

Six Rivers National Forest
Land and Resource Management Plan
Monitoring and Accomplishments Report
Fiscal Year 2008

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Introduction

The purpose of the Six Rivers National Forest fiscal year 2008 Monitoring Report is to disclose monitoring accomplishments associated with the monitoring program outlined in the Six Rivers National Forest Land and Resource Management Plan (LRMP). This report also includes activities on the Ukonom Ranger District which is part of the Klamath National Forest, but administered by the Six Rivers National Forest (Forest). The Forest's management strategy and subsequent monitoring are designed and implemented with the intention of achieving the management goals associated with each resource management area. This document addresses by resource area, goals, monitoring and accomplishments for FY2008 that occurred between October 1, 2007 and September 30, 2008.

Monitoring is an important step in the management process to determine if the Forest's management strategy has been appropriately implemented and are effective in achieving the identified goals. Monitoring observes and records both the effects of natural processes and the results of actions permitted by the LRMP. It is conducted at a variety of levels and scales, as deemed appropriate for each resource area. This document will address project level monitoring, LRMP monitoring, and resource-specific monitoring.

Project level and LRMP monitoring, is implemented in accordance with the Land and Resource Management Planning Handbook [FSH 1909.12, Chap. 6, WO Amendment I, 7/88]. It is limited to those actions necessary to comply with the regulations set forth by the National Environmental Policy Act (NEPA) and the National Forest Management Act (NFMA). Resource-specific monitoring is additional monitoring that is required by other laws, executive orders or supplemental plans (such as Threatened and Endangered Species Recovery Plans). Resource-specific monitoring is typically conducted to gather needed resource information and to validate management assumptions. This information can best be displayed by identifying the objectives, methods and results associated with the performed monitoring. Project level monitoring examines how well specific management direction (standards and guidelines) is applied on the ground and how effectively it produces desired or expected results.

Forest/Resource-Specific Monitoring Program by Area

Air Quality Management

Goal

- To maintain air quality at acceptable levels for the protection and use of Forest resources and to meet applicable Federal and State standards and regulations (*LRMP IV – 106*)

Monitoring

In 2001 the State Air Resources Board (ARB) adopted Title 17 of the California Code of Regulations regarding Agricultural Burning Guidelines. Revisions included a significant emphasis on the development of Smoke Management Plans by prescribed burners, and advanced planning and consultation between prescribed burners, air districts, and the ARB to ensure greater emphasis on smoke prevention and reduction to smoke sensitive populations.

North Coast Unified Air Quality Management District (NCUAQMD) monitoring stations are located where human impacts would be the greatest (i.e., population centers of Eureka, Weaverville, and Crescent City). These stations show that all Federal standards are met for the NCUAQMD, but the State PM10 standard is not met. Prescribed burns and other management practices on the Six Rivers National Forest have little chance of affecting readings at these stations due to their distance from the Forest.

Siskiyou County monitoring stations are also located where human impacts would be the greatest (i.e., Yreka, Mt. Shasta, Lava Beds National Monument). Prescribed burns and other management practices on the Ukonom District have little chance of affecting readings at these stations due to their distance from the District. State and Federal standards were met for ozone and PM10 attainment was achieved for Siskiyou County in January 2005.

The entire Six Rivers NF is in attainment for Federal PM2.5, 8-hr ozone, and National Ambient Air quality Standards (NAAQS) for ozone at .075 ppm.

Table 1 displays the number and acres of prescribed burning across the Forest for 2008. The majority of these burns occurred within the wildland urban interface, where smoke impacts to humans would have had a higher chance of occurring.

Table 1. Number of Prescribed Fires and Acres Burned

FY 2008	WUI	Non-WUI	Total
Number of prescribed fires	17	10	27
Acres	318	280	598

According to the NCUAQMD, no smoke complaints were registered for SRF prescribed burns during FY2008. Three smoke complaints were called in during the summer of 2008 that were associated with back firing operations during wildfires. Siskiyou County AQMD also did not register any Forest Service related complaints in FY2008. No other observable undesirable smoke impacts requiring mitigations of prescribed burns occurred.

One of the largest prescribed burning efforts in FY2008 was the Salyer/Hawkins Bar project on the Lower Trinity Ranger District. Due to its proximity to private property with residences, monitoring of smoke was conducted throughout the burn operation. NCUAQMD personnel also visited the area during burn operations in May of 2008. Smoke production was light to moderate at times during the prescribed fire, with the smoke rising straight above the canopy and dissipating from between 200-1000' above ground level (AGL). Residual smoke showed good atmospheric mixing, which blew northeast, away from nearby neighbors and communities.

The large number of wildfires occurring in the summer of 2008, along with their long duration (over 100 days) produced tremendous amounts of smoke which affected many local communities. The local AQMDs took readings from several monitoring stations throughout Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity Counties. Based on these data, a State of Emergency was declared by the governor for Humboldt County due to the severe smoke conditions and unhealthy air quality. (NOTE: Mendocino and Trinity counties already had states of emergency in place due to the wildfires themselves.) Hoopa, Karuk, and Yurok Tribal Nations also declared local emergencies for their reservations due to smoky conditions. Several local SRF communities registered “unhealthy air quality” for over 20 days, including: Somes Bar (43), Orleans (43), Weitchpec (21), Hoopa (21), Willow Creek (21), Hyampom (52), Mad River (26), Ruth (21), and Zenia (35).

Fuels Management

Goal

- Provide well-planned and well-executed fuel management programs (including fire use through prescribed burning) that are responsive to land and resource management objectives (LRMP IV – 116)

Monitoring

In FY2008 fuel treatment tracking became a more holistic approach, keeping track of all benefiting functions within FACTS. Table 2 shows the reported WFHF or “core” fuel treatment accomplishments for 2008. These fuel treatment acres are split by Wildland Urban Interface (WUI) acres vs. non-WUI acres, with 78% of our core fuel treatments being accomplished in the WUI. One burning project (LT – 1 acre) was focused on beargrass burning to stimulate basketweaving materials.

Table 2. Acres of WFHF (core) Fuel Treatments

FY 2008	WFHF Number	WFHF Acres
WUI	33	1653
Non-WUI	18	475
Total	41	2128

Table 3 shows the reported “integrated” fuel treatments, including funding from timber thinning, RAC projects, invasive species removal, and grazing. Thirty-five percent of our integrated project acreage was conducted in the WUI.

Table 3. Acres of Integrated Fuel Treatments

FY 2008	WFHF Number	WFHF Acres
WUI	9	840
Non-WUI	7	1529
Total	16	2369

Pre and post-burn data were collected using the Brown intercept method (Brown 1974) on three plots within the Salyer/Hawkins Bar prescribed burn. All three plots showed a reduction in fuel loading, with an average reduction of 38%. Duff weight also showed an average of 92% reduction.

In addition, the Adaptive Management Services Enterprise Team recently acquired a Joint Fire Science grant to continue their R5 fuel treatment monitoring work from several years ago. During the summer of 2009 they will be visiting previously placed plots on Mad Ridge and Salyer/Hawkins Bar to re-read 5 plots.

Two of our many 2008 wildfires (Swim Fire and Riess Fire) burned into previously treated areas on the Mad River Ranger District. The Swim Fire was started by a single tree lightning strike on top of Swim Ridge on June 21. The fire was not engaged until June 24 due to resource commitment on other higher priority fires. During this time the fire slowly spread from the ridge down slope in all directions. By June 24, the fire had spotted into the Clover Underburn, a 139 acre project, which was completed in 2006. This is where a 20-person hand crew engaged the south flank to start containment of the fire. The fuels treated by the Clover Underburn (mostly 1, 10, and 100 hour fuels) were reduced, which enabled the hand crew to make excellent progress in line construction and containment. This enabled resources to concentrate on other more active flanks of the fire. The fire activity in the Clover Underburn area ranged from low to moderate, with 6-20 inch flame lengths with little tree mortality and low scorch heights. The fire activity outside the Clover Underburn was characterized by 2 to 3 foot flamelengths, with occasional individual and group tree torching. The final fire size of the Swim Fire was 210 acres.

The Riess Fire was started by a single tree lightning strike, occurring approximately 500 feet downslope from the west side of the Mad Ridge Fuelbreak. It is assumed that the fire started burning about 1800 on June 20, when the first series of lightning storms passed through that part of the Mad River Ranger District. This fire was not detected until June 21, about 1200 when a smoke column was observed coming off the west side of the fuelbreak. Outside the fuel treatment area the fire intensity was moderate with high scorch heights and some tree mortality. Inside the treated area, where there were concentrations of firewood, the fire burned with a moderate to high intensity due to a longer burning period. The fire inside this area burned hot, but with a low spread rate due to a lack of ladder and ground fuel which had been consumed by the earlier fuel treatment, which had been completed in 2007. Inside the treatment area where there was little to no logs left, the fire intensity was low with very little tree mortality. An eye witness reported that the fire column picked up in activity and then slowed down when the fire hit the ridge fuelbreak.

Fire Management

Goal

- Provide well-planned and well-executed fire protection and fuel management programs (including fire use through prescribed burning) that are responsive to land and resource management objectives (*LRMP IV – 116*).

Monitoring

Table 4 shows the number and total acreage of wildfires recorded for 2008, which was a tremendously busy year, with over 50 lightning strikes recorded on June 20-21. Many of these fires burned together, becoming the following complexes: Hells Half, Ukonom, and Siskiyou. Also, several of these fires ignited on the SRF and burned onto adjacent forests, or ignited on adjacent forests and burned onto the SRF.

For human-caused wildfires, incendiary fires accounted for the largest number of human-caused fires in 2008 (11), but with minimal acreage (39 ac.). The largest human caused fire for the year was a miscellaneous cause and ended up at 35 acres. The trend continues with no children-caused fires recorded in 2008. Eight abandoned campfires were recorded this year, which is slightly up from the five recorded in 2007.

Table 4. Number and Acres of Wildfires by Cause

2008	Total	Human	Lightning
# Fires	107	41	66
Acres	159,662	50	159,612

The Forest's fire management strategy emphasizes protection of resources of concern during fire suppression. Resource specialists are involved upfront to identify resources at risk from a fire and to identify potential measures to reduce the impact on these resources from the fire suppression activities.

During the wildfires of 2008 the Forest had a total of seven individual Agency Administrators or Agency Administrator Representatives assigned to the daily oversight of fire suppression operations. These Agency Administrators or Representatives had access to a multitude (more than 30) of field going Natural Resource and Heritage Advisors. These advisors worked closely with fire suppression personnel on developing the strategies and tactics that were implemented throughout the duration of these incidents that burned more than 150,000 acres. This constant oversight and coordination between disciplines ensured that actions taken to manage fire were implemented in accordance with the direction set forth in the Forest's Land and Resource Management Plan.

Impacts to forest infrastructure and land caused by fire suppression activities were identified and addressed in Fire Suppression Damage Repair Plans. Each incident or complex greater than 300 acres generated a plan which was approved by the Agency Administrator and implemented by incident personnel. In total, four such plans were developed and completed by the Forest in 2009.

Impacts to the forest caused specifically by the wildfires themselves were evaluated by District Resource Specialists. In the case of the Siskiyou and Panther/Ukonom fires, a more

comprehensive Burned Area Emergency Response (BAER) Plan was developed. This plan identifies specific measures to be taken to avoid any further degradation of the land or forest infrastructure. Implementation of the approved BAER plan began in the fall. This plan also aided in the development of the Forest's request to obtain funding for reforestation work in fire affected areas. This work also has begun to occur on the Forest

Lands

Goals

- Reduce land management problems and minimize conflicts between uses of National Forest System and adjacent private lands.
- Actively pursue and eliminate illegal occupancy and use (*LRMP IV-118*).

Land Adjustments

Monitoring

The Forest Land Adjustment Strategy (LRMP, Appendix O) provides direction of various land adjustment methods to reduce land management conflicts. These methods include land purchase, exchange and donation. In areas of intermingled private and federal ownership these methods can be effectively used to eliminate property line and use problems. All these methods require a willing proponent. Between 2001 and 2005 the Forest had one land donation involving one acre of river access to the Middle Fork of the Smith River. Between 2005 and early 2008 the Forest completed purchase of the 9,483 acre Goose Creek parcel in the Smith River National Recreation Area. The purchase took place in three stages with 3,518 acres acquired in 2005, 1,579 acres acquired in 2006 and the last 4,386 acres acquired in early 2008.

The successful donation and completion of the Goose Creek acquisition indicates the Forest's Land Adjustment Strategy has been implemented appropriately. These transactions have also resulted in cost savings by eliminating the need for surveying over 20.75 miles of land line for this large in-holding within the Smith River National Recreation Area (NRA) as well as providing additional resource protection by eliminating potential impacts of logging on Goose Creek, an anadromous stream.

Land Use Authorizations

Monitoring

Land use authorizations are administered to ensure that the use of National Forest System lands for specific purposes by adjacent landowners and others are permitted and compliant with the Six Rivers LRMP. The most common of these uses include waterlines, access roads, communication sites and utility lines. The Forest has over 300 issued permits and a backlog of expired permits and new proposals. The focus for the program is administration of the existing permits to Forest standards and guidelines and processing the expired permits that meet Forest standards in order to re-issue them. The Forest administers 26 permits to standard, re-issues 15 to 20 permits per year and issues approximately 5 new permits per year.

From 2001 through 2008 the Forest received 30 verbal and 2 written complaints about the amount of time it takes to get a permit issued or re-issued. The time it takes to complete the

environmental review and documentation for permits varies depending on the type of use, location of the activity and the resources that may be impacted by the requested use. Up to 2006 funding for administration of special uses had been limited which substantially contributed to the processing backlog. Starting in 2006 the regulations changed to allow for the charging of processing fees for most lands related special use permit. This additional funding has started to shorten the back log list and provide for additional processing and monitoring funding.

Boundary Management

Monitoring

The Boundary Management Program includes survey, posting and monumentation of the Forest's property lines. The Forest has approximately 960 miles of property lines adjacent to private property. Through the years, 90% of this line has been posted and their associated corners monumented. Due to wildfire, vegetation growth and vandalism, property lines require maintenance after 25 years. To keep up with maintenance would require doing approximately 29 miles of property boundary a year. The Forest maintained from 3 to 6 miles of property line per year from 2001 through 2006 due to limited funding. Starting in 2007 additional funding became available to do landline maintenance work associated with proposed timber and fuel reduction projects. In 2007 thirty eight miles of property line were maintained to standard and in 2008 thirty four miles of property line were maintained to standard by Forest Service personnel and survey contractors. The landline work done in 2008 resulted in the discovery of three encroachments with resolution of these encroachments is currently in progress.

Minerals

Goal

- Manage National Forest System lands that are not withdrawn from mineral entry to encourage and facilitate the exploration, development and production of mineral resources while ensuring that these activities are integrated with the use and protection of other resources (*LRMP IV-119*).

Mineral Operations

Monitoring

Minerals operations for locatable minerals (gold, silver and other precious metals) are controlled by surface use regulations in Title 36 of the Code of Federal Regulation (CFR), Section 228. The Smith River NRA supplements the regulations in 36 CFR 288 with additions regulations specific to the NRA in 36 CFR 292.60. A mineral administrator periodically visits operations to ensure compliance with the accepted Notices of Intent (NOI) and Plans of Operation (POO). Operations not in compliance with plans are followed up with appropriate actions.

The Forest regulates a continuing program of small suction dredging and panning activities. The number of active claims and the intensity of exploration fluctuate with the price of gold. The Ukonom Ranger District is the main area of mining interest with the Orleans Ranger District the second most popular area. From 2000 through 2003 there were from four to seven Notices of Intent (NOIs) per year. Mining activities were all monitored for compliance with their

operations as they identified them in their NOI. During the 2004 mining season no NOIs were accepted on the Salmon River (Ukonom Ranger District). In 2005 this same section of the Salmon River was closed to suction dredge mining by the State of California, Department of Fish and Game due to the need to protect threatened anadromous fish. As a result of a lawsuit in 2006, the State of California Department of Fish and Game withdrew their closure due to a lawsuit and again opened up the lower Salmon River to suction dredging. In 2008 mining was minimal due to several large fires that burned in the area most of the summer.

Activities on the Smith River in 2008 include one suction dredge operation on the Middle Fork of the Smith River under an NOI. There were no NOI's or PoO on Lower Trinity or Mad River Ranger Districts. There were no PoO's on the Six Rivers NF in 2008

Historically (1860's through 1930's) there was extensive hard rock mining on the Gasquet, Ukonom and Lower Trinity Ranger Districts. This resulted in many abandoned mining adits and shafts. Starting in 2003 the Forest began identifying adits and shafts that should be closed. In 2004 the Forest closed two adits. In 2005 the Forest closed 8 adits and 5 prospect holes. In 2006 there were no safety closures. In 2007 there were 8 adits and shafts closed. In 2008 a mining waste removal action was completed for acidic waste rock at the Union Zaar mine site on the Gasquet Ranger District. Environmental clearance work was completed to closure of several additional mining adits. The completion of the closure work is dependent upon future availability of funding.

Outputs and Activities

In FY 2008, a major AML project on the Smith River NRA was completed in Copper Creek at the Union-Zaar Mine. The project removed 25,000 cubic yards of hazardous mine tailings from Copper Creek, as well as obliterated over a mile of unauthorized mining routes, restored 6 acres of disturbed area, and stabilized and improved approximately 1 mile of stream habitat. These treatments will restore the Union-Zaar section of Copper Creek and reduce water quality and sediment impacts, stabilize streambanks, and restore natural surface drainage patterns and sediment routing. The hazardous mine tailings that were removed contain toxic levels of arsenic. These mine tailings were deposited in a designated environmentally safe repository nearby for permanent storage and long-term monitoring. Copper Creek contains occupied coho salmon habitat approximately 0.75 mile downstream of the Union-Zaar Mine site.

Mineral Materials

Monitoring

Mineral materials (sand, gravel and rock) are regulated by Title 36 of the CFR, Subpart C Section 228.40 – 228.67 and authorized by a permit. Permit conditions are monitored for compliance by a mineral administrator. The mineral materials program provides opportunities for the public to purchase sand, gravel, river rock and pit run material. Most permits are for less than two cubic yards of material to be hand picked from two specific sites, one at Hawkins Bar on the Lower Trinity Ranger District and the other at Dolan's Bar in Orleans. In total approximately 80 low volume mineral material permits are issued annually. These sites are periodically monitored for compliance to the mineral material permit. The Forest does have two commercial sites that are used most every year. One site is one quarter mile below Big Rock on the Trinity River in Willow Creek and the other is a borrow pit near the Salmon River.

Approximately four sales per year are transacted for between 1,000 to 20,000 cubic yards. These sites are monitored for permit compliance annually.

Transportation Management

Goals

- Provide public access to National Forest System lands for the use and enjoyment of its natural resources.
- Provide a safe, efficient and cost-effective transportation system.
- Provide access for the physically challenged to a wide variety of Forest Service programs, services and activities (LRMP IV – 115).

Accomplishments

The Forest managed 2,850.2 miles of road in FY 2008 of which 2097.9 miles are open for public access with a motorized vehicle. Of the 2,097.9 miles of road open to the public, 663.6 miles are managed as roads passable to passenger cars and the remaining 1,434.3 are managed for high clearance vehicle use.

In 2008, there were no new permanent roads constructed and 30.2 miles of system roads taken out of the system. Most maintenance and repairs occur on roads rated for passenger car use, which are primary arterial or collector roads or on secondary roads that have a specific resource or safety need that has to be addressed. In FY08, 267.95 miles of Forest roads open to the public received some level of maintenance activities.

Forest roads were designed for commercial use with a maximum speed limit of 25 miles per hour. These roads need regularly scheduled maintenance to maintain adequate driving surfaces, site visibilities and drainage structure maintenance. The road system is currently minimally maintained and is safe to operate by a prudent driver who operates his/her vehicle in a safe manner with consideration of existing road conditions.

Recreation Management

Goal

- The overall goal for the Forest's recreation program is to provide a wide range of quality outdoor recreation opportunities, emphasizing the unique character of the Six Rivers by providing access, facilities, and information necessary to meet public demand (*LRMP IV – 122*)

Overview of Recreation Program

The Forest's Recreation Program focuses on four key areas. These emphases continued to guide our programs in FY08. They are 1) rivers and water-based recreation; 2) special areas such as Smith River NRA, scenic byways, botanical areas, etc.; 3) cultural heritage riches and legacies such as 1930s Civilian Conservation Corps (CCC) architecture, historic mining and logging, and

native American culture; and, 4) uncrowded backcountry opportunities for recreation and solitude focusing on dispersed areas rather than wilderness.

Impacts from wildfires

Wildfires that began in June 2008 and continued throughout the summer in the northern part of the Forest greatly impacted monitoring of selected sites on the Orleans, Ukonom, and Lower Trinity ranger districts. Of the 20 sites formally monitored, 11 of them were inaccessible due to fire. The fires also affected the National Visitor Use Monitoring (NVUM) surveys with sites being inaccessible.

Recreation site facility analysis and recreation niche

In FY08 the Forest completed a recreation site facility analysis which developed priorities for a five-year program of work for recreation site improvements. A two year national process, conducted by Enterprise Team consultants, was followed to determine priorities, rankings, costs, etc.

As part of this process, a recreation niche, which identifies what is unique about the Six Rivers, was identified for the Forest: **Rivers to Ridges for Fun and Renewal!**

The name says it all – Six Rivers National Forest – six major rivers intersect one million acres and flow from the coastal mountains to the ocean. Specially designated areas celebrate the uniqueness of these rivers and the botanic, geologic and wildlife diversity of the forest. Visitors escaping the misty coast find clear skies, and clean rivers & lakes with outstanding water-based opportunities. Travelways showcase dramatic scenery and provide access to solitude both in and out of wilderness. Rich cultural stories to be shared are as ancient as the rivers and flow through time to the contemporary culture of today.

The niche will be used for tourism and marketing efforts as well as to help focus the overall recreation program of work.

Rivers and routes were identified as high priority settings for developed recreation, dispersed uses were medium priority; wilderness was low. Resources of the developed Recreation Program should be focused in the future toward these areas. More detailed information is available on the Forest website in the *Recreation Facility Analysis, 5-year Program of Work and Programmatic Results of Implementation, Six Rivers National Forest, June 22, 2008.*

National Visitor Use Monitoring

In FY08 the Forest conducted its second round of National Visitor Use Monitoring surveys, a key monitoring effort for the agency's Recreation Management Program. The surveys occurred throughout the Forest; results will not be available until late 2009. Surveys asked the same questions as the 2003 round and will give us comparative information as well as provide new information about forest visitors' preferences and observations. Visitation use numbers for 2008 to compare to 2003 visitation will be available.

Wilderness and Wild Rivers

Goals

- The goal of wilderness management is to preserve the integrity of the wilderness resource as described in the Wilderness Act.
- The goal of wild rivers is to protect their free-flowing conditions and outstandingly remarkable values for which the rivers are designated, and to provide for the benefit and enjoyment of present and future generations. (LRMP IV-11, IV-26)

Monitoring

Wilderness

The Forest solely manages the North Fork and Mt. Lassic Wildernesses; it shares management with three lead forests for four wildernesses (Siskiyou, Marble Mountains, Trinity Alps, Yolla-Bolly Middle Eel).

In FY08 annual effectiveness monitoring of the following sites occurred:

Marble Mountains - Wooley Ck Trailhead (TH): Monitoring not able to occur due to wildfire

Trinity Alps - Bear Hole: Monitoring not able to occur due to wildfire

Marbles - Stanshaw TH: Monitoring not able to occur due to wildfire

Marbles - Haypress Meadow: Monitoring not able to occur due to wildfire

Marbles – Haypress TH: Monitoring not able to occur due to wildfire

Wild Rivers

No formal monitoring of wild sections of W&S rivers is identified in our monitoring plan at this time. Rivers with 'wild' sections are also doubly protected inside Wilderness areas.

Wildernesses managed by the Six Rivers are in the low visitation category. To our knowledge, there was no deviation from management direction.

Recreational and Scenic Rivers

Goal

- The goal of recreational and scenic rivers is to maintain and enhance the outstandingly remarkable values for which the rivers are designated and provide recreational opportunities that do not adversely impact or degrade those values. (LRMP IV-60, IV-55)

Monitoring

In FY08 annual effectiveness monitoring of the following sites was conducted with the following results:

Big Rock river access: Monitoring not able to occur due to wildfire

Pappas Flat: In Spring 2008 850 feet of boulder barriers were placed to restrict vehicle access. Vegetation has started to recover in the grass meadows and vehicle tracks are slowly disappearing/becoming less evident. For the most part, barriers have been effective in reducing vehicle access to meadow, the oak stand, and to protect cultural sites. Continue monitoring/documentation to maintain compliance with management objectives for site.

Chimney Flat day use: In Summer 2007 350 feet of boulder barriers were placed to restrict vehicle access to riparian areas and meadow. Vegetation has started to recover in the meadow with vehicle tracks slowly becoming less evident. For the most part, barriers have been effective in reducing vehicle access to meadow, riparian areas, and to protect cultural sites. Continue monitoring/documentation to maintain compliance with management objectives for site.

Dolan's Bar river access: Monitoring not able to occur due to wildfire

Hippo Rock river access: Monitoring not able to occur due to wildfire

George Butler river access: Monitoring not able to occur due to wildfire

Big Bar river access: May to October 2008 resource damage noticed around the bulletin board/bathroom loop. Potholes/trenches and tire tracks observed in road. Resource damage has progressively worsened over the course of the monitoring period, most likely created by many groups of forest users. Failure to take action could result in further site/resource damage. Need to relocate bulletin board and shape/slope parking area.

Blue Hole river access: May to October 2008 user created trail observed at spring monitoring period. Some trampled vegetation noticed on side of trail in the same area. Minor erosion also observed along the sides of trail. Minor resource damage occurring due to erosion and visitor use. Without trail repairs, resource damage will continue to worsen. Need for trail to be added to trail system needs to be assessed. If needed, project must be brought forward to the Forest's program of work; NEPA must be conducted, and trail designed and built to standard. If not needed, trail must be eliminated to prevent further resource damage.

Smith River NRA (V-16)

Monitoring

National Recreation Area staff performed informal monitoring through public involvement meetings for individual projects during the year. Results of this monitoring showed no deviation from management direction.

Partial Retention VQO (V-16)

Monitoring

No formal monitoring. No problems were identified through informal monitoring.

Dispersed Recreation

Goals

- Manage recreation resources in a sustainable manner compatible with other ecosystem values.
- Emphasize dispersed recreation along river corridors and existing trails and roads that provide access to the forest interior.
- Continue to encourage semi-primitive non-motorized, semi-primitive motorized, and roaded recreation in areas with compatible Recreation Opportunity Spectrum (ROS) standards. (LRMP IV-122)

Monitoring

Trail condition surveys on 20% of 400 miles of trail (80 miles/year) were conducted in 2008. Results from the annual trail inventory indicate that emphasis for maintenance is placed on the trails most popularly used by the public and our four nationally designated recreation trails. The Trails budget, in sync with federal budget trends for natural resources agencies, is in a downward trend; trail work is increasingly dependent volunteers, grant funding, and other sources of budget supplementation. Many trails have grown over and need reconstruction and heavy maintenance to make them usable again.

In FY08 annual effectiveness monitoring of the following sites occurred:

Cold Springs dispersed camp: May 2008 to October 2008 monitoring shows little use of site and no noticeable changes during period. No action required at this time.

Grays Falls day use: May to October 2008 observations during spring monitoring at this developed site include several dispersed fire rings, tire tracks close to trailhead, bathroom graffiti and nails pounded into several trees. After dispersing fire rings and cleaning bathroom graffiti, little changes were noticed throughout the monitoring period. Little changes over the monitoring period possibly due to the summer fire season. Recommend vehicle access be restricted or designate parking areas by placing signage.

Groves Prairie dispersed camp: May 2008 to October 2008 minor erosion due to poor drainage observed on road going in to site. No noticeable changes over the course of the monitoring period. No action required at this time.

Happy Camp dispersed camp: May 2008 to October 2008 the only noticeable site/resource damage occurred on the user created road. User road appeared to have little use over the monitoring period; however, fresh tracks were observed by the fall monitoring date. This area has little use, therefore, impacts to the site will result in minimal resource damage. No recommendations required due to little or no change in site condition.

Lassics hunter camp: Monitoring of site not done

Brown's Canyon dispersed camp: Monitoring of site not done

Louse Camp: Monitoring not able to occur due to wildfire

Elk Valley dispersed camp: Monitoring not able to occur due to wildfire

Motorized Recreation (OHV)

Goals

- Provide a range of recreational opportunities to meet the needs of motorized recreationists.
- Manage motorized recreation to provide for public safety and resource protection, and to reduce user conflicts.
- Develop a cooperative effort with State, local and other agencies, Tribes and user groups to identify potential motorized recreation facilities and interpretive opportunities.
- Provide planning and implementation of the California Backcountry Discovery Trail as outlines in the MOU between BLM, USDA-FS and the State of California.(LRMP IV – 123)

Monitoring

The Six Rivers National Forest Plan allows Off-Highway Vehicle (OHV) travel on designated routes only; there are no open areas available for OHV use. OHV opportunities have been identified on the Smith River NRA, Orleans and Lower Trinity Districts in order to provide opportunity and at the same time reduce the risk of spreading Port-Orford-cedar root disease.

R5 TRAVEL MANAGEMENT/OHV ROUTE DESIGNATION STRATEGY

In accordance with the 2005 National Transportation Rule and the Region 5 Route Designation Process the Smith River National Recreation Area Road Management Route Designation Project Environmental Analysis was completed and decision signed on September 27, 2007. However, this decision was reversed by appeal and a new decision is pending further analysis.

The Orleans Transportation and Road Restoration Project Environmental Analysis was completed and decision signed on March 28, 2007. A Motorized Visitor Use Map is now available.

A draft proposed action for Lower Trinity and Mad River Ranger Districts travel management plan has been developed and has gone out for public comment. A final decision is expected to be made in 2009.

PILOT CREEK TRAIL USE STRATEGY IMPLEMENTATION/MONITORING

The Mad River Ranger District has been implementing the first two of three phases of the Pilot Creek Watershed Trail Use Strategy (1999). The first two phases of the strategy are completed and used a variety of design features (e.g. installation of water control features, hardening channel crossings, placement of artificial tread, minor trail re-routes, and tread repair). Twenty-two miles of new designated OHV routes resulted. Ultimately, this project will provide off-highway vehicle recreational opportunity on a total 29 miles. Future development of five trailhead/staging areas and fourteen primitive campsites is also part of this project.

In FY08 annual effectiveness monitoring of the following sites occurred:

Pilot Creek OHV emphasis area: Trail maintenance and the design features identified in the Pilot Creek Trail Strategy completed from 1999 through 2008 were found to be adequate and functioning effectively. Specific monitoring information is available in OHV grant quarterly accomplishment reports.

Ammon Ranch/meadow: May 2008 to October 2008 OHV tracks observed in meadow. Fence fixed in spring was broken again in fall. Mud trenches and tire tracks near fire ring area where progressively worse in the Fall. A few nails were noticed in the trees. Piles of shotgun shells were observed by the fence several times throughout the season. This site was monitored periodically, approximately every two or three weeks; however forest users were never observed. Resource damage has progressively worsened over the course of the monitoring period, most likely created by a single group of forest users. Lack of action could result in worsened resource/site damage. Recommend replacing broken fence; continue monitoring use.

A Frisby Golf Tournament with about 50 – 75 people is held at this site every year for one weekend under special use permit in May. Their use is monitored before, during, and after the event. A port-a-potty is brought in by the group as a condition of the permit and the site is cleaned up upon the conclusion of the event. Photo documentation and monitoring is done by George Frey, special uses permit administrator.

Sandy Bar: May 2008 to October 2008 major resource damage observed on parking area hillside from OHV use (see pictures). Major erosion noticed due to tire tracks and drainage. OHV/ATV use is uncontrollable in this area and will continue to worsen if no action is taken. Boulder replacement to prevent or restrict ATV/OHV travel around problem areas. Continue site monitoring.

Horse Linto dispersed camp: Monitoring not able to occur due to wildfire

Heritage Resources Management

Goals

- Identify, evaluate, and provide for public appreciation of cultural resources on National Forest lands.
- Maintain a well-balanced heritage resource program in the areas of prehistory, history, ethnography, and contemporary values.
- Recognize the contemporary values of the American Indians who use the Forest and provide positive resolution where other resource uses conflict with those values (LRMP IV – 114).

Monitoring

Heritage Resources monitoring occurs in two different forms. Both are provisions of the National Historic Preservation Act of 1966 (NHPA) and the First Amended Regional Programmatic Agreement (PA) among the USDA Forest Service, Pacific Southwest Region, California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (2001). 1) Implementation monitoring is directly related to projects and constitutes Section 106 monitoring. The purpose of this monitoring is to ensure that heritage resources are

protected from potential disturbances during project activities. Additionally, as a condition of the Programmatic Agreement, a specified number of historic properties not located within federal project areas are monitored every year. 2) These monitoring activities are related to Section 110 of the NHPA. While Sec. 110 monitoring exceeds Six Rivers' LRMP monitoring requirements, it is viewed as an essential component of the Region's agreement with SHPO. Table 5 summarizes Heritage Resource monitoring activities for 2008.

Table 5. Number of heritage sites monitored

Year	Sec. 106 Monitoring ("Implementation Monitoring")	Sec. 110 Monitoring
2008	35	3

Heritage work on projects suitable for application of the "Interim Protocol for Hazardous Fuels and Vegetation Reduction Projects" was undertaken during 2008. Several projects were in phase 1, identifying project areas and eliminating unsuitable areas from the project due to inaccessible terrain, etc. Monitoring was stipulated for work within, or within close proximity to, a few specific sites. No post-project inventory or evaluation has been made on projects, thus far, but is required within one year of site clearing. In some instances the project boundaries were modified as part of site protection mitigation measures.

Monitoring during project implementation is frequently used as a protection and mitigation measure, particularly when tribal interest and affiliation is high. Tribal monitors frequently monitor sites in addition to Forest Service staff archaeologists. Historic mining sites sometimes compromise pre-contact sites due to hydraulic dislocation of artifacts. Alternately, riverbank flooding can relocate artifacts and create the appearance of a site. No inadvertent effects to heritage sites were reported in 2008.

Three sites were monitored outside of project work areas, meeting the criteria for Section 110 work. Most of these were monitored for condition assessment. The monitoring at Sandy Bar site confirmed problems with past and present evidence of looting, vandalism, and pedestrian traffic. Monitoring forms and photo-documentation were prepared and filed. The affiliated Tsnungwe tribe was notified. SHPO and ACHP have not yet been notified of any 2008 damage, although they are aware of on-going problems with the site.

During 2008, no sites were formally evaluated for nomination to the National Register of Historic Places. Three sites were evaluated for significance, a Determination of Eligibility was prepared for each, and these are expected to be submitted during 2009.

Vegetation Management

Goals

- Manage vegetation to maintain biological diversity at all physiographic scales. A combination of management strategies in both reserved and matrix areas shall provide a range of ecological conditions, meet a variety of resource objectives, and provide a continuous supply of forest products. (LRMP IV – 74)

Vegetation across the Forest shall be managed to reflect the range of conditions characteristic of recent, historic vegetation patterns and disturbance regimes. A mix of different aged stands will occur across the Forest in proportion to the mix, which appears to have existed in the past few centuries. Large and small patches of young stands will be created through wildfire, timber harvest, landslides and other disturbance. Older stands will be maintained and generated through natural succession, small-scale disturbance, silvicultural treatment, fuels treatment and fire suppression.

Conservation of late-successional vegetation is emphasized to provide essential habitat for species dependent on these forest conditions. The spatial and temporal distribution of old-growth stands throughout the landscape is an important component of ecosystem diversity. The long-term goal of reducing fragmentation in late-successional forests is intended to create a contiguous forested landscape that provides well distributed, functional habitat for late-successional forest related species, such that their populations remain viable and persist over time.

Accomplishments

With a combination of funding, the Forest accomplished approximately 961 acres of forest vegetation improvement.

The Forest Vegetation Management Program coordinated with the Forest Fuels and Wildlife Programs to develop integrated treatments to increase our project efficiency and provide for multiple objective accomplishments on treated acres wherever possible. Every acre of commercial thinning treatment offered in FY08 also accomplished integrated fuels treatment acres for the Forest Fuels Program.

Table 6 displays the total green and salvage timber volume offered in FY08, relative to timber volume targets.

Table 6. Volume of Timber Awarded

Year	Total Volume In Cubic Feet (CCF)	Green Volume (CCF)
Target Volume FY 2008	37,100	37,100
Awarded Volume FY 2008	19,505	11,844

Special Forest Products

Goals

- Provide a wide-range of opportunities for collection of Special Forest Products (SFP). Manage plant material collected to ensure sustainability and the conservation of plant diversity.
- Maintain awareness of the cultural values placed upon certain plant species and the activity of collecting.

- Educate collectors and the general public about the ecology of the plants collected and harvesting techniques that may reduce impacts to the resource.
- Monitor collection activities to improve our knowledge base regarding tolerance of certain species to collection.
- Encourage commercial production (such as mushroom farming) through rural development programs (LRMP IV – 125).

Monitoring

The Forest issued 2,900 permits for firewood, boughs, greenery, mushrooms and other special forest products in FY2008.

Pest Management

Goals

- Minimize resource damage from insects, disease, plants and animals to help achieve resource objectives. Where this damage causes undesirable changes in vegetation, minimize resource damage through integrated pest management (LRMP IV – 125).

Monitoring

Each year in July or August, the Forest conducts aerial pest detection flights over the entire forest to identify new insect and disease infestations and to monitor existing infestations. The total forested area that pests are mapped on is approximately 830,000 acres.

The management of Port-Orford-cedar (POC) root disease is an emphasis area for the Pest Management Program. POC root disease can unintentionally be spread by human activities in wet areas where the disease occurs. It can be picked up on tires and shoes and transported to areas that were not previously infested. Control measures to minimize the spread of POC root disease have been developed. These control measures include seasonal road closures and barrier placement in areas where the spread of POC root disease is a threat. Monitoring has shown that the disease has intensified and spread on existing infestation sites but no new infestations have been identified.

The Forest maintained the POC program on three of the Ranger Districts: Smith River National Recreation Area, Orleans and Lower Trinity. The Forest also worked with UC Davis Extension and several other State and local government agencies and citizen groups to continue developing and implementing Sudden Oak Death (SOD) monitoring efforts on the Forest and monitoring and control efforts in southern Humboldt County.

Education

Sudden Oak Death presentations continued to be given to the Six Rivers National Forest Leadership Team

Monitoring

Surveys were conducted of over 30 campgrounds, boat-launch areas, Ranger District offices, guard stations, and trailheads on the Forest (no *P. ramorum* detected; *P. pseudosyringae* detected at Peach Creek Campground, Orleans Ranger District).

Provided assistance to USFS Forest Health Monitoring Aerial Survey crews in ground-checking polygons of tanoak mortality on the Six Rivers NF.

Regular stream-based monitoring conducted on SRNRA (Rock Creek, Hardscrabble Creek); no *P. ramorum* detected.

These SOD activities are in addition to off-forest monitoring and management activities designed partly to help monitor and control the spread of *P. ramorum* throughout Humboldt County. Activities planned for the near future include an expanded watercourse monitoring program on the Forest and outreach to specific user groups likely to travel from infested areas of the county onto the Forest.

Range Management

Goals

- Manage for healthy rangeland ecosystems.
- Maintain the biologic diversity of rangeland ecosystems and protect fish and wildlife resources.
- Maintain rangeland productivity on suitable rangelands while providing forage for livestock production consistent with demand and other resource values and uses (LRMP IV – 120).

Monitoring

Annual monitoring for meeting LRMP resource standards is typically performed on key areas or areas of resource concern within the grazing allotment. Resource standards that are monitored for compliance with the LRMP include streambank stability, stubble height for herbaceous riparian vegetation, browse use within riparian areas, and residual dry matter standards for the annual grasslands or oak woodlands. This monitoring occurs toward the end of the grazing season and results are used to guide subsequent management, such as early livestock removal, an extension of the grazing season, or changes in herding, gathering, watering, or salting practices. These results are also used to make changes in the following grazing season so that LRMP standards are more likely to be met the following year.

Other monitoring that is addressed in the LRMP and detailed in the annual operating instructions (AOI) that are reviewed with permittees before each grazing season include proper placement of salt blocks, maintenance of water developments or troughs, or other elements found within the permits (such as proper brands or livestock numbers), and are not included in this summary. Table 7 below identifies the number of allotments that were monitored and the percentage of key areas that met LRMP standards for 2008. The LRMP identifies 17 allotments on the Six Rivers. With the implementation of the 2005 North Fork Eel Grazing Allotment Management FEIS and

Record of Decision, one allotment was closed while two allotments had no grazing authorized under that decision. Currently, 14 allotments are active. FY 2008 saw the start of environmental analysis on two additional allotments with a decision expected in the fall of 2009.

Table 7. Number of Allotments or Units Monitored

Year	Number of Allotments or Units Monitored (multiple locations monitored for some allotments)	Percent of Key Areas Within LRMP Standards
2008	9	57 %

Long-term Monitoring

The following long-term monitoring occurred within the allotments to track effectiveness in meeting LRMP standards. In 2008, seven allotments or units were monitored. Long-term monitoring was performed for herbaceous vegetation within the allotments. Results of this data are used to refine allotment management techniques within the grassland vegetation types.

Geology, Soil, Watershed Management

Goals

- The primary management goal is maintenance of long-term soil productivity and high water quality.
- Identify geologic hazards and minimize the impacts from management activities on streams and facilities.
- Plan and conduct all forest management activities to maintain existing water quality or, where degraded, restore water quality to meet State water quality standards for the North Coast Region.
- Maintain the integrity of watersheds and riparian ecosystems, including riparian zones, for the protection or enhancement of riparian-dependent resources (LRMP IV-70).

Monitoring and Accomplishments

Roads are the primary contributor of sediment which affects water quality. Improving watershed health involves decommissioning roads that are no longer needed and storm proofing the remaining roads. In FY2008 the Forest decommissioned 13.9 miles of road.

Physical Monitoring (non riparian)

Rainfall Monitoring

Objective: Quantify rainfall amounts at various locations in the Forest, particularly areas that are remote (distant from cities, towns, or other rain gauges) and at higher elevations (most historic stations are in valley bottoms even though a clear positive relationship exists between elevation and rainfall amount).

Methods: Eleven tipping-bucket, recording rain gauges were monitored throughout the Forest.

Results: With a few exceptions, rainfall data was successfully collected. Rainfall amounts were found to be higher than nearby valley bottoms. Rainfall data from individual sites will be more meaningful after a longer period of record has been established.

Best Management Practices (BMPs) – All Resources

Objective: To evaluate the implementation and effectiveness of individual BMP’s to determine the success of the BMP program. BMPs are mitigations that are applied on projects to reduce the impact of activity on soil and water resources.

Methods: Each BMP has a unique field form assessing specific project activities that may impact water quality.

Results: In 2008, 38 BMPs were evaluated for implementation and effectiveness. Copies of the BMP reports are at the Supervisor’s Office.

Ninety percent of all evaluations were determined to be Effective. Three percent of the evaluations were determined to be Not Effective. No impacts to water quality or beneficial uses were observed. Except for a few areas, BMP’s have been fully implemented and fully successful (Table 15).

Results are placed into one of four categories; implemented and effected (IE), not implemented and effective (NIE), implemented and not effective (INE) and not implemented and not effective (NINE).

Table 8. Number of BMP’s Inventoried and Number Not Implemented and/or Not Effective

BMPep Form	Activity	Number Inventoried/ Number Not Implemented and/or Not Effective			
		IE	NIE	INE	NINE
EO8	Road Surface, Drainage and Slope Protection	1	3	0	0
EO9	Road Stream Crossings	1	3	0	0
E11	Road Sidecast Control	4	0	0	0
E13	In-Channel Construction Practices	0	0	0	0
E14	Temporary Roads	1	0	0	0
E15	Road Rip Rap Composition	0	0	0	0
E16	Water Source Development	0	0	0	0
T01	Streamside Management Zones	3	0	0	0
T02	Skid Trails	3	0	0	0
TO3	Suspended Yarding	0	0	0	0
T04	Landings	3	0	0	0
T05	Timber Sale Administration	0	0	0	0
T06	Special Erosion Control and Revegetation	0	0	0	0
G24	Range Management	3	0	0	0
V28	Vegetation Manipulation	0	0	0	0
F25	Prescribed Fire	0	0	0	0
R22	Developed Recreation Sites	0	0	0	0

R30	Dispersed Recreation Sites	4	3	0	0
M26	Mining Operations	0	0	0	0
M27	Common Variety Minerals	0	0	0	0
	Total	23	9	0	0

Aquatic and Riparian Ecosystems

Goals

- Provide diverse, high quality fish habitat capable of maintaining or enhancing ecologically functional populations and stocks of fish at risk.
- Follow direction outlined in the Aquatic Conservation Strategy (FSEIS ROD pages B-9 to B-33 except as noted otherwise), which outlines specific objectives regarding the Forest goals in the management of aquatic and riparian resources.
- Maintain riparian dependent resources (water, fish, wildlife, riparian-related aesthetics, and aquatic vegetation).
- Manage riparian areas to maintain water quality; stream temperature; stream bank stability; wildlife habitat, connectors, and corridors; and to retain sources of large woody debris for habitat structure and channel stability (LRMP IV – 106).

Physical Monitoring (Instream)

Temperature Monitoring

Objective: To monitor instream temperatures during summer low flows.

Methods: Electronic data recorders (hydrothermographs) are placed in the streams in early summer and recovered in the fall each year. This year 30 data recorders were placed in Klamath Basin streams and three in the North Fork Eel River watershed. Sites are selected by fisheries and hydrology personnel. This data allows the monitoring of water temperatures, especially as they affect fish and track long-term trends in habitat quality.

Results: The monitoring continues to show that stream temperatures are within the normal range of variability in most streams, but that some streams or tributaries have temperatures that may be too warm for summer rearing of juvenile salmonids. This information provides a basis for identifying restoration opportunities and can highlight sensitive areas where special consideration is needed during planning processes to ensure Aquatic Conservation Strategy objectives are met.

Stream Flow Measurements

The objective of this study was to continue to monitor summer low flows at 13 different mid-Klamath tributaries using a USGS protocol to gather this information.

Low stream flow conditions were expected to be located, analyzed and recorded for understanding baseline conditions in the lower-mid Klamath River as relates to anadromous salmonids. This information is also important in the development of projects.

Biological Monitoring – Fisheries

Spawning Surveys

The objective of this project is to monitor and assess the current and overall status of fall Chinook populations. Spawning surveys also help monitor the effectiveness of habitat use and conditions. Information from this monitoring can be used for future habitat improvement projects. On the Smith River, the entire length of Hurdygurdy and Coon Creeks were surveyed, and all salmon and steelhead redds were counted. A Region 5/Six Rivers National Forest protocol is used for Spawning Surveys. This consists of weekly surveys of key anadromous reaches to identify trends in spawning and success in habitat improvement. Some expected results include: population assessments and trends of fall Chinook salmon; distribution and habitat use data for management and recovery planning; watershed analysis and project specific analysis. The 279 miles of surveys could not be accomplished without the help of the following partners: Americorps , California Department of Fish and Game , Middle Klamath Watershed Council , Salmon River Restoration Council , Smith River Alliance , Yurok Tribe.

Table 9. Fall run Chinook salmon spawning surveys from 2001 to 2008

Fall- Run Chinook Spawning Surveys		
Year	ORD Total Redds	LTRD Total Redds
2001	393	353
2002	514	455
2003	504	194
2004	133	251
2005	88	104
2006	409	101
2007	273	138
2008	Final numbers unavailable	

Summer Adult Salmonid Surveys

The objective of this project is to derive local estimates of summer steelhead, spring Chinook and coastal cutthroat trout populations and habitat use. Methods and techniques used in these surveys are intensive downstream "direct-observation" snorkel surveys. Participants are fully trained in free-diving and safety techniques/exercises derived by the US Forest Service Washington Office and modified by Six Rivers National Forest.

Some of the expected results from these summer surveys are population and trend monitoring, as well as identification of key holding pools for management and recovery planning.

Table 10. Summer adult salmonid surveys from 2001 to 2008

	Cutthroat less than 12"	Cutthroat greater than 12"	Spring Chinook	Steelhead	Half-Pounders
Smith River					

	Cutthroat less than 12"	Cutthroat greater than 12"	Spring Chinook	Steelhead	Half-Pounders
2001	329	235	2	1	1
2002	330	283	14	4	2
2003	238	198	14	1	8
2004	335	196	14	14	0
2005	326	268	5	15	23
2006	642	567	11	25	17
2007	489	199	3	9	0
2008	784	235	2	6	0
Klamath Basin					
2001	n/a	n/a	10	1153	753
2002	n/a	n/a	58	1728	993
2003	n/a	n/a	111	913	375
2004	n/a	n/a	15	587	456
2005	n/a	n/a	8	295	257
2006	n/a	n/a	0	12	5
2007	n/a	n/a	14	187	270
2008			5	200	184

South Fork Smith Tributary Level II Habitat Inventory

The objectives of stream surveys are: 1) inventory stream habitat conditions and quality for threatened, endangered and sensitive (TES) fish and aquatic species, and 2) derive local estimates of summer steelhead, spring Chinook and coastal cutthroat trout populations and habitat use through “direct observation” snorkel surveys. Fish survey information provides baseline fisheries data for use in all project design on the SRNRA

Results from these surveys include habitat monitoring, TES abundance and habitat use monitoring, as well as identification of important fish refugia for management and recovery planning. Survey information provides baseline fisheries data for use in project design on the NRA. Ten miles were surveyed in 2008.

Little Jones Cutthroat Study

The coastal cutthroat trout is a Forest Service Sensitive and Management Indicator Species. This ongoing research lead by PSW Redwood Sciences Lab is to provide basic life history information to help in the management and protection of the species and its habitat. The Smith River is unique on the Forest in having a large population of coastal cutthroat trout that provide sport fishing opportunities.

Smith River Salmon/Steelhead Creel Census

The California Department of Fish and Game is the lead agency in this project. This annual project collects information through direct interviews to determine angler/days and sport harvest levels on the Smith River. This information on over 24 miles provides baseline fisheries data for use in all project design on the SRNRA. The project is important in monitoring river use by anglers for determining impacts to aquatic resources as well as potential recreation partnerships and projects. The survey also aids in determining where use occurs, when peak angling occurs, and estimates of harvest on species.

Creel surveys provide a natural forum for one-on-one aquatic education. The benefits of this kind of dialogue directly with a user group are immeasurable, yet result in immediate benefits. In addition, both Chinook and steelhead are Forest Service sensitive species.

North Fork Eel River Monitoring

Annual survey of spawning success by visual observation of steelhead juveniles as well as age class identification for over-summering success is done to monitor for steelhead presence and livestock absence for the North Fork Eel Allotment EIS.

While in 2007, steelhead young of the year were not seen in the upper Salt Creek meadow area, surveys in 2008 indicated young of the year present higher in the meadow system than previously detected. Multiple year classes of steelhead were seen in the lower reaches, albeit in low numbers.

Klamath Tributary Coho Surveys

Direct observation using CDF&G protocol within the lower-mid Klamath Subbasin is used to estimate coho outmigrants, habitat and thermal refugia utilization, timing and distribution

Through this information gathering, a better understanding of upstream migration patterns, timing and distribution, and thermal refugia will be gained to aid in planning and recovery.

Juvenile Salmonid Downstream Migrant Trapping

The monitoring of emigrating juvenile salmonid populations in conjunction with habitat availability data and suitability studies permit evaluation of restoration because these efforts focus on the juvenile phase of life, which is most affected by instream conditions. This type of evaluation directly relates to ongoing restoration for tribal trust, state, and federally listed fish species. In 2008 the Forest Service continued the monitoring of the health, survival, abundance, timing, and biological parameters of emigrating anadromous salmonids within Camp and Red Cap creeks using rotary screw traps. Reports are available from the Orleans Ranger District.

Aquatic Invasives – Ruth Reservoir

The partnership with CDF&G and lead agency Humboldt Bay Municipal Water District, as well as local landowners, is in its early stages of developing a prevention plan that could allow use of Ruth Reservoir for recreational boating while still protecting the multi-million dollar infrastructure that provides municipal water to the greater Humboldt Bay area. In addition the risk to the Ruth ecosystem from an invasion of Quagga or Zebra mussels is also at the heart of the prevention plan. Fish and Game has developed a monitoring plan to determine if the mussels invade Ruth Reservoir.

Sensitive Plant Species Management

Goals

- Maintain the health and well-being of threatened, endangered and sensitive species and their habitats. Take all steps necessary to ensure that actions authorized, funded, or carried out by the Forest Service are not likely to jeopardize the continued existence of these species.
- Manage other botanical resources on a sustainable basis. (IV-83)

Population Monitoring

Lassics lupine (*Lupinus constancei*) – Forest Sensitive species

Sampling Year: 2008 (consistent long-term monitoring since 2003)



Objectives:

- 1) Continue annual monitoring at the permanent monitoring sites (4 transects) using Level 3 monitoring (LRMP H-2) which involves demographic sampling throughout the growing season. Continue monitoring (Level 1) of the slope of Mt. Lassic based on the four permanent transects laid out this year using laser range finder techniques. Slope sampling will emphasize flowering plants.
- 2) Determine the extent of herbivory on plants and effectiveness of caging.
- 3) Determine the seed bank capacity of Lassics lupine.

Results

Objective 1): Lassics lupine occurrences referenced below are associated with 4 different sites: Red Lassic, Mount Lassic saddle, Mount Lassic forest, and Mount Lassic slope. All but the slope are monitored in fixed plots. Estimate of overall population size in fixed plots in 2008 is 186 individuals (Figure 1, Frame A). Estimate of total population across the 4 sites is 410 individuals.

- Red Lassic: Population size at the end of the season (August 2008) was 39 plants which was an increase of 62% of the August total in 2007. Total seedling number dropped from 50 seedlings in 2007 to 3 in 2008, an 88% drop in regeneration. Total number of reproductive plants nearly doubled (from 7 to 13) from 2007 (Figure 1, Frame B). All reproductive plants set seed, but seeds were not counted. All reproductive and most non-reproductive plants were caged during the 2nd week of July.

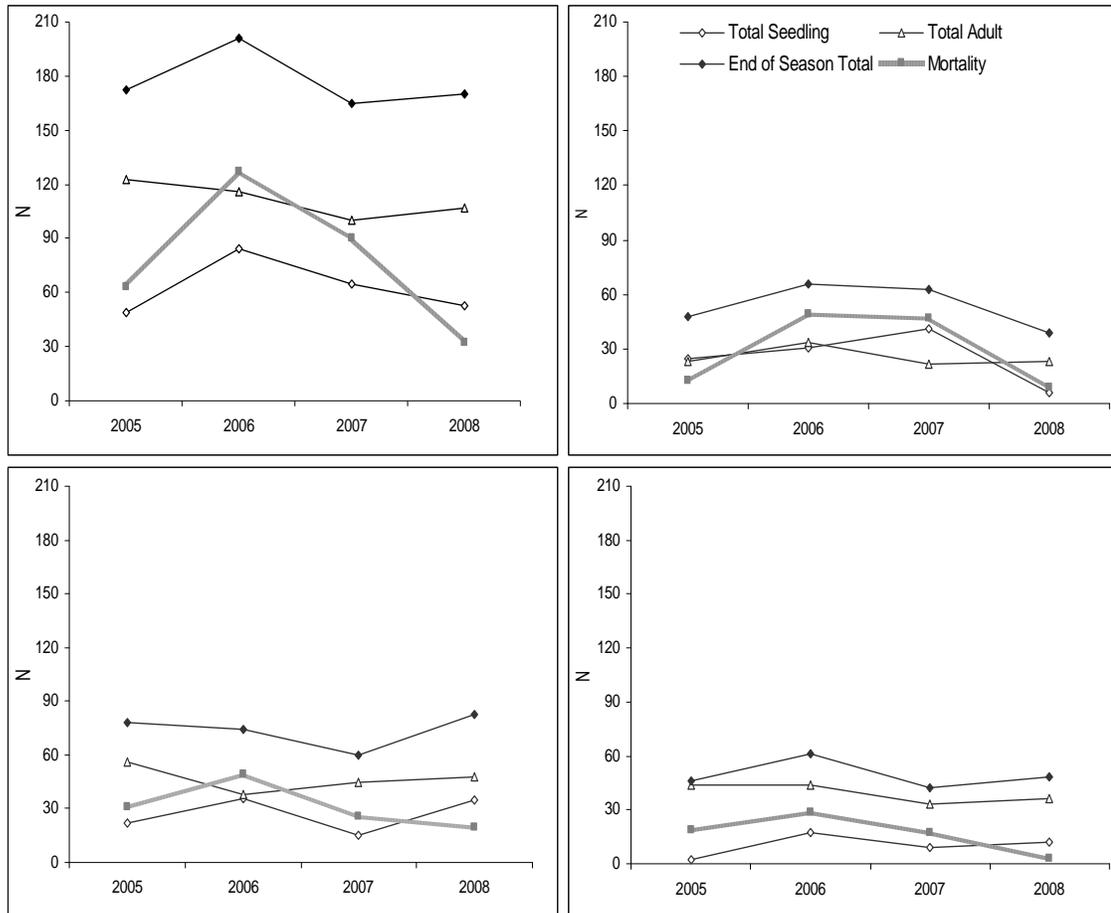


Figure 1. Summary of population fluctuations over 4 years of monitoring *Lassic lupine*. From top left: Frame A: All three permanent transects; Frame B: Red Lassic; Frame C: Saddle; Frame D: Forest. Total seedlings: all seedlings counted throughout season; Total adult: vegetative and reproductive plants; End of season total: Number of individuals at last count of season; Mortality: sum of plants lost 1) within season (between first and last counts of current year) and 2) between years (between last count of current year and first count of following year)

- Mount Lassic saddle: Population size at the end of the season was 83 which was an increase of 130% of the total in 2007. Total seedling number increased 230% of the total in 2007. Total number of reproductive plants doubled (from 20 to 40) from 2007. This latter figure is deceptive as it represents the maximum number of reproductive plants, and 17 of those had reverted by August sampling to non-reproductive via either browsing or aborted maturation of inflorescences. Seventeen of 40 reproductive plants were caged during the 2nd week of July (all bore seed).
- Mount Lassic Forest: Population size at the end of the season was 42 which was an increase 14% from August 2007. Total seedling number increased by 25% from 2007 totals. Reproduction more than doubled (from 4 to 10) from 2007 (Figure 1, Frame D). All reproductive plants set seed but seeds were not counted. Three reproductive plants were caged.

- Mt. Lassic slope: Plants are censused using a range finder. Seedlings are not counted. Total number of reproductive and visible non-reproductive plants increased from 161 in 2007 to 214 plants with the population structure shifting from dominance of non-reproductive plants in 2007 to dominance in reproductive plants in 2008.

Objective 2): Intensity of herbivory varies annually and by transect. At Red Lassic 31 of the 36 adult plants were caged, Mount Lassic Saddle, 17 of 40 adult plants, none at the Forest transect, and 24 of the 164 adult plants on the slope. Damage from browsing clearly led to mortality in cases where plants were excavated or only their remains were found, but cumulative effects of repeated browsing on viability have not been quantified. Consumption of the fruits on reproductive plants that were not caged resulted in loss of any potential propagules from those plants. Overall, the incidence of herbivory was less in 2008 than in previous years, with the number of plants affected by herbivory in the Forest transect dropped from 65 to 10, 35 to 30 at the Saddle transect and a slight increase from 1 to 3 plants at Red Lassic.

Objective 3): Seed Bank Study & Buried Seed Experiment. An in situ germination experiment began in 2005. Of the 435 seeds sown in 2005, 84 germinated in 2006 and one in 2007. Thirteen of the 85 seedlings were still extant (8 reaching a reproductive age class and 5 non-reproductive class) in 2008 and 4 new seedlings were counted. This study was expanded in 2008 to 4 additional seed plots located at the different sites (i.e. Red Lassic, and Forest). At each plot 24 seeds were planted.

A companion experiment to the seed bank study that provides more controls was established in 2008. Seeds were buried (up to 1" deep) in mesh bags in newly established plots. Annually, starting in 2009, a bag from each plot will be removed and the seed that have not germinated (i.e. radical evident emitting from the seed), will be subjected to a test to determine if seeds are dormant or dead.

Summary: Seven years of demographic data (at Mount Lassic saddle and Red Lassic) and 3 years of demographic monitoring at the Lassics Forest site indicate that both population size and reproductive capacity can fluctuate across years and at by site.

The total number of individuals sampled at the end of the season increased from 157 in 2007 to 186 in 2008 (16 of the plants were from a new lateral transect). From 2005 to 2008, the number of individuals is as follows: 2005 with 172 individuals, 2006 with 182, 2007 with 157, and 2008 with 186.

With the exception of the Red Lassic site, the number of new recruits and reproductive plants increased at all transect sites. The increase in these life stages is a positive short-term trend as the health of the population depends on a balance across life stages. Demographic monitoring will continue for at least another 3 years at which time analysis will be conducted to determine a viable population size.

Reproductive success is in part due to caging that prevents small mammals from either excavating the plants or consuming the fruits. In 2008, the incidence of herbivory was less than in previous years. The number of plants caged in 2009 will be reduced to re-evaluate the significance of herbivory on the population.

The seed germination study will be carried out in 2009 and will better document the extent of seed banking for this species and thus the influence of seed dormancy on the population. The burial experiment will be sampled for the first time in 2009.

This project is a cooperative endeavor between North Coast Chapter of the California Native Plant Society, U.S. Fish and Wildlife Service, and Six Rivers National Forest.

**Beaked tracyina (*Tracyina rostrata*) –
Forest Sensitive species**

Sampling Year: 2008

Objective:

- a) To inventory potential habitat for beaked tracyina in order to document occurrences on Six Rivers and Mendocino National Forest
- b) To test the model and better characterize potential habitat of beaked tracyina

Background

Beaked tracyina has been on the Regional Forester's Sensitive species list since 1990. To date, the species has not been documented on Six Rivers National Forest (SRNF) but there is a historic site located west of the Forest boundary near Alderpoint. The Mendocino National Forest (MNF) supports a few historic sites that have not been recently visited. In general, this species is associated with grassy, rocky settings.

Under the first phase, potential habitat for beaked tracyina on the MNF and SRNF was modeled based upon habitat parameters determined to exist at known locations and in consultation with botanists familiar with the taxon. Selected parameters included:

- oak woodland/annual grassland vegetation type
- 5 specific soil types: NRCS Map Unit Ids CA 260, 283, 295, 296 and 299.
- aspects between 337 - 68°
- elevations below 2800 feet.

Potential habitat was outlined and mapped as “polygons” (discrete bounded areas) on digital orthographic photos and on USGS 7.5" quadrangle maps.

Results

During the weeks of June 9 and June 16, 2008, surveys on the MNF were undertaken by botanists of the San Hedrin Chapter of the California Native Plant Society (CNPS). Of a total of approximately 245 acres of potential habitat, 42 acres were surveyed, or about 17% of the area proposed for survey based on the original polygon data

Surveys on SRNF were undertaken by botanists from the North Coast Chapter of CNPS. Of a total of approximately 53 acres, we surveyed 17.4 acres, or about 26% of the area proposed for survey based on the original polygon data.

No beaked tracyina was discovered during 2008 surveys on either the MNF or the SRNF, or during surveys of the extant population at Hopland.

Relative to evaluating the model and habitat characteristics, 2008 surveys did not provide us a



definitive basis for assessing the efficacy of the predictive model, as beaked tracyina was not found. However, based on his familiarity with this species at Hopland, some observations were made on the predictive power of the model.

Model criteria that were consistent across sites visited:

- Open grassland and grassland/oak woodland interface
- Seasonally mesic soils
- Low-pitch to moderate slopes (on the MNF; slope angle tends to be quite steep on the SRNF)
- Lower to mid-slope position with either springs up-slope or near-surface hydrology within the habitat.

Model criterion that was not consistent:

- Aspect is not a reliable predictor.

In addition, while not variables in the model, it should be noted that:

- Dry and rocky or fast-draining slopes are unlikely to support beaked tracyina (rocky sites and areas with thin soils can be determined from aerial photos).
- Searching for beaked tracyina after livestock have been present may be futile.
- Habitats dominated by species whose dead culms build up a dense thatch layer, such as medusa-head seem unlikely to support a non-competitive annual such as beaked tracyina.

Summary

The effort resulted in a collation and synthesis about what is known about this species and its habitat. While the model cannot be fully validated, field visits indicated much consistency in habitat variables across polygons. In 2009, if beaked tracyina is detected at Hopland or at Alderpoint, surveys will continue on SRNF. If not detected, the surveys will be postponed a year.

This project was implemented under a cost-share agreement with the North Coast Chapter of the California Native Plant Society in partnership with the San Hedrin Chapter of CNPS.

Effects Monitoring

Opposite-leaved lewisia (*Lewisia oppositifolia*)

Sampling year: 2008 & 2009

Objectives:

To gather baseline data on opposite-leaved lewisia in Jeffrey pine/Idahoe Fescue grasslands of Coon Mountain (2008) and to gather post-fire data on the population to ascertain short-term effects of prescribed burning (2009).



Results

In June, 2005, we established permanent monitoring plots for opposite-leaved lewisia and collected baseline data for long-term and/or post-fire monitoring effects on the species. A sub-set of the plots was established in areas where fire is to be excluded, thus serving as a control. Two

additional transects with plots were added in 2007. Burning of the grassland occurred in the fall of 2008 followed by early 2009 post-fire monitoring.

The sampling scheme includes the establishment of 6-50 meter transects in which 1m² frames are subjectively located along the frame (with grids to facilitate estimation) to capture lewisia plants. Number of individuals per plot along 6 transects were tallied by phenology class and frequency (a measure of abundance) was collected within the plots for associating species. Cover values for bare ground, litter, and associating species were also estimated.

Figure 2 below does not reveal any notable change in total population size over three years. The change in population totals are as follows: 2007- 3141 plants, 2008- 3024 plants, and 2009- 2984 plants.

One objective of the 2009 monitoring was to determine the immediate effects of a prescribed burn. Of the transects, the fire only burned 2 frames along transect 2. None of the other transects burned. Possible explanations: a) not enough fuel to carry the fire, b) natural fire breaks (rock, gravelly substrate) within the occupied habitat area, c) opposite-leaved lewisia tends to occupy mesic to moist micro-sites. Where burning did occur, the plant counts went up in frame 1 from 35 individuals to 42, and down in frame 2 from 38 to 29. At transect 1, frame 1, there was change in cover values of graminoids (grass) from 45 to 28% and an increase in bare ground from 13 to 45%, however this was not consistent with the findings in frame 2 (Figure 3). No invasives were detected

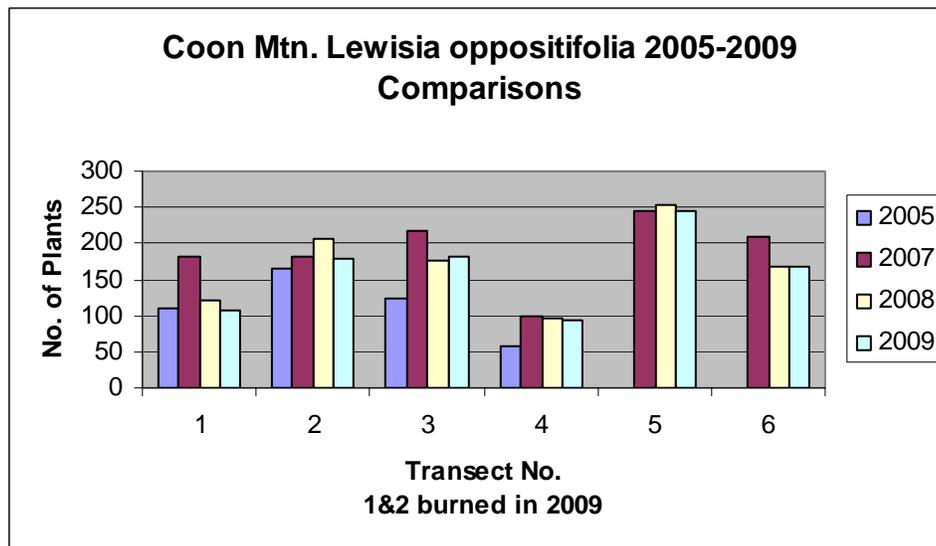


Figure 2. Number of individuals of *Lewisia oppositifolia* along transects from 2005-2009

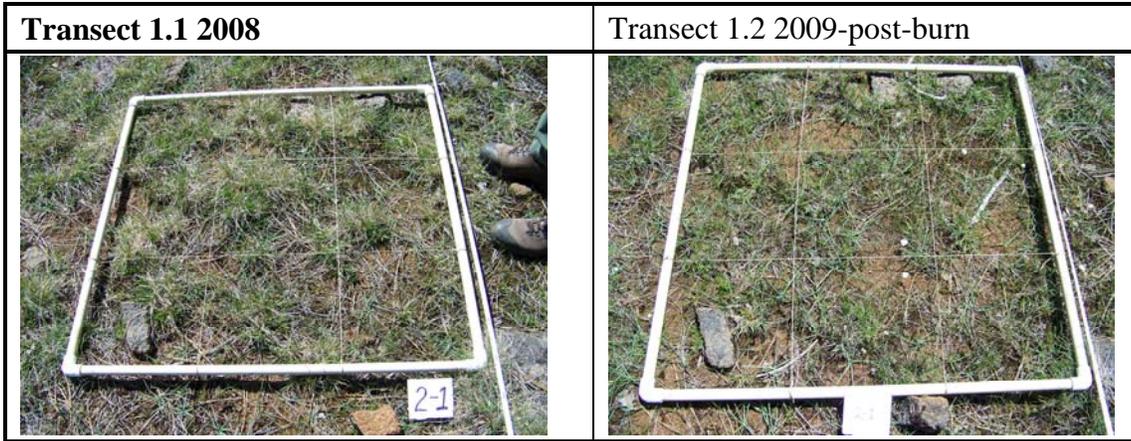


Figure 3. Comparison of transect frames pre- and post-burn.

Summary:

From a population (specifically a sub-population) perspective, since baseline data were collected, the short-term trends indicate a relatively stable situation. Post-fire burn results were limited by the fact that only small portions of two transects actually burned. In the frames of the transects, opposite-leaved lewisia was not dramatically affected. As to burning in general, perhaps the micro-habitat for the lewisia precludes low intensity fire from burning the habitat.

Invasive Species Management

Goal

- Sites treated to eradicate invasive exotic plant species shall receive follow-up monitoring. (LRMP IV-130, 20-20)

Objective

To reduce the incidence of invasive or noxious weed re-establishment via seed or resprouting by monitoring sites and retreating as necessary (LRMP IV-130).

Results

Treatment or management emphasis on the Forest generally focuses upon small satellite occurrences or leading edges (i.e. the edge of a new species moving onto the Forest) regardless of the species. The species, its distribution on the landscape and the size of the occurrence are all factors that play into whether monitoring and retreatment are prioritized. Table below summarizes results in 2008.

Table 11. Noxious Weed Stats for the Forest (2008)

Number of sites documented on Forest	725 (06' figures of 921 inadvertently included duplicates)
Priority species= those which exist as small, isolated, satellite occurrences or as leading edges	Diffuse/spotted & meadow knapweed, scotch/french & spanish broom, meadow knapweed, yellow starthistle, pampas grass, dyer's woad, dalmation toadflax

Number of sites documented on Forest	725 (06' figures of 921inadvertently included duplicates)
# of priority sites monitored and retreated in 2008 as necessary	125
Proportion of priority weed occurrences < 0.1 acre	80%
# of priority sites not found (= progressing toward eradication or eradicated) in 2008 ¹	27
% of priority sites not found in 2008= eradicated	22%

¹ A proportion of these sites have indicated negative finds over consecutive years.

Summary:

Early detection, treatment, monitoring and repeated re-treatment (e.g. over 3 years) has proven effective in eradicating small (< 0.1 acres) and isolated occurrences of noxious weeds. This approach has likely prevented noxious weeds in upper watershed positions or outlier locations from spreading into wildlands.

Noxious weed treatments were accomplished with internal funds and through a cost-share agreement with Mid-Klamath Watershed Council, a grant from the Del Norte Resource Advisory Committee, and a grant from the Humboldt County Weed Management Area.

Wildlife Resource Management

Goal

- Maintain or improve populations of endangered, threatened, and sensitive species by providing suitable habitats that are capable of meeting species requirements (LRMP IV-96).

Marbled Murrelet (*Brachyramphus marmoratus*)

Status: Threatened

In 2008, project-level surveys to protocol were completed for marbled murrelets within Zone 1, by PSW Redwood Sciences Laboratory for project clearance. Surveys resulted in no detections.

Marbled Murrelet Survey (2008)

Ranger District	Survey Emphasis	Survey Area	Stations	Project Name	Results
Gasquet	Noise	3	6	Big Flat Project	No detections
Orleans	Habitat	5	9	Orleans Community Fuels Reduction	No detections

Bald Eagle (*Haliaeetus leucocephalus*)

Status: Threatened

In 2008, bald eagle territories were monitored but occupancy was undetermined. Territories are visited beginning in early spring to determine whether the territory is occupied. Once occupancy is established, an additional visit is completed in mid summer to determine how many young are nearing fledging age. Table 12 displays the results of bald eagle territory monitoring on each District.

Bald Eagle Owl Survey (2008)

Territories by District	2008 Bald Eagle Monitoring		Notes
	Occupied?	# Young?	
Mad River (Ruth Lake Historic Site)	No- Historic nest tree died in 2004	No	There was a pair of eagles near the historic nest site, but a new nest tree was not found.
Mad River (Ruth Lake New Site) (2005)	This is probably a new territory but breeding is unconfirmed.	XX	There was a pair of eagles on the NW end of Ruth Lake all season. Nest suspected 23 April, 2008.
Mad River (Marshall Rock)	New nest not used 2008. Devils Backbone nest not monitored 2008.	unknown	0.34 miles north of the summit of Marshall Rock in T2S,R8E,NW1/4 of NE ¼ Sec.10 from New Site
Lower Trinity (Todd Ranch)	unknown	unknown	No monitoring accomplished in 2008 due to Hells Half Acre Fire smoke.
Orleans (Wakaar)	Breeding pair near nest tree throughout season	none	Breeding presumably failed due to community activity near nest during mating season.
Orleans (Soldier Creek)	unknown	unknown	Unsuccessful attempts to locate nest site and no pair observed
Ukonom			Nest site locations unknown
Annual Totals	2 territories occupied	0 young detected	

Northern Spotted Owl (Strix occidentalis caurina)

Status: Threatened

The Forest monitored several Northern Spotted Owl Activity Centers (AC's) in 2008 to determine whether the sites were active and if they successfully fledged young. Survey efforts included protocol surveys and status visits of known Activity Centers. The table summarizes the results of the monitoring.

Northern Spotted Owl Activity Centers (AC's) Monitored (2008)

Ranger District	# AC surveyed	Barred Owl	Results
Gasquet	XX		Big Flat Project had 10,000 acres surveyed with 3 detections (not AC).
Mad River	12XX	No	Pilot Creek Monitoring: Year 2 of 2
	5	Yes	Beaverslide Project: Year 1 of 2
	5		Kelsey (Clover D): Year 1 of 2
	6		Buck Mtn Project: Year 1 of 2
Orleans	7	Yes	OCFR: Year 1 of 2 resulted in responses at 2 known AC
	6		CEDAR: Year 1 of 2 = occupied AC "CrawfordCk"

The Willow Creek Demography Study Area (WCSA) has been monitored annually since 1985. This study area occurs on the Lower Trinity Ranger District. The results of the monitoring that occurred in 2008 are documented in annual reports entitled Population Ecology of the Northern Spotted Owl in Northwestern California, on file in the Supervisors Office.

Peregrine Falcon (Falco peregrinus anatum)

Status: Forest Service Sensitive Species

The Forest monitored five peregrine falcon territories in 2008 to determine whether the sites were active and if they successfully fledged young. Surveys were completed to protocol. The table below summarizes the results of the monitoring.

Peregrine Falcon Territories Monitored (2008)

Ranger District	Nest Code & Site Name	Occupied?	# Young?	Notes
Mad River	N10021 - Mad River Rock	Active Pair	1 heard	
Mad River	N10065 - Hetton Rock	Active Pair 1May08		Nest activity seen and heard

Lower Trinity	N10025 - Castle Rock	Active Pair	2 seen	Nest activity through Hells Half Acre Fire
Lower Trinity	N10096 - Hawkins Bar	Abandoned	n/a	This site has been inactive for several years.
Orleans	N10029B – Bluff Crk Alt 2. (Aikens Crk)	Active Pair 10May08	2 seen	Moved off eyre upon fledging. Assumed to be w/in area.
Orleans	(Murder Bar)	Active Pair 10May08	Heard	Assume at least one young. Ukonom Complex Fires 20 June 08 extended through fledging
Ukonom	(Sugarloaf Bar)	Active Pair	Heard	Suspected
Totals		6 Active Pairs	7 fledglings	

Northern Goshawk (Accipiter gentilis)

Status: Forest Service Sensitive Species

In 2008, the Forest did plan management activities within suitable or occupied northern goshawk habitat and territories and conducted surveys for this species.

Northern Goshawk Survey (2008)

Ranger District	Nest Code & Site Name	Surveyed?	Results
Orleans		1) Rosalena Creek Territory R05F10D5211 last detected 1991	XX
Mad River	NOGO 491 NOGO 511	Kelsey Project	NOGO 491: 1 fledgling NOGO 511: 2 fledglings
	NOGO 462 NOGO 483	Buck Mtn	
	NOGO Nests	Beaverslide	New Nest
	NOGO Territory		Monitored by T.Leskiw

Ranger District	Nest Code & Site Name	Surveyed?	Results
Gasquet	NOGO Hab	Big Flat Project	No detection
Ukonom	Incidental	Ukonom Fire Complex Monitoring	20 July 08 observed flying across HWY 96 west to east at 41° 27.871 and 123° 29.754' (NAD 83) about 3 miles NNE of a known goshawk nest site across the river. The observation location about is ½ mile downriver from Irving Creek

Osprey (Pandion haliaetus)

Status: California Species of Special Concern

Ospreys typically nest in large snags along the banks of rivers and lakes. There are two existing osprey nests adjacent to the Highway 299 Road Repair Project on the Lower Trinity Ranger District. Seasonal restrictions are imposed on noise disturbing activities within ¼ mile of the nests to minimize disturbance during the breeding season. Wildlife Biologists monitor the nests during the breeding season to determine if the sites are active. The table below summarizes the results of the monitoring.

Osprey Nests Monitored (2008)

District	Nest Site	Occupied?	# Young?
Orleans	Nest #1 Hwy 96 – Aiken’s Camp Grnd (Sec 30 SE)	yes	2
	Ullathorn Nest	21Jul08 1 adult	1 fledgling
	Nest #2 Hwy 96 – Dolan’s Bend	Unknown	unknown
Lower Trinity	Nest #1 Hwy 299 - Boise Crk Camp Grnd (Sec 31)	10May08 on nest	1
	Nest #2 Hwy 299 – Rest Area (Sec 19)	yes	1
Mad River	Private Prop	1May08 on nest	
	South shore	1May08 on nest	1
	North shore		
Ukonom	18 July 08unoccupied osprey nest not previously noted on forest inventory. The location		

District	Nest Site	Occupied?	# Young?
	near in a snag was 10.5 miles east on Salmon River Road near the east end of Tripp Point, above the road approx. 1/8 mile up from road. Luke Langstaff walked to the base of the nest tree to get a GPS location 41° 20.149' and 123° 23.737' (NA 83)		

Bats

Yuma Myotis bats are known to nest and roost on the Smith River National Recreation Area (NRA). There is an abandoned guard station building that is used annually by Yuma Myotis bats as a maternity colony. The building is in disrepair and is falling apart. It is scheduled to be demolished to meet public safety concerns. In its current condition, the building is not likely to remain a suitable maternity colony for much longer. The District Wildlife Biologist has constructed 6 alternative nest/roost site structures adjacent to the existing building in hopes that the bats will colonize it prior to the demolition activities. The new structures will provide suitable habitat for approximately 1,200 bats. The Biologist monitored the existing structure and the new alternative bat roosts throughout the 2008 season. About fifty bats colonized the new structures but a majority of the bats in the colony (approximately 600) used the historic roost site in the old structure.

Social and Economic Environment

Native American Trust Responsibility

Goals

- Emphasize increasing understanding, communications, and partnerships with federally recognized Tribal governments.
- Improve relationships between the Forest Service and Indian people.
- Facilitate access and use of National Forest System lands by Indian people (LRMP IV-112).

Monitoring and Accomplishments

The purpose of the monitoring is to determine if communications are occurring that result in facilitating access and use of National Forest System lands by Indian people.

There are 12 Federally Recognized Tribal governments within the area of influence of the Forest. They are the Hupa, Yurok, Karuk, Elk Valley Rancheria, Smith River Rancheria, Big Lagoon Rancheria, Resighini Rancheria, Trinidad Rancheria, Blue Lake Rancheria, Table Bluff Reservation – Wiyot Tribe, Bear River Band of Rohnerville Rancheria, and Round Valley Indian Tribes. The Forest has established government-to-government consultation protocol

Memorandums of Understanding (MOU) with 10 of the 12 tribal governments. Formal consultation takes place at project planning to include tribal concerns, issues, and interests in project development. Additionally, we work with the Tolowa Nation and the Tsnungwe Tribal Councils, two tribes who are not Federally Recognized, and numerous Indian organizations.

Table 12. Number of Consultations and Partnerships with Tribes

Year	# Consultations	# Partnerships	Value of Partnerships
2008	296	12	\$288,125

*Note: Not all partnerships are associated with dollars.

Some examples of the results of consultations include:

- This year wildland fire occurred in the Blue Creek drainage encompassing the *Helkau* determined eligible National Register of Historic Places District that contains numerous sacred locations for the Yurok, Karuk and Tolowa. We had protocols in place with the Yurok and Karuk through Memorandum of Understandings for governmental consultation during wildland fire situations. These agreements also outlined how we will work with the tribes to protect significant cultural resources while implementing suppression tactics. The Blue 2 and Siskiyou fires had Designated Tribal Representatives and Heritage Resource Consultants as part of the Incident Command Team during the entire fire incident. Governmental consultation between the Tribal Councils and their Designated Representatives and the Forest Supervisor was ongoing throughout the fires. These two fires were managed to protect the cultural significance of the locations and trails associated with the tribes’ culture. The Forest Land & Resource Management Plan outlined some standard and guides for this area which also were implemented as part of the management of the fires. These fires started in June and are still burning with a Type 4 Team as of the writing of this report on September 30, 2008.
- At the request of the Yurok Tribe, the Forest participated in a multi-agency working group in support of the Yurok Condor Reintroduction project.
- The Forest worked with the Bear River Band of Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe – Table Bluff Reservation and finalized a National Register of Historic Places Determination of Eligibility for the Humboldt Nursery Site CA-HUM-513/H, McKinleyville. State Historic Preservation Office concurred that the entire Humboldt Nursery property is a site that is eligible for inclusion on the National Register as an archaeological site under Criteria D: Information Potential.
- We entered into a Wyden Challenge Cost Share Agreement with the Round Valley Indian Tribes which sets us up to do future collaborative partnerships for work on either National Forest lands or Tribal lands.
- The Forest supported the Karuk Tribe’s request to add 33 miles of Forest Service routes they identified for listing on the Indian Reservation Roads (IRR) inventory system with the Bureau of Indian Affairs.
- The Hoopa Tribal Civilian Community Corps (TCCC) and Americorp crews did trail work within the Mill Creek area in support of the grazing special use permittees who are

Tribal members. They cleared trails that had numerous downed trees from the storms from the last couple of winters.

- The Hoopa Tribe began implementing on the ground the Mill Creek Roadside Fuels Project which is a Tribal Forestry Protection Act project on National Forest System lands that is adjacent to the Hoopa Valley Indian Reservation.
- In partnership with the Karuk and Yurok tribes the Forest successfully obtained a \$483,000 grant from the California Department of Parks and Recreation, Off-Highway Division. This grant funds the decommissioning of 42 miles of road in tributaries to the Klamath River, specially, Blue, Pecwan, and Bluff Creek watersheds. Each tribe will contribute approximately 30% of the total project costs.
- Additionally, the Forest obtained \$311,000 California Department of Fish and Game Fisheries Restoration grant for road decommissioning in the Bluff Creek watershed, of which the Karuk Tribe is contributing an additional 35% of project costs.
- The number of consultations demonstrates that a lot of formal interaction is occurring both at the staff level and at the leadership level and this communication is resulting in partnerships, policy change, and work completed on the ground that is supportive of tribal values, interests and culture. This level of communication facilitates the Forest in meeting the Forest Service's trust responsibilities to tribal governments and the overall goal of providing access and use of National Forest lands for Indian people. This data indicates that the Forest is trending towards meeting its LRMP goals for tribal relations.