have created.

There is concern about fuelwood gathering. Many people across the spectrum of social and economic status burn wood for heating and cooking. Traditionally, people have gathered dead and down wood away from the main roads since the desirable fuelwood has long since been harvested from near the roads. While fuelwood areas will continue to be established (and cross-country travel can be authorized within these areas), the scattered nature of desirable dead and down fuelwood makes this product difficult to incorporate into the implementation process of the Travel Management Rule.

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Appendix D: Definitions

Administrative unit. A National Forest, a National Grassland, a purchase unit, a land utilization project, Columbia River Gorge National Scenic Area, Land Between the Lakes, Lake Tahoe Basin Management Unit, Midewin National Tallgrass Prairie, or other comparable unit of the National Forest System. (36 CFR 212.1)
Area. A discrete, specifically delineated space that is smaller, and in most cases much smaller, than a Ranger District. (36 CFR 212.1)
Designated road, trail, or area. A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to § 212.51 on a motor vehicle use map. (36 CFR 212.1)
Forest road or trail. A road or trail wholly or partly within or adjacent to and serving the National Forest System that the Forest Service determines is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources. (36 CFR 212.1)
Forest transportation atlas. A display of the system of roads, trails, and airfields of an administrative unit. (36 CFR 212.1)
Forest transportation facility. A forest road or trail or an airfield that is displayed in a forest transportation atlas, including bridges, culverts, parking lots, marine access facilities, safety devices, and other improvements appurtenant to the forest transportation system.(36 CFR 212.1)
Forest transportation system. The system of National Forest System roads, National Forest System trails, and airfields on National Forest System lands. (36 CFR 212.1) Maintenance. The upkeep of the entire forest transportation facility including surface and shoulders, parking and side areas, structures, and such traffic-control devices as are necessary for its safe and efficient utilization. (FSM)
Maintenance Levels. Defines the level of service provided by, and maintenance required for, a specific road, consistent with road management objectives and maintenance criteria. (FSH 7709.58, 12.3)
Motor vehicle. Any vehicle which is self-propelled, other than: (1) A vehicle operated on rails; and (2) Any wheelchair or mobility device, including one that is battery powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area. (36 CFR 212.1)
Motor vehicle use map. A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the National Forest System. (36 CFR 212.1) National Forest System road. A forest road other than a road which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority. (36 CFR 212.1)
National Forest System trail. A forest trail other than a trail which has been authorized by a legally documented right-of-way held by a State, county, or other local public road authority. (36 CFR 212.1)
Objective maintenance level -The maintenance level which will be assigned at a future date; considering future road management objectives, traffic needs, budget constraints and environmental concerns.
Off-highway vehicle. Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain. (36 CFR 212.1)
Operational maintenance level-The maintenance level currently assigned to the road considering today's needs, road condition, budget constraints and environmental concerns; in other words it defines the level to which the road is currently being maintained.
Over-snow vehicle. A motor vehicle that is designed for use over snow and that runs on a track or tracks and/or a ski or skis, while in use over snow. (36 CFR 212.1) Public roads. Any road or street under the jurisdiction of and maintained by a public authority and open to public travel (23 U.S.C. 101(a)).
Road. A motor vehicle route over 50 inches wide, unless identified and managed as a trail. (36 CFR 212.1)
Road construction or reconstruction. Supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road. (36 CFR 212.1)
Road Decommissioning. Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1), (FSM 7703).
Road maintenance. The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective (FSM 7712.3).

Road maintenance levels. Road Maintenance levels define the level of service provided by, and maintenance required for, a specific road. Maintenance levels must be consistent with road management objectives and maintenance criteria. (FSH 7709.58,10)

Road management objective. A formal document that establishes the design criteria and operation and maintenance criteria for each road. The road management objectives require approval by the Responsible Official (usually the District Ranger) and are included in the forest transportation atlas. (FSM 7712.5)

Roads subject to the Highway Safety Act. National Forest System roads that are open to use by the public for standard passenger cars. This includes roads with access restricted on a seasonal basis and roads closed during extreme weather conditions or for emergencies, but which are otherwise open for general public use. (FSM 7705)

Temporary road or trail. A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas. (36 CFR 212.1)

Trail. A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail. (36 CFR 212.1)

Travel management atlas. An atlas that consists of a forest transportation atlas and a motor vehicle use map or maps. (36 CFR 212.1)

Unauthorized road or trail. A road or trail that is not a forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas. (36 CFR 212.1).

Appendix E: References

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