



United States
Department of
Agriculture

Forest Service
Pacific Southwest
Region

Shasta-Trinity
National Forest

Fiscal Year 2005

Monitoring and Evaluation Report



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Summary of the 2005 Monitoring Results

Physical Environment

Soil and Water

Best Management Practices (BMPs): Results in 2005 showed that of the 66 BMP applications monitored, 57 were implemented effectively and 9 were not effective. Site specific recommendations were made for the sites where BMPs were found to be ineffective. Most of the problems were related to declining road maintenance.

Soil Quality: A Soil Quality Standard monitoring program was conducted in 2005 to determine if soil erosion standards were met for OHV activities on heavy use, shallow soils. This monitoring effort showed that in the Chappie-Shasta OHV park, located on the Shasta-Trinity National Forest, erosion levels were normal for typical OHV parks. It also showed that in event activities (races), soil erosion is accelerated around staging areas and event trails. OHV event trails exhibited berming thus impairing water outflow structures. This monitoring shows that dispersed traffic and proper trail maintenance are key factors in controlling accelerated erosion in OHV parks.

Watershed Restoration Projects: Pre-project monitoring continued on the 92-acre Trout Creek Wetland Restoration Project in 2005. The Forest Service established baseline vegetation plots, continued to measure water levels in wells and began stream discharge measurements. This baseline data will be compared with post-project data in order to monitor the effects of the project on the water table.

Post-project monitoring was completed for the Tate Creek Restoration Project. Results indicate that the willow cuttings continued to be successful for all areas where willows were established (80% survival) and the channel has established a stable form and pattern in the project area.

In 2005 the westside hydrologist monitored 15 road crossings at locations where streams were excavated as part of road decommissioning, culvert upgrades or fish passage improvements. Monitoring was accomplished by using photo points, channel cross-sections, ocular assessments and direct fluvial sediment monitoring. Over 85% of the monitoring points met the criteria of no sediment input to channels. Only one crossing showed turbidity downstream (>20 active channel widths) for a short time.

Biological Environment

Fisheries Management

An analysis of effects of multiple fish passage sites was completed in 2005. It is expected that the assessment of the individual passage sites will benefit from the Alternative Consultation Agreement (ACA) in FY06 and beyond. The ACA process allows for biological assessments to be completed by forest fisheries biologists without the need for review by the National Marine Fisheries Service (NMFS), depending on the degree of projected effects to the coho salmon.

Sport fisheries: During 2005, lake habitat for sport fisheries was improved on 234 acres by the placement of 20 underwater brush structures, 15 willow plantings and two acres of seeding. Monitoring showed three to ten times more fish in these treatment areas compared to untreated areas.

Improve the anadromous fishery within the South Fork Trinity River and its tributaries:

Surveys were conducted on juvenile coho salmon, adult salmon, stream condition and spring/fall Chinook salmon within the South Fork Trinity River. ESA consultation with NMFS for fish passage projects was also completed.

Wildlife (Threatened and Endangered)

Bald Eagles: During 2005, 24 eagle chicks were fledged from 33 occupied territories. The Forest exceeded the Bald Eagle Recovery Plan objective of 65% with success at 72%. Contributing to breeding success was implementation a Forest Order to close and restrict access to nest territories likely to be impacted by visitors.

Northern spotted owls: During 2005, 20,000 acres of suitable northern spotted owl habitat were surveyed on the Shasta McCloud Management Unit (SMMU) and 10, 000 acres on the Trinity River Management Unit (TRMU). Information was coordinated with the State of California and adjacent private landowners. Two nesting owl pairs were found on SMMU and four non-nesting pairs were found on TRMU.

Peregrine falcon: Two historical sites on the Shasta side were monitored in FY 2005. Biologists did not confirm occupancy or breeding. On the Trinity side of the Forest, biologists surveyed eight peregrine territories. Of the eight peregrine eyries, four had adult peregrines present with only one of these successfully fledging a chick in 2005. A formalized database was developed at the district.

Neotropical birds

Neotropical bird population and habitat data were collected at Whites Bar on the Trinity River. Mist nets and point counts were conducted 3 times from May-August according to protocol. Surveys have occurred at the Whites Bar station since 1991. Partnerships includes the Klamath Bird Observatory, the Institute for Bird Populations, and US Forest Service's Redwood Sciences Lab. Surveys are accomplished on 1,000 acres. Results from over 30 bird species are integrated into breeding bird survey data at the US Geological Survey's Patuxent Wildlife Research Center.

Botany

Sensitive Plants: Thirty-seven new populations of sensitive plants were found and documented in FY 2005. Plant Biological Evaluations were written for 31 projects forest-wide. No sensitive plants on the Shasta-Trinity were proposed for listing by USFWS. Mitigations were developed for six projects in FY 2005 to lessen or eliminate project impacts to sensitive plants. In general, mitigations were implemented as written and were effective.

The conservation strategy process for serpentine endemics of the Rattlesnake Terrane (Yolla Bolla and Hayfork RDs) moved forward with habitat model development and testing for six species by the Univ. of California at Davis.

Noxious Weeds: The Shasta-Trinity NF Forest Supervisor signed a Memoranda of Understanding establishing Shasta and Trinity Weed Management Areas. Shasta-Trinity weed program coordinators participated in Siskiyou, Shasta, and Trinity Weed Management Areas, including a steering committee for the Shasta Weed Management Area.

Resource Management Programs ---

Fire and Fuels

Military Machine Pile Burning. A post-burn fuels inventory was taken and a visual site assessment was performed for the Military Machine Pile fuels project. The 2005-06 Military project successfully implemented 160 acres of prescribed activity fuels treatments by mechanical piling and burning.

Timber Management

Allowable sale quantity: The timber volume offered for sale in FY 2005 totaled 34.9 MMBF compared to the 82.0 MMBF allowable sale quantity in the Forest Plan. The average annual timber volume offered for sale since the signing of the Forest Plan in 1995 is about 57.1 MMBF, or about 70% of the ASQ.

	Forest Plan Objective	FY 2005 Accomplishment
Regeneration Cutting-Volume (MBF)	66,000	4,100 MBF
Intermediate Cutting-Volume (MBF)	12,000	16,000 MBF
Salvage Cutting-Volume (MBF)	4,000	14,900 MBF
Total MBF	82,000	35,000 MBF
Regeneration Cutting-Acres	3,500	227 ACRES

Reforestation and Timber Stand Improvement (TSI): Reforestation acres accomplished in FY 2005 totaled 133 acres. TSI acres accomplished in FY 2005 totaled 4448 acres

Biomass: In FY 2005 about 7,000 MBF of biomass sold as part of the Forests' regular timber sale program. Biomass opportunities have been emphasized more on the east side of the Forest. Opportunities are limited on the west side of the Forest primarily due to economic considerations including longer distances to transport materials for processing.

Facilities Management

Roads: Gains have occurred recently in the development of comprehensive road inventories. The forest now has a much better picture of its road assets and conditions with more up-to-date records and improved accountability. There are approximately 6500 miles of roads on the Forest. Over the past 5 years only 15-25% of those roads have received any type of maintenance.

The road maintenance budget is declining and it is expected that the maintenance level will drop to 10-15% in the next few years. This is having a direct effect on soil and water quality as can be seen in the BMP (Best Management Practices) monitoring results. We are also getting more complaints about road condition from the public. More roads will have to be closed to avoid critical health and safety issues in the future.

Buildings and administrative sites: Every building and administration site on the Forest has been inspected by Engineering in the past five years. The Forest has met the inspection frequencies and database requirements for record keeping. However, the results of these inspections indicate that current funding levels are not sufficient to maintain buildings to standard – funding is primarily dedicated to correcting health and safety deficiencies. The deferred maintenance backload continues to increase. The Forest is working to dispose of buildings identified for decommissioning in the Facilities Master Plan.

Potable water sources: All potable water sources on the Forest were tested during 2005 in accordance with the Safe Drinking Water Act and other regulatory health requirements. From the last two years worth of data, only 5-6% of our monthly routine water samples tested positive and only 1% was confirmed with repeat sampling. If substandard results are found from testing, the site is posted “non-potable” until it is cleaned up. The forest maintains a computer-based drinking water system inventory for each drinking water system, including physical data, treatments, and monitoring testing results.

Rising costs are also a concern for the drinking water program. The Forest has to contract specialized crews to do work that was previously performed by Forest employees. For example, Forest Service employees have not been permitted to clean out water tanks for the past 4-5 years. Instead, a confined-space, 3-person certified crew must be contracted to clean the tanks.

Forest Pest Management

Surveys from 2005 located 42,671 acres of conifer mortality on the Forest compared to 53,000 acres in 2004. Conifer mortality is known to have a direct relationship to the average spring snowpack in the Sacramento River drainage. The spring snowpack in 2005 was at 110% of normal compared to 2004 which was at 85% of normal.

Range Management

The current emphasis for the Forest range program is to complete NEPA on all range allotments by 2009. The NEPA target for 2005 was four allotments. The Forest met and exceeded this target, completing NEPA on seven allotments. Range administration targets, including monitoring was accomplished on 55% of the allotments, also exceeding a target of 30%. Range readiness and utilization checks were conducted on all 13 active allotments. However, only seven allotments were monitored to Forest standards. Results of this monitoring effort are positive and indicate that these allotments meet or are moving towards meeting existing standards and guidelines.

Public Use and Information Programs

Wild and Scenic Rivers

Continual improvement is occurring in the wild and scenic character of designated rivers. This can be attributed to the assistance of the public, partners and the completed implementation guides. Landownership issues (encroachment of structures on National Forest lands due to faulty land surveys, and vice versa) in the Trinity River corridor continue to accumulate due to a lack of lands

funding. The existing character of proposed Wild and Scenic River are being protected until there is a formal decision on classification.

Wilderness

The primary focus of the Forest is to meet enough components of the 10-year Wilderness Stewardship Challenge Wilderness to put all of the five wilderness areas into category of “managed to standards.” Also, Implementation Schedules (WISs) are being used to implement direction from the Forest Plan. A Fire Use Plan is currently being developed for the Trinity Alps Wilderness. Implementation of the Summit Pass under the Federal Lands Recreation Enhancement Act helps maintain public service in the Mt. Shasta Wilderness. Wilderness boundary management is conducted on an as-needed basis, with a significant backlog of un-posted boundary. Wilderness information programs, including the “electronic kiosk” for the Trinity Alps, help get necessary information to wilderness visitors.

Recreation

Recreation Partnerships: There has been a strong emphasis on partnerships, volunteerism and hosted programs on the Forest since 1995. In 2005 the Shasta-Trinity and the Klamath National Forests hosted the 2005 Centennial Partnership Symposium in the Trinity Alps Wilderness. Participants were videotaped and spoke about the success of these partnerships that provide unique opportunities for youth, increased access to the back county and improved protection of wilderness areas.

Off Highway Vehicle (OHV) Route Designation Process: In 2005 the Forest continued to implement the five step OHV Route Designation Strategy and the new Travel Management Rule.

Direct involvement with motorized and non-motorized user groups, other state and federal agencies and local community members occurred in 2005 to contribute to meeting the route designation strategy.

Pacific Crest Trail (PCT): In 2005 the California Conservation Corps (CCCs) and the Back Country Horsemen (BCH) helped to open up the last remaining portion of Section O of the PCT (running roughly from Burney Falls to Castle Crags).

Visual Quality

The 2005 visual quality program focused on the design needed to: (1) visual quality review of proposed California Department Transportation bridges (2) collaborate in the development for Volcanic Legacy Scenic Byway signing, and (3) monitor scenery for vegetation management projects (4) monitor scenery for special use permits. Construction and upgrade of the recreation sites will begin in FY2005. Scenic Byway signs will be fabricated as soon as possible.

Law Enforcement

In 2005 there was an increase in the number of marijuana gardens, the number of plants eradicated and an increased sophistication of the drug trafficking organizations that manage the gardens. The law enforcement workforce was down to 1 Patrol Captain and 3 Law Enforcement Officers on the Shasta-Trinity NF. In this situation it is more difficult to adequately deal with all types of increased incidents.

Social and Economic Environment _____

Hayfork Adaptive Management Area

Studies continued on the following projects:

1. O&C Research on logging activity noise disturbance effects to Northern Spotted Owls (*Strix occidentalis caurina*).
2. Effects of Off-Highway Vehicles on Northern Spotted Owls (*Strix occidentalis caurina*).

The Hayfork CRAFT Beta Testing Project was started in 2005. Comparative Risk Assessment Framework and Tools (CRAFT) is designed to lead natural resource managers through an integrated assessment of the risks, uncertainties, and trade-offs that surround forest and rangeland management. CRAFT helps to identify and clarify objectives, design alternatives, assess probable effects and compare and communicate risks. The beta testing is expected to be completed in 2007.

Community Development/Partnerships

Partners: In 2005 the Shasta Trinity NF partnered in 131 active agreements in addition to cooperative fire protection agreements. Partnerships included grants and agreements with over 80 different partners. Some of these include: the Resource Advisory Councils (RACs) in Shasta and Trinity Counties, CalTrans, California Conservation Corps, Trinity County Resource Conservation District, Bureau of Reclamation, Western Area Power Administration, the State of California, Rocky Mountain Elk Foundation, California Deer Association, and the Mule Deer Foundation, the Watershed Research & Training Center, and the Back Country Horsemen of California.

In FY05 there were 9 RAC projects funded in Shasta County for a total of \$ 321,705 and 16 RAC projects funded in Trinity County for a total of \$ 831,056.

Contribution to the National Strategic Plan _____

The USDA Forest Service Strategic Plan for Fiscal Years 2004-2008 displays six conservation goals for the Nation's forests and grasslands. The six goals are based on four current threats to conservation - growing fire danger due to hazardous fuel buildups; the spread of invasive species; loss of open space; and unmanaged recreation, particularly the unmanaged use of off-highway vehicles. The goals of the Strategic Plan include:

1. Reduce the risk from catastrophic wildland fire
2. Reduce the impacts from invasive species
3. Provide outdoor recreation opportunities
4. Help meet energy resource needs
5. Improve watershed condition
6. Other mission related work.

During 2005 the Shasta-Trinity National Forest made contributions toward all of these goals. These results can be found in the Monitoring and Evaluation report under each respective topic.

Appendix A: Implementation of Forest Plan Standards and Guidelines

Appendix A provides background information for the 2005 Monitoring and Evaluation Report. It is organized by resource areas and evaluates the use of key standards for each area.

Physical Environment

Soil and Water

Best Management Practices: BMPs

Forest Plan Standard: Implementation of Best Management Practices for protection or improvement of water quality. (Ref: Forest Plan 4-18 c.)

Objectives: To determine if BMPs were implemented as prescribed in the BMP handbook. To determine if BMPs were successfully implemented at selected sites where BMPs had been prescribed. To determine if the BMPs as implemented were effective for their intended purpose.

Methods: Evaluation procedures vary greatly based upon the management activity evaluated, but the overall evaluation process is similar. The type and number of management activities evaluated each year on the Forest are assigned by the Regional Office. The specific management activity sites evaluated are randomly selected from project pools. The criteria for sample pool development have been standardized by the Region for each activity type and are described in the BMP User's Guide (2002).

All BMP evaluations were carried out by unit hydrologists and/or hydrologic technicians. Whenever possible evaluators were accompanied by unit personnel responsible for implementing the BMP (i.e. range conservationist, contracting officer, etc.). Follow-up office reviews of each BMP occurred with the evaluator and appropriate department representative in those cases when a representative could not accompany the evaluators to the field.

Results: The table below shows the specific BMPs that were monitored in FY 2005. Of the 66 BMP applications monitored, 57 were found to be effective in their application and 9 were not. Most of the BMP applications not found to be effective were related to road maintenance issues.

Recommendations

- Seed landings with native species to help prevent the introduction of noxious weeds
- Preventative road maintenance (stormproofing) is needed throughout the Westside. Less maintenance funding is available each year.
- Rolling dips should be used to lower maintenance needs and decrease erosion via rilling and gullying.
- The forest needs OHV regulations for unclassified roads/trails.
- Botany survey is needed on native grass seed used on decommission and other watershed restoration projects to justify the high price and low root mass of this product. It is not an effective erosion control, but may help in preventing the spread of noxious weeds.
- Public education needed on human waste and trash disposal, especially during hunting season.

- There is a need to field check and update maintenance levels recorded in Infra.

2005 BMP Evaluations on the Shasta-Trinity National Forest

Form	Practice	Number of Sites Evaluated	Number of Sites Implemented	Number of Sites Effective
T01	Streamside Management Zones	4	4	4
T02	Skid trails	4	4	4
T03	Suspended yarding	0	0	0
T04	Landings	7	7	7
T05	Timber sale administration	2	2	2
T06	Special erosion control and revegetation	0	0	0
T07	Meadow Protection	1	1	1
E08	Road surface, drainage and slope protection	7	4	5
E09	Stream crossings	5	2	3
E10	Road Decommissioning	5	5	5
E11	Control of side cast material	4	4	3
E12	Servicing and refueling	1	1	1
E13	In-channel construction practices	4	4	4
E14	Temporary roads	3	3	3
E15	Rip rap composition	1	1	0
E16	Water source development	1	1	0
E17	Snow removal	1	1	1
E18	Pioneer road construction	0	0	0
E19	Restoration of borrow pits and quarries	0	0	0
E20	Management of roads during wet periods	1	1	0
R22	Developed recreation sites	1	1	1
R23	Location of stock facilities in wilderness	0	0	0
R30	Dispersed Recreation Sites	4	3	4
G24	Range management	1	1	0
F25	Prescribed fire	2	2	2
M26	Mining operations (locatable minerals)	1	1	1
M27	Common variety minerals	2	2	2
V28	Vegetation manipulation	2	2	2
V29	Revegetation of surface disturbed areas	2	2	2
	Totals	66	59	57

Site specific recommendations were made for the sites where BMPs were found to not be effective.

The following table provides the combined results of the BMPEP monitoring conducted from 1999 to 2004 in order to provide a comparison with the results for 2005. In 2005 89% of the sites monitored found that BMPS were implemented and 86% were effective. The totals for the previous six years show that 73% of BMPS were implemented and 83% were effective. Looking at individual results shows improvement in BMP implementation overall, but indicates road surface, drainage and

slope protection and stream crossings continue to be problem areas. The results have been reported annually to the Forest and the Regional Office.

1999-2004 BMP Evaluations on the Shasta-Trinity National Forest

Form	Practice	Number of Sites Evaluated	Number of Sites Implemented	Number of Sites Effective
T01	Streamside Management Zones	22	18	20
T02	Skid Trails	31	19	30
T03	Suspended Yarding	18	17	18
T04	Landings	40	33	39
T05	Timber Sale Administration	4	4	4
T06	Special Erosion Control & Veg	1	1	1
T07	Meadow Protection	11	11	11
E08	Road Surface, Drainage and Slope Protection	20	9	11
E09	Stream Crossings	16	7	7
E10	Road Decommissioning	8	4	5
E11	Control of Sidecast Material	13	5	5
E12	Servicing and Refueling	1	1	1
E13	In-Channel Construction Practices	7	7	6
E14	Temporary Roads	11	9	11
E15	Rip Rap Composition	2	1	1
E16	Water Source Development	1	1	1
E17	Snow Removal	10	8	8
E18	Pioneer road construction	0	0	0
E19	Restoration of borrow pits and quarries	0	0	0
E20	Management of Roads during Wet Weather	2	0	0
R22	Developed Recreation Sites	8	8	8
R23	Location of stock facilities in wilderness	0	0	0
G24	Range Management	5	4	4
F25	Prescribed Fire	13	11	12
M26	Mining Operations (Locatable Minerals)	3	1	2
M27	Common Variety Minerals	4	2	2
V28	Vegetation Manipulation	5	5	5
V29	Revegetation of Surface Disturbed Areas	1	1	1
R30	Dispersed Recreation Sites	6	6	6
Totals		263	193	219

Public Involvement: occurs during the NEPA process for identified projects.

Data Location: The results of the BMP monitoring are stored in the Regional BMPEP Database as well as on a Forest database. The Forest Headquarters Office, Redding, CA also has the original data collection forms.

Soil Quality Standards and Soil Productivity

Forest Plan Standards: Implement forest soil quality standards as they relate to soil productivity and soil erosion. (Ref: Forest Plan 4-25e. Forest Soil Quality Standards, in relation to soil erosion).

Objectives: Erosional data for the Chappie-Shasta OHV park was lacking for accurate assessment of erosion from OHV use. Because erosion data was missing for accurate assessments for normal use and event use, monitoring sites were established on the two main soil types, Holland and Goulding series Soil erosion was measured for a period of 1 year to develop preliminary OHV Chappie-Shasta erosion database to estimate erosion trends.

Methods: Erosion monitoring was established on types of trails (easy, moderate, difficult) and use level (light, moderate, high). Background erosion for Holland and Goulding soils and disturbance erosion on Holland and Goulding soils were collected using soil troughs. Three soil troughs were placed below Shasta dam near the Chappie-Shasta OHV staging area on trails OHV17, OHV19, and OHV19a. Erosion was monitored from late winter 2005 to summer of 2006.

Results: Areas near the staging area had the most use and in the Goulding soils had the highest erosion rates (see Table 1 below). Trail OHV19 had the highest erosion rates due to its proximity to the main staging area and being a moderately difficult trail. OHV17 and 19 were also event trails so had additional erosion due to a large (500+ riders) hare-scramble event on May 6th, 2006.

Table 1: Erosion rates for three high use trails

Trail	Conditions	Size (ft ²)	Sediment (lbs)	Erosion Rate (t/a)
OHV19a	Holland fine-seds	1573	103	1.3
OHV19	Goulding coarse-seds	807	303	8.2
OHV17	Goulding coarse-seds	1290	163	2.8

Recommendation: Walking these trails after the large Hare-scramble event showed erosion was concentrated in certain preferred lines of travel and this caused side outlet areas to be grooved which did not allow water to flow off but to concentrate down main trail thus causing accelerated erosion. Maintenance is the key to keeping these trails functioning properly since side outlets are in proper locations and will work fine if they are cleared out on an annual basis. Also dispersed staging areas are necessary to reduce heavy impacts to resources near main staging areas. This data is only preliminary and several other locations are planned for data collection in 2006-2007 season to evaluate roads, OHV trails, and motorcycle trails on other soil types.

Public Involvement: occurs during the NEPA process for identified projects.

Where is data located: Shasta-Trinity National Forest Headquarters, Redding, CA.

Watershed Restoration

Forest Plan Standards: Identify and treat areas with degraded watershed condition. (Ref: Forest Plan 4-18 f.)

Monitoring Objectives: To establish baseline conditions prior to restoration implementation. To determine if watershed restoration projects were implemented as planned. To determine if the watershed restoration practices implemented were effective in achieving desired results.

Methods: Some larger projects have specific methods outlined in their monitoring plans. Other monitoring efforts include subjective on-site evaluations and photo point monitoring. Contracts through contract administration were monitored. The Forest monitored implementation of road decommissioning work by selecting a sample of road segments and following the monitoring methods of the Region's Best Management Practices Evaluation Process. The field sites were evaluated following the winter after the projects were completed.

Trout Creek Wetland Restoration Project: Pre-project monitoring at Trout Creek continued in 2005. The FS established baseline vegetation plots, continued to measure water levels in wells and began stream discharge measurements. This baseline data will be used to compare to post project data in order to monitor the effects of the project on the level of the water table.

Tate Creek Restoration Project: Post project monitoring was completed for the Tate Creek Restoration Project. Monitoring efforts consisted of evaluating the effectiveness of riparian planting and changes in the stream channel configuration. Results indicate that the willow cuttings continued to be successful for all areas where willows were established (80% survival) and that channel adjustments have largely ceased indicating that the channel has established a stable form and pattern in the project area.

Westside Watershed Restoration: In 2005 the westside hydrologist monitored 15 road crossings at locations where streams were excavated as part of road decommissioning, culvert upgrades or fish passage improvements. Monitoring was accomplished by using photo points, channel cross-sections, ocular assessments and direct fluvial sediment monitoring. Over 85% of the monitoring points met the criteria of or no sediment input to channels. Only one crossing showed turbidity downstream (>20 active channel widths) for a short time.

Recommendations: Explore ways to increase watershed restoration capability for SMMU through the use of partnerships, contracts, grant and agreements and unit personnel. In conjunction with the above explore ways to leverage partnerships to accomplish monitoring activities and increase overall watershed monitoring capability. Continue monitoring of watershed restoration activities.

Biological Environment

Fisheries Management

Sport Fisheries

Forest Plan Goal: Emphasize sport fisheries as a major recreation activity by expanding recreational fishing opportunities. (Ref: Forest Plan Goals, page 4-4, # 12).

Monitoring Objective: To determine fish response and abundance related to habitat improvement treatments compared with untreated areas in Shasta and Trinity Lakes.

Results: During 2005 there were 234 acres of underwater lake habitat improved for sport fisheries including the placement of 20 underwater brush structures, 15 willow plantings and two acres of seeding. Fish utilization abundance was monitored at the improvement sites via scuba diving along with underwater photography. Fish abundance continues to range from three to ten times greater in these treatment areas compared to untreated control areas.

Internet website Fishing Page: A Shasta-Trinity National Forest ‘fishing page’ website is viewable at: www.fs.fed.us/r5/shastatrinity/recreation/st-main/st-fishing/index.shtml.

Summer Steelhead and Spring-Run Chinook Habitat

Forest Plan Standard: Emphasize the restoration of summer steelhead and spring-run Chinook salmon habitat in the South Fork Trinity River Basin. (Ref: Forest Plan Goals, page 4-4, #13).

Monitoring Objective: Detect changes in channel cross section geometry and bedload particle size, since these physical processes affect biological health. Previous inventories completed in the 1980s and 1990s did not provide us with sufficient focus to detect trend changes.

Results: South Fork Trinity River spring-run Chinook salmon adult surveys have been conducted repeatedly since 1998 via snorkeling and the counting of spawning redds. The California Department of Fish and Game coordinates this survey and staff from the Forest participate every year. Spring-run Chinook salmon adult and redd surveys were once again funded in FY05. Results for 2005 are summarized below:

Adult Chinook	Steelhead	½ pound Steelhead
61	73	22

Instream Flows

Forest Plan Standard and Objective: Develop an instream flow assessment program to determine fish needs and to protect the integrity of fish habitat in selected streams. (Ref: Forest Plan Standards and Guidelines, page 4-18, #9a)

Results: In 2004 an agreement was signed by PG&E to adopt the proposed flows for the Pit 3, 4 and 5 FERC relicensing project supported by the Forest Service. The agreed-upon flows within the three Pit River bypass reaches (20+ miles in length) increase up to 300% over existing flow levels. The new license cannot be implemented, however, until PG&E develops numerous monitoring plans that were requested by the Forest Service within the 4(e) conditional environment. Review and comment of these draft plans by the USFS occurs on short notice whenever PG&E issues a new draft and will be on-going in 2005 and beyond.

Forest Plan Standard: Coordinate instream flow needs with the California Department of Fish and Game (DFG), Counties, and other local agencies to benefit fish habitat. Specific projects may entail hydroelectric facilities, water diversions, and water impoundments. (Ref: Forest Plan Standards and Guidelines, page 4-18, #9b)

Results: The DFG was a representative on the Pit River Collaborative Team and worked cooperatively with the USFS in the development of the Forest Service’s 4(e) conditions and 10(a) recommendations.

Improve Anadromous Fishery

Forest Plan Standard and Objective: Improve the anadromous fishery within the South Fork Trinity River and its tributaries. This can be done by evaluating and implementing opportunities for stream habitat improvement, watershed restoration, and biological (stock) enhancement in the context of a watershed/ecosystem analysis. These projects will be done in conjunction with the Trinity River

Basin Fish and Wildlife Management Program. (Ref: Forest Plan Standards and Guidelines, page 4-18, #9c)

Results: South Fork Management Unit fisheries funds were used to support the Trinity County Resource Conservation District (RCD) projects for road obliteration, fish passage NEPA, and East Fork South Fork watershed restoration road decommissioning NEPA. Juvenile coho salmon surveys, adult salmonid surveys, stream condition surveys, and spring/fall Chinook salmon surveys were all conducted within the South Fork Trinity in 2005. ESA consultation with NMFS for fish passage was also completed.

Forest Plan Standard: Coordinate rehabilitation and enhancement projects with cooperating agencies involved in the Model Steelhead Stream Demonstration Project Plan and the Trinity River Basin Fish and Wildlife Management Program. (Ref: Forest Plan Standards and Guidelines, page 4-18, #9d)

Results: Coordination with the Management Program was active in FY05. The Forest Service is a chartered member of the Trinity River Restoration Program Management Council and participates in all Council and subcommittee functions. The Forest is scheduled to take the lead on a Trinity River Coarse Sediment injection project in the Trinity River on Forest Service managed lands immediately below the Lewiston Dam outlet to be completed in FY2006.

Threatened Endangered and Sensitive (TES) Species

Forest Goals and Standards: Monitor and protect habitat for federally listed threatened and endangered (T&E) and candidate species. Assist in recovery efforts for T&E species. Cooperate with the State to meet objectives for State-listed species. Manage habitat for sensitive plants and animals to prevent them from becoming a candidate for T&E status.

Threatened and Endangered Species for the Shasta-Trinity National Forest

Type	Scientific Name	Common Name	Category	Critical Habitat
Plant	<i>Orcuttia tenuis</i>	Slender Orcutt grass	T	N
Invertebrate	<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	T	N
	<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	T	N
	<i>Pacifastacus fortis</i>	Shasta crayfish	E	N
Fish	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
	<i>Oncorhynchus mykiss</i>	Central Valley steelhead	T	P
	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	P
	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	P
	<i>Oncorhynchus tshawytscha</i>	winter-run chinook salmon	E	Y
Amphibian	<i>Rana aurora draytonii</i>	California red-legged frog	T	N
Bird	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Coccyzus americanus</i>	western yellow-billed cuckoo	C	N
	<i>Haliaeetus leucocephalus</i>	bald eagle	T	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y
Mammal	<i>Martes pennanti pacifica</i>	Pacific fisher	C	N

Source: Forest Records and US Fish & Wildlife Service document February 8, 2005: 86570305-95212

(E) Endangered; (T) Threatened; (C) Candidate species;

Critical Habitat on Shasta-Trinity National Forest: (Y) Designated, (P) Proposed, (N) Not Designated

Examples of Monitoring

1. Spotted Owl monitoring - Shasta N.F.

Objective: Monitor northern spotted owl nesting territories to determine breeding status and monitored projects to determine presence as required to complete projects during limited operating period.

Methods: During FY 2005, 20,000 acres of suitable northern spotted owl habitat were surveyed on the Shasta McCloud Management Unit (SMMU). This included 4 projects and 15 historical territories. Region 5 spotted owl survey protocol was utilized and historical searches to determine breeding status. Information was coordinated with the State of California and adjacent private landowners.

Results and Recommendations: Found 2 nesting northern spotted pairs. Owl nesting activity was lower than 1989-1997 monitoring results. Recommend continuing monitoring owl territories and projects to assess breeding status.

Data location: statewide *Strix* database and the Mt. Shasta and McCloud Ranger District wildlife offices.

2. Spotted Owl monitoring - Trinity N.F.

Objective: The purpose of monitoring was to determine presence, nesting and reproduction status of Northern spotted owls on timber projects and known activity centers.

Methods: During FY 2005, 10,000 acres of suitable owl habitat were surveyed on the Trinity Management Unit (TRMU). T&E habitat was evaluated by reviewing vegetation maps, aerial photos and conducting some field work. Night and day surveys of known owl pairs and /or single owl locations were surveyed in proposed timber tale areas using the standardized spotted owl protocol.

Results and Recommendations: Four spotted owl pairs were found with non-nesting determined for all. Recommend continuing monitoring owl territories and projects to assess breeding status.

Data location: Big Bar District wildlife offices.

3. Bald Eagle monitoring

Objective: To protect, monitor, manage and enhance the bald eagle population (35 pairs) and habitat on Shasta, Lewiston and Trinity Lakes within the Shasta-Trinity National Recreation area.

Methods: Conducted at least 3 visits per nest to determine productivity and nest success as per Pacific State Bald Eagle Recovery Plan direction and California Dept. of Fish and Game protocol to determine occupancy, nest status and nest success.

Results and Recommendations: During 2005, 35 nest territories and almost 80,000 acres of eagle habitat were monitored at 3 reservoirs in the NRA. Of the total number of occupied territories, eagles fledged 24 chicks from 33 occupied territories in 2005. We exceeded the Bald Eagle Recovery Plan objective of 65% nest success (72%) though did not meet the objective of 1 chick fledged per occupied territory. Contributing to breeding success was implementation of a Forest Order to close and restrict access to any nest territory that we feel is likely to be impacted by visitors. Continue yearly monitoring.

Data location: Shasta Lake and Weaverville Ranger District Offices.

4. Small Owl monitoring

Objective: Four owl species - the Northern Saw-whet, Flammulated, Western Screech and Northern Pygmy - were monitored to gain information for analysis of small owl population trends. Information will be used to provide baseline information in project-level NEPA and MIS analysis.

Methods: Methods follow the Owl Capture and Census Protocol designed by the Klamath Bird Observatory and Redwood Sciences Lab. Monitoring sites were selected in the interior of the forest where two mist-nets are placed parallel with a tape player in the middle to audiolure owls into nets. Owl capture and censusing occurred from dusk to dawn.

Results and Recommendations: Seven owl territories were found and monitored thru the capture and censusing method in 2005.

5. Peregrine Falcon monitoring - Shasta N.F.

Objective: Monitor historical sites to conform nesting or occupancy.

Methods: Used Region 5 peregrine protocol as a guide for monitoring individual, known peregrine habitat. Several visits were made to each site.

Results and Recommendations: Two historical sites were monitored in FY 2005. Biologists did not confirm occupancy or breeding. Recommend continue yearly monitoring.

Data location: Mt. Shasta and McCloud Ranger Station wildlife offices.

Public Involvement: Information is shared with California Department of Fish and Game and adjacent land owners.

6. Peregrine Falcon monitoring - Trinity N.F.

Objective: Cooperate with the State to meet objectives of State Listed Species to monitor our peregrine falcon territories. Most of the peregrine falcon eyries (nesting sites) have been monitored for over twenty years and an extensive database has been generated over this time.

Methods: Biologists surveyed 8 peregrine territories by following established peregrine falcon protocols. Observation points were established where the observer can see the nesting area without impacting the birds using high powered spotting scopes. The observer watched the nesting area for 1 to 5 hours, depending on weather and activity. Any observations and all activities were recorded for data entry.

Results and Recommendations: Of the eight peregrine eyries, four had adult peregrines present with only one of these successfully fledging a chick in 2005. A formalized database was developed at the district. In addition, peregrine occupancy and reproductive results are forwarded to a national database for distribution. It is important to continue monitoring efforts so that a complete data picture can be formulated.

Data location: Hayfork Ranger Station.

Public Involvement: Information is shared with California Department of Fish and Game and adjacent land owners.

7. Maintain Goshawk Territories

Objective: McCloud Ranger District contains approximately 33 historical nesting territories. Nest searches were completed on all of the 33 territories in FY 2005. The standard is to protect the viability of the species and to assess individual territories on a project basis. Since 1992, 100-acre goshawk territories have been defined to include primary and alternate nest cores. During project preparation, habitat alteration is delayed or minimized in the 100-acre territories if nesting has occurred in recent years.

Methods: Walking surveys determined recent occupancy and nest success in 33 goshawk territories. Information was shared with California Department of Fish and Game and adjacent land owners.

Results and Recommendations: Nest searches were completed in 33 territories. One territory was occupied with a nesting pair. The validity of the 100-acre core territories will be visited on a project-by-project basis. Recommend to continue monitoring 100-acre nest territories.

Data location: Mt. Shasta Ranger District wildlife office.

Public Involvement: Information is shared with California Department of Fish and Game and adjacent landowners.

Late-Successional Reserves

Forest Plan Standard: A management assessment should be prepared for each large Late-Successional Reserve (or group of smaller Late-Successional Reserves) before habitat activities are designed and implemented. (Ref: Forest Plan page 4-37)

Monitoring Objective: Late-Successional Reserves (LSRs) were developed to protect and enhance conditions of late-successional and old growth forest ecosystems which serve as habitat for late-successional and old growth-related species. LSR Assessments will provide guidelines to meet desired conditions.

Methods: A comprehensive forest-wide late-successional reserve assessment (LSRA) was completed in 1999. This LSRA was produced by an interagency core team, including USFWS and the Bureau of Land Management. The LSRA was a significant undertaking, covering 18 LSRs and 6 Managed Late-successional Areas (MLSAs). One additional LSR, Clear Creek, was completed in 1998. All of these assessments used methodology provided by the Regional Ecosystem Office (REO) and the Record of Decision for the Northwest Forest Plan.

Results: These assessments have been used extensively in project design and planning. The LSRA stressed the need to treat unacceptable fuel hazards and over stocked stand conditions.

Recommendations: Continue use of the LSR assessment and update at periodic intervals.

Public Involvement: The public was informed of the LSR Assessment's progress.

Data location: Supervisor's Office, Redding, California and the Shasta-Trinity website at www.fs.fed.us/r5/shastatrinity/publications/

Botany

Monitor Projects

Forest Plan Standard: Analyze, mitigate, and monitor project impacts to sensitive plants. (Ref: Forest Plan pages 4-14 and 4-16, #4a, b, c, Sensitive and Endemic Plants).

Monitoring Objective: To ensure that the Forest sensitive plant program effectively maintains the viability of sensitive and endemic plants on the Forest at the project level.

Method: Biological evaluations based on preliminary potential habitat evaluation using existing soils and TES plant data; field surveys of potential habitat in the areas to be affected by project implementation. Mitigation measures are developed by interdisciplinary teams and made part of project designs. Monitoring site visits are taken 1-2 years after project implementation. GIS botany coverages are updated periodically as needed.

Data Collected: Population numbers, size, location, and habitat; potential project impacts and proposed mitigations. For monitoring, whether mitigations were implemented as prescribed, and whether populations recovered or persisted as predicted by BEs.

Results: Thirty-seven new populations of sensitive plants were found and documented in FY 2005. Field surveys are performed for all large projects; a few small or dispersed projects that are likely to have no effect on sensitive plants, because of lack of suitable habitat or lack of expected impacts from the proposed action, are analyzed with existing data. Plant BEs were written for 31 projects forest-wide. No sensitive plants on the Shasta-Trinity were proposed for listing by USFWS.

Mitigations were developed for six projects in FY 2005 to lessen or eliminate project impacts to sensitive plants. In general, mitigations were implemented as written and were effective.

Recommendations: Continue field surveys at project level. Assess forest wide effectiveness of existing data analysis of smaller, dispersed projects.

Public Involvement: Through the NEPA process. Also organizations including the California Native Plant Society and the California Department of Fish and Game are involved in reviewing status of sensitive species list.

Data location: Project NEPA files, HQ and district botany files, GIS coverages, California Natural Diversity Database (Dept. of Fish & Game) files.

Conservation Strategies

Forest Plan Standard: Develop at least one conservation strategy per year. (Ref: Forest Plan page 4-16, #4f).

Monitoring Objective: To review compliance with our Forest standards, and effectiveness of our collaboration with other agencies in conserving sensitive plants.

Method: Office review of sensitive plant files.

Data Collected: Number and names of conservation strategies developed and/or signed in FY 2005.

Results: The conservation strategy process for serpentine endemics of the Rattlesnake Terrane (Yolla Bolla and Hayfork RDs) moved forward with habitat model development and testing for six species by the Univ. of California at Davis.

Recommendations: Continue to focus on multi-species, rather than single species strategies. Continue with the Rattlesnake Creek Terrane conservation strategy and look next to the Shasta-McCloud Management Unit for an opportunity for a multi-species strategy.

Public Involvement: No public involvement.

Where is data located: Headquarters and District sensitive plant files.

Noxious Weeds

Participate in County Program

Northern Province Noxious and Invasive Weeds Program Strategy Objective/Action Item: 2A. Northern Province Forests will actively participate in county Noxious Weed Management Areas with other agencies and interested parties.

Monitoring Objective: To review compliance with Northern Province Weed Program Strategy, and effectiveness of our collaboration with other stakeholders in managing invasive plants.

Method: Phone conversations with district noxious weed coordinators; review of files at the Forest Headquarters.

Data Collected: Weed Management Area MOUs signed by Forest Supervisor; attendance by Forest Service representatives at WMA meetings and other events; informal contacts with WMA participants.

Results: Shasta-Trinity Forest Supervisor signed Memoranda of Understanding establishing Shasta and Trinity Weed Management Areas. Shasta-Trinity weed program coordinators participated

in Siskiyou, Shasta, and Trinity Weed Management Areas, including steering committee for the Shasta Weed Management Area.

Recommendations: Continue regular involvement with Siskiyou, Shasta, and Trinity Weed Management Areas.

Public Involvement: Weed Management Areas include federal, state, county, and local agency representatives, non-profit groups, and private stakeholders.

Data location: Weed Management Area MOUs are on file at County Agriculture offices, the Forest Headquarters and district weed program files.

Databases

Northern Province Noxious and Invasive Weeds Program Strategy Objective/Action Item: 1B. Develop and implement automated databases for the storage and retrieval of information on noxious weeds. Ensure that the forests implement Forest Service inventory and monitoring protocols and that data is gathered and shared consistently across units and Forests.

Monitoring Objective: To review compliance with corporate inventory & monitoring procedures, and use of corporate databases for invasive plants.

Method: Review of Forest Headquarters' files.

Data Collected: Proportion of existing invasive plant records in corporate GIS layers and entered into NRIS Terra Invasives database.

Results: 100% of all legacy (pre-2004) invasive plant records were migrated into NRIS Terra by the end of 2005. 95+% of legacy spatial records were digitized as shapefiles in ArcGIS. All new 2005 records were entered into NRIS as tabular and spatial data.

Recommendations: Continue entering tabular and spatial invasive plant data into NRIS Terra annually.

Public Involvement: None

Data location: Electronic data on local and regional servers; hard copy data in district and Forest Headquarters' files.

Biological Diversity

Snag Retention

Forest Plan Standard: Snags are to be retained within the harvest unit at levels sufficient to support species of cavity-nesting birds at 40 percent of potential population levels based on published guidelines and models or a minimum average of 1.5 snags per acre greater than 15 inches in diameter and 20 feet in height. Provide specified amounts of coarse woody debris in Matrix management well distributed across the landscape: (1) Provide a renewable supply of large down logs well distributed across the Matrix (2) Coarse woody debris already on the ground should be retained and protected. (Ref: Forest Plan, page 4-61).

Objective: Survey and maintain at least minimum management requirements for dead/down, hardwoods, and snags at both pre and post-project levels.

Methods: Data collected during visual surveys for snag and dead/down densities at timber sale projects. The public was involved during public scoping of NEPA.

Results and Recommendations: For 2005, dead/downed wood minimum standards were met in all areas where the baseline level of snags met the minimum standards. District policy is to leave any tree or snag deemed a hazard on site as downed wood. Continue monitoring of salvage and green sales for dead standing/down woody material.

Data location: Data is in NEPA documents at the Ranger stations.

Wildlife Management

Neotropical Birds

Forest Plan Standard: Manage habitat for Neotropical migrant birds to maintain viable population levels. (Ref: Forest Plan page 4-29, #25.c).

Objective: Continue to survey and band breeding birds at the Whites Bar station to provide annual adult population size and post-fledging productivity of local bird species and neotropical migratory birds. Although this is not a Land & Resource Management Plan requirement, the monitoring is part of the national Forest Service “Partners in Flight” program for neotropical migratory bird management.

Methodology: Bird population and habitat data were collected at Whites Bar on the Trinity River. Mist nets and point counts are conducted 3 times from May-August according to the Monitoring Avian Productivity and Survivorship (MAPS) protocol. Surveys have occurred at the Whites Bar station since 1991. Partnerships includes the Klamath Bird Observatory, the Institute for Bird Populations, and US Forest Service’s Redwood Sciences Lab.

Results and Recommendations: Surveys are accomplished on 1,000 acres. Results from over 30 bird species are integrated into breeding bird survey data at the US Geological Survey’s Patuxent Wildlife Research Center.

Where is data located: Big Bar Ranger Station.

Resource Management Programs

Fire and Fuels

Hazard Fuels and Reintroduction of Fire

Forest Plan Standard: Plan and implement fuel treatments emphasizing those treatments that will replicate fire’s natural role in the ecosystem. (Ref: Forest Plan, page 4-17 #8 d).

1. Fuels Monitoring Example 2004-2007 – Green Mountain

Objective: Monitor (A) environmental analysis process and (B) post-burn summaries to insure that fuels reduction objectives are being met.

Methods: (A) The environmental evaluation for a fuels treatment project is based on a fuels inventory and/or a photo series comparative analysis taken at the project site.

(B) Each project burn plan contains a summary of monitoring elements. The results for each element are evaluated by the burn boss to determine if burn objectives were met. Burn plans are prepared for every proposed burning project. They are designed to meet the fuels objectives and mitigations described in the environmental analysis for the project area. Burn plans are signed by the

responsible line officer and the assigned burn boss. Close coordination and monitoring is maintained between the Forest Service burn boss, Forest Fire Management, Air Quality Management District and Redding Interagency Command Center.

Results: Monitoring evaluation of the Green Mountain Project in 2005 showed that target accomplishments were 75-95% successful. Both the consumption rates and scorch heights were within acceptable limits. Team members found that the project favorably met the objectives.

Recommendation: Team members recommend continuation of program and monitoring. Funding and personnel are not currently available to conduct optimal pre and post-burn inventories (in large part due to the regional emphasis on fuels treatment in Wildland Urban Interface WUI.) Acquire additional funding for future prescribed burn programs inclusive of non-WUI project areas.

Public Involvement: The public is closely involved with our burning program. Frequently pre-burn meeting and field trips are held with local organization. Pre-burn notices are also circulated to local post offices, newspapers and radio stations. Adjacent landowners are routinely notified of Forest Service burn projects. There is also public education program in the schools to inform students of the fuels programs and objectives.

Data location: Burn plans are located at the local management unit offices, the Forest Headquarters Office in Redding, and RICC (Redding Interagency Command Center). Post-burn summaries are located at the local Management Unit Offices.

Activity Fuels

Forest Plan Standard: Activity fuels that remain after meeting wildlife, riparian, soil, and other environmental needs will be considered surplus and a potential fire hazard. The amount and method of disposal will be determined in the ecosystem analysis. (Ref: Forest Plan, page 4-17).

Monitoring Objectives: (2005 example project – Military Machine Piles - SMMU)

Evaluate the effectiveness of prescribed fuel treatments to adequately treat excess activity fuels within various site-specific resource and environmental constraints.

Methods: All areas were visited prior to logging during the NEPA stages. Fuels inventories, photo series assessment and team expertise were used to estimate the count of activity fuels likely to be generated on a unit-by-unit basis for project area. If there was to be no reforestation (e.g. thinning) activity fuels were treated to meet hazard reduction objectives. In areas where reforestation was to take place, fuels specialists and silviculturists worked together to prescribe the appropriate method of fuel treatment. All treatments, both for hazard reduction and site-prep were developed and refined by interdisciplinary teams for each project.

Results: When possible a post-burn fuels inventory was taken, otherwise a visual site assessment was performed. For the 2005-06 Military area 160 acres of prescribed activity fuels treatments by mechanical piling and burning were successfully implemented.

Recommendation: Continue to carefully monitor timber sale Brush Disposal (BD) program, to assess whether the pre-sale estimated BD work adequately meets, exceeds or fails to address the needs of LMP standards/recommendations in the post-harvest outcome.

Public Involvement: Local citizens groups and field trips with industry players are conducted to review timber sale areas on the unit.

Data location: Burn plans are located at local Management Unit Offices, Forest Headquarters Office in Redding and, RICC (Redding Interagency Command Center). Post-burn summaries are located at the local Management Unit Offices.

Timber Management

Allowable Sale Quantity

Forest Plan Standard: Allowable Sale Quantity (ASQ). Yields from suitable lands will be chargeable toward the ASQ. The suitability of land for timber production will be field verified at the project level using the timber suitability criteria shown in Appendix I of the Forest Plan. (Ref: Forest Plan page 4-26, #20a., and page 5-13, Timber).

Monitoring Objective: The objective is to determine if the timber sold in FY 2005 meets the ASQ level specified in the Forest Plan.

Method/Data Collected: Information on timber products offered and sold is collected at the district level and compiled at the forest level into a national database called the Sale Tracking and Reporting System (STARS).

Results: The timber volume offered for sale in FY 2005 totaled 34.9 MMBF compared to the 82.0 MMBF allowable sale quantity in the Forest Plan. The average annual timber volume offered for sale since the signing of the Forest Plan in 1995 is about 57.1 MMBF, or about 70% of the ASQ.

Recommendations: Continue monitoring annually to determine the average annual output for the 10-15 year period of the Plan.

Public Involvement: Public involvement occurs during NEPA at the project level.

Data location: STARS data and the FY 2005 Timber Information Management (TIM).

Silvicultural Systems

Forest Plan Standard: Silvicultural Systems/Harvest Methods. Emphasize the regeneration harvest of understocked and poorly growing stands, whether using even or uneven-aged systems. Intermediate cuttings in overstocked stands (thinning) and the salvage of dead and dying trees will also be emphasized. (Ref: Forest Plan page 4-26, #20e).

Monitoring Objective: The objective is to determine if silvicultural systems and harvest methods prescribed in FY 2005 timber sales are following the prescriptions specified in the Forest Plan.

Method: Information was compiled through review and collection of volume per acre data from individual timber sale Environmental Assessments (EAs) and contracts sold in FY 2005.

Data Collected: Volume and acres of regeneration cutting and intermediate (thinning) and salvage cutting in FY 2005 timber sales.

Results: The Forest did not meet annual regeneration cutting objectives, but exceeded the intermediate and salvage cutting objectives in FY 2005, as follows:

	Forest Plan Objective	FY 2005 Accomplishment
Regeneration Cutting-Volume (MBF)	66,000	4,100 MBF
Regeneration Cutting-Acres	3,500	227 ACRES
Intermediate Cutting-Volume (MBF)	12,000	16,000 MBF
Salvage Cutting-Volume (MBF)	4,000	14,900 MBF

Recommendations: In order to meet long-term sustained yield timber objectives as specified in the Forest Plan, the Forest would have to place additional emphasis on regeneration cutting in the future.

Public Involvement: Public involvement occurs during NEPA at the project level.

Data location: Timber sale EAs and contracts are located at the Forest Headquarters in Redding.

Reforestation

Forest Plan Standard: Achieve stocking standards of well distributed trees within five years of final harvest under all silvicultural methods. (Ref: Forest Plan page 4-26, #20g, and page 5-13, Timber).

Monitoring Objectives: The objectives are to 1) determine if reforestation goals are being met, and 2) determine if regeneration harvest areas are being adequately stocked within five years.

Method: Information on reforestation accomplishment was taken from the FY 2005 Silvicultural Accomplishment Report. Information on regeneration status was taken from the FY 2005 Forest Service Activity Tracking System (FACTS) database.

Data Collected: FY 2005 reforestation acres accomplished. FY 2000 regeneration harvest acres certified for reforestation in FY 2005.

Results: Reforestation acres accomplished in FY 2005 totaled 133 acres. This is about 4% of the 3500 acres projected in the Forest Plan due to the emphasis on thinning and salvage during the past few years for healthy forest objectives.

Recommendations: Continue monitoring annually.

Public Involvement: No direct involvement.

Data location: The FY 2005 data resides in the National FACTS database.

Timber Stand Improvement

Forest Plan Standard: Timber stand improvement (TSI) projects will emphasize maintaining or improving growth, and healthy, vigorous trees, through release and thinning. (Ref: Forest Plan page 4-27, 1, and page 5-13, Timber)

Monitoring Objective: Determine if timber stand improvement goals are being met.

Method/Collection: Information on TSI accomplishment from the FY 2005 FACTS database.

Results: TSI acres accomplished in FY 2005 totaled 4448 acres. This was less than the 5300 acres (84%) projected in the Forest Plan because the Forest still has TSI work in plantations created prior to the implementation of the Forest Plan.

Recommendations: Continue monitoring annually.

Public Involvement: No direct involvement.

Data location: The FACTS National Database.

Biomass

Forest Plan Standard: Incorporate biomass opportunities into ecosystem analysis and project proposals that meet ecosystem objectives, such as dead/down material for wildlife and ground cover for soil protection, and to reduce fuel loading to complement the natural fire regime. (Ref: Forest Plan page 4-14, #3a).

Monitoring Objective: Determine if biomass opportunities have been incorporated into project proposals.

Method/Collection: Information on biomass volume offered and sold was compiled through the review and collection of volume data from timber sale contracts sold in FY 2005.

Results: Accomplishment in FY 2005 was about 7,000 MBF of biomass sold as part of the Forests' regular timber sale program of 35,000 MBF. Biomass opportunities have been emphasized more on the east side of the Forest. Biomass opportunities have been limited on the west side of the Forest, primarily due to economic considerations.

Recommendations: Continue to incorporate biomass opportunities in the timber sale program.

Public Involvement: Public involvement occurs during NEPA at the project level.

Data location: Timber sale contracts are located in the Supervisor's Office in Redding, CA.

Facilities Management

Road Maintenance

Forest Plan Standard: Schedule and perform road maintenance activities to meet management objectives. (Ref: Forest Plan page 4-16, #7a., and page 5-7, Facilities).

Monitoring Objective: To ensure that the Forest road maintenance program meets current regulations and direction.

Data Collected: based on a total of 6,555 miles of forest roads

1. Miles of roads maintained in 2005:

High clearance roads	313.3
Passenger vehicle roads	<u>499.1</u>
Total	812.4 miles of road maintenance

2. Total miles of road construction in 2005 = 4.7 miles

3. Total miles of road decommissioned in 2005 = 11.05 miles

Results: Results show that current funding is insufficient to maintain roads at target operational levels. In 2005 only 12% of forest roads received some type of maintenance and only 9% were maintained to standard.

Recommendations: Due to lack of funding, health and safety issues have become the overriding consideration for road maintenance. More roads will need to be decommissioned and "disinvested" in the future unless funding increases.

Public Involvement: informal contacts and public comments and complaints.

Data location: Engineering Department at the Supervisor's Office in Redding, CA.

Buildings and Administrative Sites

Forest Plan Standard: Manage, construct, and maintain buildings and administrative sites to meet applicable codes and to provide the necessary facilities to support resource management. (Ref: Forest Plan page 4-17, n)

Monitoring Objective: To ensure buildings and administration sites do not pose a health and safety hazard to public and employees and that they meet the requirements of the applicable model building codes and the manual.

Method: Visual inspection following processes required by manual. Every building to be inspected by Engineering at least once every five years in accordance with INFRA protocols.

Data Collected: Building inspection reports performed by Engineering were completed in the last five years for every building and administration site on the Forest. Inspection information including annual and deferred maintenance needs were entered into the INFRA data base.

Results: Forest is in compliance with required inspection frequency and INFRA protocols. Inspection results are shared with the District Rangers and Assistant Forest Engineers. However, current funding levels are not sufficient to maintain buildings to standard – funding is primarily dedicated to correcting health and safety deficiencies. The deferred maintenance backload continues to increase, although OMB and the Department expect the Forest Service to reduce deferred maintenance 25% by 2010. We are working to dispose of buildings identified for decommissioning in the Facilities Master Plan.

Recommendations: Perform maintenance work to eliminate health and safety concerns and reduce deferred maintenance backlog. Continue efforts to dispose of buildings.

Public Involvement: Minimal public involvement is required unless the building is historical or the building is to be disposed.

Data location: Engineering department in the Headquarters Office in Redding, CA.

Dams and Bridges

Forest Plan Standard: Inspect dams and bridges at prescribed intervals and provide the maintenance necessary to keep them safe. (Ref: Forest Plan on page 4-16, #70)

Monitoring Objective: To ensure facilities do not pose a threat to public health and safety.

Method: Visual inspection following process as required by manual.

Data Collected: Bridge inspection and dam monitoring reports were recorded in 2005 by the Forest bridge and dam inspector.

Results: The Forest is close to being in compliance with required inspection frequencies. Inspection results are shared with the District Rangers and Assistant Forest Engineers. All operating dams and bridges are up to standard. Based on load analyses, a bridge may be posted for a reduced weight limit and maintained at that new standard. Routine maintenance of bridges is performed by road maintenance crews. Major repairs are prioritized and completed as funding permits. Forest has replaced several non-standard bridges through the deficient bridge program. Some small dams have been removed from the system and the stream channels put back to more pre-dam conditions.

Public Involvement: Posted information and public comments due to closures.

Data location: Engineering department in the Supervisor's Office in Redding, CA.

Potable Water Sources

Forest Plan Standard: Monitor potable water sources and designated swimming areas according to the Safe Drinking Water Act and other regulatory health requirements. (Ref: Forest Plan page 4-16, #7p.).

Monitoring Objective: To ensure potable water sources provide water safe for public and employee use.

Data Collected: All potable water sources were tested during 2005. Monthly Bac-T tests were taken and sent to a lab which calls within 24 hours if a poor result is found. The Forest Service then calls the State within 24 hours to agree on the mitigation that will be followed. There are approximately 50 sites that are monitored on the Shasta-Trinity National Forest.

Results: The program is monitored according to regulations; water quality is being maintained to standard. All official drinking water system records documentation (FSM 7421.3) were updated to reflect the WO interim directive for Forest Service Manual 7400 (Public Health and Pollution Control Facilities). The forest maintains a computer-based Drinking Water System inventory for each drinking water system, including physical data, treatments, and monitoring testing results. The last two years worth of sampling data, 5-6% of our monthly routine water samples tested positive and then 1% was confirmed with repeat sampling.

Recommendations: Continue monitoring to standard and fully implement new inventory database. More interagency coordination is needed to keep testing up to standard at shared interagency facilities.

Public involvement: If substandard results are found from testing, the site is posted “non-potable” until it is cleaned up. The public can also fill out complaint forms that are available in recreation facilities. To-date, no complaints have been filed about drinking water.

Data location: Engineering department in the Supervisor’s Office in Redding, CA.

Note: Costs for the drinking water program are continuing to rise. The Public Health Services Federal Task Unit deployed certified engineers to do forest sanitary surveys for all systems that the State was behind schedule. Forest Service employees have not been permitted to clean water tanks for the past 4-5 years. Instead, a confined-space, trained 3-person certified crew must be contracted to clean the tanks.

Forest Pest Management

Forest Plan Standard: Implement an integrated pest management (IPM) program to maintain or reduce forest pest impacts to acceptable levels and to maintain or enhance forest health and vigor. (Ref: Forest Plan page 4-18 #b).

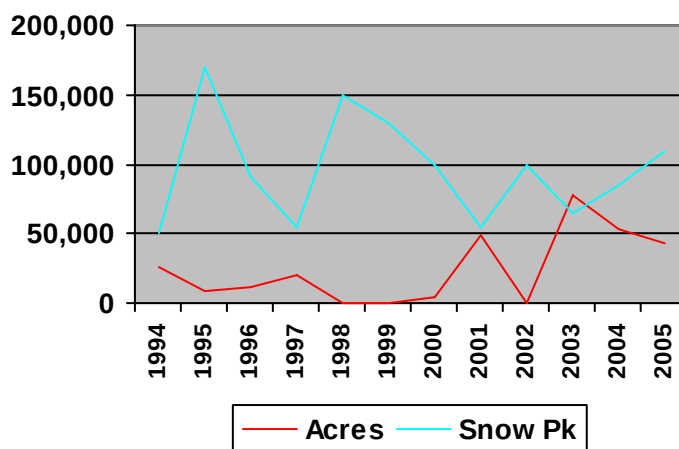
Monitoring Objectives: Conduct yearly aerial surveys to monitor and develop a database of mortality statistics on the Forest.

Year	Pine Acres*	Fir Acres*	Mixed Conifer Acres*	Total Mortality Acres*	% Ave. Apr. 1 Snowpack**
1994	15,259	10,871	0	26,130	50
1995	5,080	553	3,327	8,960	170
1996	7,712	3,242	514	11,468	90
1997	7,557	6,464	5,531	19,552	55
1998	0	0	99	99	150
1999	0	0	0	0	130
2000	4,608	0	0	4608	100
2001	45,363	1,638	1,753	48,754	55
2002	27,068	2,213	50	29,331	100
2003	56,566	20,632	364	77,562	65
2004	24,952	23,438	5,153	53,544	85
2005	31,347	11,324	0	42,671	110

Conifer Mortality on the Shasta-Trinity National Forests

*Acres of conifer mortality estimated from annual aerial surveys.

** Percent of average April 1 water content in Sacramento River drainage snowpack measured on April 1 of that year from CA Dept. Water Resources.



Acres = Total number of acres of conifer mortality detected on the 2.1 MM acres of Shasta-Trinity NF by aerial survey for that year.

Snow Pk = Percent of average April 1 water content multiplied by 1,000 in Sacramento River drainage measured on that April 1 by CA Dept. of Water Resources Snow Survey.

There is a clear trend for the total number of acres of conifer mortality on the Shasta-Trinity NF to increase as the water content of the snowpack decreases, and *vice versa*. The magnitude of changes in acres of mortality depends both on the magnitude of the yearly departure from normal, as well as the trajectory of the trend in the recent past. Unless it follows a trend of several consecutive above-normal years of snowpack, a snowpack with less than 100% of the average April 1 water content will result in conifer mortality visible from the aerial survey.

Decreases in visible conifer mortality in 1998 and 1999 are attributed to abundant precipitation during the el Nino and la Nina years of 1997 and 1998. The large increases in visible conifer mortality during 2001 and 2003 are attributed to winter drought conditions.

Recommendations: Continue monitoring

Data location: Supervisor's Office, Redding, CA. For more information regarding the Forest Health in California, refer to the Forest Pest Conditions In California - 1998 published by the California Forest Pest Council.

Web site: Forest Pest Management information is available on the Web at:

www.r5.fs.fed.us/fp/index.htm.

Range Management

Sustainability of Forage

Forest Plan Standard: Manage rangeland vegetation and livestock grazing activities in order to meet and/or provide for desired ecosystem conditions, including the sustainability of forage for livestock and wildlife and the attainment of the Aquatic Conservation Strategy and proper management of Riparian Reserves. (Ref: Forest Plan Goals, page 4-5 and Standards, page 4-22).

Objective: Determine if rangeland ecosystems are healthy, if livestock/wildlife forage is available on a sustainable basis and if proper management of this resource and its associated attributes is occurring.

Methods: Four of the Forest 17 allotments were vacant, thus information monitored was based on 13 active allotments. Of these 10 were monitored more intensely than the others. Information can be found in the Annual Grazing Statistical Reports, which is available in the Forest Supervisors Office.

Both hardwire and electric fence systems were maintained on seven allotments in an effort to monitor use and exclude livestock from riparian areas. Range readiness checks were made on all of the 13 active allotments. Distribution of livestock use, utilization checks and suitability of range within 10 allotments was checked to determine if management objectives and Forest standards and guidelines were being met. Overall results are shown in the table below:

Standard or Objective	Activity	Accomplishments
Provide for proper management of selected riparian areas	Riparian areas monitored and/or protected	9 sites/ 64 acres
Designate lands that are suitable for livestock grazing	Determination of suitability	1,909 acres
Ecosystem analysis, NEPA documents and annual operation instructions is the primary tool for implementing management actions	Annual Operating Instruction carried over from previous year	13 allotments
WA & NEPA documents shall be prepared to bring authorized grazing use in conformance with Forest Plan objectives	Supporting documentation and surveys in preparation for an EA	1 Report 2 field surveys
Verify range readiness, proper utilization and distribution on active allotments.	Range readiness, utilization and distribution checks done on all 13 allotments	13 allotments

Results: Yearly utilization measurements indicate that some areas might be able to sustain higher utilization levels while others may need less utilization. Use in two key areas exceeded utilization standards, however overall results were determined to be consistent with Forest Plan standards and guidelines. This year, there were two reports of fence damage caused by vandalism, and one report from wildlife. Monitoring on both of the MALAA allotments indicated little livestock use of riparian areas that interface with anadromous habitats, and little if any of this use took place during key life phases of the species.

Recommendation: Continue to monitor range condition, suitability and utilization each year. Continue to work with permittees and cooperating agencies in development and implementation of Annual Operating Instructions.

Range Management: coordinate with other organizations

Forest Plan Standard: Coordinate rangeland activities with other agencies, organizations and individuals having an interest in the management of the rangeland resource where it is appropriate. (Ref: Forest Plan Standards, page 4-22, #f).

Objective/Method: Determine by review of program records if rangeland activities are being coordinated with other agencies, organizations and individuals as appropriate.

Results: Annual operating plans were developed through coordination with the permittees. In addition, the livestock advisor from the Shasta County Cooperative Extension office and a biologist with the U.S. Fish and Wildlife Service worked with the Forest in developing the annual operating plan for an allotment on the Shasta side. Permittees were required to maintain allotment structures, including electric fences. Permittees were also responsible for maintaining proper distribution of their livestock.

Recommendation: Continue to work with permittees and cooperating agencies in development and implementation of Annual Operating Instructions.

Public Use and Information Programs

Wild and Scenic Rivers

Forest Plan Standard: Protect the existing character within established boundaries of designated Wild and Scenic Rivers, and within a ¼ mile boundary on either side of the proposed Wild and Scenic Rivers pending the outcome of their formal classification by Congress. (Ref: Forest Plan page 4-28, #23 Wild and Scenic Rivers).

Method: Management Plans are complete for all designated rivers. These plans are used to address specific issues, such as improved public access. Proposed rivers are being addressed through the project planning process. Otherwise, both existing and proposed rivers are places where the Forest Service and partners come together to implement actions, such as the annual National Rivers Cleanup Day.

Results: Access (Big Flat and Pigeon Point) and annual cleanup projects have helped significantly to improve the wild and scenic character of the Trinity River. A Section 7 is being conducted for Canyon Creek, a proposed river, pursuant to the Trinity 1-8 mining proposal. CalTrans continues to propose actions (i.e., curve widening) for Hwy 299, that must be analyzed for affects on the Trinity River. Due to long-standing problems with the land survey along much of the Trinity River, encroachments of private features onto National Forest System lands, and vice versa, continue to be identified. Private landowners also approach the Forest seeking access to their lands. Land ownership issues cannot be immediately resolved due to budget limitations, and thus are prioritized.

Recommendations: Continue to conduct high priority projects and maintain active community involvement.

Data location: Weaverville Ranger District Office and Forest Headquarters, Redding, CA.

Wilderness

Develop Direction

Forest Plan Standard: Develop wilderness direction to guide annual programs and long-term strategic actions in the Forest's 5 wildernesses. (Ref: Forest Plan page 4-29, #24a).

Method: Nationwide, a 10-Year Wilderness Stewardship Challenge has been initiated to ensure that all wilderness areas are meeting common objectives that will result in quality wilderness. Components of the strategy include addressing noxious weeds, fire ecology, environmental education, Forest Plan direction, and campsite inventories.

Results: Wilderness Implementation Schedules (WISs) have been developed to implement direction from the Forest Plan. A Fire Use Plan is currently being developed for the Trinity Alps Wilderness. The Forest is focusing other efforts on meeting the 10-year Wilderness Stewardship Challenge.

Recommendations: Continue to implement the 10-year wilderness strategy, including elements in the implementation schedules and Limits of Acceptable Change monitoring.

Data location: Supervisor's Office, Redding, California and District Offices.

Encroachment Sites

Forest Plan Standard: Post potential encroachment sites on the boundaries of the five Wildernesses as necessary. (Ref: Forest Plan page 4-29, #24b)

Method: Wilderness boundary posting is an on-going forest program. Posting is routinely conducted in conjunction with specific projects, such as timber sale activity adjacent to Wilderness for Forest Service and private lands timber management.

Results: Between 1998 and 2005 approximately 50 miles of wilderness boundary was posted. The focus was on the Trinity Alps Wilderness (Coffee Creek) and the Mt. Shasta Wilderness (east side near the Pilgrim Creek snowmobile area). Other areas of potential encroachment are monitored and posted.

Recommendations: Continue program.

Data location: Supervisor's Office, Redding, California.

Visitor information

Forest Plan Standard: Initiate visitor information and education programs that interpret and emphasize values and behavior that protect wilderness resources. Post regulations, orders, and/or permits outside the Wilderness boundaries. (Ref: Forest Plan page 4-29, #24f).

Method: Seasonal wilderness rangers meet visitors and provide them with information. Pamphlets and signs are also posted at all trailheads. Recreation Opportunity Guides (ROGs) are available either in hard copy form or on the Forest website. The Trinity River Management Unit is utilizing an "electronic kiosk" to disseminate wilderness information, education, and permits.

Results: The various methods of sharing information on wilderness behavior and ethics are being used. Problem areas still exist, requiring alternate approaches. For example, a temporary campfire closure order has been established for the high lakes in the headwaters of Canyon Creek and the Stuarts Fork.

Recommendations: Continue using proven methods and exploring/development new ways of disseminating information to wilderness users. Monitor the effectiveness of the campfire closure order before making a decision as to whether to implement for a longer period of time.

Data location: Ranger District Offices.

Water Quality

Forest Plan Standard: Maintain surface and sub-surface waters at the “high quality level” as defined by U.S. Environmental Protection Agency standards. (ref: Forest Plan page 4-29, #24h).

Method: Conduct yearly sampling.

Results: Sampling has not been done between 1998 and 2005.

Recommendations: Eliminate this standard and only conduct water monitoring in areas of known problems.

Data location: Weaverville Ranger District and the Supervisor’s Office, Redding, California.

Recreation

Partnerships

Forest Plan Standards: Promote partnerships with user groups to assist in the operation, maintenance, and development of recreation sites and facilities (Ref: Forest Plan, page 4-23, r).

Method: Recreation staff and members of the forest Recreation Fee Board of Directors participated in on-going discussions related to maintaining and expanding existing partnerships, developing new partnerships, exploring new ways of doing business and determining the most efficient means for accomplishing program objectives, including providing safe, quality recreation opportunities and meeting the diverse needs of the recreating public.

Results: In 2005, the forest maintained partnerships with the Shasta Lake Improvement Project Partnership, the Shasta and Trinity Houseboat Owners Associations, the Backcountry Horsemen of America, the California Conservation Corps (CCCs), the Backcountry CCCs, the Redding Dirt Riders, the Sierra Club, Trail Weavers and The Watershed Research and Training Center. These partners assist the forest in operating, maintaining and enhancing recreation sites (and/or trails) for forest visitors. The majority of the developed sites in the National Recreation Area continue to be managed by concessionaires.

Recommendations: Continue to promote partnerships and explore ways to improve efficiency.

Public Involvement: Direct involvement with partners/stakeholders, other forests, other agencies and interested community members.

Data location: Supervisor’s Office, Redding, California.

OHV

Forest Plan Standard: Cooperate with the State, other agencies, and user groups to identify potential OHV trails. Where compatible with management objectives, develop segments of OHV trails that support the concept of a statewide OHV trail system. (Ref: Forest Plan, page 4-23, #16 f.)

Results: The Forest continued to implement the five step OHV Route Designation Strategy and the new Travel Management Rule in 2005.

Recommendations: Continue to implement the five step OHV Route Designation Strategy. Promote increased public participation in the OHV route designation process.

Public Involvement: Direct involvement with motorized and non-motorized user groups, other state and federal agencies and local community members occurred in 2005.

Data location: Supervisors Office, Redding, California

Pacific Crest Trail (PCT)

Forest Plan Standard: Provide a safe, usable, and convenient passage through the project area or a reasonable detour during the entire period of project activities. As a minimum, detours will consist of temporary route markers and a four foot wide travel way cleared of vegetation. Tread work will only be performed to allow safe stock passage. (Ref: Forest Plan, page 4-23, #16 b.2).

Method: In 2005 the California Conservation Corps (CCCs) and the Back Country Horsemen (BCH) helped to open up the last remaining portion of Section O of the PCT (running roughly from Burney Falls to Castle Crags).

Recommendations: Provide regular maintenance on the sections of the PCT that cross the forest. Continue to promote safety on the PCT by providing safe, useable and convenient passage for users and by providing the appropriate level of training needed for individuals performing trail maintenance work and by enforcing the use of the required Personal Protective Equipment (PPE) while performing trail maintenance activities on the PCT.

Public Involvement: Direct involvement with the California Conservation Corps, the Back Country Horsemen of America, the Pacific Crest Trail Association and “through hikers”.

Data location: Supervisors Office, Redding, California

Visual Quality

Forest Plan Standard: Maintain a diversity of scenic quality throughout the Forests, particularly along major travel corridors, in popular dispersed recreation areas, and in highly developed areas. (Ref: Forest Plan Goals, page 4-5).

Monitoring Objective: Assess integration of visual quality standards in forest management activity.

Method: The 2005 visual quality program focused on the design needed to: (1) collaborate and review scenery for Antlers and Stuart Fork Bridges and other road projects proposed by California Dept. of Transportation, (2) collaborative involvement in the development for the Volcanic Legacy Scenic Byway, (3) the monitoring of scenery for vegetation management projects, and (4) collaborate and review scenery for special use permits, including the Trinity Center Airport and Turntable Bay Marina.

Results: Projects will be monitored for implementation of proposed objectives.

Recommendations: Continue development and implementation of proposals.

Public Involvement: Public involvement was achieved through the NEPA comment process and community interest group participation in the development of the Volcanic Legacy Scenic Byway improvements.

Data location: Recreation and visual quality program office, Supervisor’s Office.

Heritage Resource Management

Compliance with Section 106

Forest Plan Standard: For Prescription XI sites, achieve full compliance with Section 106 and develop required protection plans. (Ref: Forest Plan, page 4-50, D3, D12).

Monitoring Objectives: To ensure that Forest's program of work is in compliance with Section 106 and 36 CFR 800. Determine if plans have been completed for significant heritage resources and determine if sites are being monitored sufficiently.

Methods: Both the FY 05 Department of the Interior Report and the FY 05 Annual Report for the Section 106 Programmatic Agreement describe Forest compliance with Section 106.

Results: In FY 05, the vast majority of projects fell under the Programmatic Agreement for Section 106. Based on the monitoring of sites, the Forest appears to be in compliance with the Programmatic Agreement of Section 106. Reviews by the State Historic Preservation Office and Region 5 support this conclusion.

Recommendation: Section 106 compliance appears to be in compliance with the requirements of the Programmatic Agreement and other direction at the present time. In some cases monitoring sites needs to be more frequent and priority of monitoring needs to be given to Prescription XI sites within proposed actions.

Interdisciplinary Involvement: Information resulting from archaeological studies is being shared with other specialists preparing watershed studies.

Public Involvement: Public involvement occurs during project level NEPA.

Data location: Heritage program office, Supervisor's Office

Law Enforcement

Forest Plan Standard: Protect the public interest by a thorough and aggressive program of violation prevention, violation detection, investigation and apprehension of violators and the presentation of cases for prosecution. (Ref: Forest Plan page 4-21, #13)

Monitoring Objectives: Monitor the number of reported incidents on a yearly basis.

Methods: Data is summarized yearly by Law Enforcement staff in the LEIMARS report.

Results and Recommendations:

LEIMARS annual statistics for Shasta-Trinity NF
Incidents, Warnings, Citations and Arrests

FY 2001 - 1,557

FY 2002 - 1,912

FY 2003 - 1,897

FY 2004 - 2,223

FY 2005 - 2,681

In 2005 there was an increase in the number of marijuana gardens, the number of plants eradicated and an increasing sophistication of the drug trafficking organizations that manage the gardens.

There was also an increase in vandalism and theft of both private and public property including resource damage due to OHV use, range allotment fences, fuelwood theft and timber theft. The trend of more visitors each year to the National Recreation Area at Shasta Lake is welcome from a recreation viewpoint but it is increasingly difficult to deal recreational violations from a law enforcement standpoint.

In 2005 the law enforcement workforce was down to 1 Patrol Captain and 3 Law Enforcement Officers on the Shasta-Trinity NF. In this situation it is increasing difficult to adequately deal with all types of increased incidents. Without a larger law enforcement workforce, the Forest can only respond to after-the-fact to violations, rather than having a proactive law enforcement program. Many incidents will never be known or recorded because there are 2.1 million acres and 3 Law Enforcement Officers on the Forest.

Social and Economic Environment

Hayfork Adaptive Management Area

Forest Plan Standard: Development, demonstration, implementation, and evaluation of monitoring programs and innovative management practices that integrate ecological and economic values. (Ref: Forest Plan, page 4-69, Technical Objectives).

Monitoring Objective: To report implementation and effectiveness of actions that lead towards the goals and objectives for the Hayfork Adaptive Management Area.

1. O&C Research on logging activity noise disturbance effects to Northern Spotted Owls (*Strix occidentalis caurina*).

This project was developed to research the effects that disturbance associated with logging activities has on the productivity of the northern spotted owl (*Strix occidentalis caurina*; NSO). Continued analysis during 2005 of Franklin's data and existing data on logging disturbances – correlated with known sites. Results of this study will be available in 2007.

2. Effects of Off-Highway Vehicles on Northern Spotted Owls (*Strix occidentalis caurina*).

The goal of this study is to assess the disturbance effects of Off-Highway Vehicles (OHV) on the federally threatened northern spotted owl (*Strix occidentalis caurina*; NSO). Information is needed on the effects of OHV use on northern spotted owl stress levels, behavior, and nesting success. Results of this study would assist landowners in managing OHV use in NSO habitat. Results of the 3-year study will be available in 2006. Continued data collection.

3. Post Mountain Stewardship Agreement. During 2005 the Post Mountain NEPA process was started. Collaboration continued with the Post Mountain Volunteer Fire Department and the Hayfork Watershed Research and Training Center. The NEPA document is expected to be completed in 2006.

4. The Hayfork AMA guide is now available on the Forest website.

5. Hayfork CRAFT Beta Testing Project was started in 2005. Comparative Risk Assessment Framework and Tools (CRAFT) is designed to lead natural resource managers through an integrated assessment of the risks, uncertainties, and trade-offs that surround forest and rangeland management. CRAFT helps to identify and clarify objectives, design alternatives, assess probable effects and compare and communicate risks. The beta testing is expected to be completed in 2007.

Community Development/Partnerships

Forest Plan Standard: Emphasize the development of partnership programs through coordination with interested public and agencies (Ref: Forest Plan, page 4-5 #28).

In 2005 the Shasta Trinity NF partnered in 131 active agreements in addition to cooperative fire protection agreements.

Grants	31
Collection Agreements	25
Participating Agreements	47
Cost Share	7
Interagency Agreements	13
MOU's	8
Total	131

Types of Partners: Partnerships included grants and agreements with over 80 different partners. Some of these include: the Resource Advisory Councils (RACs) in Shasta and Trinity Counties, CalTrans, California Conservation Corps, Trinity County Resource Conservation District, Bureau of Reclamation, Western Area Power Administration, the State of California, Rocky Mountain Elk Foundation, California Deer Association, and the Mule Deer Foundation, the Watershed Research & Training Center, and the Back Country Horsemen of California.

Partnerships with Resource Advisory Committees (RACs) on the Shasta-Trinity NF: In October 2000, Congress passed Public Law 106-393 entitled “Secure Rural Schools and Community Self Determination Act of 2000” which stabilized federal payments to states for funding schools and roads.

The Act established the committees consisting of 15 local citizens representing a broad array of backgrounds, interests, and experiences. Each year the Resource Advisory Committees recommend projects to the Forest Service to be conducted on Forest Service system lands, or that will benefit resources on Forest Service system lands. For more information visit the Shasta-Trinity NF website at: www.fs.fed.us/r5/shastatrinity/home-page/rac.shtml.

TRINITY COUNTY RAC - In FY05 there were 16 RAC projects funded in Trinity County for a total of \$ 831,056.			
1S36 Culvert Replacement	Six Rivers NF	Approved	\$20,460
Five Cent Gulch Road Decommission	Shasta-Trinity NF	Completed	\$19,002
Garden Gulch Mastication	Shasta-Trinity NF	Completed	\$57,575
Hayfork Area Fuels Reduction Implementation "2005"	Shasta-Trinity NF	Completed	\$90,250
Hayfork Youth Restoration Crew	Shasta-Trinity NF	Completed	\$20,000
Hidden Valley Road Decommissioning	Shasta-Trinity NF	Approved	\$190,476
Mad Ridge Fuel Break - Phase II	Six Rivers NF	Completed	\$100,000
Musser Hill Mastication	Shasta-Trinity NF	Completed	\$52,313
Natural Bridge Project	Shasta-Trinity NF	Approved	\$22,560
Salyer/Hawkins Bar Community Protection Phase II	Six Rivers NF	Approved	\$100,100
Shasta-Trinity Fish/ Trails Project	Shasta-Trinity NF	Completed	\$10,000
Trinity Alps Wilderness Trail Clearing	Shasta-Trinity NF	Completed	\$14,500
Trinity Alps Wilderness Trail Restoration	Shasta-Trinity NF	Completed	\$20,000
Trinity RAC Videotaping (carryover funds)	Shasta-Trinity NF	Completed	\$1,105
TRMU Oregon Fire Road Decommissioning Project.	Shasta-Trinity NF	Approved	\$64,868
TRMU Sidney Gulch Fish Passage Improvement Project	Shasta-Trinity NF	Approved	\$47,847

Shasta Dam Feasibility Study

During 2005 the Shasta-Trinity NF continued to work with the Bureau of Reclamation in the feasibility study of enlarging Shasta Dam. The Forest participated on the Project Management Environmental Study Team and the Project Coordination Team. In addition, during 2005 the forest conducted detailed cadastral surveys of key recreational facilities that could potentially be affected by the dam raises being studied by the Bureau.

Trinity River Basin Fish and Wildlife Management Program

Coordination with the Management Program was active in FY05. The Forest Service is a chartered member of the Trinity River Restoration Program Management Council and participates in all Council and subcommittee functions. The Forest is scheduled to take the lead on a Trinity River Coarse Sediment injection project in the Trinity River on Forest Service managed lands immediately below the Lewiston Dam outlet to be completed in FY2006.

Tribal Government Program

Forest Plan Standard: Develop partnerships with Native American tribes and consult with Native Americans at the planning and project level of analysis. (Ref: Forest Plan page 4-4 #7, and page 4-50 #4)

Monitoring Objectives: The objective of monitoring the Tribal Government Program is to determine if partnerships and the consultation process are established and serving to improve relationships, communication and understanding between the Forest Service and Indian people.

Methods: MOUs are signed with the Pit River Tribe, the Shasta Nation, the Redding Rancheria, and the McCloud Wintu. Annual meetings are held with recognized tribes and Native Americans are consulted during scoping and watershed analysis where there are issues of concern.

Results: In 2005, consultation continued with Native Americans for projects such as timber sales, special use permits and recreation site improvements.

Native American consultations have been productive in resolving issues arising during project planning. Some projects were modified following consultations. Native Americans are interested in both historical places and areas of current use on the Forest. The Pit River Tribe, the McCloud Wintu and the Hayfork Wintu are the most actively involved tribal groups.

For more information related to these objectives, refer to the Sec 106 PA Heritage Resource Management Report for FY 05 prepared by the Forest Archeologist.

Recommendation: Continue consultations and partnerships at current level.

Public Involvement: Direct involvement with tribes.

Data location: Supervisors Office, Redding, California

Appendix B: Forest Monitoring Scales

Shasta-Trinity National Forests Monitoring System _____

Monitoring Scales - Information obtained through the monitoring and evaluation system was reported at several different geographic scales including individual project areas, management areas, watersheds, and the Forest as a whole. For this report, information was collected at both the District and Forest scale with District information aggregated up to the Forest level whenever possible.

Monitoring Levels - Information for this report was derived from 3 levels of monitoring:

1. Project Environmental Analysis
2. Single Resource--Forest Program Assessment
3. Forest-wide Multiple Resource Assessment

Each level consists of two components: data acquisition and administrative review. Data acquisition refers to the collection and processing of environmental data. Administrative review refers to program analysis after the information has been evaluated and compared with Forest Plan objectives, standards, and guidelines.

The Forest database will be updated periodically. Each of the above levels will contribute to the process, but project level assessments will be the most often used means of insuring that District level information is incorporated into the broader Forest data-base.

Project Environmental Analysis - One of the common processes available for monitoring is project environmental analysis where on-the-ground information is compared with the existing data-base. This information is used to verify assigned management area prescriptions, projected outputs, and objectives originating from the Forest Plan for updating, if necessary.

Single Resource - Forest Program Assessment - The next level is a Forest-wide assessment of single resources and Forest programs. For example, single resources such as bald eagle habitat or anadromous fisheries are site-specific, but they may not coincide with project environmental assessments.

Forest-wide Multiple Resource Assessment - The Forest-wide scheme includes intensive field surveys and high resolution remote sensing data which provides the framework for monitoring single resources and Forest programs. As in the other two levels, information obtained in these assessments will be used for updating the existing data-base for multiple resources and comparing results with Forest objectives.

Appendix C

Location of Supporting Documentation

The supporting information for this report is on file at the Forest Headquarters and the Ranger District Offices. Refer to Appendix A for specific documents and their location by functional area.

Shasta-Trinity National Forest Headquarters

3644 Avtech Parkway
Redding, CA 96002
(530) 242-2360

Big Bar Ranger District

Star Route 1, Box 10
Big Bar, CA 96010
(530) 623-6106

Hayfork Ranger District

P.O. Box 159
Hayfork, CA 96041
(530) 628-5227

McCloud Ranger District

P.O. Box 1620
McCloud, CA 96057
(530) 964-2184

Mt. Shasta Ranger District

204 West Alma
Mt. Shasta, CA 96067
(530) 926-4511

Shasta Lake Ranger District

14225 Holiday Drive
Redding, CA
(530) 275-1587

Weaverville Ranger District

P.O. Box 1190
Weaverville, CA 96093
(530) 623-2121

Yolla Bolla Ranger District

HC01 Box 400
Platina, CA 96076
(530) 352-4211

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Leslie Ross	Potable water management
Dave Schultz	Forest pest management
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Rhonda Bowers	Road management
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Winfield Henn	Archeology
Dave Peeler	Law enforcement
Anna Arnold	Hayfork AMA and Partnerships

Forest Website

A notice of the FY 2005 Monitoring and Evaluation Report will be posted on the homepage of the forest website. The complete report will be available for review on the forest website at:

<http://www.fs.fed.us/r5/shastatrinity/publications/>.