

SAWTOOH NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN

MONITORING AND EVALUATION REPORT FY 2004

I. INTRODUCTION

In September 2003, the Forest began implementing its revised Land and Resource Management Plan (Forest Plan) which will shape management of the Forest for the next 10 to 15 years. The revised Forest Plan defines a strategy that manages Forest resources to attain a set of desired resource and social and economic conditions by emphasizing the maintenance or restoration of watershed conditions, species viability, terrestrial and aquatic habitats, and healthy, functioning ecosystems.

One of the lessons learned from experience implementing the original Forest Plans is that plans need to be dynamic to account for changed resource conditions such as large scale wildfire or listing of additional species under the Endangered Species Act, new information and science, and changed regulation and policies such as the roads analysis policy. To accomplish this, the 2003 Forest Plan has embraced the principles of adaptive management. Monitoring and evaluation are critical to these principles.

The goal of our monitoring program is to help us determine what in the Plan is working well and what is not, and to help identify if we need to change management direction or monitoring methods. Monitoring and evaluation is intended to tell us how forest plan decisions have been implemented, how effective the implementation has proven to be in accomplishing desired outcomes, and how valid our assumptions were that led us to decide on the management strategy detailed in the Forest plan. Monitoring and evaluation of key results over time will help us determine if we are making satisfactory progress toward the desired conditions identified in the Plan or if a “need for change” in the existing strategy is required. As long as the monitoring and evaluation results determine that the management strategy outlined in the Forest plan is resulting in acceptable progress toward Forest Plan desired conditions, then the conclusion would be that there is no need for change in that strategy. However, if monitoring and evaluation concluded that the Forest Plan strategy is not effective in light of conditions and circumstances at the time of the assessment, then the Forest Supervisor would make the determination as to what the “needs for change” are and whether plan amendment or revision would be needed.

This document reflects the first year of implementing the revised Sawtooth National Forest Plan. It reports Forest monitoring activities and accomplishments for FY 2004.

II. 2004 FOREST PLAN MONITORING and EVALUATION REPORT ORGANIZATION

As previously stated, monitoring and evaluation provide knowledge and information to keep the Land and Resource Management Plan viable. Appropriate selection of indicators, and monitoring and evaluation of key results helps us determine if we are meeting the desired conditions identified in the Plan. Chapter IV of the Revised Forest Plan provides the list of activities, practices and/or effects to be monitored and the various indicators to be used as measures. While most of the monitoring elements require that some level of data be gathered each year, the majority of elements are designed to evaluate the effects of management over time. Therefore, results of monitoring efforts for most elements are reported after evaluation of data that has been gathered for multiple years.

Chapter IV, Table IV-1 of the Forest Plan identifies elements related to National Forest Management Act (NFMA) and other pertinent laws and regulations that are reported on either an annual basis or every 5 years. Elements that are not reported each year are typically those that require the collection of information over multiple years before a meaningful evaluation is possible. In this first year monitoring report under the 2003 Forest Plan, only the 5 elements identified in Table IV-1 with a “yes” in the “Annual Posting of Results” column will be discussed in Section III-A below.

Table IV-2 of the Forest Plan identifies questions and indicators that will be monitored to determine the success of the Forest Plan management strategy in progressing toward desired conditions. Similar to Table IV-1, information pertaining to many of the indicators requires multiple years of collection before any meaningful evaluation of an element and its related question can be made. Therefore, only the four monitoring questions and their related indicators with “annually” in the “Report Period” column will be addressed in Section III-B below.

As described above, the monitoring elements from Table IV-2 were designed around monitoring questions that need to be answered about Forest Plan implementation. For many of the elements, information used to answer the questions is gathered through annual review of selected projects. In addition to the annual monitoring requirements from Table IV-1 and Table IV-2, section III-C below includes a description of project level monitoring that occurred in 2004.

III. SUMMARY OF MONITORING RESULTS:

A. Annual Monitoring Requirements – Table IV-1:

Monitoring requirements identified in the Forest Plan shall provide for:

- 1. A quantitative estimate of performance comparing outputs and services with those projected by the Forest Plan.**

As defined in the Forest Plan, Objectives are “concise time-specific statements of actions or results designed to help achieve goals”. As such, objectives provide the best projection of outputs and services to be provided through implementation of the Forest Plan. Forest Plan objectives are found under the various Forest-wide Resources sections in Chapter III of the Forest Plan. Following is a summary of the Forest’s accomplishments for those objectives designed to provide for specific services on an annual basis, and/or projected outputs resulting from management actions. Other objectives found in the various sections of the Forest Plan that were not required to be accomplished in the first year of plan implementation (2004) or did not require an annual accomplishment are typically *not* discussed in this first year monitoring report. These objectives are discussed only in those cases where activities have been implemented that substantially contribute toward or fully accomplish the objective in the first year. Typically, these objectives will be addressed in detail every 5 years, unless otherwise specified or warranted due to changed conditions or circumstances.

The objectives addressed below are organized by resource section as they are found in the Forest Plan. Those resource sections in the Plan that do not contain objectives that are reported on an annual basis or require an annual accomplishment will be noted below.

Threatened, Endangered, Proposed and Candidate Species Objectives (FLRMP pages III-8 to III-11)

Objective TEOB22: *Develop operational resources (maps, keys, desk guides, etc.) within 1 year of signing the ROD, to coordinate TEPC species concerns and practical mitigations, and include those resource tools in the Fire Management Plan. Consult with NMFS and USFWS on operational resources on an annual basis.*

Accomplishment: Fire operational guidelines were developed in the spring of 2004. Guidelines from the Boise National Forest were adapted as a starting point. Since the Sawtooth National Forest shares many of the same watersheds with the Boise National Forest, it was felt that having similar criteria would lead to more consistent measures to mitigate potential fire suppression effects.

Guidelines were developed further through input from the Sawtooth National Forest Level 1 consultation team, district biologists, supervisor office fire staff, and district fire management officers. Final acceptance of the guidelines by the regulatory agencies (U.S. Fish and Wildlife Service/NOAA Fisheries) occurred in May 2004.

The guidelines cover protective measures for wildlife, botany, and aquatic resources. Specifically, there is direction for (1) drafting and dipping of water from lakes and ponds; (2) foam and retardant application near waterways; (3) fireline construction; (4) activities in riparian conservation areas (RCAs); (5) noxious weeds; (6) aquatic invasive species; and (7) nest and denning sites for wildlife. It was agreed that guidance would apply across the entire forest. This is because it would help to

minimize effects to similar resource issues on all districts. Guidance should be used once a Wildland Fire Situation Analysis (WFSA) has been approved.

AIR QUALITY AND SMOKE MANAGEMENT Objectives (Forest Plan, page III-16)

This section contains no annual accomplishment requirements.

SOIL, WATER, RIPARIAN AND AQUATIC RESOURCES Objectives (Forest Plan, pages III-19 to III-21)

Objective SWOB11: *Coordinate with state and local agencies and tribal governments annually to limit or reduce degrading effects from stocking programs on native and desired non-native fish and aquatic species.*

Accomplishment: The Sawtooth National Forest participated in several meetings with Idaho Fish and Game and Utah Department of Natural Resources in 2004. These ranged from annual district coordination meetings to participation in the Northwest Power and Conservation Council subbasin assessments. Stocking in high mountain lakes across the forest was one of the topics discussed with the Magic Valley, Salmon, and Southwest Idaho Fish and Game regional offices. Stocking frequency, stocking databases, common naming convention for lakes, and roles and responsibilities were discussed. The Sawtooth National Recreation Area will initiate a working group in the fall of 2004 to further discuss how to best share-stocking information and discuss jurisdiction within the Sawtooth Wilderness.

Participation in the Northwest Power and Conservation Council subbasin assessments in Boise-Payette-Weiser and the Salmon River helped to further characterize threats from stocked species and identified restorative actions that could be taken to reduce these threats at the subbasin scale.

WILDLIFE RESOURCES Objectives (Forest Plan, pages III-25 to III-26)

This section contains no annual reporting requirements.

VEGETATION RESOURCES Objectives (Forest Plan, page III-30)

This section contains no annual accomplishment requirements.

BOTANICAL RESOURCES Objectives (Forest Plan, pages III-32 to III-33)

Objective BTOB07: *Maintain annually a list of Forest Watch plants that identify species of concern (see Appendix C for list of species).*

Accomplishment: No species were added to or deleted from the Forest Watch list.

NON-NATIVE PLANTS Objectives (Forest Plan, pages III-35 to III-36)

Objective NPOB03: *Develop strategic noxious weed management plans for Coordinated Weed Management Areas. Cooperate on a regular basis with federal agencies, tribal governments, the State of Idaho, county weed organizations, state and local highway departments, and private individuals in establishing Coordinated Weed Management Area strategic priorities, and locating and treating noxious weed species.*

Accomplishment: The administrative boundary of the Forest falls within seven Cooperative Weed Management Areas (CWMAs): Camas Creek, Blaine County, Shoshone Basin, Goose Creek, South Fork Boise, Custer County and Raft River. Coordinated accomplishments for CWMAs are reported in the winter following the field season of work. Thus the summary of final accomplishments will be reported in the monitoring report published next spring (see Section 3 below). However, as of July 2004, the Forest had treated 1,964 acres of noxious weed across the Forest.

FIRE MANAGEMENT Objectives (Forest Plan, pages III-38 to III-39)

Objective FMOB04: *Schedule and complete at least 40,000 acres of fuels management through prescribed fire and mechanical treatments in the next decade to achieve desired vegetation attributes and fuel reduction goals. Focus on wildland/urban interface and areas in Fire Regimes 1, 2, and 3 (non-lethal, mixed1, mixed2) in Condition Classes 2 and 3 (moderate to extreme hazard rating).*

Accomplishment: In FY04, the Forest treated 2,010 acres in non-wildland urban interface (Non-WUI) and 393 acres in wildland urban interface (WUI) with prescribed fire. Mechanical treatment was used to treat 35 acres in Non-WUI and 1229 acres in WUI for an accomplishment of 3,667 acres. This figure is expected to change however, as prescribed burning on Lime Creek began on September 27th, 2004 and will account for additional acres in the Non-WUI category.

TIMBERLAND RESOURCES Objectives (Forest Plan, pages III-42 to III-43)

Objective TROB01: *Provide timber harvest, and related reforestation and timber stand improvement activities, to contribute toward the attainment of desired vegetation conditions. Annually, during the next 10 to 15 years:*

- a) *Harvest timber, other than by salvage, on an average of approximately 2,000 acres,*
- b) *Reforest an average of approximately 480 acres, and*
- c) *Complete timber stand improvement activities on an average of approximately 300 acres.*

Accomplishment:

- a) Harvested timber, other than by salvage, on 26 acres;
- b) Reforested 3 acres; and
- c) No timber stand improvement activities were completed.

Objective TROB02: *Make available an estimated 60 million board feet of timber for the decade, which will contribute to Allowable Sale Quantity (ASQ).*

Accomplishment: In 2004 the Sawtooth National Forest made available 5.55 million board feet (MMBF) of timber (4.5 MMBF of salvage and 1.5 MMBF of green) which contributed to the Allowable Sale Quantity.

Objective TROB03: *Utilize wood products (e.g., fuelwood, posts, poles, houselogs, etc.) generated from vegetation treatment activities, on both suited and not suited timberlands, to produce an estimated 69 million board feet of volume for the decade. This volume, when combined with ASQ, is the Total Sale Program Quantity (TSPQ). The TSPQ for the first decade is estimated to be 129 million board feet.*

Accomplishment: In 2004 the Sawtooth National Forest made available 1.97 million board feet (MMBF) of wood products (.12 MMBF in post and poles and 1.85 MMBF in firewood). When combined with the 5.55 MMBF contributing to ASQ (i.e. TROB02), the Sawtooth National Forest made available 7.52 MMBF that contributed to the Total Sale Program Quantity (TSPQ).

RANGELAND RESOURCES Objectives (Forest Plan, page III-44)

This section contains no annual accomplishment requirements.

MINERALS AND GEOLOGY RESOURCES Objectives (Forest Plan, pages III-48 to III-49)

Objective MIOB02: *Develop and implement within one year standardized inspection, monitoring, and reporting requirements for minerals activities to provide for environmentally sound exploration, development, and production of mineral and energy resources.*

Accomplishment: A standardized inspection form developed for the Minidoka District was expanded to the Ketchum, Fairfield, and SNRA to document annual inspection results. Annual inspections are conducted as required as part of the "administered to standard" Minerals Attainment Report (MAR) Target.

LANDS AND SPECIAL USES Objectives (Forest Plan, page III-53)

This section contains no annual accomplishment requirements.

FACILITIES AND ROADS Objectives (Forest Plan, pages III-58 to III-59)

Objective FROB01: *Analyze road system needs and associated resource effects in accordance with the established agency policy direction for roads analysis.*

Accomplishment: Two Roads Analysis Processes were completed during fiscal year 2004; one for the Oakley Stone quarries on Minidoka District and one for the Upper Alturas project on the Sawtooth National Recreation Area. No changes to the Forest road system was recommended as a result of these analyses.

Objective FROB05: *Coordinate transportation systems, management, and decommissioning with other federal, state and county agencies, tribal governments, permittees, contractors, cost-share cooperators, and the public to develop a shared transportation system serving the needs of all parties to the extent possible.*

Accomplishment: Timber sale purchasers and other commercial users of FS roads either participate in road maintenance based on the amount of timber they haul or contribute money toward FS maintenance. Road maintenance coordination meetings were held with Camas County and Mountain Home Highway District this year.

Objective FROB06: *Identify roads and facilities that are not needed for land and resource management, and evaluate for disposal or decommissioning.*

Accomplishment: No project decisions were made under the current Forest Plan that identified the addition or decommissioning of any roads.

Objective FROB11: *In the Forest's annual program of work, prioritize and schedule improvements to existing culverts, bridges, and other stream crossings to accommodate fish passage, 100-year flood flow, and bedload and debris transport. Include accomplishments in the biennial update of the Watershed and Aquatic Recovery Strategy (WARS) database.*

Accomplishment: The Sawtooth National Forest was one of four Forests in Region 4 selected to completed culvert inventories. The purpose of the culvert inventory was to better describe the extent of culvert barriers across the forest to fish and associated aquatic species. The emphasis was to first focus on those streams with listed bull trout, cutthroat trout, steelhead trout, and anadromous salmon. Another objective was to prioritize culverts needing restoration taking into account extent of habitat blocked, habitat quality, importance of stream, etc.

In FY 03 and FY 04, approximately 500 stream crossings were inventoried on the Sawtooth National Forest. Crossings on fish bearing streams were surveyed in each subbasin across the forest. This include fish bearing streams in the Raft River, Goose Creek, Rock Creek, Shoshone Creek, Big Wood River, Little Wood River, Camas Creek, S.F. Boise, S.F. Payette and Upper Salmon River.

The 2003 inventory found that about 65% of stream crossings do not meet the criteria to pass fish and are a barrier for at least one life stage. Most of the "red" crossings are associated with circular or squashed pipe-arch culverts and are a barrier due to the culvert slope. Only 11% of the evaluated culverts met the passage criteria and are not a barrier to fish for both juvenile and adult life stages. The remaining 24% of the

evaluated culverts are undeterminable and candidates for further evaluation (e.g.; Fish Xing software).

No culvert or bridgework was accomplished in 2004 to correct fish passage, flow or bedload problems. However, a decision on the Fairfield District was made to replace 3 existing culverts carrying Soldier Creek with a bridge. Although funding has been obligated in 2004, work will not actually be completed until 2005.

One ford in Little Smokey Creek at the FR 096 crossing (T2N, R15E, Sec 8, SW 1/4) and one ford in Basalt/Sawmill Creeks (T2N, R14E, Sec 24, SW 1/4) of the S.F. Boise subbasin were rehabilitated. At the Little Smokey crossing the ford was reconstructed in conjunction with a realignment of the stream channel. A new stream channel was excavated downstream of the ford to eliminate most of the existing road-stream overlap and the ford was graded and hardened to minimize the potential for recapture of the creek. The Basalt ford was eliminated, rehabilitated, and blocked. While the former culvert crossing on Sawmill Creek was redesigned with a new, larger, engineered ford. Both projects will reduce erosion and sedimentation during spring run-off and facilitate fish passage. Additionally, work will be taking place this fall on Stanley Creek Road to correct drainage problems and move a portion of the road out of the floodplain.

RECREATION RESOURCES Objectives (Forest Plan, pages III-62 to III-64)

Objective REOB12: *Annually update recreation databases for developed sites, dispersed areas, and trails.*

Accomplishment: Condition and deferred maintenance surveys were conducted for selected developed recreation sites, recreation buildings, and trails according to an established schedule. The schedules for these inspections are based on inspecting approximately 20% of each recreation element every year.

The INFRA developed site and buildings databases are being updated with the results of the 2004 deferred maintenance surveys, which includes repair and replacement needs for each improvement for each site and building.

The INFRA trails module is new this year. As a result, forest trail managers were completing the initial data entry requirements. Complete trail data entry is not scheduled for completion until September 30, 2005. In 2004, all National Forest System trails are required to have 100% core data for all trails and the 2004 condition survey results entered as stipulated in the FY04 Trails Deferred Maintenance Protocols. Core data includes data elements such as completed condition survey dates, trail jurisdiction, trail status, and length.

Objective REOB17: *Initiate a process of phased, site-specific travel management planning as soon as practicable. Prioritize planning based on areas where the most significant user conflicts and resource concerns are occurring. Identify and address*

inconsistent access management of roads, trails, and areas across Forest, Ranger District, and interagency boundaries.

Accomplishment: The Forest initiated Travel Management in 2004 focusing on areas with unrestricted cross-country motorized travel on the Minidoka, Ketchum and Fairfield Districts. The goal of the process is to designate a manageable snow-free season motorized transportation system that will address resource concerns while providing opportunities for quality motorized recreation on the Forest.

Open houses were held in the communities of Malta, Burley, Fairfield, Hailey, Gooding and Twin Falls to provide interested publics with information regarding the travel planning process. Maps displaying existing roads and trails were available for review at the open houses to aid the public in identifying roads and trails that they feel should be considered for designation. Public comments/input will be taken through November, with the release of the proposed travel map anticipated in June 2005.

Objective TROB01: *Meet annually with designated tribal representatives to coordinate tribal uses of National Forest System lands as provided for through existing tribal rights with the U.S. Government*

Accomplishment: There are four federally recognized Native American tribes who have expressed interest in management activities on the Sawtooth National Forest. They are:

- Nez Perce Tribe
- Shoshone-Bannock Tribes
- Shoshone-Paiute Tribes
- Northwest Band of the Shoshone Nation

Scoping documents for most projects proposed in FY 2004 on the Forest were sent to the Tribes. The Forest will be working on a process to ensure that the Tribes receive copies of all scoping documents in the future.

In September 2004 the Sawtooth National Forest Supervisor met with the Shoshone-Bannock Business Council in Fort Hall, Idaho to discuss, in part, the need to establish a regular consultation process protocol that would result in effective coordination of tribal uses on the Sawtooth National Forest, as well as the identification and understand of tribal rights and interests that may be affected by proposed activities on the Forest. Discussions are to continue in 2005.

2. Documentation of costs associated with carrying out the planned management prescriptions as compared with the costs estimated in the Forest Plan.

Summary of findings: As described in Chapter IV of the Forest Plan, the final determining factor in carrying out the intent of the Forest Plan is the adequacy of

funding. Allocation of dollars from Congress during the first planning period (1987-2003) was consistently lower than Forest Plan projections for most program areas. Because of this, rate of implementation of the 1987 Forest Plan was considerably lower than projected.

To predict a more realistic rate of implementation, the budget level used to develop the revised Forest Plan for all programs except timber management and hazardous fuels was based on average allocations from 2001 to 2003. Timber management and hazardous fuels reduction were based on a 10% increase over average service level constraints from the Forest Service Budget Formulation and Execution System. Actual allocations by fund code and program emphasis will vary on an annual basis based on Forest priorities for a given year as well as the will of Congress. Table 1 shows the predicted Forest Plan budget level by program area based on average allocations and BFES and the actual allocation for fiscal year 2004, not including carry over dollars. Carry over dollars are unobligated funds remaining at the end of the fiscal year that may be carried over to the next fiscal year. These funds tend to be highly variable and therefore are not included.

Table 1. Predicted versus Actual Forest Budget Levels

Fund Code	DESCRIPTION	Predicted Forest Plan Budget Level	FY 2004 Actual Allocation	Percent Change
BDBD	BRUSH DISPOSAL	\$ 42,740	\$ 50,163	+15%
CNFC/ CMII	FACILITY CONSTRUCTION AND MAINTENANCE	\$1,346,888	\$1,109,271	-18%
CMRD	ROAD CONSTRUCTION AND MAINTENANCE	\$1,240,459	\$1,148,016	-8%
CMTL	TRAIL CONSTRUCTION AND MAINTENANCE	\$ 529,880	\$ 528,020	-1%
CWKV	REFORESTATION	\$ 207,366	\$ 250,130	+18%
LALW	LAND ACQUISITION MANAGEMENT	\$ 240,082	\$ 100,000	-59%
NFIM	INVENTORY AND MONITORING	\$ 533,334	\$ 656,590	+19%
NFLM	LAND OWNERSHIP MGMT	\$ 279,799	\$ 324,289	+14%
NFMG	MINERALS & GEOLOGY MGMT	\$ 304,519	\$ 304,426	0%
NFPN	LAND MGMT PLANNING	\$ 598,470	\$ 185,108	-70%
NFRG	GRAZING MANAGEMENT	\$ 701,206	\$1,139,154	+39%
NFRW	RECREATION/HERITAGE RESOURCES/WILDERNESS MANAGEMENT	\$2,349,320	\$2134,613	-10%
NFTM	TIMBER MANAGEMENT	\$ 604,000	\$ 283,808	-54%
NFVW	VEGETATION MANAGEMENT (FOREST AND RANGE)/WATERSHED IMPROVEMENTS/SOIL/WATER/AIR MANAGEMENT	\$ 948,347	\$ 855,387	-10%
NFWF	WILDLIFE/FISH/THREATENED AND ENDANGERED SPECIES HABITAT MANAGEMENT	\$ 781,553	\$ 781,035	0%
RBRB	RANGE BETTERMENT	\$ 72,312	\$ 65,574	-10%
SSSS	SALVAGE SALE	\$ 238,295	\$ 311,195	+24%
WFHF	HAZARDOUS FUELS	\$ 662,000	\$1,016,172	+35%
WFPR	FIRE PREPAREDNESS	\$3,671,354	\$3,504,451	-5%

Substantial differences in predicted allocations versus actual were seen in Land Acquisition Management; Inventory and Monitoring and Land Management Planning; Grazing Management; Timber Management and Salvage Sales; and Hazardous Fuels. The Forest did receive additional funding in Land Acquisition Management for easement acquisition on the SNRA from 2001 – 2003. Funding levels for this fund code will vary based on potential for easement purchases. During Forest Plan revision, the Forest received Land Management Planning funds at a level necessary for revising the plan. Now that the revision process has been completed, the Forest is being funded at a maintenance level which is considerably less. The reduction in Land Management Planning funds also correlates with an increase in Inventory and Monitoring funds. In fiscal year 2004, the Forest placed an increased emphasis on monitoring, including management indicator species monitoring and plan implementation monitoring. The increase in grazing management funds is attributed to an earmark the Forest received to complete allotment NEPA in accordance with a court order. It is not expected that this level of funding will continue in the future. As a direct result of the insect related mortality on the SNRA, the Forest shifted its emphasis from a “green” timber program to salvage harvest. This is reflected in the shift in funding levels. Similarly, in response to the Healthy Forest Initiative and the National Fire Plan, the Forest increased its emphasis on fuels reduction treatments.

1. Population trends of the management indicator species will be monitored and relationships to habitat changes determined.

Table 2 shows the Management Indicator Species (MIS) selected by the Sawtooth National Forest in the 2003 Forest Plan. The primary reason MIS are selected is because their populations are believed to indicate the effects of management activities. Other reasons are also considered (36 CFR 219.19(a)(1)).

Table 2. Management Indicator Species for the Sawtooth National Forest, 2003 Forest Plan

Type	Common Name	Habitat	Management Concerns
Bird Species	Pileated Woodpecker	PVGs 2-9	Sufficient large trees, snags, and down logs
	Sage Grouse	Sagebrush/grassland	Habitat reduction and alteration
Fish Species	Bull Trout	Perennial streams	Sediment in spawning and rearing areas, water temperature, habitat connectivity

Following is a summary of the monitoring completed for each MIS on the Forest in FY 2004:

Bull Trout Monitoring:

An approach to monitoring bull trout as a management indicator species was developed with the Boise National Forest, Regional Office, and Rocky Mountain Research Station in 2004.

For aquatic species, trend is typically monitored using relative abundance estimates over time in a select set of streams. However, the challenge with abundance data is that it is often influenced by sampling error and natural inter-annual variation in abundance (Platts and Nelson 1988; Maxell 1999; Ham and Pearsons 2000; Dunham et al. 2001). Previous work on bull trout and other salmonids highlight several limitations to monitoring abundance for detecting trends, including 1) low statistical power (Maxell 1999; Hamm and Pearsons 2000), 2) errors in estimating abundance (Dunham et al. 2001; Peterson et al. 2004), 3) high natural variability in populations (Platts and Nelson 1988), 4) lack of a connection between abundance and habitat (Fausch et al. 1988), and 5) the high cost of estimating population abundance using rigorous methods, such as mark-recapture.

Given these well-known limitations, an alternative trend monitoring approach was needed. The alternate approach selected for bull trout is monitoring the spatial patterns of occurrence (distribution) through time. Monitoring distributions can be particularly appropriate for bull trout because it has very specific habitat requirements. Specifically, bull trout distribution is limited to cold water (Dunham et al. 2003), and suitably cold habitats are often patchily distributed throughout river networks (Poole et al. 2001). Dunham and Rieman (1999) found that bull trout populations in the Boise River basin were linked closely to available habitat “patches” or networks of cold water. A patch is defined for bull trout as the contiguous stream areas believed suitable for spawning and rearing (Rieman and McIntyre, 1995). Rieman and McIntyre (1995) analyzed bull trout in the Boise River and found occurrence to be positively related to habitat size (stream width) and patch (stream catchment) area, as well as patch isolation and indices of watershed disruption. Patch size (area) was the single most important factor determining bull trout occurrence.

Spatial patterns can also provide information on population persistence, local extinction and recovery (recolonization). The stability and persistence of metapopulations are related to the number, size, and relative distribution of populations (Dunham and Rieman 1999). Bull trout populations in larger, less isolated, and less disturbed habitats appear more likely to persist and these habitats may prove critical as long-term refugia or cores for changing environments and future recolonization of restored habitats (Rieman and McIntyre, 1995). Large patches may persist because the populations are larger and because they support more diverse habitats for bull trout allowing some internal stability in the face of variable environments (Rieman and McIntyre, 1995; Dunham et al. 2003; Miller et al. 2003).

Based upon the above approach the following metrics for determining trend will be used:

- The proportion of habitat patches that bull trout occupy within each subbasin across time.

- The spatial pattern of occupied bull trout patches within each subbasin across time.
- In the future we will explore indices of abundance and distribution within individual streams as a metric useful for developing relationships with or exploring the linkages to local management.

2004 Monitoring Results

In 2004, the Sawtooth National Forest focused monitoring for bull trout in the S.F. Payette, Upper Salmon, and S.F. Boise subbasins. Surveys were completed in 14 patches. Bull trout presence was confirmed in 6 patches, habitat was determined to be suitable but no bull trout were detected in 8 patches. Bull trout were found for the first time in the headwaters of Big Peak Creek during the 2004 surveys. They had not been found previously in 1993, 1998, and 1999 surveys conducted by Idaho Fish and Game and the Boise National Forest. Preliminary result for the S.F. Boise suggests that bull trout distribution within the patches surveyed have remained relatively stable since the early 1990s.

Pileated Woodpecker Monitoring

The primary goal of the Sawtooth National Forest Management Indicator Species/Landbird Monitoring Program is to estimate the overall population trends on the Forest for specific avian management indicator species, namely the pileated woodpecker and sage-grouse. The secondary goal of this monitoring strategy is to conduct an assessment of habitat relationships as they relate to population trends for those two species.

The Sawtooth monitoring strategy for pileated woodpecker is modeled on standardized bird monitoring methods (i.e. Northern Region Landbird Monitoring Program) which is being applied on the National Forests in Idaho in Region 1 of the USFS, as well as the Payette and Boise Forests in Region 4. As such, the data collected from any one unit becomes not only relevant to its particular Forest, but contributes to a larger data sets which allows monitoring trends to be evaluated at multi-forest scales, state-wide scales, or regional scales. The Region 1 protocols have been in place for 10 years and are well tested as to achieving their goal for establishing population trend data.

The adopted monitoring strategy is a population-based approach to bird monitoring that spreads survey locations randomly across the Forest, irrespective of habitat to determine an overall population trend for the Forest. The survey design for the Sawtooth National Forest samples both potential and existing suitable habitat across the historic range of the pileated woodpecker. Permanent monitoring points were established on each Ranger District with potential and existing habitat in 2003 (Ketchum, the SNRA, and Fairfield Districts). District Wildlife Biologists initially mapped points and individual points were then later marked in the field.

Each year 350 points are monitored across habitat suitable for these two species. Points typically fall wherever they may in various cover types, landscapes, managed habitats, and heterogeneous mosaics. As long as the points are sampled over a specified period of time, overall population trends are relatively simple to calculate and are robust (Hutto and Young 2002).

In addition to population information, habitat information (vegetation structure) is gathered at each individual point. Vegetation measurements are collected: within a 100-meters radius of the point, within a 30-meter radius of the point, and within a 15-meter radius of the point. This information is intended to characterize the site with vegetative structure and species composition.

2004 Monitoring Results

All transects (350 points) were surveyed in 2004. Pileated woodpeckers were detected at 21 points. Data collected in 2004 will be assessed against data collected in future years to establish trend relationships within the planning unit.

Sage Grouse Monitoring.

As previously stated, the primary goal of the Sawtooth National Forest Management Indicator Species/Landbird Monitoring Program is to estimate the overall population trends on the Forest for both the pileated woodpecker and sage-grouse. The secondary goal of this monitoring strategy is to conduct an assessment of habitat relationships as they relate to population trends for those two species.

The Sawtooth is working on refining a protocol for monitoring sage grouse populations on the Forest. Current monitoring involves gathering presence/absence data of breeding season activity, including counts of the number of male and female sage grouse using those sites, use of lek site data collected by the Idaho Department of Fish and Game and general observations of sage grouse presence on the Forest throughout the year. Radio tracking data collected by the Bureau of Land Management (BLM), Burley District has also been used to identify what habitats on the Forest, if any, the radio-collared sage grouse use after they leave the BLM lek sites.

To monitor sage grouse habitat attributes, the SNF adopted the habitat classification and inventory protocol for upland non-forest vegetation that is currently being used by Steven K. Rust of the Idaho Conservation Data Center, Department of Fish and Game. Using this protocol and strategy, the SNF intends to be able to better assess the impacts of management activities on reproductive success at the lek sites, and the quality and quantity of habitat at other use areas on the Forest. This strategy will provide the information needed to examine relationships between MIS use, vegetative cover, and management actions within sage grouse habitats. A prescription can then be designed that will move those use area to be within the historic range of variability.

Currently, the only known occupied sage grouse habitat occurs on the Minidoka District with 30 known lek on the Cassia Division. Monitoring efforts in 2004 were

focused on the south end of the Forest in the Cassia Division. Idaho Department of Fish and Game is currently working with Lava Lake Land and Livestock to radio collar sage grouse on BLM and private land adjoining the Ketchum District. In the future this information will be used to identify if any habitats on the east side the Ketchum District are being used. The Forest will be working with the recently formed Interagency Sage Grouse Working Group to identify monitoring sites on the north end of the forest, as well as to develop joint monitoring efforts.

2004 Monitoring Results : A total of 10 leks were surveyed of which 4 were found to be active.

- 2. Accomplishment of ACS priority subwatershed restoration objectives.**
 Summary of findings: The Watershed Aquatic Recovery Strategy (WARS) is a process that identified restoration priorities (high, moderate, and low) and restoration type (passive, active, and conservation) among the 650 subwatersheds across the Southwest Idaho Ecogroup. This strategy provides the “blue print” for recovery and protection of aquatic (both physical and biological) resources across the Ecogroup. Table 3 displays the aquatic restoration that occurred in ACS priority subwatersheds on the Sawtooth National Forest in 2004.

Table 3 Aquatic Restoration Activities in ACS Priority Watersheds

ACS Priority Subwatershed	FW or MA Objective addressed in FY2004	FY2004 Work Completed
Warfield-West Fork Warm Springs (170402191001)	SWOB 18	Rehabilitation of unmanaged recreation
Pettit Lake	<p>SWG015 - Provide habitat to support populations of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.</p> <p>SWOB17 - During fine-scale analysis, identify opportunities to restore degraded upland and aquatic habitat conditions in order to support productive and diverse populations of native and desired non-native aquatic species to meet social needs and tribal interests. Opportunities should focus on restoring passage for fish and other aquatic species, and restoring desired ranges of water temperature, large woody debris, streambank stability, sediment levels, water chemistry, and pool size and numbers.</p> <p>Upper Salmon MA Objective 0253 - Restore or maintain native vegetation that provides naturally resilient and productive shoreline habitats, through management of lakeside recreation use and developments, with emphasis at Stanley, Redfish, Little Redfish, Perkins, Pettit, and Alturas Lakes.</p>	Lakeshore restoration and fencing. Project was designed to limit recreational impacts on lakeshore banks, soils, and riparian vegetation in the Pettit Lake campground and boat launch.

3. Terms and conditions or reasonable and prudent measures that result from consultation under Section (a) of the Endangered Species Act.

Summary of findings:

Both NOAA Fisheries and the USDI Fish and Wildlife Service (USFWS) issued Biological Opinions in response to the Federal Action (i.e. proposed action or management strategy) outlined in the 2003 Forest Plan. However, only NOAA Fisheries issued reasonable and prudent measures and related terms and conditions with their Biological Opinion.

Reasonable and Prudent Measures (RPMs) are non-discretionary measures to minimize take that may or may not already be part of the description of the proposed action. They must be implemented as binding conditions for the exemption in section 7(o)(2) to apply. The Forest Service has the continuing duty to regulate the activities covered in this incidental take statement. If the Forest Service fails to carry out required measures, fails to require applicants to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, or fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) that will become effective at the project level may lapse. To be eligible for an exemption from the prohibitions of Section 9 of the ESA, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above for each category of activity. These terms and conditions are non-discretionary.

The terms and conditions related to two of the three RPMs in the NOAA Fisheries Biological Opinion apply to the Sawtooth and require annual reporting. They are identified below, along with the 2004 accomplishments related to them.

RPM #1: Minimize the likelihood of incidental take by clarifying local sideboards pertaining to:

d) Fire Management timelines for fire operational resource guidance

As described earlier under TEOB23, Fire operational guidelines were developed in the spring of 2004. Guidelines from the Boise National Forest were adapted as a starting point. Since the Sawtooth National Forest shares many of the same watersheds with the Boise National Forest, it was felt that having similar criteria would lead to more consistent measures to mitigate potential fire suppression effects. Final acceptance of the guidelines by the regulatory agencies (U.S. Fish and Wildlife Service/NOAA Fisheries) occurred in May 2004.

RPM #2: Minimize the likelihood of incidental take by maintaining the necessary linkages between the Sawtooth National Forest Plan and broad-scale restoration/recovery strategies. To implement RPM #2 the Sawtooth National Forest is required to:

- a) Provide an oversight and accountability body that links to IIT by continuing to work with the IIT and provide exchange of information regarding processes that are local in scope, but have broad-scale implications, such as subbasin planning, watershed analysis and monitoring.

The Interagency Implementation Team (IIT) conducts monitoring at the level of the Forest Service Forest Plan or BLM Resource Management Plan for the salmon, steelhead, and bull trout listed in the Upper Columbia and Snake River Basins. Both implementation and effectiveness monitoring are conducted annually by the Forest Service and BLM administrative units, including the Sawtooth National Forest, in a sample of 6th field hydrologic units (HUs).

The 2003 Sawtooth National Forest Plan monitoring (Forest Plan Chapter IV) was built with the current IIT monitoring being conducted across the planning unit in mind. However, because the IIT *implementation* monitoring process is based on the specific direction found in PACFISH and INFISH, it cannot be tied directly to the direction found in the Sawtooth National Forest Plan. However, it is clearly possible to use the same or similar monitoring protocols to allow the Sawtooth National Forest Plan *implementation* monitoring protocols to be aggregated to the basin level with the rest of the implementation monitoring data conducted on other administrative units. In calendar year 2005 the Sawtooth National Forest will work with the IIT Monitoring Task Team to provide greater alignment between Plan and IIT monitoring to make them as complementary as possible. Progress of this effort will be reported out in the 2005 monitoring report.

IIT *effectiveness* monitoring is conducted annually by a centralized unit across a sample of 6th field HUs within the basin on a 5-year cycle. IIT effectiveness monitoring involves collection and analysis of data on the channel and stream processes to assess how baselines are changing, for the better or worse. Data collection for this effort is not dependent on specific direction, but is intended to answer the question “Are key biological and physical components of aquatic and riparian communities maintained, degraded, or restored in the range of steelhead and bull trout? Essentially, this monitoring is intended to provide an indicator as to whether management strategies being implemented across the basin are resulting in the desired maintenance or improvement of the key biological and physical components considered. Data for the IIT effectiveness monitoring is stored in a database at the Forest Service Fish Ecology Unit, Logan, UT, and is available to the administrative units and Services.

As Sawtooth National Forest and IIT personnel evolve the “bridge” between *implementation* monitoring efforts, the Forest continued to participate in the *effectiveness* monitoring program in 2004. The report pertaining to this activity will be available the spring of 2005.

In addition to work in the IIT process, Sawtooth National Forest personnel participated in the Northwest Power and Conservation Council subbasin assessments in Boise-Payette-Weiser and the Salmon River and bull trout 5-year status assessments. The data exchange involved in these efforts helped participating agencies and groups to further characterize threats to ESA listed species, share new habitat and population data on these species, and identify restorative actions that could be taken to reduce threats to populations and habitat at the subbasin scale.

B. Year One Monitoring Requirements –Table IV-2. Monitoring Elements:

As described in Chapter IV of the Forest Plan, monitoring elements were designed around monitoring questions that need to be answered about Forest Plan implementation. These questions are key to determining if we are moving towards meeting the desired conditions identified in the Forest Plan. Following is a summary of the findings for those elements that we are required to monitor and evaluate on an annual basis:

- **Activity or Practiced to Be Monitored:** Safety of administrative facilities

Monitoring Question: Are administrative sites safe and accessible for visitors and employees including drinking water sources?

Summary of findings: Sanitary surveys are required every 5 years at a minimum to assess the overall operational quality, function and maintenance of water systems. In accordance with the schedule, sanitary surveys were conducted on the Fairfield and Valley Creek administrative sites. In addition to the sanitary surveys, condition surveys were completed this year on 24 buildings.

Water systems are tested for bacteriological contamination on a monthly basis when they are open. Any systems that show bad results are re-tested according to FS direction and either closed or posted as non-potable if re-testing indicates a problem. The drinking water systems for all Forest administrative sites were opened in 2004. Monthly samples collected from these water systems during the months the systems were open for use, determined that each of these systems were compliant with the Safe Drinking Water Act standards.

In addition to surveys and testing, the Forest completed construction on the Upper Rock Creek Water System this year. This water system serves 4 recreation sites and one administrative site and meets all current drinking water standards.

Construction is currently taking place to replace the water systems for the Big Smoky Administrative Site and Shake Creek Administrative Site.

- **Activity or Practiced to Be Monitored:** Safety of developed recreation sites

Monitoring Question: Are developed recreation sites free of high-risk

conditions? Do water systems meet Federal, State, and local requirements?

Summary of findings: Generally, all Forest developed recreation sites are inspected in the spring or early summer, in conjunction with opening for the summer season. Any identified hazards are removed or mitigated at this time. Water systems are managed and tested in accordance with the Safe Drinking Water Act and Forest Service regulations.

The drinking water systems for 86 recreational facilities were open for use in 2004. Monthly samples collected from these water systems during the months the systems were open for use, determined that each of these systems were compliant with the Safe Drinking Water Act standards. In 2004, all developed recreation water systems met all standards established under this act and agency regulations.

- **Activity or Practiced to Be Monitored:** Protection of historic properties

Monitoring Question: Are historic properties being affected by project activities?

Summary of findings: Data from field review of historic properties is not currently available.

- **Activity or Practiced to Be Monitored:** Watershed restoration and conservation activities

Monitoring Question: Have restoration and conservation activities been focused in priority watersheds identified by the WARS process?

Summary of findings: Many of the aquatic restoration projects implemented in FY 04 were planned under the 1987 forest plan prior to development of the WARS. Therefore, they were not planned with forest-wide, management area objectives or WARS in mind. Many have, however, addressed several of these objectives as indicated in the above table. It is hoped that as districts more fully understand the forest plan and the WARS strategy that more projects will be designed in ACS priority or high priority subwatersheds. Table 4 provides a list of projects completed in FY 04.

Table 4 Aquatic Restoration Projects Relationship to WARS

Subwatershed in which FY2004 restoration occurred	FW or MA Objective addressed	Summary of FY2004 work accomplished	ACS Priority-yes or no WARS Restoration Strategy and Priority
Warfield-West Fork Warm Springs (170402191001)	SWOB 18 - Reduce road-related effects on soil productivity, water quality, and aquatic/riparian species and their habitats. Refer to the Watershed and Aquatic Recovery Strategy (WARS) for mid-scale prioritization indicators to assist in fine and site/project scale restoration prioritization planning.	Warm Springs Unmanaged Recreation Rehabilitation	Yes - Active/Low

Subwatershed in which FY2004 restoration occurred	FW or MA Objective addressed	Summary of FY2004 work accomplished	ACS Priority-yes or no WARS Restoration Strategy and Priority
Almo Creek (170402100802)	SWOB18	Ranger Trail and Road Rehabilitation	No - Active/High
Upper Little Smoky	SWOB17 - During fine-scale analysis, identify opportunities to restore degraded upland and aquatic habitat conditions in order to support productive and diverse populations of native and desired non-native aquatic species to meet social needs and tribal interests. Opportunities should focus on restoring passage for fish and other aquatic species, and restoring desired ranges of water temperature, large woody debris, streambank stability, sediment levels, water chemistry, and pool size and numbers. SWOB18	Ford Restoration in Upper Little Smoky Creek. Project will reduce erosion and sedimentation during spring run-off and facilitate fish passage.	No - Active/Moderate
Joes-Little Casino	TEOB27 - During fine-scale analyses in areas where dispersed and developed recreation practices or facilities are identified as a potential concern or problem contributing to adverse affects to TEPC species or degradation of their habitats, evaluate and document where the problems are and prioritize opportunities to mitigate, through avoidance or minimization, adverse effects to TEPC species. REOB01 - During fine-scale analyses in areas where recreation facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document the location of the facilities causing degradation and prioritize opportunities to mitigate effects. EFSR White Clouds MA 0335 - Restore floodplain function and streamside habitats along the Salmon River corridor by reducing or modifying developed or dispersed recreation sites, and reducing highway alignment or maintenance conditions that are detrimentally affecting the floodplain.	Casino Creek Campground Restoration was designed to reduce foot traffic and camp sites along the Salmon River	No - Active/Moderate
Redfish-Little Redfish Pettit Lake Creek	SWOB17 - (see description above) Upper Salmon MA 0249 - Reduce lakeshore pressure at the morainal lakes, particularly in areas of current or historic sockeye shoal spawning. Redfish-Little Redfish Lake	Lakeshore restoration and fencing. Project was designed to limit recreational impacts on lakeshore banks, soils, and riparian vegetation in the Pettit Lake campground and boat	Yes - Active/High in Redfish Lake Passive/High in Pettit Lake

Subwatershed in which FY2004 restoration occurred	FW or MA Objective addressed	Summary of FY2004 work accomplished	ACS Priority-yes or no WARS Restoration Strategy and Priority
	<p>subwatershed is the priority.</p> <p>Upper Salmon MA Objective 0253 - Restore or maintain native vegetation that provides naturally resilient and productive shoreline habitats, through management of lakeside recreation use and developments, with emphasis at Stanley, Redfish, Little Redfish, Perkins, Pettit, and Alturas Lakes.</p>	launch.	
Stanley Creek	<p>TEOB03 - Identify and reduce road-related effects on TEPC species and their habitats using the Watershed and Aquatic Recovery Strategy and other appropriate methodologies.</p> <p>TEOB09 - As funding allows, implement restoration activities in accordance with the current Watershed and Aquatic Recovery Strategy or Forest Service-approved portions of recovery plans to: (a) Restore listed fish species distribution, (b) Restore desired habitat conditions, (c) Conserve genetic diversity, and (d) Provide for genetic exchange.</p> <p>FROB04 - During fine-scale analyses, identify opportunities to reduce road-related degrading effects to help achieve other resource objectives.</p> <p>FROB12 - During fine-scale analyses in areas where roads and facilities are identified as a potential concern or problem contributing to degradation of water quality, aquatic species or occupied sensitive or Watch plant habitat, evaluate and document where the contributing facilities are and prioritize opportunities to mitigate effects.</p>	Wetland Restoration and Road Realignment in Stanley Creek. Project was designed to reduce annual road damage from high flows; reduce sedimentation; and restore 1 acre of wetland/floodplain in Stanley Creek.	No - Active/Moderate
Baker Creek	SWOB17 - (see description above) Big Wood River MA 0440 - Restore watershed and floodplain function and reduce accelerated sediment by modifying roads, trails, and developed or dispersed recreation sites in the Big Wood River headwaters above Owl Creek, and in the Silver Creek, Baker Creek, Warm Springs Creek, Prairie Creek, Boulder Creek, North Fork Big Wood River, Deer Creek, Big Wood River, East Fork Big Wood River, and Trail Creek drainages.	Willow Planting in Baker Creek. Willows and coniferous would be placed at a former dispersed camping sites to stabilize eroding streambanks and to provide stream shading and future LWD recruitment.	No - Active/Moderate

Subwatershed in which FY2004 restoration occurred	FW or MA Objective addressed	Summary of FY2004 work accomplished	ACS Priority-yes or no WARS Restoration Strategy and Priority
Basalt Creek	SWOB17 - (see description above) SWOB18 - (see description above)	Ford Restoration in Basalt Creek. Project was designed to reduce erosion and sedimentation during spring run-off and facilitate fish passage.	No - Active/Moderate

C. Annual Project Reviews:

Given that this is the first year of monitoring under the revised Plan, a monitoring protocol for annual project reviews was developed. This protocol was based upon addressing the following key questions, in addition to applicable Forest Plan monitoring questions from Table IV-2, during Interdisciplinary Team (ID Team) field review of the selected projects:

1. How well did the project meet its objectives?
2. Were the effects to resources within the expected range?
3. Was the project design and mitigation effective?
4. Are the proposed actions and associated effects being adequately disclosed in NEPA documents?
5. Have prescriptions, projects and activities been implemented as designed and in compliance with the Forest Plan?
6. Did the project result in movement towards desired conditions or contribute to management objectives as described in the Forest Plan?

Results of the annual project reviews will be compiled and evaluated and results reported by monitoring element in accordance with the reporting periods identified in Table IV-2. The following three projects were reviewed in 2004 using the monitoring protocol:

- Bally Mountain Prescribed Burn – Minidoka Ranger District
- Mountain Pine Beetle Spray Project – Sawtooth National Recreation Area
- Red Tree I (Crooked Creek Salvage Sale, Valley Salvage Sale and Iron Salvage Sale) – Sawtooth National Recreation Area

During the fall/winter of 2004/2005, evaluation of results of project monitoring reviews will be completed for these projects. Summaries of findings will be presented in the 2005 monitoring report.

III. FUTURE MONITORING AND EVALUATION REPORTS and SCHEDULE

Beginning in 2005, the Sawtooth National Forest will issue the Forest Plan Monitoring and Evaluation report in late spring or early summer of each year. The report will describe findings from monitoring data collected through the prior year's field season and

evaluated during the winter of the reporting year. As described in this 2004 report, 2004 data collections will not be completed until late fall of 2004 and the evaluations of the data collected will not occur until late fall or winter 2004/2005. As a result, this 2004 report contains less of the evaluation due to timing of this year's report. Thus, moving publication date of the monitoring and evaluation report to the late spring/early summer period will allow a complete display of the prior year's data collection, as well as the evaluation of that data.

Also, the Forest Plan Monitoring and Evaluation report is intended to be a "living" document. As such, it will be updated periodically through out the year to incorporate new information and findings.