

Chapter II. Monitoring Findings & Recommendations

Issue A. Ecosystem Condition, Health and Sustainability

Sub-Issue 1. Biological Diversity

a. Vegetation Management

(1) Regeneration of Desired Tree Species

Monitoring Item Description - Restoration of longleaf and shortleaf pine ecosystems is monitored by checking regeneration areas at one and three years to determine if any additional treatments are needed to achieve sufficient stocking. The third-year check will be used to certify that successful stand reestablishment has taken place.

Variability - Longleaf stands should have stocking of at least 400 trees per acre, while shortleaf stands should have stocking of at least 300 trees per acre. When stocking levels of longleaf or shortleaf stands are less than these, each deficient stand must be evaluated to determine if there is sufficient stocking in other desirable species or if remedial treatments are needed.

Finding(s) – Third-year stocking exams conducted in 2009 found that 29.6 percent of the seedlings had survived. First-year survival exams found that 54.9 percent of the seedlings had survived. Seedling survival was adversely impacted in 2009 by inadequate rainfall. The Angelina County weather station recorded above average rainfall in 2009; however, lack of adequate precipitation during the early growing season months (January and February) is a significant cause of seedling mortality. In January 1.43 inches of rain fell and in February 2.16 inches fell. Since the NFGT is at the extreme western edge of the natural range for pine species, lack of adequate precipitation makes seedling establishment difficult.

Recommendation(s) – No change needed. Emphasis needs to be placed on planting seedlings in late fall/early winter (November through January) when there is sufficient soil moisture to allow seedlings more time to become established before warmer and drier spring conditions occur. Continue established regeneration checks to assure adequate restocking occurs at required *Plan* levels.

(2) Ten Year Age Class

Monitoring Item Description - Progress in achieving the *Plan's* DFC (Desired Future Condition) for vegetation and a determination that desired diversity for plant communities is being achieved is measured through an evaluation of data obtained from internal reviews and surveys.

Variability - Changes in any ten-year age class greater than one percent per year should be evaluated to determine the cause.

Finding(s) - Age-class distributions was evaluated by reviewing data obtained from FSVeg (Field Sampled Vegetation).

Table 1 illustrates the trends in age class among the four seral stages on the four National Forests.

Table 1. Seral Stage Distribution

<u>Seral Stage</u>	<u>Age Class</u>	<u>1992</u>	<u>2002</u>	<u>2004</u>	<u>2006</u>	<u>2009</u>	<u>Trend</u>
Early Succession	0-20 years	22%	14 %	13 %	11 %	8%	-14 %
Mid Succession	21-50 years	11%	15 %	15 %	17 %	19%	+8 %
Late Succession	51-90 years	61%	54 %	53 %	50 %	46%	-15 %
Very Late Succession	91+ years	6%	17 %	18 %	22 %	25%	+19%

The table and charts show the steady increase in very late seral stage by 19 percent since 1992. The decrease in the late succession is due primarily to stands growing into the very late stage. The decrease in acreage in the early succession stage is due to a decline in regeneration harvests resulting in a reduction in the number of acres in younger age classes.

The FSVeg age-class distribution report for the end of 2009 shows a continuing trend towards an older forest. For instance, the acres in stands over 100 years old have increased from 15,037 acres in 1992 to 69,094 acres in 2009, which is a 359 percent increase. Likewise, the acres in young stands age 0 (currently being regenerated) to 10 years old are just 8 percent of what they were in 1992: 83,612 acres in 1992 to just 7,321 acres in 2009.

Table 2 indicates trends in key forest type groups identified in the *Plan*.

Table 2. Forest Type Group Trends

<i>Forest Type Group</i>	<i>1992</i>	<i>2002</i>	<i>2004</i>	<i>2006</i>	<i>2009</i>	<i>Trend</i>
Longleaf Pine Woodlands	5.6%	5.7%	5.7%	5.2%	5.2%	-0.4 %
Dry-Xeric Oak Pine Forests	25.8%	25.1%	25.1%	25.2%	25.4%	-0.4 %
Mesic Oak-Pine Forests	58.6%	58.3%	58.4%	58.6%	59.2%	+0.6%
Mesic Hardwood Forests	2.9%	3.9%	3.9%	3.9%	3.8%	+0.9 %
Bay-Shrub Wetlands	0.4%	0.4%	0.4%	0.4%	0.4%	No Change
Bottomland/Streamside Forest	6.7%	6.6%	6.5%	6.7%	6.0%	-0.7%

Recommendation(s) - Continue to work towards restoring Longleaf and Shortleaf Pine ecosystems as directed by the *Plan*.

(3) Prescribed Burning

Monitoring Item Description – Determine if prescribed burning is occurring at required levels to meet the *Plan*’s goals and objectives and the DFCs for vegetation.

Variability - Achieve 80 percent of forest assigned targets, unless weather or other extenuating circumstances prevent this accomplishment. If the forest falls below the 80 percent target, reassess the target.

Finding(s) - The *Plan* set an annual objective of approximately 100,000 acres of prescribed burning per year. This is calculated on a land base of about 500,000 acres for which fire should play an ecological role. The desired return interval for fire is in a three-to-five year range. In FY 09, the forest burned 139,053 acres. The average acres burned over the last nine years is about 96,688 acres. Table 3 displays acres burned each year (by objective) for the past nine years. Most burns accomplish multiple objectives.

Table 3. Prescribed Fire – Acres Burned Annually

FY	Fuel Reduction	Brownsport Control (Longleaf)	Site Prep for Regeneration	Control of Understory	Range Improvement	T&E*	Other Wildlife	Total
2000	21,408	0	98	690	0	2,746	11,424	36,366
2001	40,656	80	92	563	0	3,535	14,230	59,156
2002	50,926	0	704	2,893	0	16,726	4,796	76,045
2003	23,750	0	1,472	0	0	4,360	1,400	30,982
2004	89,392	219	0	1477	0	31,722	4,401	127,211
2005	87,720	0	133	0	0	12,872	65	100,790
2006	95,770	0	479	0	0	435	0	96,684
2007	110,219	0	856	0	0	15,808	2,735	129,618
2008	158,701	0	179	0	0	6,510	0	165,390
2009	139,053	0	0	0	0	0	0	139,053

*Threatened and Endangered

Recommendation(s) – No change needed. Maintain prescribed burning targets at 100,000 acres per year in order to meet vegetation management objectives.

b. Management Indicators

(1) Diversity of Plant and Animal Communities

Monitoring Item Description - Plant and animal communities are defined through the descriptions of community components by vegetation group in the *Plan*, Chapter V (pgs 306-307). These forest and grassland communities, as defined in the ECS (Ecological Classification System) in *Plan* Appendix A, form the ecological groups monitored through time. Through an evaluation of data obtained from internal reviews and surveys, as well as reports obtained from other state and federal sources, the Forest Service determines if the desired diversity and objectives for plant and animal communities (MI- management indicators, TES-threatened and endangered, and sensitive species) are being maintained.

Variability - Trends, as determined through monitoring, are based on one-to-five years or more of population change. Natural populations fluctuate through time; however, if five or more consecutive years of downward trends are documented, this trend would indicate a need for closer evaluation and possible change in management strategies.

Finding(s) - The majority of management indicators have indicated stable or increasing trends (see Appendix A). The red-cockaded woodpecker population is at 346 active clusters, a new milestone for the NFGT. The Wood Thrush and Acadian Flycatcher appear to have downward trends.

Recommendation(s) – No change needed. Continue population monitoring and evaluation to determine if any changes in monitoring strategy or management actions are needed. Continue working with Southern Research Station (SRS) and Texas Parks and Wildlife Department (TPWD) to monitor TES populations

(2) Habitat for Management Indicator Species (MIS)

Monitoring Item Description – Annual evaluation of forest habitat change is documented through levels of forest and grassland management actions such as prescribed fire, regeneration cutting and forest thinning. These activities are described in acres within forest compartments or allotments in the GIS (Geographic Information System) spatial database. This database, as well as other USFS (U.S. Forest Service) database information, is updated regularly and evaluated annually. Changes in habitat will directly and indirectly affect management indicator species population trends.

Variability - Five years or more of undesirable trend in any management indicator species habitat would indicate a need for some change. Changes needed could include either modification of habitat described and desired for any particular species in question, or implementation of different management actions.

Finding(s) - Habitat for management indicator species is generally improving throughout the forests and grasslands. Increased prescribed fire efforts are revealing greater improvements in both the number of certain element occurrences and quality of each occurrence for fire-dependent plant species like Louisiana squarehead. Most species habitat and trends appear to be stable or increasing (see Appendix A).

Recommendation(s) – No change needed. Continue population monitoring and evaluation to determine if any changes in monitoring strategy or management actions are needed. Consider increasing prescribe burning to benefit habitat for plants and wildlife species such as wild turkey, bobwhite quail and RCW.

(3) Population Trends of Management Indicators

Monitoring Item Description – Population trends of management indicator species are monitored through annual efforts and evaluated and reported on periodically to relate trends to habitat changes.

- Plants - Seasonal botanical surveys are conducted on units in appropriate habitat, based on forest-wide sampling strategies or to support project planning. Numbers of occurrences are tracked over time.
- Animals – Birds are monitored annually with point counts.
- Game species – Information is collected by Texas Parks and Wildlife.
- Fish – Periodic incidental records, annual netting or electrofishing sampling of water bodies occurs.

Variability - Five years or more of downward population trends would indicate a need for change.

Finding(s) –Most species’ long-term trends appear to be stable or increasing (see Appendix A), with the exception of the Wood Thrush and Acadian Flycatcher. Population declines for the Acadian Flycatcher and the Wood Thrush cannot be directly tied to Forest Service Management since these species are affected by threats on their wintering grounds in Central and South America.

Recommendation(s) – Change needed. Continue monitoring and coordination with SRS and TPWD for population monitoring and evaluation to determine if and what changes in survey – sampling strategy are needed to better evaluate the trends as localized or regional in scope.

c. Threatened, Endangered, and Sensitive Species

Monitoring Item Description – Surveys for each T&E and Sensitive Species known to reside on the forests or grasslands are conducted forest-wide and project based. Periodic surveys for some species, such as the American burying beetle that may have the potential to occur but have not been found to date, are conducted if conditions warrant or as indicated in the updated Appendix G Summary Table in the Forest *Plan* (see Appendix B). Through an evaluation of data obtained from these surveys, as well as reports obtained from other state and federal sources, a presence or absence determination can be made for potential species and a judgment can be made whether recovery objectives for resident T&E and Sensitive Species are being met.

Variability - Five years or more of downward population trends would indicate a need for change. Confirming presence of potential T&E and Sensitive Species would identify the need to manage habitat accordingly to facilitate population expansion.

Finding(s) - Most resident T&E and Sensitive Species populations are increasing. RCW populations are at an all-time high. Habitats for other sensitive species appear to be stable.

Recommendation(s) – No change needed. Continue annual monitoring and periodic surveys for presence to determine if progress is being made towards recovery objectives.

Sub-Issue 2. Forest and Range Health

a. Air Quality

(1) General Forest Air Quality

Monitoring Item Description - Determine if NFGT management activities are being conducted to maintain air quality within appropriate standards. Ensure air quality control and compliance activities are being conducted in a manner consistent with all Federal, State, local standards or regulations and *Plan* guidelines.

Variability - Documented fine particulate matter levels in NFGT areas that reach or exceed the National Ambient Air Quality Standards (NAAQS) PM (particulate matter) 2.5 level during state or federal monitoring. The Environmental Protection Agency has established PM_{2.5} NAAQS to protect public health and the environment; the daily standard is set at 35 µg/m³, while the annual standard is set at 15 µg/m³. If PM_{2.5} levels are exceeded, reduce the size of prescribed burns or reduce the size of the fuels consumed (through mulching) until appropriate levels are met.

Finding(s) – The National Forests and Grasslands in Texas consist of four National Forests in east Texas and the Caddo-Lyndon B. Johnson National Grasslands in northeast Texas. The distance from the eastern-most edge of the Sabine National Forest to the western-most boundary of the Lyndon B. Johnson National Grasslands is nearly 300 miles. Because air quality concentrations can vary based on local industry and nearby roads and highways, an assessment of air quality at each individual National Forest and Grassland is warranted. It is generally accepted that air quality monitoring values at a particular location may be representative of the air quality within 40 kilometers (25 miles) of that site. Unfortunately, there are not air quality monitoring sites located within 40 kilometers of each Forest or Grassland. In fact, only one fine particulate matter monitoring site is located within 40 kilometers of any of the National Forests or Grasslands in Texas. The Harris County PM_{2.5} monitor (EPA Site ID #482010024) is located 40 kilometers south of Sam Houston National Forest. The graph below shows the 3-year average of 24-hour and annual fine particulate matter concentrations at that monitoring site as compared to the NAAQS. Data are taken from the EPA AirData and AirExplorer websites (www.epa.gov/air/data and www.epa.gov/airexplorer/index.htm).

As shown, fine particulate matter levels near the Sam Houston National Forest are below both the 24-hour and national air quality standards, as averaged on a three-year basis. The graph below shows the yearly monitoring data as compared to annual fine particulate matter emissions from prescribed fires on the Forest.

Table 4. Three-Year Average Fine Particulate Matter Trends

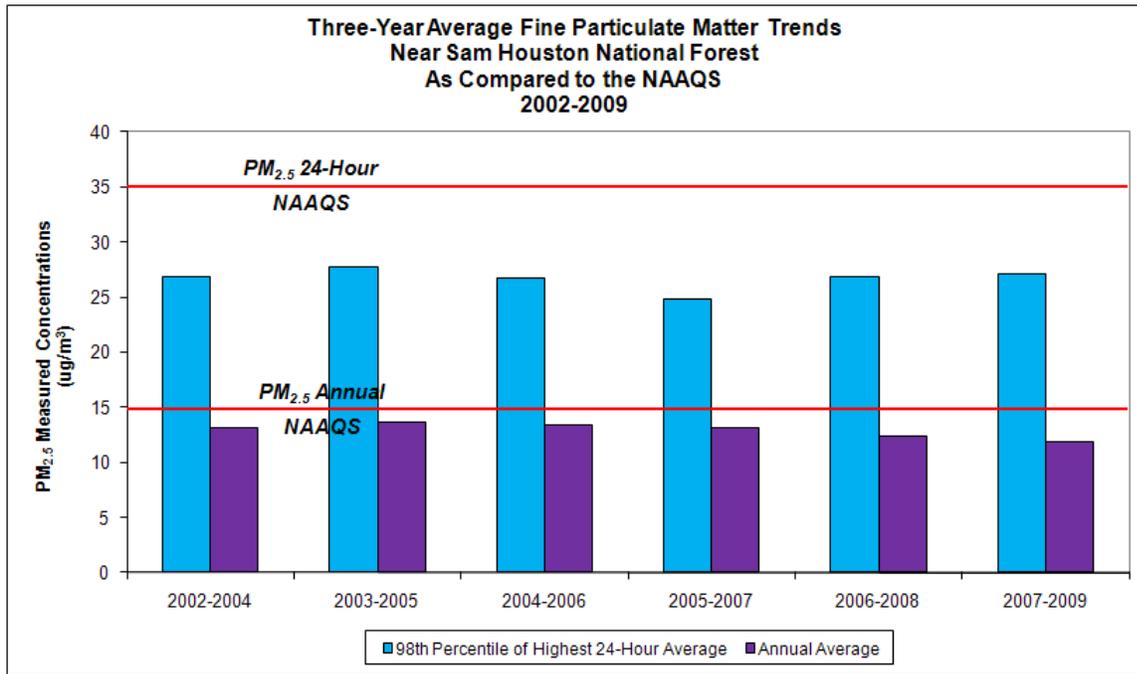
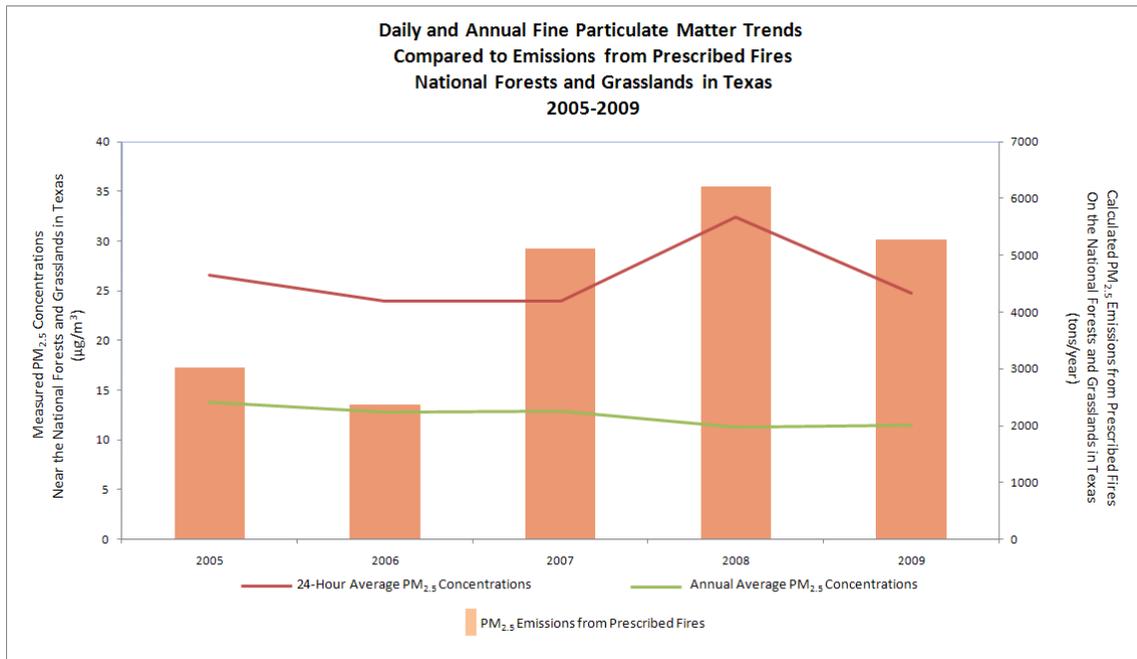


Table 5. Daily and Annual Particulate Matter Trends



The NAAQS is not being exceeded, and emissions from prescribed fire do not appear to be correlated with ambient concentrations. Therefore, it appears that prescribed burning activities have not caused or contributed to any exceedances of the PM_{2.5} NAAQS at this location.

Within the state of Texas, there are at least 30 air quality monitors that measure fine particulate matter in the air. There are no areas within the state which have been designated as nonattainment with either the 24-hour or annual average PM_{2.5} air quality standard.

The NFGT coordinated with TCEQ (Texas Commission on Environmental Quality) on air quality monitoring issues. This is an ongoing process. Air quality was addressed during prescribed burning by operating within the burn plan perimeters for smoke dispersion.

Recommendation(s) – No change needed. However, the NFGT needs to work with CENRAP (Central Regional Air Planning Association) and also the TCEQ to have its emissions added to their emissions inventory to insure that activities meet general conformity requirements. Continue to review monitoring data from the EPA (Environmental Protection Agency) monitoring stations to determine if counties are out of compliance with air quality standards and ascertain whether any NFGT actions, especially prescribed burning, could be the cause (based on timing of the activity verses when air quality was found to be out of compliance).

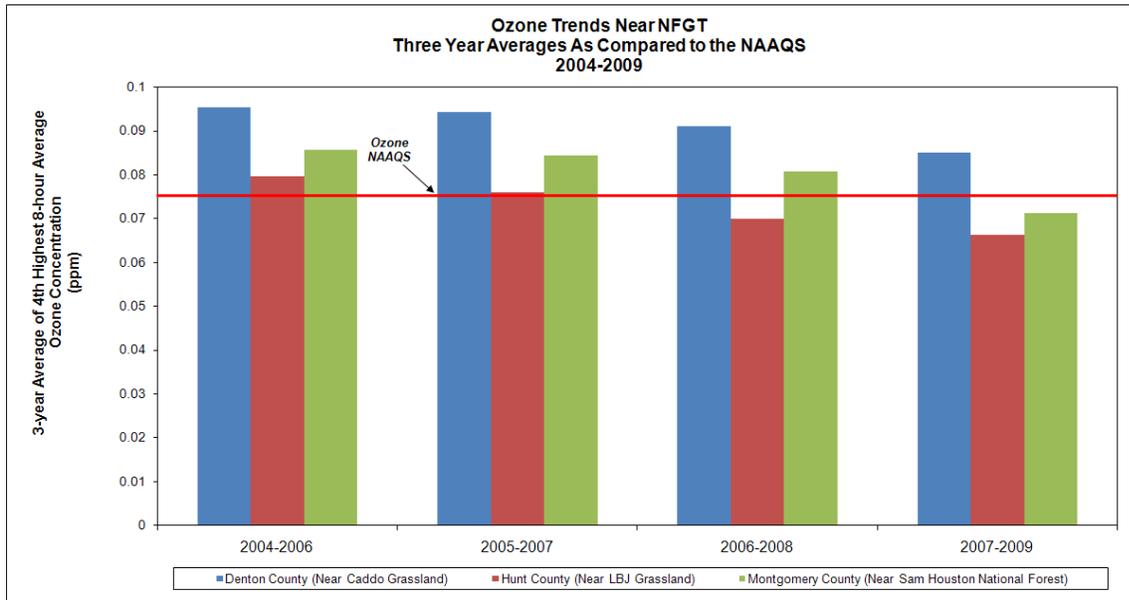
(2) Class I and Class II Lands Air Quality

Monitoring Item Description - Determine if management activities are being conducted in a manner that protects the air quality on Class II lands. Currently there are no Class I Lands on the NFGT. All land in Texas is considered Class II. The EPA lists six criteria pollutants and maximum concentration levels that should not be exceeded. These pollutants are carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, particulate matter and lead. National Ambient Air Quality Standards (NAAQS) have been established for each of these pollutants; measured ambient concentrations can be compared to the respective NAAQS to determine whether harmful impacts to either human health or the environment are expected due to elevated levels of pollution.

Monitoring air quality at stations established in the state will indicate pollutant occurrences.

Variability - Air quality pollutant occurrences should be identified and investigated to determine their cause. If an occurrence is related to NFGT activities, appropriate actions should be taken.

Finding(s) – There are air quality monitoring stations throughout the state of Texas that measure the ambient concentrations of each of the criteria air pollutants. The map below shows the location and type of all of the air quality monitoring stations within the state.

Table 6. Ozone Trends Near the National Forests and Grasslands in Texas.

Although the ozone standard is being exceeded at two of the three monitors, activities on the Forest are not anticipated to exacerbate ozone concentrations. Ozone is a secondary pollutant formed when emissions of nitrogen oxides (mainly from automobiles and power plants) combine with emissions of volatile organic compounds (again from automobiles as well as naturally occurring sources) in the presence of heat or sunlight. Research suggests that prescribed fire activities do not generate a significant amount of emissions of either pollutant.

Other criteria pollutants monitored in Texas include carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead. The respective NAAQS are not being exceeded for any of these pollutants. Although large amounts of carbon monoxide (CO) are emitted from prescribed fires, concentrations are highest within the burn unit and readily dissipate a short distance beyond the burn. The CO monitor closest to a National Forest is in Harris County, 40 km south of the Sam Houston National Forest; concentrations at this site are well below the CO NAAQS.

Recommendation(s) – No change needed. Continue to monitor the air quality index and the emissions per county per year, as reported on EPA’s website (<http://www.epa.gov/air/data>). [Note: This does not indicate how much of the emissions are from NFGT; it just shows if there is any change.]

b. Forest Pests

(1) Pine Beetles

Monitoring Item Description – Includes actions to protect forest health by reducing the potential impacts of expanding SPB (southern pine beetle) infestations in forest stands and

minimizing the threat of other pine bark beetles. Protection will be accomplished through prevention (such as thinning stands with high SPB hazard ratings) and beetle population monitoring. All National Forests must monitor southern pine beetle population levels.

Variability - Reduction of high hazard rated areas should exceed 1,000 acres per year on the NFT (National Forests in Texas.)

Finding(s) – No SPB infestations were detected on the NFT in FY 09. The NFT participated in the spring southern pine beetle survey, and results from the survey predicted extremely low populations, as no SPB were captured. The number of the SPB insects, clerids and predators collected fell from the previous year. The NFT also participated in fall SPB trapping, a new program designed to provide early warning of SPB outbreaks. No SPB were collected in the fall. No detection fights were made due to the low level of SPB activity predicted.

Figure 2 is an aerial view of a SPB infestation (spot) illustrating trees in several age classes. Gray trees in background no longer contain beetles in any stage; red trees contain late developmental stages and beetles ready to emerge; lightly faded trees contain early developmental stages; and green trees in the foreground (at the edge of the spot) are being attacked.

Figure 2. Typical Start of a SPB Spot



Source: <http://www.barkbeetles.org/spb/spbbook/Index.html>

The forests thinned 4,535 acres of dense pine stands as part of their SPB prevention program. Many scattered pines were affected by the prolonged drought, and increased tree mortality due to the combined effects of the drought and *Ips* bark beetles occurred. No other major insect or disease problems or outbreaks occurred on the NFGT in FY 09.

Recommendation(s) – No change needed. Continue SPB monitoring and hazard reduction by thinning densely stocked pine stands in advance of the next outbreak.

(2) Non-Native Invasive Plants (NNIPS)

Monitoring Item Description - Identify and protect forests and rangelands by preventing the introduction of NNIPS, controlling their spread and eradicating any known NNIPS from priority areas.

Variability - If significant growth occurs in areas of existing NNIPS or if new areas of NNIPS are identified that threaten forest or grassland ecosystems, recommendations for control or eradication will need to be developed and (once approved) implemented.

Finding(s) - In FY 09, 1,473.7 acres were treated for noxious weeds. Table 7 lists the acres treated in 2009. In addition, NNIPS surveys were conducted forest-wide. This survey focused on primary vectors for infestations such as utility rights-of-ways, special use sites, recreation sites, and road right-of-ways.

Table 7. NNIS Treatment Acres by Forest.

FISCAL YEAR	DISTRICT	ACRES ACCOMPLISHED	ACRES MONITORED	AVERAGE CONTROL
2009	Angelina	125	125	0.81%
2009	D. Crockett	385.6	385.6	0.84%
2009	Sam Houston	376	376	0.65%
2009	Sabine	157.1	157.1	0.83%
2009	Caddo/LBJ	430	430	0.78%

Recommendation(s) – Continue implementing the forest-wide NNIPS Management Strategy.

Sub-Issue 3. Watershed Conditions

a. Soil and Water Conservation

Monitoring Item Description - Conduct periodic reviews/inspections of project areas and environmental documents to avoid permanent impairment of site productivity and ensure conservation of soil and water resources.

Variability - Appendix F of the *Plan* “Erosion and Sediment Coefficients” will be used during project planning and monitoring to assure the NFGT does not exceed allowable soil lost tolerance levels that would result in permanent impairment of site productivity. Texas Forest Service BMPs (Best Management Practices) inspection reports will be analyzed and if the

overall inspection results fall below 90 percent, forest specialists will identify the reason and recommend corrective actions that need to be taken.

Finding(s) - No soil and water disturbances occurred that were identified by NFGT personnel as exceeding the soil loss tolerance levels set out in the *Plan*. In 2009, TFS (Texas Forest Service) did not conduct a BMP (Best Management Practices) compliance review on the National Forests and Grasslands in Texas. Hurricane Ike hit Texas in September 2008 and most of the work during 2009 was related to Hurricane Ike salvage.

As part of the NFGT’s endeavors to protect soil and water resources in FY 09, the Caddo and LBJ NGs continued to implement an active Watershed Improvement Program. The objective of this program is to repair active soil erosion that is the result of weather and poor management activities that have existed for many years. Most of the initial damage predates the establishment of the unit. These accomplishments help the grasslands meet the intent of Section 319 of the Clean Water Act. Actions in FY 09 included the completion of 50 acres of watershed improvement. Table 8 displays accomplishments on the Caddo/LBJ NGs for the past ten years.

Table 8. Caddo/LBJ Watershed Improvement Accomplishments

Year	Acres Treated for Erosion Control	Grade Stabilization Structures	Feet of Terraces Constructed	Number of Gully Plugs Installed
2000	*	0	0	0
2001	58	1	3,004	8
2002	100	3	6,884	14
2003	*	0	0	0
2004	95	3	7,007	17
2005	*	0	0	0
2006	50	1	3,850	8
2007	50	0	0	0
2008	22	0	0	0
2009	50	0	0	0

* No budget allocation received.

Recommendation(s) – Change needed. Continue to monitor projects, environmental documents and follow up on other requests made by districts to review areas to assure the *Plan’s* Standards and Guidelines are being used to protect soil and water resources. Increase the amount of on-the-ground monitoring being performed by the Forest Soil Scientist/Watershed Specialist. Continue to monitor Rights-of-Way for erosion. Also request that the TFS increase the frequency of BMP compliance reviews on the NFGT.

b. Water Quality

Monitoring Item Description - Ensure vegetative manipulation prescriptions and other management actions on the NFGT provide the desired effects on water quality. Water quality will be monitored by routine sampling of the conductivity in streams.

Variability - Identify elevated conductivity levels during routine stream sampling. If conductivity levels reach above 200uS (micro siemens, this is the established unit of measure for conductivity), a forest specialist will investigate the cause and recommend appropriate action.

Finding(s) - There were no identified adverse soil and water occurrences from activities on NFGT lands or to impaired stream segments identified in FY 09. Today, the TCEQ is the primary agency responsible for water quality management in Texas, although it shares the responsibility with other state agencies such as the Texas Parks and Wildlife Department, the General Land Office and the Railroad Commission of Texas.

Recommendation(s) – Change needed. Continue to monitor projects, environmental documents and follow up on other requests to review areas to assure the *Plan's* Standards and Guidelines are being met to protect water quality. Increase the amount of on-the-ground monitoring being performed by the Forest Soil Scientist/Watershed Specialist.

c. Revegetation of Temporary Roads

Monitoring Item Description - Ensure temporary roads are revegetated in accordance with standards set forth in the *Plan* and BMPs. Review Harvest Inspectors, Timber Sale Administrators and Minerals Operation Inspection Reports to assure timely revegetation of temporary roads occurs.

Variability - Best Management Practice inspections that fall below 90 percent compliance will be reviewed on the ground to identify changes needed to correct deficiencies. Harvest Inspectors, Timber Sale Administrators and Minerals Operation Inspection Reports are reviewed and non-compliance of revegetation of roads is corrected in a timely manner. If not corrected in a timely manner, actions against the operator will be taken.

- **Finding(s)** - In 2009, TFS (Texas Forest Service) did not conduct a BMP (Best Management Practices) compliance review on the National Forests and Grasslands in Texas. Hurricane Ike hit Texas in September 2008 and most of the work during 2009 was related to Hurricane Ike salvage.

Recommendation(s) – No change needed. Continue temporary road revegetation efforts and monitoring procedures in accordance with *Plan* Standards and Guidelines as well as State Recommended BMPs.

Issue B. Sustainable Multiple Forest and Range Benefits

Sub-Issue 1. Outdoor Recreation Opportunities

a. Recreation Uses and Opportunities

Monitoring Item Description - Review recreation opportunities provided by the NFGT and compare them to what the public demands, considering what is feasible based on expected budgets and what is environmentally sustainable. The NFGT is expected to align its recreation program so that it is offering the public recreation opportunities that they desire (within the above parameters). This alignment is tracked annually.

Variability - Recreation construction, reconstruction or decommissioning performed on trails or developed/dispersed recreation areas must follow the NFGT's alignment philosophy. If monitoring identifies deviation from this philosophy, necessary changes must be made to bring the project back into alignment.

Finding(s) – The NFGT provides for diverse types of recreational uses including OHV riding, horseback riding, hiking, hunting, fishing, camping and bird watching. Most of these activities can be done on the NFGT with no charge to participants.

Recommendation(s) – No change needed.

b. Visual Quality Objectives

Monitoring Item Description - Visual character is considered during development of project plans by including *Plan* guidance for the protection of scenic resources. Reviews of project plans occur to assure visual character is protected. Monitoring will also occur on the ground for actions such as timber sales, road projects and other ground-disturbing activities.

Variability - If the on-the-ground post activity monitoring reveals that project implementation fails to meet *Plan* guidelines and objectives, the responsible line officer will be notified and appropriate actions taken to correct instances where the project departs from its original design.

Finding(s) – The *Plan* contains direction for VQO instead of the more current SMS which is tied to GIS. In order to have the most current information SMS should be used. To begin working toward SMS, the Forest decided to staff a Landscape Architect position in the Supervisor's Office beginning in FY 09.

Recommendation(s) – Move toward implementing SMS. This may require a non-significant Forest Plan amendment.

c. Off-Road Vehicle Use

Monitoring Item Description - Off-road vehicle, (ORV) or off-highway vehicle, (OHV) use and trails are to be monitored to assure no unacceptable damage is occurring that would affect the sustainability or integrity of any resources.

Variability - If unacceptable resource damage is not corrected in a timely manner, consider trail closure.

Finding(s) - The TMR was finalized and published on November 9, 2005 (70 FR 68264) This regulation recognizes OHVs as a legitimate use of the National Forest System lands, but requires that OHV use be carefully managed. The TMR restricts the use of motorized vehicles to designated roads, trails, and areas. The Rule requires the designations be made at the local level, with public involvement, in order to continue to provide the citizens of the country with the use and enjoyment of these public lands, while protecting the important environmental resources, services, values and uses of these public lands.

The TMR requires that each unit of the NFGT (the Sam Houston, Davy Crockett, Sabine, and Angelina NFs as well as the Caddo/LBJ National Grasslands) determine which roads, trails, and areas would be open for motorized vehicle use in a separate process and publish a Motor Vehicle Use Map (MVUM) designating those roads, trails and areas open for motorized vehicle use on each unit. Amendment # 9 was signed on January 4, 2008 which implemented the TMR. MVUM maps have been produced for each unit and distributed to Forest users.

Recommendation(s) – Continue to monitor the road and trail system on the NFGT. Update MVUM maps annually and have new maps ready for distribution in January.

Sub-Issue 2. Infrastructure

a. Road Construction, Reconstruction, and Maintenance

Monitoring Item Description - Ensure that any roads constructed or reconstructed are designed according to their planned uses and in accordance with all *Plan* guidelines, as well as other required specifications. Road maintenance is monitored to insure compliance with the *Plan* Standards and Guidelines.

Variability - Inspections must assure construction and reconstruction follow technical specifications as set out in Table 203-1 of the Forest Service Standard Specifications for Roads and Bridges and that tolerance levels are not exceeded. All roads are designed in accordance with applicable road management objectives and road design criteria. Culverts are designed in accordance with applicable road design criteria. Fish passage design is included in all culvert designs where applicable. Road maintenance is performed according to the “Standard Specifications for Road Maintenance Activities” that is in all road maintenance contracts. Deviations from the above specifications will be documented and approximate actions taken.

Finding(s) - All road construction in FY 09 was in compliance with contract specifications and *Plan* Standards and Guidelines. In FY 09, no road construction was accomplished.

In FY 09, a total of 278.15 miles of road reconstruction was accomplished. All of these miles included wing ditches with appropriately designed J-hooks.

The number of miles of roads constructed/reconstructed for the past eleven years is displayed in Table 9. The NFGT also decommissioned 132.7 miles of roads in 2009. This has saved significant maintenance dollars.

Table 9. Miles of Road by Activity

Year	Constructed	Reconstructed	Decommissioned	Unauthorized Roads Decommissioned	Unauthorized Roads Added to System	Maintained	Total System
1999	0.8	39.0	11.0	13.0	0.0	815.0	2380.0
2000	1.1	17.8	23.0	0.0	0.0	662.0	2358.0
2001	1.5	18.5	22.0	2.0	0.0	935.0	2330.0
2002	0.0	14.2	9.4	3.1	0.0	850.5	2335.0
2003	1.0	20.5	14.6	4.0	0.0	672.0	2321.4
2004	0.0	0.0	41.0	2.0	0.0	682.0	2280.4
2005	0.0	16.7	0.0	0.0	0.0	543.3	2288.9
2006	0.7	*83.0	2.9	0.0	8.5	602.6	2295.2
2007	1.85	*98.25	0	0	0	884.2	2390.8
2008	1.0	32.1	1.0	1.0	0	771.27	2389.4
2009	0	**278.15	132.7	26.3	8.5	10382.16	2408.7
Total	7.95	627.2	257.6	51.4	17.0	17800.03	N/A

* This number is high due to the impacts from Hurricane Rita.

** This number is high due to impacts from Hurricane Ike.

Note: The word “Unauthorized” is synonymous with the word “Unclassified”.

One hundred percent of National Bridge Inspection System (NBIS) major culverts (those having an end area of 35 square feet or more) were inspected in FY 09. This inspection indicated all road bridges and major culverts are structurally stable; however, low maintenance applications due to funding levels will continue to accelerate their deterioration. These structures have inspection cycles of two-to-four years. Engineering unit employees will continue to report deficiencies to the RO and work towards a replacement program that will not allow catastrophic failures.

Recommendation(s) – No change needed. Continue road construction, reconstruction and maintenance in accordance with road management/road design criteria and *Plan* provisions.

b. Facilities

Monitoring Item Description – Safety and maintenance items noted in inspections of administrative facilities are accomplished and administrative facilities are replaced as needed for health and safety of employees.

Variability – Facilities are required to be inspected every five years and entered into the INFRA data base. The *Plan* list three facilities that were scheduled for replacement and states that one facility will be replaced per *Plan* year.

Finding(s) – In FY 09, approximately twenty percent of the NFGT facilities were inspected and the data was entered into the INFRA data base.

Construction of the new Supervisor’s Office on federally-owned land in Lufkin, Texas began in the fall of 2008 and construction continued throughout FY 09. This new facility will be owned by the NFGT, thus eliminating the current situation of having to rent a facility. This will improve efficiency and provide more funding for on-the-ground project work.

The NFGT began to repair facilities that were damaged by Hurricane Ike during FY 09. These facilities were located on the Sam Houston National Forest (SHNF) and the Davy Crockett National Forest (DCNF).

SHNF: Double Lake Recreation Area- Toilet Building; Cagle Recreation Area Boat Dock and 2 Buildings.

DCNF: Ratcliff Lake – Bathhouse and Toilet Building.

Recommendation(s) – No change needed. The NFGT will continue inspections of its facilities, as required, and will continue to replace the facilities mentioned in the *Plan*.

c. Lands

(1) Property Boundary Maintenance

Monitoring Item Description – Boundary lines will be monitored through activity reviews and management attainment reports to determine if the *Plan* Standards and Guidelines are being met.

Variability – If boundary line maintenance falls below the *Plan’s* required 10-year rotation for maintenance, the responsible line officer will be notified and appropriate action taken.

Finding(s) – Because of Hurricane damage by storms, Rita and Ike and the amount of land line boundary re-survey work that has and will be accomplished under the hurricane contracts, the National Forests are catching up with the 10 year rotation criteria in the Forest Plan. The National Forests in Texas (Angelina, Sabine, and Davy Crockett) are in much better shape as far as the 10 year boundary line rotation criteria. These contracts are still on-going and have helped tremendously to keep up with the Landline Maintenance rotation and helps regain the ground that we had lost in monumenting and maintaining property boundaries. Additionally, we are becoming more aware of and are resolving trespass and encroachment cases as they are being identified by the re-survey work. In addition, one title claim and a trespass case have been resolved in FY 09.

Hurricane Rita

The Hurricane Rita Re-surveying Landline Contract has accomplished 158 miles of re-surveyed landline boundaries on the Angelina N.F. and 183 re-surveyed miles on the Sabine N.F. The contractor has completed approximately 76 % of the work or total landlines for both National Forests that were designated under contract.

Hurricane Ike

A Landline Re-surveying Contract for Hurricane Ike was started in April 2009 for work on the Davy Crockett and the Sam Houston. This contract accomplished 175 miles of re-survey landlines, 130 miles of landline maintenance, 50 re-monumented corners and 1,436 maintained standard tract corners on the Davy Crockett National Forest. This contract accomplished 60 miles of re-survey landlines, 10 miles of landline maintenance, 50 re-monumented corners and 324 maintained standard tract corners on the Sam Houston National Forest. The NFGT reports accomplishments yearly.

Resolved Title Claim Case: Texas Parks & Wildlife Department (TPWD) personnel, while posting hunting signs between a newly purchased property and USA tract A-660, discovered that there was an apparent overlap in the boundary location along the Angelina River. TPWD contacted the United States Forest Service (USFS) personnel and requested a response regarding the United State's title interests in that immediate area. Based upon a thorough review of the Tract A-660 title documents, surveys, and the administrative record, the government makes no claim of title to lands in that area in question, lying south of the Angelina River in Angelina County, Texas.

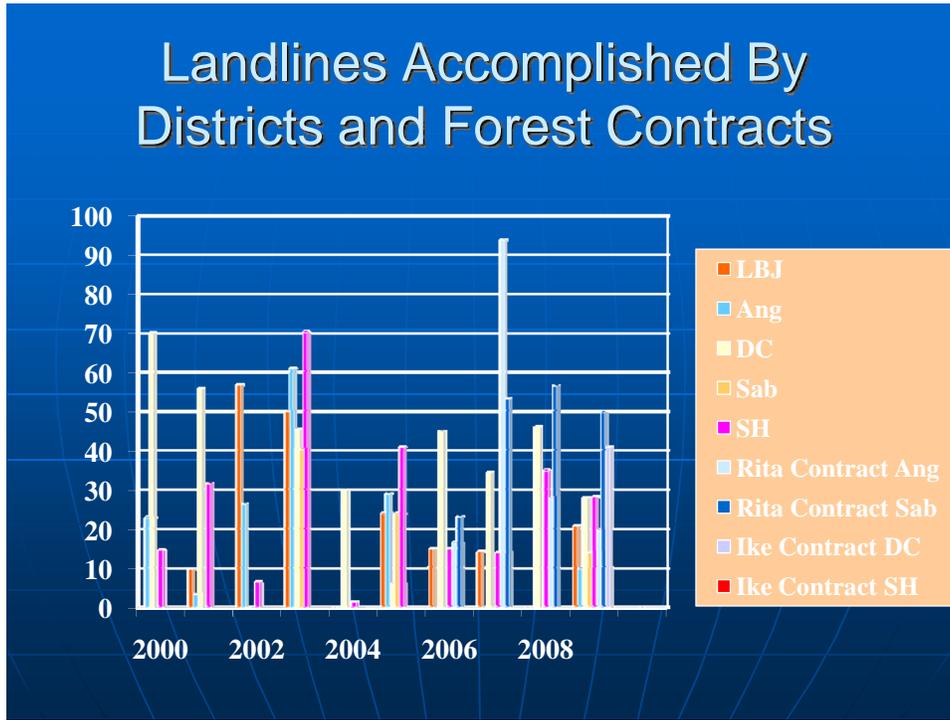
Table 10. Miles of Boundary Line Accomplished by Hurricane Rita and Hurricane Ike Contracts.

District	2003	2004	2005	2006	2007	2008	2009
LBJ	50.13	0	24	15	14.3	0	20.84
Angelina	61.1	0	29.08	0	0	0	10.0
Davy Crockett	45.45	30	6	45	34.5	46.09	29.28
Sabine	40.45	0	24	0	0	0	14.0
Sam. Houston	70.38	1.4	41	15	14	35	28.25
HR*				16.52	93.95	27.9	19.7
Angelina							
HR Sabine				23.25	53.35	56.71	49.94
HI**							41
Davy Crockett							
HI							0
Sam Houston							
Total (Miles)	268	31	124	115	210	166	213

*Hurricane Rita

** Hurricane Ike

Figure 3. 10 – Year Boundary Line Target and Accomplishments



In August 2009, Texas hired a cadastral land surveyor. The National Forests and Grasslands in Texas Lands Program has not had a Lands Surveyor since 1995.

Recommendation(s) – Continue monitoring and request increased funding allocations to address boundary maintenance needs.

(2) Land Ownership Adjustments

The NFGT is working to develop a Lands Adjustment Strategy, focusing on its goals and objectives. This document will show the direction the Forest Service is headed by using maps that give detailed information, and reasoning as to why it is necessary to pick up valued properties. This strategy plan will be used and tiered along with the Forest Plan when making land management decisions.

(a) Acquired Right-of-Ways

Monitoring Item Description – Acquired right-of-ways are monitored to assure they facilitate more efficient management of NFGT lands.

Variability – All acquired right-of-ways are appropriate to meet access or other public objectives.

Finding(s) – No acquisition of any right-of-ways were obtained through land acquisitions although protection of existing right-of-ways were made to prevent private landowners from blocking access of forest roads to larger tracts of National Forests system lands. This was accomplished through law enforcement actions.

Recommendation(s) – No change needed. Continue to monitor and take action to hold and secure public access.

(b) Land Exchanges, Acquisitions, Interchanges, and Donations

Monitoring Item Description – Land exchanges, acquisitions, interchanges and donations are monitored to assure they are improving management, consolidating ownership and result in a net interior boundary reduction.

Variability – All exchanges, acquisitions, interchanges and donations will comply with land ownership adjustment Standards and Guidelines in the *Plan* and will be coordinated with the landownership adjustment map.

Finding(s) – The primary focus for the Lands Program in FY 09 was to acquire lands by implementing Tripartite Land Exchanges and using timber sale receipts to purchase land in holdings and Land for Land Exchanges. This will help consolidate national forest lands, improve forest management and reduce the total miles of boundary line maintenance.

A land exchange proposal was received in 2009. The Forest Service is reviewing and working on exchanging two federal tracts which are approximately 172 acres combined for a private tract that is approximately 174 acres. The Non-Federal land has a lot to offer in that it borders the Upland Island Wilderness, has unique pitcher plant bogs and has several riparian drainages associated with Big Creek within the proclamation boundary of the Angelina National Forest.

Recommendation(s) – Change needed. Focus on acquisitions by implementing Land for Land and Tripartite Land Exchanges that use timber sale receipts to purchase land in holdings. This will help consolidate national forest lands, improve management and reduce the total miles of boundary line maintenance.

Sub-Issue 3. Human Influences

a. Law Enforcement

Monitoring Item Description - Evaluate the ability to provide sufficient levels of visitor protection, enforcement of resource regulations and facility protection.

Variability - Activities being conducted are within the administrative boundaries of or are near NFGT lands and are consistent with Federal, state and local laws.

Finding(s) - Activities and conditions presented in the last report remained consistent in FY 09. There is a constant rise in use of NFGT lands that are near large urban areas (such as Dallas, Fort

Worth and Houston.) The Sam Houston NF, near Houston, experienced increased use by OHVs - specifically all-terrain vehicles (ATVs) - from people living in nearby subdivisions. This created unauthorized trails and associated resource damage on the forest. Due to this increase of violations, one additional LEO (Law Enforcement Officer) was added and assigned to the Sam Houston NF. There is also the need for an education program for Forests visitors that would make them aware of the resource damage that can be caused OHV use on unauthorized trails.

Law Enforcement Officers are still encountering an increased amount of controlled substance use activity on the NFGT. Table 11 shows a significant increase in Felony and Misdemeanor arrests from previous years. This increase in numbers of arrests and search warrants reflects more illegal drug activity and better enforcement of the drug laws.

Table 11. Law Enforcement Arrests and Search Warrants

Fiscal Year	Felony Arrests	Misdemeanor Arrests	Search Warrants
2003	7	14	2
2004	14	18	0
2005	6	25	0
2006	26	27	2
2007	21	152	0
2008	21	114	0
2009	18	88	0

Illegal trash dump sites have been a continual problem on the entire NFGT for many years. Law Enforcement Officers actively monitor sites to enforce trash dumping regulations.

To partially address this continuing problem, two programs have been developed that have been popular events for more than a decade. The Great Forest Trash-off in the Angelina NF and the Rivers, Lakes, Bays 'n Bayous Trash Bash near the shores of Lake Conroe in the Sam Houston NF are one-day events where volunteers remove trash from illegal dumping sites in these forests.

Recommendation(s) – Change needed. In FY 09, several law enforcement personnel retired. Additional officers should be hired to help deal with increased OHV use, illegal drug issues, trash dumping and other illegal uses on NFGT lands. Have the Conservation Education Coordinator develop an OHV education program for Forest visitors. This could be done by working with the Trails Coalition and the Sierra Club.

b. Land Use Authorizations

Monitoring Item Description – Utilize the land use authorization (special use permits) screening protocol to ensure that only projects that pass the standards are approved. One of these standards is to limit access across National Forests lands where other alternatives are possible. Assure required mitigation measures are a binding part of the authorization to implement proposals on National Forest lands. With the implementation of Cost Recovery, the NFGT have

a responsibility to process accepted applications that are complete within 60 days, or request an extension in writing.

Variability – Violations of permit conditions will not be allowed and when discovered, the violations will be addressed with the permit holder for compliance with the terms of their permit. The Forest Service will work with the holder to gain compliance and if the corrections are not performed in a timely manner, a Notice of Non-compliance will be issued. If the problem continues, NFGT personnel will pursue revocation/termination of the permit.

Finding(s) – Inspections in FY 09 indicated that most activities were in compliance with the terms of authorization. Table 12 displays the activities that occurred in FY 09, with trends starting in 2004.

Table 12. Special Use Land Authorizations

Use	2004	2005	2006	2007	2008	2009
Utility ROWs (Power, water, Telephone, Fiber, Sewer)	158	148	149	152	152	147
Road ROWs, Private & Public (DOT, FRTA, FLPMA)	489	500	498	499	507	500
Recreation-related permits (Rec Event, Concess., Filming)	43	47	43	54	63	23
Churches & Cemeteries	17	17	17	17	16	15
Agriculture & Residence (Apiaries)	9	11	11	10	10	7
Watershed, reservoir & supply.	7	8	8	8	8	11
Mineral – pipelines, etc.	134	135	132	128	136	127
Mineral - seismic	3	3	1	1	4	4
Communication Sites	4	4	4	4	4	4
Research	4	2	4	4	8	26
Other Misc. (mailboxes, Sings, glidepath, svc bldg)	23	23	26	28	29	23
Total	891	898	893	905	937	887

At the end of FY 09, the NFGT had 887 active lands special use permits. Also in FY 09, the NFGT issued 23 recreation special use permits. These permits include one day events such as trail rides, motorcycle races, fishing tournaments, and youth camps.

Recommendation(s) – No change needed. Continue monitoring special use permits at existing frequencies.

Sub-Issue 4. Roadless Areas/Wilderness/Wild and Scenic Rivers

Monitoring Item Description - Visitor use in wilderness areas should leave only limited and short-term evidence of passing. This is evaluated through national surveys performed every five years. Locally, visitors are given access to Wildergram cards to report their experiences. Visual observations at sites and study of older information all indicate very low use of wilderness areas.

Variability - Do not exceed maximum allowable limits of visitors, as determined by observation, NVUM (National Visitor Use Monitoring) surveys, or other inventories.

Finding(s) – A NVUM survey was performed in FY 08. The survey revealed that visitor use of wilderness areas remains low.

Recommendation(s) - No change needed. Continue to coordinate with local universities or volunteer groups to collect and interpret Wildergram information and assure that wildernesses are generally maintained in a natural condition.

Sub-Issue 5. Timber

a. Timber Sale Allowable Sale Quantity

Monitoring Item Description – The *Plan* specifies the quantity of timber that may be sold from an area of suitable land during a specified period. This quantity is usually expressed as the ASQ (average annual allowable sale quantity). The NFGT should ensure that the maximum amount of ASQ projected in the *Plan* is not surpassed.

Variability - Do not exceed the maximum ASQ of 1,134 MMBF (million board feet) for the first decade of *Plan* implementation.

Finding(s) – Total volume offered in FY 09 was approximately the same as FY 08 offerings due to increased salvage sales associated with Hurricane Ike Timber Sales. Regular program sales were deferred to a later date in order to expedite salvage operations. See Table 13 for Timber Volume Sold vs. ASQ Volume (shown in MMBF). The ASQ remains low due to reduced budgets and timber targets.

Table 13. Harvested Timber Volumes

Fiscal Year	Total Volume Sold*	Volume Sold Excluding Salvage*	ASQ Volume**	Volume Sold as a Percent of ASQ	Difference Between Volume Sold & ASQ
2004	7.7	7.3	113.4	6%	-106.1
2005	26.4	19.7	113.4	15%	-93.7
2006	63.6	3.6	113.4	3%	-109.8
2007	34.0	31.1	113.4	27%	-82.3
2008	39.4	38.3	113.4	34%	-75.1
2009	34.4	8.5	113.4	30%	-79.0
Total	205.5	108.5	680.4	19% (Avg.)	-546.3

* Volume from *Timber Cut & Sold* report.

**ASQ Volume does not include timber volumes sold from salvage sales.

For the last ten years, an average of 19.0 percent of the *Plan* specified ASQ has been sold. Since the probability of exceeding ASQ is unlikely, this is not a real issue for the NFGT.

Recommendation(s) – Change needed. Identify areas of concern and develop associated project plans to build up the timber harvesting program in order to meet *Plan* target levels. This will help the NFGT move toward meeting its *Plan* management objectives for habitat improvement, forest health, age-class distribution and restoration needs.

b. Silvicultural Practices

Monitoring Item Description - Determine if silvicultural practices are in compliance with the *Plan* by reviewing project plans, prescriptions, environmental assessments and other decision documents. Conduct inspections of silvicultural activities (either during or post treatment).

Variability - General practices determined to be out of compliance with the *Plan* are to be documented and corrected as soon as practicable. Document necessary deviations from *Plan* direction authorized by line officer.

Finding(s) - Project plans, prescriptions, environmental assessments and decision documents that were developed in FY 09 were reviewed and found to be in compliance with the *Plan*. On-site inspections of silvicultural practices, including site preparation and tree planting, found no violations of *Plan* standards.

Recommendation(s) – No change needed. Continue reviews and inspections to assure these activities are performed in compliance with *Plan* direction.

c. Restocking Harvested Lands

Monitoring Item Description –Beginning in FY 2007, regeneration treatments will be incorporated into the Forest Service Activity Tracking System (FACTS). The results of first-year and third-year stocking and survival exams are now be entered into FACTS. The third-year check is used to certify that successful stand reestablishment has taken place. The *Plan* Forest-wide Standard FW-204-1 identifies the target level and lower and upper levels of desirable stems per acre for pine and hardwood species.

Variability - Stands not meeting the lower level of desirable stems per acre must be evaluated after the third-year survival exam is completed and a determination made whether additional treatments to improve stocking warrants the additional cost and site disturbance.

Finding(s) – Third-year stocking exams conducted in 2009 found that 29.6 percent of the stands exceeded the lower level of the FW-204-1 standard for the planted species. Stands that were below minimum survival levels (for planted seedlings) were checked for stocking. Enough natural seedlings were established to increase the total stand stocking levels (planted and natural seedlings) above the *Plan* minimum level for most of the deficient stands. The remaining deficient stands will be monitored to see if sufficient suitable natural seedlings become established to adequately stock the stands. Only in cases where stands are grossly deficient in suitable stocking will additional site preparation and planting be considered.

Recommendation(s) – No change needed. However, emphasis does need to be put on plant seedlings in late fall/early winter (November through January) when there is sufficient soil moisture to allow seedlings more time to become established before warmer and drier spring conditions occur. Continue established regeneration checks to assure adequate restocking occurs at required *Plan* levels.

d. Maximum Harvest Acres

Monitoring Item Description - Harvest unit sizes are monitored by the Forest Service Activity Tracking System (FACTS).

Variability – Do not deviate from limitations on the size of openings created by even-aged regeneration harvests that are found in the *Plan's* Forest-wide Standard FW-198, which provides that the maximum size opening is 80 acres for the southern yellow pine types and 40 acres for all other species. Document necessary deviations from *Plan* direction authorized by line officer.

Finding(s) - The FY 09, a FACTS report indicated that 109 acres of even-aged regeneration harvests were completed. These harvests took place on two separate stands, the largest of which was 75 acres. Therefore, all individual cutting units conformed to the maximum size limits established in the *Plan*.

Recommendation(s) – No change needed. Continue monitoring FACTS to assure *Plan* limitations are not exceeded.

e. Timber Harvesting on Land Not Classified as Suitable

Monitoring Item Description - Use FACTS to determine if timber harvesting has occurred on lands classified as “not suited” for timber production. The FACTS database is used to report silvicultural accomplishments and includes land suitability classification information.

Variability - No harvesting should occur on lands classified as unsuitable, except for salvage sales or sales necessary to protect other multiple-use values where the *Plan* establishes that such actions are appropriate. Document cases where necessary deviations from *Plan* direction are authorized by a line officer.

Finding(s) - No timber was harvested on unsuitable lands solely for timber management purposes.

Recommendation(s) - No change needed. Continue reviews to assure that no timber is harvested from unsuitable lands (unless the special need is authorized by a line officer.)

f. Classification of Lands as Suitable for Timber Production

Monitoring Item Description - The NFGT uses FSveg (Field Sampled Vegetation) database, which is part of the NRIS (Natural Resource Information System). The FSveg database captures timber suitability information through land class codes. Changes in timber suitability are identified through project plans, prescriptions, environmental assessments and other decision documents.

Variability - Minor changes in land suitability, such as stand boundary changes resulting from improved mapping, may be approved via the National Environmental Policy Act process by a line officer. Large acreage changes in land suitability must be documented and approved in a *Plan* amendment.

Finding(s) – Acres of suitable and unsuitable lands continue to remain constant.

Recommendation(s) – No change needed. Keep the FSveg database current with any changes that may occur in land suitability classification

Sub-Issue 6. Forage

Monitoring Item Description - Forage production and composition is assessed annually on all grassland allotments through general allotment inspections and in some cases more specific vegetation sampling. Monitoring of the condition of rangeland provides information so specialists can develop management options for prescribed fire, grazing or land deferral. Allotments are classified as either poor, fair, good, or in excellent condition.

Variability – A significant downward trend in range condition for five years or more would indicate a need for change.

Finding(s) - Grassland allotments are being managed to a satisfactory condition of fair to good. In FY 09, the grassland units continued to implement a fundamental change in grazing schemes that began in 1998. The focus changed from year round grazing to a seasonal grazing system. This implemented a high intensity/low duration grazing system which resulted in a higher number of cattle grazing for a shorter grazing period. The change resulted in fewer total AUMs (Animal Unit Months - this is equal to a cow and a calf grazing for one month); however, it still provided for the desired grazing results.

Recommendation(s) - Change needed. The grasslands are adequately monitoring AUMs. However, due to a shortage of personnel and funding the annual monitoring of forage production and composition is not at the desired level. This additional monitoring is needed in order to identify trends in vegetation production and composition. The grasslands will pursue additional funding to fill vacant positions to accomplish this much-needed monitoring.

Sub-Issue 7. Other Products

Monitoring Item Description –Assure implementation of required mitigation measures for ongoing activities for federal mineral rights and private minerals where the U.S. owns the surface rights. This is to be done while adhering to the National Energy Policy of 2005. Ensure that operators are in compliance with the terms of their permit. At a minimum, the NFGT must provide every other day inspections during active drilling operations and annual inspections of additional ongoing activities. The NFGT will inspect problem areas as needed.

Variability – Violations of permit conditions will not be permitted and if discovered, the violations will be addressed with the operator to gain compliance. If the corrections are not performed within a timely manner, a Notice of Non-compliance will be issued and any performance bonds will be collected by the Forest Service to ensure problems are corrected.

Finding(s) – Minerals activities on the NFGT have effects at the national and local levels. These effects include adding additional jobs, increasing revenues to local shops and businesses, providing royalties to local residents, impacting local roads, increasing or decreasing payments in lieu of taxes to local counties.

Inspections in FY 09 indicated most activities were in compliance with operating plans. There were no spills reported or found during FY 09.

Recommendation(s) – No change needed. Continue monitoring mineral operations at existing frequencies. Respond to new requests for operating permits and lease offerings in a timely manner.

Sub-Issue 8. Heritage Resources

Monitoring Item Description - Through project reviews, field surveys, coordination with other resource managers and active monitoring of projects, ensure the protection of significant cultural (heritage) resources (historic properties) from degradation and destruction. A historic property is any archeological or historical site that has been listed on the National Register of Historic Places, or that has been formally determined eligible through consultation under 36 CFR 800.4-800.6.

Variability – No evidence of disturbance or destruction to historic properties is allowed as a result of the implementation of *Plan* guidelines, or as the result of human-caused actions or acts of nature.

Finding(s) - In FY 09, there were no projects which implemented *Plan* Standards and Guidelines that adversely affected historic properties.

Inventories for the presence of historic properties are ongoing. Driving these inventories are the needs of other resource management programs, such as timber, wildlife, engineering, & fire to remain in compliance with Section 106 of the National Historic Preservation Act of 1966. In 2009, the National Forests and Grasslands in Texas began a partnership with the Caddo Tribe of Oklahoma to conduct heritage surveys for timber management projects. The work focused primarily on the Angelina/Sabine and Davy Crockett National Forests. The Caddo crew accomplished 300 acres of intensive heritage resource survey for the Groveton Phase II project on the Davy Crockett National Forest. At the same time, these employees gained valuable work experience. The Supervisor's Office Heritage Resource Program is credited with developing this very important partnership. The NFGT would like to train the Caddo Tribe to assist with prescribe burning on the Forests. There is also interest from the Alabama-Coushatta Tribe of Texas in developing a similar partnership.



Figure 4. Caddo crew members conduct shovel tests on the NFGT.

Recommendation(s) – No change needed. Continue heritage resource coordination and consultation for all projects which implement *Plan* Standards and Guidelines. Continue to develop partnerships with the Tribes.

Issue C. Organizational Effectiveness

Sub-Issue 1. Economics

Monitoring Item Description – The *Plan* projects the amount of funds needed to accomplish its goals and objectives. Annually, the NFGT should evaluate how well *Plan* projections for funding are being met and whether the NFGT is receiving sufficient monies to meet its *Plan* obligations.

Variability – Receiving allocations less than 100 percent of the *Plan*'s average projected budget can prevent full implementation of the *Plan*.

Finding(s) – Since the NFGT is no longer allocated funds based on a percent of its need (as identified in the *Plan* as funds needed to accomplish its goals and objectives), tracking actual expenditures and comparing them to the average projected budget shown in the *Plan* is the only way the NFGT has to determine how much less than *Plan* projected dollars are received. Table 14 displays this type comparison for the past seven years. The total expenditures include the normal operations on the NFGT and do not include emergency funding (such as fire severity, hurricane recovery, and shuttle recovery operations).

Table 14. Forest Expenditures by Fiscal Year

Fiscal Year	Expenditures	Percent of <i>Plan</i> Projected Average Budget*
2000	\$14,491,972	54
2001	\$14,363,604	54
2002	\$17,925,012	67
2003	\$14,080,375	52
2004	\$18,084,902	68
2005	\$21,177,789	79
2006	\$19,356,826	73
2007	\$21,975,842	82
2008	\$25,134,618	94
2009	\$23,810,173	89

**Plan* projected average budget is \$26,657,400.

Recommendation(s) – No change needed. Continue to monitor expenditures to determine where shortfalls may be creating an inability to achieve *Plan* Goals and Objectives.

Sub-Issue 2. Evaluating New Information

a. Emerging Issues, Concerns and Opportunities

Below is information about lawsuits affecting the NFGT. Action has been taken to address and/or adhere to final rulings that have been issued, and lessons learned while continuing litigation support efforts are taken into consideration when planning new projects for implementation of *Plan* Objectives.

(1) National Forest System Litigation Affecting the NFGT

2001 Roadless Area Conservation Rule –During 2009, national direction was issued to clarify how units should handle areas designated as roadless in the 2001 rule. This was done to respond to two conflicting rulings that were issued by the U.S. District Courts in Wyoming (2008) and California (2007). On May 28, 2009, Secretary Thomas J. Vilsack reserved final decision authority over certain forest management and road construction projects in inventoried roadless areas. The Secretary’s Memorandum 1042-154 was intended to assure the careful evaluation of actions in inventoried roadless areas while long-term roadless policy continues to be developed and relevant court cases move forward.

This direction was modified in a letter dated August 3, 2009 and provided re-delegation of authority to the Forest Service to authorize —

Approval of any necessary timber cutting or removal or any road

- construction/reconstruction in emergency situations involving wildfire suppression, search and rescue operations, or other imminent threats to public health and safety in inventoried roadless areas. The local line officer is delegated authority to make these decisions.

Approval of any timber cutting, sale, or removal in inventoried roadless areas

- incidental to the implementation of an existing special use authorization.
- Road construction/reconstruction is not authorized through this re-delegation without further project specific review. The local line officer is delegated authority to make these decisions.

The Sam Houston NF has four areas that are being managed per the Secretary’s direction. These areas are: Big Creek Scenic Area, Winters Bayou Scenic Area, a 200-acre track adjacent to Little Lake Creek Wilderness, and the Big Woods Areas in Compartment 80.

For the most up-to-date information about this issue, visit the Forest Service website at <http://www.fs.fed.us/> and look for a direct link to the Roadless Website.

b. Changes in Policy or Other Direction

National Forest System Land and Resources Management Planning Rule – The U.S. District Court for the Northern District of California invalidated the 2008 Planning Rule on June 30, 2009, holding that it was developed in violation of the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA). The 2000 rule legally came back into effect when the 2008 rule was set aside. The 2000 rule allows the Forest Service to develop, revise, and amend forest plans using the provisions of the 1982 planning rule.

The Department of Agriculture decided not to seek further review of the latest court decision. It was determined that a new planning rule is the best way forward because the agency needs a stable planning rule to meet current and future needs of the National Forest System. Developing a new planning rule provides the opportunity to help protect, reconnect, and restore national forests and grasslands for the benefit of human communities and natural resources. The development of the new rule will provide new direction to help the Forest Service respond to modern challenges, including restoring and conserving forests, protecting watersheds, addressing climate change, sustaining local economies, improving collaboration, and working across landscapes.

As an interim measure, the Department will republish the 2000 planning rule, as amended, in order to make it available to the public in the Code of Federal Regulations. This action will facilitate its use by forests and grasslands in the National Forest System to revise and amend plans while a new rule is being developed.

The public can visit <http://www.fs.usda.gov/planningrule> to find out more about this ongoing process.

c. Significant Changes in Conditions or Demands

(1) Hurricane Ike

Salvage operations from Hurricane Ike were conducted in 2009. The Sam Houston and Davy Crockett National Forests (NFs) sustained the hardest hit, followed by the Sabine and Angelina NFs.

On the Davy Crockett National Forest, much of the wind damage occurred within RCW clusters. Based upon preliminary sketch mapping of damage area by helicopter, 74% of the damage areas were within the HMA, and 62% of the active clusters showed to have moderate to severe damage. However, nearly all active and inactive clusters were impacted by the hurricane, especially clusters in the northern portion of the Forest. Many active clusters lost one or more cavity trees and many non-cavity trees as well. Artificial cavities (inserts) were installed immediately following the hurricane in those clusters losing active cavity trees or those found not to have at least four suitable cavities. A total of 238 inserts were installed in 85 clusters.

On the Sam Houston National Forest, damage from Hurricane Ike was less severe. A total of 25 active and 3 inactive RCW clusters were located in areas where salvage logging occurred. Artificial cavities were installed in clusters losing active cavity trees or in clusters not having at least four suitable cavities in the weeks immediately following the hurricane.

d. Effects of National Forest Management to and from Private Lands

National Forests and Grasslands in Texas management actions affect its lands, resources and adjacent communities. Management activities conducted on nearby lands that are managed by other Federal, State, local governmental agencies, or individuals can also affect NFGT lands and resources as well. These interactions need to be carefully considered and are discussed in the following issues.

(1) Wildland-Urban Interface

The NFGT is a very fragmented forest and there is an abundance of private land intermingled with its lands. This creates a serious wildfire situation where a fire that starts on the NFGT can easily spread to private land. Conversely, a fire that starts on private land can easily spread to federal lands.

In FY 09, the NFGT conducted numerous prescribed fires that, among other benefits, reduced the potential of wildfire to spread. In addition to prescribed fire, mechanical treatments were performed to reduce fuels to address reducing the potential for damaging wildfires to occur. In FY 10, the NFGT will continue its prescribed fire program and increase efforts to mechanically treat strips of land along federal property boundaries to help mitigate the potential for the spread of wildfire.

In 2009, the Sam Houston National Forest (SHNF) began an Environmental Assessment for the West/Central Wildland Urban Interface (WUI) Fuels Reduction project. The project proposes to treat 260 acres adjacent to several subdivisions in Walker County by mechanical means and prescribe burning. The counties surrounding the SHNF are becoming more developed and the acres of WUI have increased significantly in the last 10 years.

(2) Payments to Counties

In FY 09, the NFGT made payments to counties in Texas that contain NFGT lands through Title I of the Secure Rural Schools Act. Table 15 displays the amounts that were paid by the U.S. Treasury to the involved counties.

Title II funds from the Secure Rural Schools Act (SRS) can be used for special projects on federal lands. These projects are developed with the assistance of a Resource Advisory Committee (RAC). The Davy Crockett National Forest (DCNF) is currently the only NFGT Forest that has partnered with the local county officials to develop a RAC. Projects developed by the RAC include watershed restoration and maintenance, infrastructure maintenance, treatment of non-native invasive plant species, and the improvement of wildlife habitat.

Table 15. Payments to Counties in 2009

Counties	Payments
Angelina	\$205,601
Houston	\$680,921
Jasper	\$86,819
Montgomery	\$209,995
Nacogdoches	\$38,810
Newton	\$13,929
Sabine	\$688,396
San Augustine	\$302,684
San Jacinto	\$264,750
Shelby	\$428,303
Trinity	\$497,348
Walker	\$238,380
Total	\$3,655,940

e. Community Outreach

Three of the top ten largest cities in the United States are located in Texas- Houston (# 4), San Antonio (# 7), and Dallas (# 9). All three are within a 2-4 hour drive of a National Forest or National Grassland in Texas. The population of Texas is urban and becoming more diverse (<http://www.window.state.tx.us/specialrpt/tif/population.html>). The NFGT wants to reconnect Forest visitors with their National Forests.

(1) Environmental Education

Urban Connections

The National Forests and Grasslands in Texas hired a Student Career Experience Program (SCEP) student to coordinate its Environmental Education programs. The Environmental Education program has been working with students from Stephen F. Austin University and the Texas Forest Service to develop an outreach program through Urban Connections. The goals of the Urban Connections program are to:

- Increase awareness and knowledge of outdoor recreation and land stewardship opportunities.
- Connect organizations and diverse/under-served communities with the National Forest.

- Increase the level of stewardship in urban users of natural resource-based areas.
- Expand and highlight employment and volunteer opportunities in natural resource agencies and organizations.

The Urban Connections program has been involved in many events throughout Central and East Texas.

More Kids in the Woods

The Caddo/LBJ National Grassland received a grant from the More Kids in the Woods Initiative to conduct Science Days/Mission Possible 9.0 mile walk. The event was attended by children and their parents.

The Caddo/LBJ National Grassland also conducts Outreach events at Cabelas and Bass Pro Shops in Fort Worth, Texas throughout the year. The events bring awareness to urban dwellers of the National Forests and Grasslands in Texas.

The Sam Houston National Forest hosted a More Kids in the Woods Program at Double Lake Recreation Area.