

Sabine National Forest Roads Analysis Report

Executive Summary

Introduction

A roads analysis can be conducted at various scales, ranging from the forest scale (this analysis) to smaller or project scale analyses. Since this Sabine National Forest (NF) analysis is a broad forest-scale analysis, individual roads were not analyzed; however, the forest transportation system as a whole was reviewed. Site-specific road issues, concerns, and opportunities will be addressed later during other smaller or project-scale analyses.

This forest-scale analysis addresses the public State, County, and Maintenance Level (ML) 3, 4, and 5 Forest Service roads. Maintenance Levels 3, 4, and 5 roads provide access for all types of public traffic from low-clearance passenger cars to large commercial vehicles. The ML-1 and 2 Forest Service roads and unclassified roads will be analyzed during subsequent site-specific project scale planning. Maintenance Level 2 roads are suitable for use by only high-clearance vehicles and may be seasonally closed. Maintenance Level 1 roads are closed roads blocked to all vehicular traffic for a year or more.

A roads analysis makes no decisions nor does it allocate resources for specific purposes. It provides information for decision making by examining important issues related to roads. This analysis will help by providing information for potential management actions that may be considered in subsequent environmental analyses.

Key Analysis Findings

- Most of the major roads on the forest roads system (see Appendix L *Glossary* for definitions) already existed when federal land purchases for the Sabine NF began in 1935. Most of these major roads are under State or County jurisdiction and are open to public motorized traffic at all times.
- All arterial and collector roads are in place.
- The Final Environmental Impact Statement (FEIS) for the 1996 Revised Land and Resource Management Plan (the *Plan*) states (p136):
“With State, County, and Forest Service routes, a transportation system now exists that meets the need for access into most areas... The current inventory contains all arterial and collector roads needed... However, some of these roads exist at a standard lower than needed to meet safety requirements and access needs...”
- Only 35 percent of the lands within the proclaimed Sabine NF boundaries are national forest lands. The national forest lands are scattered and interspersed among private lands and corporate timberlands.
- Only about 21 percent of the forest roads addressed in this analysis are Forest Service roads.
- Forty-seven percent of the forest roads addressed in this analysis are State roads.
- Thirty-two percent of the forest roads addressed in this analysis are County roads.
- The condition of County roads is important to the Forest Service. In 1974, the Forest Service first discussed road maintenance responsibilities with Shelby, Sabine, and San Augustine Counties. A cooperative agreement concerning road maintenance was proposed. In 1976, the first cooperative agreements were signed by all three counties. Today, there are almost 100 cooperative agreements signed by these three counties.

- Most of the ML-3, 4, and 5 Forest Service roads addressed in this analysis are:
 - ML-3 (suitable for low clearance passenger cars),
 - surfaced with crushed aggregate, and
 - Traffic Service Level (TSL) C (slow flow).
- Roads that cross streams affect stream structure and water quality. Each stream crossing is a potential site for altering stream structure and introducing sediment and other contaminants.
- Generally, Forest Service roads are receiving inadequate road maintenance funds. The road maintenance funds available are only approximately 10 percent to 20 percent of the amount of the road maintenance funds needed to maintain the roads to the “objective” maintenance level standards. This indicates a big backlog of deferred road maintenance to bring ML-3, 4, and 5 Forest Service roads up to the established maintenance level standards.

Forest-Scale Recommendations and Opportunities

Providing for public safety; preserving the road prism with adequate surfacing, drainage, and maintenance; and protecting resources are the first priorities for road management. The following recommendations and opportunities were developed during this process.

1. Review and establish standard road construction designs, drawings, and specifications to implement the *Plan* Forest Wide (FW) 053 Standard, “Design and construct roads... to minimize siltation and maintain to provide surface drainage away from streams and into vegetated buffer strips or other filtering system.”
 - Consider establishing silt fencing specifications to protect streams from siltation during ground disturbing activities.
2. Road wingditches concentrate water flows. The run-off from one wingditch can combine with the run-off from other wingditches to further concentrate water flows in natural drainages. On-the-ground inspections reveal that the run-off from road wingditches can start erosion and gulying where the run-off reaches stream banks. Review and establish standard road construction designs, drawings, and specifications to implement the *Plan* FW-053 Standard, “to provide surface water drainage away from streams and into vegetated buffer strips or other filtering system”. To reduce water flows and run-off from wingditches, consider,
 - spacing wingditches closer together, and
 - reducing the run-off from wingditches by constructing a “J” hook at the outlet end of wingditches to slow water flow and provide for percolation in a settling basin, or other actions as necessary.
3. Road plans and specifications designed to implement the *Plan* FW-053 Standard, “to provide surface water drainage away from streams and into vegetated buffer strips or other filtering system”, should be reviewed during pre-work conferences with contractors to ensure everyone is aware of the requirements.
4. Review and establish standard road construction designs, drawings, and specifications to implement the *Plan* FW-055 Standard, “Provide road... design and construction that allows unrestricted fish passage”, for appropriate streams. Culverts should be designed and installed to,
 - provide for a natural stream bed substrate,
 - not increase stream flow velocity to the extent that turbulence creates a cavity at the end of the culvert, and
 - not spread low stream flows to the point that the streams are no longer navigable by fish.

Consider partially burying oversized culverts.
5. Periodically review the cooperative road maintenance program and the existing cooperative agreements for County roads with County Commissioners. County Commissioners are not always aware of the existing agreements, especially when they are newly elected officials.

6. Road maintenance funding is not always adequate to maintain roads to desired standards. Review and establish road maintenance practices to better prevent sedimentation of streams.
7. Establish guidelines to better manage the motor-grader blading of road surfaces and ditches to prevent the unnecessary disturbance of stabilized soils.
8. Provide cost-effective temporary bridge options to cross streams to isolated tracts.
9. Collect and establish a reference library of information on road maintenance and construction pertaining to mitigating impacts on resources.
10. Provide training on road maintenance and construction practices that mitigate impacts on resources.
11. Monitor motor vehicle impacts on Louisiana pine snakes (*Pituophis ruthveni*) in Compartments 139, 141, and 142.

Project-Scale Recommendations and Opportunities

Although sub-forest scale issues are not addressed in detail in the report, the following list of issues needs to be reviewed during site-specific analyses. This is not an all-encompassing list; generally other issues pertaining to individual roads may arise during further smaller-scale examinations.

General

1. The forest roads stream crossings should be inventoried during site-specific project-scale analyses to identify stream sedimentation and fish passage problems. This includes State, County, and Forest Service road stream crossings on the forest roads system.
2. Identify forest roads that,
 - o need resurfacing, reconstruction, or relocation to provide for public safety, protect forest resources, or provide for anticipated traffic associated with project proposals,
 - o consistently contribute sediment to streams at stream crossings, and
 - o have stream crossing structures that prohibit fish passage.
3. Cooperate with Counties,
 - o to maintain, resurface, or reconstruct County roads to provide for public safety, protect forest resources, or provide for anticipated traffic associated with project proposals,
 - o to construct and maintain drainage ditches to minimize stream sedimentation and to provide surface drainage away from streams and into settling basins, vegetated buffer strips, or other filtering systems,
 - o to repair or reconstruct stream crossings that prohibit fish passage,
 - o to assist counties in maintenance, resurfacing, or reconstruction of roads through cost-share agreements, and
 - o to seek funds such as Capital Improvement or Road & Trail Deposit Funds (10 percent funds) to assist counties in road maintenance, resurfacing, and reconstruction.
4. Identify roads under Forest Service jurisdiction that provide access for rural communities, residences, or private inholdings; serve as school bus or mail routes; or have other features that require regular and emergency maintenance. The roads may be more appropriately managed under State or County jurisdiction by public agencies with adequate road maintenance expertise, personnel, and equipment.
 - o Consider transferring the roads to the County or other appropriate public roads agency.
5. Review Road Management Objectives (RMOs) for Forest Service roads.
 - o Are road maintenance levels appropriate for current and anticipated traffic?
 - o Are special resource considerations appropriate?

6. Review the GIS location and INFRA data for ML-1 and ML-2 Forest Service roads.
 - o Are roads needed for current and future access?
 - o Are roads no longer needed for public use or to manage forest resources?
 - Plan to decommission and obliterate such Forest Service roads.
7. Locate and assess unclassified roads.
 - o Are unclassified roads needed for current and future access?
 - o Are unclassified roads no longer needed for public use or to manage forest resources?
 - Plan to decommission and obliterate such roads.
8. Identify road right-of-ways needed to access national forest lands.
 - o Pursue the acquisition of permanent right-of-ways.
 - o Pursue the acquisition of temporary right-of-ways where,
 - access will not be needed again in the future, and
 - a permanent right-of-way can not be acquired.
9. Inspect existing special use roads to ensure that road construction and maintenance practices protect forest resources.
10. Review proposed special use road locations and make recommendations on specific road construction and maintenance requirements before special use permit approval.
11. Inventory and evaluate Forest Service road signs.
 - o Install signs that provide for public safety and meet established standards.
12. Due to the initiative to name or number all roads to respond to emergency calls, check the current County road names, numbers, and lengths against,
 - o current cooperative agreements, and
 - o GIS and INFRA road data.

Specific

13. An assessment of road stream crossings (October 29, 2000 2600 memo) identified the following problems on the Sabine NF (see Appendix J):
 - o Road 131A (west of Bourgh's low water crossing): four 24" culverts with outlets 1' to 3' above stream bed.
 - o Road 106 (branch of Brittain Cr): 24" culvert causing severe stream channel erosion
14. Road 121 has been transferred to Sabine County, but portions of the road become impassable during wet weather. Consider reconstructing the road under a cooperative agreement to a higher standard suitable for year-round traffic.
15. Road 197 becomes impassable in wet weather. Consider reconstructing the entire road to TSL-C standards.
16. Data indicates the following roads under Forest Service jurisdiction are maintained by the County.
 - o Consider transferring these roads to the County.
17. Review and clarify the jurisdiction of the following roads:
18. Complete transportation planning for the portion of Compartment 88 west of U.S. 96.

Additional questions, as shown in the body of the report, were captured during this process that need to be addressed during the National Environmental Policy Act (NEPA) process for other projects.

The goal of this project was to update the Forest Transportation Atlas and develop information that provides a broad framework for managing Sabine NF resources. Recommendations and opportunities identified above will provide a guide for future site-specific analyses.