

Forest Plan
Monitoring and Evaluation Report
Summary
FISCAL YEAR 2000
September 2001
Kootenai

National Forest



United States
Department
Of Agriculture



Forest Service
Kootenai National Forest

SUMMARY

INTRODUCTION

The Kootenai Forest Plan was approved on September 14, 1987. It established management direction for a 10-15 year period that began on October 1, 1987 (Fiscal Year (FY) 1988). This direction was the result of a comprehensive analysis of land capabilities, public issues, and environmental effects along with a balancing of legal requirements.

We have completed the monitoring of Forest Plan implementation for FY00. This report evaluates the field data collected by the end of September 30, 1999 that pertain to the 14 monitoring items reported annually. Our monitoring and evaluation process is shown in Chapter IV of the 1987 Kootenai National Forest Land and Resource Management Plan (Forest Plan).

We have completed thirteen years of implementing the Forest Plan. Information from our monitoring will help identify what we need to change during Forest Plan revision. We have found some methods work well, and some do not. We found that some of our projections were accomplished and some have not been. The summary explains the Forest Plan itself, describes the monitoring methods, and summarizes the results of the annual monitoring items.

FOREST PLAN DECISIONS

The Forest Plan is a set of decisions that guide management of the Forest. Taken broadly, it contains three types of decisions:

- **Goals, Objectives, and Desired Conditions** (pages II-1 through II-17 of the Forest Plan) provide general direction regarding where we should be headed as we put the Plan into practice.
- **Standards** (pages II-20 through II-33, Chapter III of the Forest Plan, and Forest Plan amendments) tell us how to put the Plan into practice, or give us conditions we must meet while we implement the Plan.
- **Land Allocation – Management Areas (MAs)**, as described in the Forest Plan Chapter III and displayed on the Forest Plan Map, are those areas of the Forest that are allocated for different types of land management and resource production.

MONITORING

As we have found over the last thirteen years, land management occurs in complex and changing situations, and our results will not always be totally predictable, definitive, or certain. Many things, including natural events that cannot be predicted, affect management results.

The purpose of monitoring is to determine answers to the following questions: Are we doing what the Plan envisioned (implementation monitoring)? Are we seeing the effects and outputs predicted in the Plan (effectiveness monitoring)? Are the standards working (validation monitoring)? Do we need to adjust practices to meet the standards? Does the monitoring process need adjusting?

The Districts or responsible Forest Staff areas at the Supervisor's Office report monitoring data for most items annually. Monitoring forms are used to assist in collecting consistent data from the various sources. These work forms are on file in the Planning Section at the Kootenai Supervisors Office.

Monitoring and evaluation information will be used as we begin Forest Plan revision. Part of the reason we decided to issue a "Notice of Intent" to revise the Forest Plan, which was issued in November of 1996, was because of our findings in the monitoring program. A new "Notice of Intent" is scheduled to be filed towards the end of the calendar year. Work towards revision is proceeding under the old 1982 regulations while a new set of regulations are being prepared and approved.

SUMMARY OF MONITORING RESULTS

T & E Species Habitat (C-7):

- **Gray Wolf:** The Kootenai National Forest makes up a small portion of the Northwest Montana Wolf Recovery Area. The recovery goal for this recovery area is 10 wolf packs. In FY00, reports of wolf sightings continued at about the same level as recent years, but sightings were more localized near the areas of known packs. Sightings were reported on the Fortine and Libby Ranger Districts where at least four and possibly five packs occur. The following are the identified wolf packs on the Kootenai: Murphy Lake, Graves Creek, Little Wolf, and Wigwam. There is also a possible pack in the upper Thompson River/Silver Butte area that the US Fish and Wildlife Service is presently trying to confirm through trapping and radio collaring. The components of wolf habitat on the Kootenai did not change significantly in FY00 compared to previous years. Big game habitat treatments and wildfires during the year may result in long term habitat benefits for wolves. Big game populations

continue to rebound after the severe winter of 1996-97, and this should provide adequate prey resources for continued growth in the wolf population.

- **Bald Eagle:** The Montana Bald Eagle Management Plan (MBEWG, 1994) and the Pacific States Bald Eagle Recovery Plan (USFWS, 1986) provide guidance for bald eagle recovery. Bald eagle habitat is generally within one mile of major lakes and rivers. Habitat quality and quantity on the Kootenai is stable, and may be increasing in the long term, as potential nest trees mature. The survey results for FY00 are slightly below the long-term (16 year) average since records have been kept. Nesting surveys show the FY00 nesting eagle population continuing at similar levels as the past few years. The USFWS believes the bald eagle has achieved recovery goals and they have proposed removing them from the threatened species list.
- **Grizzly Bear:** The Kootenai National Forest contains portions of two grizzly bear recovery zones: the Cabinet-Yaak Ecosystem (CYE) and the Northern Continental Divide Ecosystem (NCDE). About 72 percent of the CYE is located on the western portion of the Forest and about 4 percent of the NCDE is located in the extreme northeast corner. Each of these ecosystems is further subdivided into smaller areas for analysis and monitoring, known as bear management units (BMUs). Grizzly bear habitat effectiveness went down in 4 BMUs and up in 11 BMUs in FY00 compared to FY99. Overall, grizzly bear habitat effectiveness remained about the same as in FY99, and is above the desired level of 70 percent Forest-wide. Seventy-two percent of BMUs meet desired 70 percent habitat effectiveness level. Emergency fire suppression activities temporarily increased road densities and reduced core in some BMUs. Emergency consultation with USFWS was conducted for these activities. Sightings of female grizzly bears with cubs were up in FY00, and the six-year average was up as well. Overall, open and total road densities declined slightly during the year, although road openings for emergency fire suppression temporarily increased road densities in some BMUs. Preliminary population trend analysis including the 2000 mortalities indicates that the grizzly bear population in the CYE may be slightly declining, although small sample sizes and wide confidence intervals prohibit statistical confirmation.
- **White Sturgeon** The USFWS Recovery Plan for the Kootenai River white sturgeon was signed September 30, 1999. The short-term goals of the Plan are to reestablish natural reproduction and prevent extinction of the species. Long-term goals include providing suitable habitat conditions and restoring a natural age-class structure and an effective population size. Delisting of this population is estimated to take at least 25 years following the approval of the Plan. The Recovery Plan for the white sturgeon outlines a comprehensive set of actions needed to begin the recovery process. The Plan does not identify actions or objectives that directly affect management of the Kootenai National Forest. However, under the Endangered Species Act (Section 7(a)(1)), the Forest is obligated to use its authorities to aid in the recovery process and to consult with the USFWS on all proposed or authorized activities. All proposed projects and activities evaluated by the forest in FY00 were found to have No Effect on the species.

- **Bull Trout:** The Kootenai National Forest continues to consult with the USFWS on all ongoing activities under Section 7(a)(1) of the Endangered Species Act. During FY00 the Forest consulted on all proposed activities. The Forest has worked closely with the five other western Montana National Forests, Bureau of Land Management and the USFWS to develop Programmatic Biological Assessments for stream surveys, road maintenance, timber stand improvement, trail maintenance, and recreational site maintenance. The Forest also prepared watershed baselines for the four sub-populations supported on Kootenai National Forest lands for submission to the USFWS. The USFWS is continuing its work towards development of a recovery plan with input for the Forest as requested. The Forest continues to work closely with Montana Fish Wildlife and Parks as well as the USFWS to determine distribution and abundance of bull trout within the boundaries of the Kootenai National Forest. White Pine Creek was added to the list of bull trout habitat with the discovery of a single sub-adult in FY00.

Range Use (D-1): Livestock use on the Kootenai was anticipated to be about 12,600 Animal Unit Months (AUMs) per year. The FY00 level of grazing use was 9,032 AUMs or 72 percent of the projected level. Monitoring indicates that riparian protection measures identified in the new grazing permits are being implemented. During the last thirteen years, grazing use has averaged 85 percent of projected use, which is within the range anticipated in the Plan. Permittee requests for non-use and Forest requests to defer grazing to prevent stream bank deterioration and over grazing account for use levels being lower than the Plan projected. In review of this monitoring item, no changes are needed to the Forest Plan at this time. During Forest Plan revision, the status of allotments will be reviewed.

Noxious Weed Infestations (D-2): The Forest Plan states that noxious weed infestations will be monitored for increases in total acreage, increases in weed density and the introduction of new weed species on the Forest. Monitoring indicates that several noxious weeds have increased more than 10 percent in the number of acres affected and some have had a 10 percent or more increase in density of existing infestations since the Forest Plan was signed in 1987. In addition, with the discovery of several new invaders over the last several years, it is apparent that the diversity of noxious weed species has increased. Based on these observations, this monitoring item is outside the range prescribed in the Forest Plan. There are several “control” measures being implemented, which should help improve the noxious weed situation on the Forest. It is recommended that no changes be made in the Forest Plan, but that considerable attention be given to the problem during Forest Plan revision.

Allowable Sale Quantity (ASQ): The Forest’s projected total maximum timber sell volume for the decade from suitable management areas is 2,270 million board feet (MMBF), which is an average of 227 MMBF per year. In addition, 60 MMBF was estimated to be sold from unsuitable management areas, averaging 6 MMBF per year. Sell volumes have declined from 200 MMBF per year to about 41 MMBF per year between FY88 and FY00. The average annual amount sold has been 106.1 MMBF from

suitable lands, and 1.5 MMBF from unsuitable lands. This actual sell volume is well below the ASQ limit as set in the Plan. In the past six years, additional factors have influenced the timber sales program. The most significant was additional streamside protection measures as required by the Inland Native Fish (INFS) Decision of July, 1995. Also, the USFWS amended biological opinion for grizzly bear recovery was issued July, 1995 and changed how recovery processes would take place on the Forest. In general, it has become more difficult to plan and execute sales due to public controversy, scheduling requirements necessary to meet resource needs, and a shift to a higher level of ecosystem management and forest health issues.

The Forest has not exceeded the ASQ in 12 years of implementation. Large changes in the actual program levels versus projections of the Forest Plan indicate that revision of the Plan will need to address the sustainability of the timber sale program in addition to the sustainability of ecosystems. This has been identified as a critical issue in scoping for Forest Plan revision.

Acres of Timber Sold for Timber Harvest (E-2): The Forest Plan projected 15,740 acres of annual regeneration harvests to achieve the ASQ. During FY00, the acreage sold for regeneration harvest was highest for MA 15, while five other suitable timber MAs (11, 12, 14, 16, and 17) continued to be well below Forest Plan projected amounts. Additional harvest occurred in FY00, but was either salvage or intermediate harvest that did not result in a regenerated stand.

Many of the factors affecting this monitoring item are similar to those affecting item E-1, ASQ. As stated in the evaluation for that item, wildlife habitat management, watershed concerns, litigation, appeals, deferrals, and changes in management area designation based on field verification have all affected the potential to meet the Plan's projected regeneration harvest.

It is apparent that the acres sold for regeneration harvest will not meet the acreage projected in the Forest Plan. The upcoming revision of the Plan will provide the opportunity to assess appropriate levels of harvest volume and acreage in line with sustainable ecosystem management principles and new planning regulations.

Suitable Timber Management Area (MA) Changes (E-3): Management areas (MAs) are validated during site-specific project analysis. When inaccuracies are found, MA boundaries are corrected to keep the Forest Plan MA map current.

Acreage losses occurred in MA 12, 14, 16 and 17, while MA 11 and 15 gained acreage in FY00. Total net loss in the suitable land in FY00 was 902 acres. Most of these MA changes were made in the process of designating MA 13 and other old growth management areas. This monitoring item is outside the prescribed range for MAs 11, 15 and 16 (more than 5,000 acres of cumulative change for any of these suitable MAs).

The degree to which changes have been made to management area designations indicates continuing validation in Forest Plan MAs. The change in the suitable management area category of close to 60,000 acres amounts to approximately 3 percent of the total suitable

base. During revision of the Forest Plan, sustainability and ASQ calculations will be made using the validated management areas. An assessment of the effect of changed management area designations will also be done during the revision process.

Timber Harvest Deferrals (E-7): To determine the effect of harvest deferrals on the timber sale program, monitoring is done in two different categories. Category A deferrals are those that result from our project-specific conclusions. Category B deferrals are those that result from an externally imposed situation. There were no deferred acres in FY00.

Clear Cut Acres Sold (E-9): The acres sold for clearcut harvest declined from FY90 to FY00, with the exception of FY96. In that FY, the amount of clear cutting increased primarily due to emphasis on salvaging fire-killed timber created by the 1994 fires and dead lodgepole pine killed by the mountain pine beetle epidemic. In FY00 the amount of clearcutting declined again resulting in a 97 percent decrease from the baseline year of 1988. The Forest will continue to monitor this item, but the Chief's goal for reducing clearcutting has been fully met.

Riparian Areas (C-9): Riparian zones are being identified and mapped as part of Forest Plan implementation. Forest Plan Appendix 26, Riparian Area Guidelines, and INFS direction are being followed. After increased emphasis over the last five years, riparian areas discovered during layout and sale administration are being identified and protected. Review of this portion of the monitoring item indicates we are successfully applying riparian considerations to projects. We are effectively applying the Riparian Area Guidelines, INFS direction, and riparian BMPs on projects; therefore, we are on-track with the Forest Plan.

Soil and Water Conservation Practices (F-1): FY00 BMP monitoring on the Forest involved two different efforts: 1) BMP monitoring done by Kootenai Forest personnel during their normal work activities; 2) BMP monitoring coordinated by the Forestry division, Department of Natural Resources and Conservation (DNRC), as part of a larger Statewide Forestry BMP Audit. Thirty-two projects had implementation monitoring evaluations, and 28 projects had effectiveness evaluations accomplished in FY00 by KNF personnel. Implementation evaluations were completed for 169 BMPs and implementation evaluations met the requirement of acceptable over 98 percent of the time. Effectiveness evaluations in FY00 met the requirement of acceptable almost 96 percent of the time. The FY00 State BMP Team audited a total of 236 BMPs on the Kootenai NF. Implementation evaluations met the requirements of acceptable or better 95% of the time while 5% were rated unacceptable or worse. Effectiveness evaluations met the requirements of acceptable or better 98% of the time and only 2% were unacceptable or worse. As a result of these monitoring efforts, there were key findings identified that will strengthen on-the-ground practices.

No changes to the Forest Plan are needed at this time. The Forest will continue to improve the BMP process and program that emphasizes training, monitoring, implementation, evaluation, documentation, tracking and completion of the feedback loop to improve resource protection.

Water Yield Increases (F-3): In FY00, the water yield model was used to estimate the peak flow increase on 135,835 acres of both National Forest and private land. Most of these watersheds have been analyzed in previous years and include many acres of private land. Of the total area analyzed during the fiscal year, 5 percent of the acres exceed Forest water yield guidelines. Channel damage has not necessarily occurred in watersheds shown to be exceeding water yield guidelines since this monitoring item is based on computer modeling and not field observations and measurements.

Approximately 2,000,000 acres have been analyzed for water yield conditions on the Kootenai since 1988. Of this total, 1,609,000 acres (78 percent) were found to be at or below the guidelines and 459,000 acres (22 percent) were found to be over guidelines according to the most recent analysis in each area, which could be up to twelve years ago.

This monitoring item continues to be off-track with the Forest Plan. It is important to note, however, that when projects are proposed in watersheds that are over the standard, they are designed to improve the long-term watershed condition, are rescheduled, or are dropped (See Monitoring Items E-1 and E-7). This monitoring item shows that water yield calculations and stream channel analysis are an important part of the analysis needed before projects can be implemented.

Emerging Issues (H-2): This item identifies those issues that appear to be developing since the Forest Plan was initiated, and also monitors the original Forest Plan issues that are still of concern. Emerging issues include: road maintenance, road closures and access; declining level of timber harvest; reducing the level of natural fuels on forest service lands; an increasing demand for use of national forest system lands; and rural community development.

These emerging issues will be reviewed during Forest Plan revision to determine if and how they should be resolved.

Forest Plan Costs (H-3): Timber sales unit costs for FY00 decreased from the average during the preceding years. However, costs are more than two times greater than projected, which is well outside the +/- 10 percent range prescribed in the Plan. This increase is due to the increasing complexity in timber sale preparation, along with a concurrent decrease in the amount of timber volume being sold. Timber road unit costs were down from the average of the preceding years and are actually lower than the cost predicted in the Forest Plan. The reduction in unit costs is reflective of a reduced amount of road construction and reconstruction. Reforestation unit costs were much higher than the average of preceding years and approximately 60 percent higher than the projected Forest Plan amount. As discussed in preceding monitoring reports, since reforestation is a relatively large component of the timber program, this additional cost is a significant change in the economic efficiency levels of the Forest. Precommercial thinning unit costs continue to stay well below projected costs. Since unit costs have increased significantly in timber sale preparation, timber roads, and reforestation, there will be a need to factor in such changes during Forest Plan revision. During the revision process, cost efficiency analysis will include these elements and others as appropriate.

Forest Plan Budget (H-4): As in prior years, there is a great deal of variation in the level of funding for various program areas in comparison to the projected amounts. Notable areas where funding has increased beyond expected are in fire, fuels management, range, co-op law enforcement, tree improvement, salvage sales, and trail and recreation facility construction. Most other program areas remain below projected budget levels. However, given major trends now seen since 1988, it is apparent that many programs and costs have changed substantially, and the Forest Plan predictions are no longer valid. This analysis will be helpful in budget analysis for Forest Plan revision.

Project Specific Amendments (Appendix C): Project specific amendments are changes in a standard that only apply to that project. They do not change the standard for the long term. The Forest Plan states, “If it is determined during project design that the best way to meet the goals of the Forest Plan conflicts with a Forest Plan standard the Forest Supervisor may approve an exception to that standard for the project”. There were three timber sale projects with project-specific amendments that were approved by the Forest supervisor. There were no projects with openings over 40 acres, and no programmatic amendments in FY00.