Annual Forest Plan Monitoring Report for the Boise, Payette, and Sawtooth National Forests

Southwest Idaho Ecogroup
Intermountain Region, USDA Forest Service
2002-2003

I. Purpose

The purpose of this report is to provide a synopsis of major monitoring and evaluation activities that are being completed in support of forest plan revision and implementation for the Southwest Idaho Ecogroup: Boise, Payette, and Sawtooth National Forests.

II. Synopsis of FY 2002-2003 Forest Plan Monitoring

There are three primary levels or scales of monitoring and evaluation. The first level of monitoring and evaluation is for project level analyses such as evaluating implementation of an individual timber sale or trail construction project. The second level is monitoring and evaluation of individual resources at the mid (forest) scale. The third level is broad-scale (ecogroup) monitoring to support forest plan revision. The emphasis of monitoring in support of forest plan revision is being conducted at mid and broad scales.

Monitoring efforts for 2002-2003 were focused on further validating information concerning high priority needs for restoration of aquatic, terrestrial and botanical resources, and validating those areas at high risk for characteristic and uncharacteristic wildfire and/or epidemic insect disturbance events. Efforts were also focused on establishing sites and monitoring protocols for white-headed woodpecker on the Boise and Payette, pileated woodpecker on all three forests, and sage grouse on the Sawtooth. Work was also focused on establishing monitoring protocols for bull trout on all 3 forests. This effort has now allowed the Forests to begin establishing baselines for all MIS described in the Revised Plans.

All three Forests continued implementation of the IIT (Interagency Implementation Team) monitoring protocol. Following is a brief overview of IIT Process.

IIT Implementation Monitoring
The intent of this monitoring module is to track implementation of management direction at the level of the FS Land and Resource Management Plan or BLM Resource Management Plan for the salmon, steelhead, and bull trout listed in the Upper Columbia and Snake River Basins. The objectives are to:

- Provide a consistent approach to implementation monitoring activities across agency boundaries;
- Provide a reporting format for all Level 1 Team implementation monitoring requirements, and ensure a "feedback loop" for Level 1 Teams and Managers to accomplish agency adaptive management;
- Meet the broad-scale, mandatory requirements and commitments of the PACFISH/INFISH, the

1998 Biological Opinions, and the IIT Charter;
- Provide documentation to show that direction in PACFISH, INFISH and the 1998 Biological Opinions is being implemented on the ground; and
- Document status and trends in implementation of federal activities by land management agencies, including locations of non-compliance with the aquatic conservation direction.

The implementation monitoring approach has changed over the years from being focused entirely on grazing in 1999 to applying to all management activities that meet specific requirements in 2002. Reporting is currently required for all activities that meet one of the four sampling sets:

- All on-going activities that occur within 6th fields selected for monitoring by the Effectiveness Monitoring Task Team.
- Any activities that require implementation monitoring to meet local consultation requirements.
- All non-compliance activities based on previous years' implementation monitoring.
- Grazing activities:
    - Do at least 20% of Module Category I pasture use areas per year, based on field unit priorities with inoput from the Level 1 Team
    - Every Module Category I pasture use area will be sampled at least once within the life of the 10-year grazing permit.

Information reported for each activity is determined by not only the above requirements, but by what category of 6th field it falls in. If an activity occurs in a 6th field with no listed fish species or critical habitat and outside of an RHCA (Category 3 activities), then only general information on activity type, project name, location, etc. is completed. If an activity occurs in a 6th field with listed fish species and in an RHCA oe in a 6th field with no listed fish species , but in an RHCA (Category 1 and 2 activities), then additional information pertaining to the appropriate Standards and Guidelines (S&Gs) and questions relating to the S&Gs is completed.

It is hoped that data collected by this module in combination with data from the Effectiveness Monitoring Module, will provide information to help validate the basic assumptions under which the management direction was developed.

IIT Effectiveness Monitoring

The effectiveness monitoring plan is intended to evaluate the effect of land management activities on aquatic and riparian communities at multiple scales and will assess whether management direction, implemented through PACFISH/INFISH is effective in maintaining or improving aquatic and riparian conditions at both the landscape and sub-watershed scales on federal lands. The objectives are to:

- Determine whether key biological and physical attributes, processes, and functions of upland, riparian, and aquatic systems are being degraded, maintained, or restored across the PACFISH/INFISH/Biological Opinion (PIBO) landscape.
- Determine the direction and rate of change in riparian and aquatic habitats over time as a function of management practices.
- Determine if riparian and aquatic habitat conditions at integrator sites are reflective of conditions throughout the watershed.
- Determine if specific Key Management Practices (KMP) are effective in maintaining or restoring riparian structure and function.

The central premise of this effectiveness-monitoring module is that a variety of natural stressors exert a significant influence on the structure and function of aquatic and riparian ecosystems and that the addition of anthropogenic stressors may change the timing, magnitude, and duration of ecosystem response.

A 5-year rotating panel sampling design is being used so that 1/3 of the sub-watersheds will be sampled between 2001 and 2005 (at full funding), with re-sampling occurring over the next 5-year sampling period. Sub-watersheds were combined geographically into 177 groups of approximately 20 sub-watersheds and then randomly assigned a sampling year such that 35 groups (1/5) will be sampled yearly.

Sub-watersheds within each group were categorized by using geology, watershed size, elevation, precipitation, and vegetation as the primary stratification criteria and "managed" and "reference" as secondary strata. If reference watersheds were unavailable throughout a basin, information was gathered from field units on the status and distribution of riparian and aquatic habitats that have been minimally influenced by land management activities.

III. Summary of 2002-2003 Monitoring Results

Soil, Water, Riparian and Aquatic Resources:

The three Forests continued to gather and update monitoring information and data to determine those suwatersheds where beneficial uses such as imperiled anadromous and native resident fish habitat, municipal watersheds, water-related recreation uses, etc., are at risk. Data gathered and reviewed included identification of imperiled resident fish strongholds, identification of highly isolated local populations of resident fish, anadromous fish spawning and rearing habitat and migration corridors, damaged stream segments, DEQ 303(d) water quality limited waterbodies, road density information and uncharacteristic fire hazard. Results of the evaluation were used to determine priority and type of restoration activity needed for each subwatershed. Evaluation of the data for the three Forests found that approximately 26% of forests are at high priority for active restoration, 14% is at high priority for passive restoration and 1% is at high priority for conservation management. Potential for lethal characteristic and uncharacteristic fire was found to pose the greatest risk to highly isolated populations of resident native fish. Fire, roads, livestock grazing and dispersed recreation were found to be significant contributors to the need for restoration of subwatersheds with other beneficial uses.

In 2003, the Boise finalized an MOU with the Bureau of Reclamation, Pacific Northwest Region, to implement a large-scale study to meet ESA mandates concerning bull trout in the Boise and Payette River Systems. Information from this study will also support revised forest plan monitoring expectations for this MIS species. The purpose of the study is three fold: (1) to meet requirements of the 1999 and 2001 Biological Opinions from USDI Fish and Wildlife Service; (2) to support the bull trout Draft Recovery Plan; and (3) to develop an understanding of movement, dispersal, distribution, and entrainment and the relationships to the environmental conditions that affect these aspects of bull trout populations. Other Federal and State agencies involved with this study include Rocky Mountain Research Station, Idaho Department of Fish and Game and USDI Fish and Wildlife Service. In addition, the Boise National Forest, Emmett Ranger District, hosted the Salvelinus confluentus (i.e. bull trout) Curiosity Society Meeting for 2003. This meeting involved participants from multiple agencies, as well as agency and university researchers. As part of this meeting inventory data on bull trout distribution and habitat quality, as well as genetic samples, were collected from some streams on the Forest.

The Payette continued to conduct substrate monitoring in the South Fork Salmon River. Additional monitoring was conducted on bull trout populations across the Forest. Work with NOAA fisheries was completed in anadromous areas. Permanent bull trout transects were identified.

The Sawtooth established additional permanent habitat monitoring sites for bull trout and continued electro-fish sampling for bull trout presence/absence data. Additional surveys of bull trout spawning/rearing and migratory habitat and Wood River sculpin habitat were also completed.

IIT implementation monitoring results for 2003 implementation monitoring will not be available until December for the three Forests, therefor the results of that monitoring will not be covered in this report.

To address the effectiveness component of the IIT, reference and managed sample sites were selected and sampled during the 2003 field season on all three Forests. These sites will be re-sampled in five years in accordance with the IIT protocol to evaluate whether key biological and physical attributes, processes, and functions of upland, riparian, and aquatic systems are being degraded, maintained, or restored across the Forests. If we are dropping IIT and going to the new format as discussed in consultation—I don't think we want to leave in this entire paragraph.

Vegetation:

Monitoring for forested vegetation continued to be primarily focused on field verification of timber stand inventory, in relation to species composition, size class, density and stand structure.
With final modifications made to potential vegetation and landsat data, an updated analysis to determine the forsted vegetation areas at greatest risk for uncharacteristic and characteristic wildfire was completed. Results of the analysis found that approximately 17% of the Boise, 15% of the Payette and 2% of the Sawtooth are at high to extreme risk for uncharacteristic wildfire. The analysis also found that in forested vegetation types, approximately 57% of the Boise, 51% of the Payette and 57% of the Sawtooth are in high to extreme resistance-to-control for wildfire.

In addition to the above three forest monitoring efforts, the Boise has continued to monitor the expansion of IPS beetle populations across multiple Districts on the forest. This information is used to focus ongoing and future forest vegetative management actions design to reduce risk of future IPS expansion and recover the economic value of dead and dying trees. Monitoring of reforestation efforts in recent wildfire areas, as well as mechanical treatment areas, has shown that a high level of success in achieving the desired outcomes was met. Monitoring of forest thinning projects has shown similar successes in achieving desired outcomes, including reduction in wildfire and insect and disease risk in stands treated. Finally, the Boise has continued to inventory and treat noxious weed sites in cooperation with its state and local cooperators.

The Payette inventoried and treated noxious weed sites, and continued to verify forest vegetation outside of the Wilderness using strata as the baseline for comparison. Permanent inventory plots were set across the Forest, including the Wilderness, to be monitored in the future.

The Sawtooth continued to monitor the Mountain Pine Beetle outbreak on the Sawtooth National Recreation Area and the Ketchum Ranger District. In addition to an annual overflight and mapping, several active plots testing the efficacy of verbenone and other pheremone controls are ongoing. The forest also initiated whitebark pine genetics studies in the Sawtooth and Whitecloud mountains.

Terrestrial Habitat:

As part of the monitoring effort pertaining to the 1990 Forest Plan, the Boise completed three reports:

(1) An assessment of the status MIS species identified in the 1990 plan; (2) a forest-wide assessment of pileated woodpecker habitat units as defined under the 1990 plan; and (3) a forest-wide assessment of old growth as defined under the 1990 plan. This information was developed to support project planning and implementation under the 1990 plan, as well as provide more complete tracks to these evolving resource factors and issues between the 1990 Forest Plan and the 2003 Revised Forest Plan. Since release of the revised forest plan the Boise National Forest has been developing the population trend monitoring protocol for pileated and white-headed woodpeckers, both MIS species in the 2003 revised forest plan, in cooperation with the Rocky Mountain Research Station. Establishment of sampling points has been initiated and field data from those plots is expected to begin in the spring of 2004.

The Payette completed white-headed woodpecker surveys on all permanent plots for the first year. The results of the survey will be entered into the NRIS fauna module. Permanent plots were also set for pileated woodpeckers across the Forest.

The Sawtooth completed the third year of a land bird study. This study focuses on sagebrush obligates and shrub-steppe habitat with an emphasis on sage grouse. The study, which monitors population and habitat trends, will be completed in 2 years. The Sawtooth also established permanent plots and conducted surveys for pileated woodpecker. Field data from these plots will be entered in to the NRIS fauna module.

Botanical Resources:

Throughout the Ecogroup, several large-scale monitoring and survey projects were designed and implemented for botanical species. The majority of monitoring information and data gathered was for species that are currently known to be in decline or at risk. Trends, threats, population dynamics, and other factors necessary to support population viability were examined. Additionally, plant communities at risk were monitored to determine needs and protection.

TEPSC plant Species

In 2003 the Boise completed a Challenge Cost Share project for the taxonomy of Lewisia kelloggii (aka L. sacajaweana) in partnership with Dr. Barbara Wilson of the Institute for Applied Ecology. A final report was submitted to Western North American Naturalist in June 2003 for peer review and publication. The Boise National Forest is also in the process of developing a Conservation Strategy for Douglasia idahoensis, in partnership with the Idaho Conservation Data Center. Numerous Douglasia idahoensis sites were re-surveyed in 2003 in support of this developing strategy. The Boise National Forest also coordinated and secured several contracts with the Idaho Conservation Data Center that address eco-group and regional priorities for vegetation inventory and classification. The total amount of these botany program projects (ca. $300,000) has increased 10-fold over the past year. These contracts and information resulting from them, will support, in part, future revised forest plan monitoring needs. The monitoring study for Lewisia kelloggii on the Lowman Ranger District continued in 2003 and has provided important information that will continue to support project and forest planning needs.

On the Payette National Forest, long-term monitoring of Tobias' Saxifrage (*Saxifraga bryophora* var. *tobiasiae*) was completed. An extirpated population was replanted in 2001 and success of planting was documented in association with this study. Weed infestations and other threats to this rare species were also examined. In addition, the Payette surveyed 17 baseline rare plant sites and located 12 new

populations. This information will be entered into the CDC database for later conversion into the Terra module.

The Sawtooth National Forest completed the seventh year of long-term population monitoring on the only known population of Christ's Indian Paintbrush (*Castilleja* christii). Reproductive effort, population numbers, and existing threats were measured for this Candidate species. Monitoring results from this year indicate that reproductive effort and number of overall individuals was much lower than in previous years Additionally, the Sawtooth National Forest contracted with the Idaho Conservation Data Center to complete an extensive survey of the Raft River Mountains for TEPSC plant species. One new population of Cottam's cinquefoil (*Potentilla cottammii*), a proposed sensitive species, was located on the Minidoka Ranger District.

Plant Communities at Risk and Research Natural Areas

Aspen response to fire was monitored on the Sawtooth National Forest. Monitoring plots were located on the Minidoka district where aspen communities are in decline. Monitoring results indicated that sprouting following fire was extremely successful. Monitoring will be continued to determine the impacts to aspen from cattle grazing. . The Mount Harrison RNA and Pole Canyon RNAs were surveyed for weeds. Points of weed infestations were tracked using a hand held GPS unit. Treatment for weeds including hand grubbing and herbicide application were completed. Long-term photo monitoring points were established and will be used to examine weed treatment success in the coming years. Additionally, long-term photo monitoring points were established in the Pole Creek and Sawtooth Peatlands RNAs. These points will serve as baseline data for long-term comparisons of trend and condition within the RNAs.

III. Consultation Processes

Formal consultation for the biological assessment with the USFWS and NOAA fisheries was completed in accordance with the National Memorandum of Agreement for programmatic consultation.

Formal consultation with Tribal Governments, the Nez Perce, Shoshone-Bannock and Shoshone-Paiute, was completed in 2003.

IV. Conclusion

The release of the draft environmental impact statement and draft forest plans in the fall of 2000 provided a comprehensive framework for establishing management direction and a monitoring framework for the next 10-15 years of management on the Boise, Payette, and Sawtooth National Forests. This document was updated and finalized in the Revised Forest Plans for the Boise, Payette and Sawtooth, released in July 2003. Implementation of the Revised Plans began on September 8, 2003.