United States
Department of
Agriculture

Forest Service

Nez Perce National Forest Plan

FIFTH ANNUAL MONITORING AND EVALUATION REPORT

Fiscal Year 1992

INFORMATION REQUESTS/COMMENTS

Information requests or comments about the Nez Perce National Forest's Land and Resource Management Plan and or Annual Monitoring and Evaluation Report can be directed to one of the following offices:

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White Bird, ID 83554
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Clearwater Ranger District
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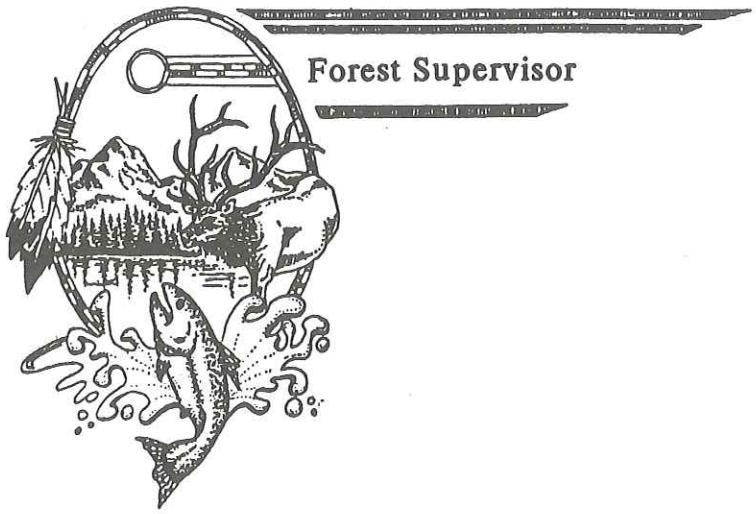


April 1993

Dear Reader:

The Nez Perce National Forest Plan, released in October 1987, charts a new course for managing the Forest for the next 10 to 15 years. It is our contract with you, the people we serve, to manage the outstanding resources of the Nez Perce National Forest in an integrated manner so we can achieve a balance of uses.

We invite you to review and comment on this, our fifth Nez Perce National Forest Annual Monitoring and Evaluation Report. This is our report on how well we are keeping our land management contract with you.

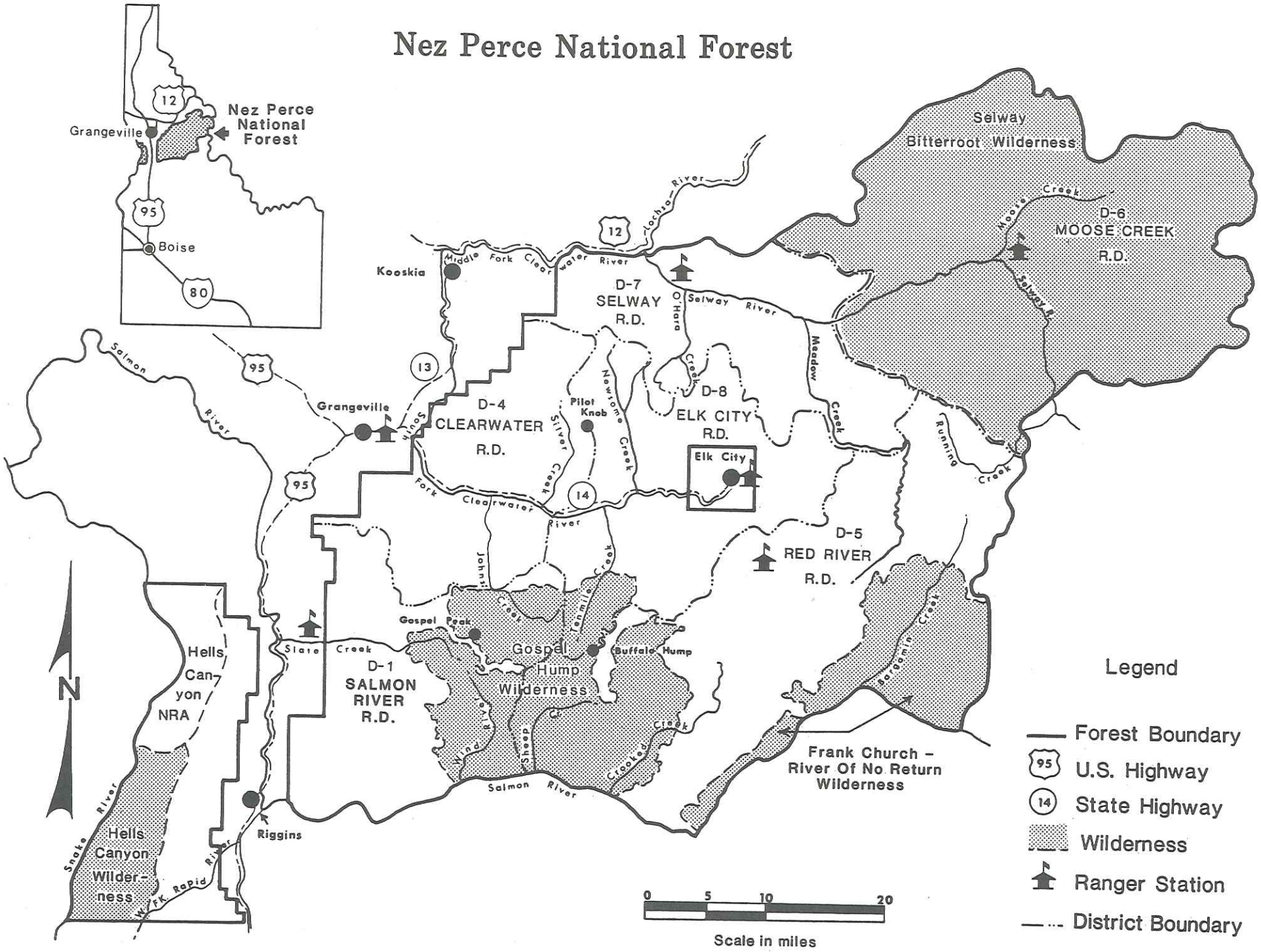
As always, we welcome you to work with us to improve our land stewardship responsibilities. Please feel free to call, visit, or write us anytime.

Sincerely,

Michael King

MICHAEL KING
Forest Supervisor

Nez Perce National Forest



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---PREFACE---

FIVE YEARS OF FOREST PLAN MONITORING--

SOME IDENTIFIED PROBLEM AREAS

Introduction

The Nez Perce National Forest Plan was adopted in October, 1987. This fiscal year 1992 Monitoring and Evaluation Report marks 5 years of Forest Plan implementation and monitoring. As is to be expected, conditions have changed over those 5 years. Better data are available in almost all resource areas. In some cases, monitoring and evaluation have shown that assumptions used in development of the Forest Plan should be revisited. As a result of monitoring findings and new information, changes in the Forest Plan may be necessary. This need will be evaluated during the 5-year Forest Plan review which is now underway.

The Nez Perce National Forest has had a long tradition of natural resource leadership. Management strives to attain a balanced implementation of the Forest Plan. Our multiple-use philosophy is based on ecological principles, sustainability, and a strong land stewardship ethic. The Forest enjoys many successes, most of which are shared with the interested publics, other agencies, and our communities. The Forest would be remiss, however, if it did not highlight some of its deficiencies.

This preface briefly summarizes problems; it does not address the many areas in which there are no problems. Not all resources are discussed. The reader is encouraged to review the different sections of this report for more information.

Wildlife

Compliance with summer elk habitat objectives related to land-disturbing activities over the past 5 years has been mixed. During Forest Plan implementation, several timber sales were approved in which individual elk analysis areas failed to meet objectives. Since 1990, adherence to objectives has improved.

Based on interim results of a Forestwide effort to assess current summer habitat conditions relative to Forest Plan objectives, some problems have been encountered:

- Some summer elk objective areas originally identified in the Forest Plan were too small in acreage to be evaluated with the elk model;

- Some summer elk objectives were not being met at the time the Forest Plan was approved; and

- Land management adjustments necessary to meet existing summer elk objectives in some areas will constrain recreation access more than anticipated and will limit some future timber harvest opportunities (page 31).

Since the Forestwide mix of acreages and elk summer objectives is viewed as management direction, timber harvest strategies that rely on new roading are to some degree dependent on the Forest meeting or exceeding these objectives. As a result, road closures and restrictions may have to be accelerated if conventional approaches to timber harvest and roading are to continue.

Bull elk vulnerability was not a major issue when the Forest Plan was developed. It is now a major concern of the Idaho Department of Fish and Game. Although this issue extends beyond Forest Service legal responsibility for wildlife management, the Forest is working with the Department to better understand vulnerability.

Big game winter range improvement, mostly through use of prescribed fire, has fallen short of Forest Plan projections. A major reason for this shortfall has been inadequate funding, complicated by high unit costs. Based on reconnaissance of priority habitat improvement sites for the next 5 years, unit costs will rise sharply. This will reduce attainable acreage treatable without increased funding (pages 37 and 162 of this Report and pages 28 and 26 of the FY 1991 and FY 1990 Reports respectively).

Snag retention in harvest areas has proved to be difficult. Though retention of snags and green tree replacements through contractor and sale administrator efforts is improving, broadcast burning of slash and snag removal by fuelwood gatherers takes a toll on the remaining snags in harvest areas (page 33).

Fish

On May 22, 1992, the spring/summer and fall run chinook salmon in the Salmon River drainage and the fall run chinook salmon in the Clearwater River were listed as "threatened" under the Endangered Species Act.

On December 2, 1992, proposed critical habitat for these fish was designated. A final decision on critical habitat had not been reached as this Monitoring Report goes to press. Proposed critical habitat in the Clearwater River is below Lolo Creek, well outside the Nez Perce National Forest boundary. Proposed critical habitat for spring/summer chinook salmon in the Salmon River includes the mainstem river, all perennial tributaries, and all adjacent riparian zones. Proposed critical habitat for fall chinook salmon in the Salmon River is "the lower reaches," which is understood to be below the Forest boundary.

The Endangered Species Act requires the National Marine Fisheries Service, which administers the Act with regard to anadromous fish species, to develop and implement plans for the recovery of listed species. These plans have not yet been completed.

As is required by law, the Forest is consulting with the National Marine Fisheries Service on all ongoing and Fiscal Year 1993 projects. This consultation has not yet been completed.

The effects of the salmon listing on Forest commodity outputs are still being evaluated. The Forest will experience delays in environmental analysis timeframes which will delay outputs until after the consultation process is completed.

The bull trout has been petitioned for listing as threatened species. This fish is present in many more Forest streams than are chinook salmon. The results of a "coarse filter" watershed condition analysis suggest that about 80 percent of the bull trout habitat outside classified wilderness is in "high concern" watersheds. These watersheds contain streams that are significantly below Forest Plan objectives (see below and page 86).

Timber

It is highly unlikely that the full sawlog allowable sale quantity (ASQ) will be sold this decade (page 60 of this Report and the same sections in the FY 1989 - FY 1991 Reports).

The Forest was financed to offer 98.4 million board feet per year during the first 5 years of the decade. Actual accomplishment was 86.7 million board feet per year. This was 88 percent of assigned timber target (page 61).

From the actual data for timber sales sold from FY 1988-1992, the following trends can be identified (pages 67 - 70).

- Actual net cruised volume per acre for all silviculture systems on sales sold continues to be 25 percent less than that estimated in the Forest Plan.

- Silvicultural system distribution also varies significantly from Forest Plan estimates. More clearcut and final harvest (commonly known as overstory removal) units are being sold and fewer shelterwood/seed tree units are being sold.

- More timber volume is being sold in Management Area 12 (timber emphasis) than was scheduled in the Forest Plan and less is being sold in Management Area 10 (riparian emphasis), Management Area 17 (timber, visual emphasis), and Management Area 21 (moose winter range emphasis).

- The average annual FY 1988-1992 acres sold is 17 percent less than the average annual acres sold projected in the Forest Plan.

Several issues must be resolved regarding Forest Plan determinations of suitability of lands for timber management. For example, does the Forest have adequate information to predict reforestation success on parts or all of the "grand fir mosaic" vegetative community, on unstable landtypes, and on high-elevation sites? Can regeneration be assured on these and other sites without extraordinary establishment and protection costs? What costs in mitigation measures to build roads in fragile landtypes or to log with expensive harvest methods in low volume or value stands can the Forest afford? (pages 65-66).

The Forest now avoids harvest in many stands because of these and similar conditions, which in effect creates an ever-growing class of *de-facto* unsuitable lands (page 66).

Soils

Forest Plan standards specify that no more than 20 percent of a management activity area (primarilly applied to timber harvest units) may be detrimentally compacted, displaced or puddled. Monitoring has shown that tractor logging with dozer piling consistently violates this standard. The Forest is moving away from dozer piling (page 80). Where topography and timber size is appropriate, the Forest will be requiring more cut-to-length log forwarding, which significantly decreases soil impacts and increases the spacing between roads.

Riparian

The Forest Plan significantly underestimated the Forestwide riparian area acreage. The Plan estimated that approximately 2 percent of the total Forest acreage is in riparian areas. Preliminary site-specific estimates based on stream length, a minimum management zone of 50 feet on each side of intermittent streams, a minimum management zone of 100 feet on each side of perennial streams, and protection of wetlands not associated with streams, indicate that between 8 to 12 percent of a given analysis area may require management to protect or enhance riparian-dependent resources (pages 72, 99, and 161).

Departures from Forest Plan riparian area standards have occurred on some timber sales and grazing allotments. Clarification of Forest Plan riparian direction was issued in 1992. All active timber sales and grazing allotments were reviewed for Forest Plan compliance, and adjustments were made to bring these departures into compliance (pages 97-98).

Water

Appendix A to the Forest Plan lists fish/water quality objectives for all nonwilderness prescription watersheds on the Forest. About 90 (28 percent) of these prescription watersheds are identified as being below objective in their existing condition; that is, before any further management is undertaken.

The below-objective watersheds displayed in the Forest Plan were identified based on information available at the time. Over the past 5 years, site-specific stream surveys have been accomplished in all parts of the Forest. While methods of quantification are still under professional discussion, these surveys suggest that more, perhaps many more, watersheds are below Forest Plan objectives in their existing condition (page 87). Management activities in below-objective watersheds can occur only if an upward trend in fish habitat conditions following management is projected and clearly indicated in an environmental impact statement (EIS) or and environmental assessment (EA)(page 86).

Existing and predicted watershed condition is closely related to critical habitat for listed fish species.

Range

Currently only 26 percent of all allotment management plans meet Forest Plan standards and guidelines. At the current funding level, all allotments that do not meet Forest Plan standards and guidelines should be updated by FY 1997 (pages 102-103).

Economics

Funding levels received from Congress have consistently been less than funding needs projected in the Forest Plan. It is uncertain how these decreased budgets will affect the long-term goals and objectives of the Forest Plan. However, the activity and output levels of some resources projected at Forest Plan funding levels have not been attained and may not be attained in the future (page 141).

Management Area (MA) Allocations

After selection of the preferred alternative in the Forest Plan EIS, management areas were assigned across the Forest. This was done with very little site-specific data and in a very short period of time. The only permanent storage of these assignments was in a spatial fitting computer data base, which does not indicate exactly where each management area is located on the ground.

During project planning, these management area assignments are reviewed by the interdisciplinary team involved with the project, using site-specific information. Over the past 5 years, 15 interdisciplinary teams concluded that the original management area assignments were not appropriate to the capability of the land they were analyzing, and these assignments were changed.

The extent of these changes is dramatically illustrated by a 25 percent reduction in acres assigned to Management Area 12 (timber emphasis), a 33 percent increase in Management Area 16 (deer, elk, winter range emphasis) acres, and an 83 percent increase in Management Area 17 (timber, visuals emphasis) acres across the 290,000 acres analyzed. Changes of this magnitude are likely to have an effect on the amounts of goods and services the Forest can provide (page 159).

FOREST PLAN MONITORING AND EVALUATION REPORT

NEZ PERCE NATIONAL FOREST

FISCAL YEAR 1992

I. INTRODUCTION

The Land and Resource Management Plan (Forest Plan) for the Nez Perce National Forest was approved by the Regional Forester on October 8, 1987. Part of the planning process was a commitment to monitor and evaluate how well the Forest Plan was being implemented. Monitoring and evaluation comprise the management control system, and the results of monitoring and evaluation provide the line officer and the public information on the progress and results of implementing the Forest Plan.

A commitment was also made to consider modifications in the Forest Plan based on the monitoring and evaluation efforts. Monitoring and evaluation each have a distinctly different purpose and scope.

Monitoring is gathering information and observing management activities to provide a basis for periodic evaluation of the Forest Plan. There are three types of monitoring:

- **Implementation Monitoring** [1] is used to determine if goals, objectives, standards, and management practices are implemented as detailed in the Forest Plan. The question being asked is, "Did we do what we said we were going to do?"

- **Effectiveness Monitoring** is used to determine if management practices as designed and executed are effective in meeting Forest Plan standards, goals, and objectives. The question being asked in this type of monitoring is, "Did the management practice do what we wanted it to do?"

- **Validation Monitoring** is used to determine whether the data, assumptions, and coefficients used in the development of the Forest Plan are correct. The question being asked here is, "Is there a better way to meet Forest Plan goals and objectives?"

Evaluation is the analysis and interpretation of monitoring results. Evaluation will assist in the review of the conditions on the land covered by the Forest Plan as required at least every 5 years by the National Forest Management Act Regulations. Planned actions resulting from evaluation are reported in the Proposed Amendments and Action Items sections.

Monitoring and evaluation focus on those facets of land and resource management which could most critically affect Forest Plan implementation. Monitoring elements include:

- items on which implementation may have a potentially significant effect;
- items where achievement of a relevant goal or objective is going to be difficult;
- items where projected effects may or may not occur as predicted;
- items where accomplishment of an objective or meeting of a standard determines ability to achieve another goal or objective.

Forest Plan management activities were monitored and evaluated as outlined in the Forest Plan Monitoring Requirements section of the Forest Plan, pages 6 and 7, Table V-1, and Appendix O to determine how well objectives were met and how closely management standards were applied. Numerous informal field reviews

[1] In this report, implementation monitoring is the type of monitoring assumed unless otherwise specified.

were also conducted on a variety of projects during fiscal year 1992. These are documented in various ways, including daily diaries, file notes, and letters. These reviews are often conducted as routine inspections of timber sales, road contracts, mining operations, or while planning or implementing other projects.

This report summarizes results of Forest Plan monitoring and evaluation conducted from October 1, 1991, through September 30, 1992. In some instances, it is difficult with 5 years or less of monitoring data to determine how well the Forest Plan objective, outputs, and standards are being met. For some items, data is insufficient to evaluate trends. We are continuing to develop methodologies for data acquisition and interpretation useful for evaluation. This will be particularly useful during the Forest Plan 5-year review required under the National Forest Management Act's (NFMA) implementation regulations (CFR 219.10 (g)). During the 5-year review, the monitoring results for the first 5 years of monitoring will be evaluated. Recommendations will be made about how to change our operations to better implement the Forest Plan, and whether or not new issues and changed conditions warrant changing the Forest Plan. Any changes in the Forest Plan will follow the direction outlined in Chapter V and will include appropriate public notification and completion of National Environmental Policy Act (NEPA) procedures. This report also provides information to the public and other levels of Federal, State, private industry, and interest groups to document the status on implementing the Forest Plan.

This report is organized into seven main sections following the Introduction. Section II compares outputs and services planned to those accomplished and discusses the results of monitoring each item. Section III identifies research needs. Section IV identifies recommended changes that will result in amendments if they are approved. Section V summarizes existing amendments to the Forest Plan. Section VI lists those people who contributed to the preparation of this Report. Following Section VII, the Approval, is the Appendix to this Report.

II. MONITORING AND EVALUATION RESULTS AND TRENDS

A. Were Outputs and Services Provided as Predicted

Table 1 compares amounts of activities and outputs projected in the Forest Plan (Page II-9, Table II-1) with more recent projected schedules of work, with assigned targets for these schedules of work, and with actual accomplishments for these activities and outputs for fiscal years 1988-1992.

Projected outputs and activities published in the Forest Plan (Page II-9, Table II-1) are shown in the columns labeled "Original Forest Plan Projection."

Targets are amounts of work assigned to the Forest by the Regional Forester and have been adjusted from projected levels in the Forest Plan to reflect actual funding levels.

Accomplishments show the amount of work actually completed in each fiscal year.

Activity and output projections for the next three fiscal years (FY 1993 - 1995) are displayed in Table 2. This is the best estimate of the work that could be completed and outputs produced given full Forest Plan funding (Forest Plan Level) or funding at levels similar to that received in recent years (Current Service Level) from this point forward. The activities and outputs originally published in the Forest Plan are shown in the column labeled "Original Forest Plan Projection."

Even though the reporting period for some monitoring items may be two or more years, information from all monitoring items is reported annually. This information will be evaluated at the end of the reporting period.

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1988		Fiscal Year 1989	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
RECREATION						
T01 Developed/Dispersed Use	PAOT Days	323,570	324,000	349,000	510,000	510,000
Cultural Resource Inventory	Acres	8,000	—	3,753	—	2,600
WILDLIFE & FISH						
Wildlife Habitat Improvement						
Non-Structural						
Excess Timber Receipts	Acres	—	—	0	400	400
T03 Appropriated Funds	Acres	5,000	3,800	1,000	2,800	2,800
T26 KV Funds	Acres	—	—	2,040	5,358	5,765
Structural						
T29 Appropriated Funds	Structures	—	—	1	2	1
T32 KV Funds	Structures	—	—	3	23	16
Fish Habitat Improvement						
Non-Structural						
Challenge Cost Share Funds	Acres	—	—	4	15	15
Excess Timber Receipts	Acres	—	—	0	50	65
T04 Appropriated Funds	Acres	50	108	104	40	40
T27 KV Funds	Acres	—	—	0	12	2
Structural						
Challenge Cost Share Funds	Structures	—	—	0	50	50
T30 Appropriated Funds	Structures	350	54	44	300	322
T33 KV Funds	Structures	—	—	21	110	70
T&E Species Habitat Improvement						
Non-Structural						
T05 Appropriated Funds	Acres	64	—	0	—	0
T34 KV Funds	Acres	—	—	0	—	0
Structural						
T31 Appropriated Funds	Structures	—	1	1	2	1
T35 KV Funds	Structures	—	—	0	—	0
RANGE						
T06 Permitted Grazing Use	AUM	43,000	43,000	32,801	43,000	25,022
Range Improvement						
T07 Non-Structural	Acres	500	370	0	0	0
T07A Structural	Structures	—	10	8	15	16
T08 Allotment Management Plans	Plans	—	—	0	—	0
T09 Noxious Weed Control	Acres	250	160	124	60	159
SOIL & WATER						
Soil & Water Resource Improvement						
Excess Timber Receipts	Acres	—	—	0	45	144
T10A (Appropriated Funds)	Acres	320	49	47	200	131
T10B (KV Funds)	Acres	—	—	45	—	93
T10 Soil Inventory	Acres	—	—	0	—	0

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN , continued

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1988		Fiscal Year 1989	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
MINERALS						
T12 Minerals Management	Actions [6]	500	453	318	477	464
TIMBER						
Acres Harvested						
Clearcut	Acres	—	—	1,440	—	1,583
Shelterwood/Seed Tree	Acres	—	—	1,332	—	961
Shelterwood/Seed Tree-Removal/Final Cut	Acres	—	—	283	—	1,063
Commercial Thin	Acres	—	—	142	—	446
Selection	Acres	—	—	24	—	13
Other	Acres	—	—	19	—	45
Acres Sold						
Clearcut	Acres	1,710	—	2,846	—	2,133
Shelterwood/Seed Tree	Acres	2,705	—	1,549	—	731
Shelterwood/Seed Tree-Removal/Final Cut	Acres	130	—	1,921	—	374
Commercial Thin	Acres	100	—	0	—	0
Selection	Acres	125	—	189	—	0
Other	Acres	—	—	55	—	23
T13 Volume Offered [7] (Total Volume)	MMBF	108	103	105	108	105
T14 Volume Offered (Salvage Volume)	MMBF	—	5	7	4	6
T14A Volume Offered (Non-Salvage)	MMBF	—	98	98	104	99
T28 Advanced Prep (NEPA)	MMBF	—	178	27	109	102
T15 Silvicultural Exams	Acres	120,000				
(Silvicultural Exam)	Acres	—	28,000	15,000	30,000	34,370
(Compartment Field Exams)	Acres	—	19,000	17,000	25,000	23,359
Reforestation						
Planting						
T16 (Appropriated Funds)	Acres	1,610	1,227	1,180	975	931
T19 (KV Funds)	Acres	2,900	1,467	1,692	1,884	1,885
Site Prep - Natural						
T17 (Appropriated Funds)	Acres	200	—	0	100	132
T18 (KV Funds)	Acres	300	153	0	468	255
Timber Stand Improvement						
T20 (Appropriated Funds)	Acres	300	611	674	798	668
T21 (KV Funds)	Acres	700	222	273	217	365
PROTECTION						
T23 Fuels Management Activity and Natura Fuels	Acres	4,560	1,300	1,309	1,529	1,529
T44 Fuels Management-Brush Disposal	Acres	—	4,600	3,041	3,590	4,111

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN , continued

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1988		Fiscal Year 1989	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
LANDS						
T11 Land Exchange	Acres	25	60	0	0	0
T11A Special Uses	Cases	—	121	121	133	133
FACILITIES						
T22 Landline Location	Miles	—	23	25	22	22
T83 Trail Construction/Reconstruction	Miles	20	25	17	27	27
Excess Timber Receipts	Miles	—	—	0	5	5
T84 Trail Maintenance Levels I - III	Miles	—	—	1,064	—	1,102
T81 Capital Investment Roads	Miles	—	8	8	90	62
T82 Timber Purchaser Credit Roads	Miles	—	92	92	130	127
T86 Road Maintenance						
Level 1	Miles	—	—	1,084	—	1,937
Level 2	Miles	—	—	599	—	614
Level 3-5	Miles	—	—	651	—	651
Total	Miles	2,221	—	2,334	—	3,202
Road Construction						
Arterial	Miles	3	—	0	—	0
Collector	Miles	24	—	4	—	7
Local	Miles	26	—	49	—	30
TOTAL	Miles	53	—	53	—	37
Road Reconstruction						
Arterial	Miles	2	—	2	—	0
Collector	Miles	13	—	17	—	102
Local	Miles	15	—	30	—	50
TOTAL	Miles	30	—	49	—	152
Access Management						
Permanently Closed	Miles	33	—	77	—	31
Unrestricted	Miles	17	—	34	—	4
Restricted	Miles	33	—	32	—	40
TOTAL	Miles	83	—	143	—	75
Closure Devices						
Gates	Numbers	—	—	6	—	27
Concrete Barriers	Numbers	—	—	14	—	10
Earth Berm Barriers	Numbers	—	—	13	—	9

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1990		Fiscal Year 1991	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
RECREATION						
T01 Developed/Dispersed Use	PAOT Days	783,000	545,000	545,000	638,000	637,980
Cultural Resource Inventory	Acres	8,000	---	3,753	---	4,286
WILDLIFE & FISH						
Wildlife Habitat Improvement						
Non-Structural						
T03 Appropriated Funds	Acres	5,000	3,500	6,898	3,000	1,903
T26 KV Funds	Acres	---	---	705	---	732
Challenge Cost Share	Acres	---	---	0	---	600
Structural						
T29 Appropriated Funds	Structures	---	---	10	---	71
T32 KV Funds	Structures	---	---	104	---	0
Wildlife Inventory						
Appropriated Funds	Acres	---	---	6,378	---	136,520
KV Funds	Acres	---	---	0	---	0
Challenge Cost Share	Acres	---	---	0	---	5,000
Fish Habitat Improvement (Inland & Anadromous)						
Non-Structural						
T04 Appropriated Funds	Acres	50	133	133	80	79
T27 KV Funds	Acres	---	---	5	---	0
Challenge Cost-Share	Acres	---	---	0	---	5
Structural						
T30 Appropriated Funds	Structures	350	257	257	127	119
T33 KV Funds	Structures	---	---	15	---	56
Challenge Cost-Share	Structures	---	---	92	---	5
Fish Inventory (Inland & Anadromous)						
Appropriated Funds	Acres	---	---	25	---	8
KV Funds	Acres	---	---	5	---	0
Challenge Cost-Share	Acres	---	---	30	---	0
T&E Species Habitat Improvement						
Non-Structural						
T05 Appropriated Funds	Acres	64	45	45	30	30
T34 KV Funds	Acres	---	---	0	---	0
Structural						
T31 Appropriated Funds	Structures	---	2	1	2	2
T35 KV Funds	Structures	---	---	0	2	2
Challenge Cost Share	Structures	---	---	0	---	15
T&E Species Inventory						
Appropriated Funds	Acres	---	---	11,600	---	1,375
KV Funds	Acres	---	---	43,000	100	100

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

			Fiscal Year 1990		Fiscal Year 1991	
Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
RANGE						
T06 Permitted Grazing Use	AUM	43,000	43,000	32,907	43,000	23,602
Range Improvement						
T07A Non-Structural	Acres	500	0	0	0	0
T07 Structural	Structures	---	3	3	10	12
T08 Allotment Management Plans	Plans	---	---	0	2	0
T09 Noxious Weed Control	Acres	250	133	133	230	226
SOIL & WATER						
Soil & Water Resource Improvement						
Excess Timber Receipts	Acres	---	14	5	---	0
T10A (Appropriated Funds)	Acres	320	150	159	105	165
T10B (KV Funds)	Acres	---	37	36	0	85
T10 Soil Inventory	Acres	---	110,000	129,604	45,000	51,787
MINERALS						
T12 Minerals Management	Actions [6]	500	410	394	375	372

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1990		Fiscal Year 1991	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
TIMBER						
Acres Harvested						
Clearcut	Acres	—	—	1,675	—	1,995
Shelterwood/Seed Tree Seed Cut	Acres	—	—	846	—	936
Shelterwood/Seed Tree-Removal/Final Cut	Acres	—	—	103	—	116
Commercial Thin	Acres	—	—	349	—	98
Selection	Acres	—	—	0	—	127
Other	Acres	—	—	31	—	170
Acres Sold						
Clearcut	Acres	1,710	—	2,337	—	2,426
Shelterwood/Seed Tree	Acres	2,705	—	990	—	2,029
Shelterwood/Seed Tree-Removal/Final Cut	Acres	130	—	455	—	602
Commercial Thin	Acres	100	—	34	—	67
Selection	Acres	125	—	31	—	0
Other	Acres	—	—	386	—	386
T13 Volume Offered [7] (Total Volume)	MMBF	108	104	85	100	87
T14 Volume Offered (Salvage Volume)	MMBF	—	24	25	34	38
T14A Volume Offered (Non-Salvage)	MMBF	—	80	53	66	49
T28 Advanced Prep (NEPA)	MMBF	—	155	42	37	89
T15 Silvicultural Exams	Acres	109,000				
(Silvicultural Exam)	Acres	—	25,700	27,100	35,358	38,386
(Compartment Field Exams)	Acres	—	28,300	13,900	12,250	9,962
Reforestation						
Planting						
T16 (Appropriated Funds)	Acres	860	634	677	1,134	1,079
T18 (KV Funds)	Acres	3,200	1,612	1,685	1,639	1,769
Site Prep - Natural						
T17 (Appropriated Funds)	Acres	80	0	0	0	0
T19 (KV Funds)	Acres	1,100	267	0	46	0
Timber Stand Improvement						
T20 (Appropriated Funds)	Acres	700	780	735	566	594
T21 (KV Funds)	Acres	300	136	155	212	112
Excess Timber Receipts	Acres	—	—	0	279	305

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Fiscal Year 1990		Fiscal Year 1991	
			Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
PROTECTION						
T23 Fuels Management Activity and Natural Fuels	Acres	1,060	1,674	1,674	1,470	1,596
T44 Fuels Management-Brush Disposal	Acres	3,590	2,784	2,784	4,860	3,619
LANDS						
T11 Land Exchange	Acres	25	60	0	40	728
T11A Special Uses	Cases	—	121	121	121	121
FACILITIES						
T22 Landline Location	Miles	—	25	25	23	23
T83 Trail Construction/Reconstruction	Miles	20	24	24	27	27
Excess Timber Receipts	Miles	—	—	6	—	0
Contributed	Miles	—	—	1	—	0
T84 Trail Maintenance Levels I - III	Miles	—	957	1,088	1,100	1,261
T81 Capital Investment Roads	Miles	—	8	8	51	54
T82 Timber Purchaser Credit Roads	Miles	—	92	92	150	173
T86 Road Maintenance						
Level I	Miles	—	—	857	—	1,407
Level 2	Miles	—	—	409	—	490
Level 3-5	Miles	—	—	649	—	650
Total	Miles	—	1,915	1,915	2,581	2,547
Road Construction						
Arterial	Miles	3	—	0	—	0
Collector	Miles	24	—	10	—	37
Local	Miles	26	—	39	—	47
TOTAL	Miles	53	—	49	—	84
Road Reconstruction						
Arterial	Miles	2	—	5	—	5
Collector	Miles	13	—	50	—	45
Local	Miles	15	—	36	—	84
TOTAL	Miles	30	—	91	—	144
Access Management						
Permanently Closed	Miles	33	—	0	—	0
Unrestricted	Miles	17	—	0	—	2
Restricted	Miles	33	—	33	—	49
TOTAL	Miles	83	—	33	—	51
Closure Devices						
Gates	Numbers	—	—	13	—	3
Concrete Barriers	Numbers	—	—	6	—	4
Earth Berm Barriers	Numbers	—	—	0	—	1

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

			Fiscal Year 1992			
Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
RECREATION						
T01 Developed/Dispersed Use	PAOT Days	783,000	300,000	300,000		
Cultural Resource Inventory	Acres	8,000	---	3,664		
WILDLIFE & FISH						
Wildlife Habitat Improvement						
Non-Structural						
T03 Appropriated Funds	Acres	5,000	2,375	2,325		
T26 KV Funds	Acres	---	---	120		
Challenge Cost Share	Acres	---	---	0		
Structural						
T29 Appropriated Funds	Structures	---	---	20		
T32 KV Funds	Structures	---	---	0		
Wildlife Inventory						
Appropriated Funds	Acres	---	69	8,500		
KV Funds	Acres	---	---	0		
Challenge Cost Share	Acres	---	---	0		
Fish Habitat Improvement (Inland & Anadromous)						
Non-Structural						
T04 Appropriated Funds	Acres	50	165	112		
T27 KV Funds	Acres	---	---	0		
Challenge Cost-Share	Acres	---	---	0		
Structural						
T30 Appropriated Funds	Structures	350	159	112		
T33 KV Funds	Structures	---	---	0		
Challenge Cost-Share	Structures	---	---	0		
Fish Inventory (Inland & Anadromous)						
Appropriated Funds	Acres	---	865	765		
KV Funds	Acres	---	---	3		
Challenge Cost-Share	Acres	---	---	0		
T&E Species Habitat Improvement						
Non-Structural						
T05 Appropriated Funds	Acres	64	45	45		
T34 KV Funds	Acres	---	---	0		
Structural						
T31 Appropriated Funds	Structures	---	2	2		
T35 KV Funds	Structures	---	---	0		
Challenge Cost Share	Structures	---	---	0		
T&E Species Inventory						
Appropriated Funds	Acres	---	4	5,050		
KV Funds	Acres	---	---	0		
Challenge Cost Share	Acres	---	---	200		

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

			Fiscal Year 1992			
Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
RANGE						
T06 Permitted Grazing Use	AUM	43,000	41,500	32,900		
Range Improvement						
T07A Non-Structural	Acres	500	0	0		
T07 Structural	Structures	---	2	3		
T08 Allotment Management Plans	Plans	---	4	3		
T09 Noxious Weed Control	Acres	250	200	202		
SOIL & WATER						
Soil & Water Resource Improvement						
Excess Timber Receipts	Acres	---	0	5		
T10A (Appropriated Funds)	Acres	320	220	214		
T10B (KV Funds)	Acres	---	0	33		
T10 Soil Inventory	Acres	---	67,000	84,040		
MINERALS						
T12 Minerals Management	Actions [6]	500	417	417		

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

			Fiscal Year 1992			
Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
TIMBER						
Acres Harvested						
Clearcut	Acres	—	—	1,793		
Shelterwood/Seed Tree Seed Cut	Acres	—	—	849		
Shelterwood/Seed Tree-Removal/Final Cut	Acres	—	—	118		
Commercial Thin	Acres	—	—	631		
Selection	Acres	—	—	0		
Other	Acres	—	—	0		
Acres Sold						
Clearcut	Acres	1,710	—	15		
Shelterwood/Seed Tree	Acres	2,705	—	0		
Shelterwood/Seed Tree-Removal/Final Cut	Acres	130	—	0		
Commercial Thin	Acres	100	—	0		
Selection	Acres	125	—	12		
Other	Acres	—	—	145		
T13 Volume Offered [7] (Total Volume)	MMBF	108	77	50		
T14 Volume Offered (Salvage Volume)	MMBF	—	32	23		
T14A Volume Offered (Non-Salvage)	MMBF	—	45	27		
T28 Advanced Prep (NEPA)	MMBF	—	92	0		
T15 Silvicultural Exams	Acres	109,000				
(Silvicultural Exam)	Acres	—	—	22,005		
(Compartment Field Exams)	Acres	—	—	2,730		
Reforestation						
Planting						
T16 (Appropriated Funds)	Acres	860	1,585	1,494		
T18 (KV Funds)	Acres	3,200	1,515	1,417		
Site Prep - Natural						
T17 (Appropriated Funds)	Acres	80	100	0		
T19 (KV Funds)	Acres	1,100	13	0		
Timber Stand Improvement						
T20 (Appropriated Funds)	Acres	700	579	742		
T21 (KV Funds)	Acres	300	350	473		
Excess Timber Receipts	Acres	—	—	0		

Table 1 - COMPARISON OF OUTPUTS AND ACTIVITIES WITH THOSE PROJECTED IN THE FOREST PLAN, continued

			Fiscal Year 1992			
Outputs and Activities [1]	Units [2]	Original Forest Plan Projection [3]	Targets [4]	Accomplishment [5]	Targets [4]	Accomplishment [5]
PROTECTION						
T23 Fuels Management Activity and Natural Fuels	Acres	1,060	750	807		
T44 Fuels Management-Brush Disposal	Acres	3,590	2,426	2,366		
LANDS						
T11 Land Exchange	Acres	25	0	24		
T11A Special Uses	Cases	—	0	133		
FACILITIES						
T22 Landline Location	Miles	—	20	20		
T83 Trail Construction/Reconstruction	Miles	20	22	26		
Excess Timber Receipts	Miles	—	—	0		
Contributed	Miles	—	—	0		
T84 Trail Maintenance Levels I - III	Miles	—	1,100	1,832		
T81 Capital Investment Roads	Miles	—	51	12		
T82 Timber Purchaser Credit Roads	Miles	—	150	42		
T86 Road Maintenance						
Level I	Miles	—	—	930		
Level 2	Miles	—	—	490		
Level 3-5	Miles	—	—	670		
Total	Miles	—	2,581	2,090		
Road Construction						
Arterial	Miles	3	—	0		
Collector	Miles	24	—	0		
Local	Miles	26	—	30		
TOTAL	Miles	53	—	30		
Road Reconstruction						
Arterial	Miles	2	—	0		
Collector	Miles	13	—	58		
Local	Miles	15	—	43		
TOTAL	Miles	30	—	101		
Access Management						
Permanently Closed	Miles	33	—	0		
Unrestricted	Miles	17	—	2		
Restricted	Miles	33	—	49		
TOTAL	Miles	83	—	51		
Closure Devices						
Gates	Numbers	—	—	3		
Concrete Barriers	Numbers	—	—	4		
Earth Berm Barriers	Numbers	—	—	1		

Footnotes for Table 1

[1] Northern Region coding for target and activity items.
[2] Unit Abbreviations

PAOT Days	persons at one time
MAUM	thousand animal unit months
MMBF	million board feet

[3] Projections originally published in the Forest Plan.
[4] Forest Target for this fiscal year. Targets for grazing use are the same as permitted capacity.
[5] Actual units accomplished during this fiscal year. Accomplishments reported for grazing use are actual use. Actual use may be less than capqacity for the convenience of the permittee.
[6] Includes administrative actions to process and administer operating plans, Notices of Intent, leases, and permits, as well as site-specific evaluations, hearings, and appeals.
[7] Timber Volume Offered includes all chargeable (i.e. counting towards Allowable Sale Quantity (ASQ)) and non-chargeable volume offered for sale during the fiscal year. Timber Volume Offered also includes sales that received no bids. Volume offered counts toward the Forest's financed sell target while volume sold counts toward allowable sale quantity.

TABLE 2 - PROJECTED OUTPUTS AND ACTIVITIES AT TWO PROPOSED FUNDING LEVELS, FY 1993-1995

Target Item	Output or Activity	Unit of Measure	Original Forest Plan Projection	FY 1993 Forest Plan Level	FY 1993 Current Service Level	FY 1994 Forest Plan Level	FY 1994 Current Service Level	FY 1995 Forest Plan Level	FY 1995 Current Service Level
RECREATION									
T01 (FI 09)	Developed/Dispersed Use	PAOT Days	---	783,000	783,000	783,000	783,000	783,000	783,000
	Cultural Resource Inventory	Acres	8,000	4,000	---	4,000	---	4,000	---
WILDLIFE & FISH									
T03 (FI 10)	Wildlife Habitat Improvement (APP)	Acres	5,000	3,300	700	3,300	550	750	300
T26 (FI 28)	Wildlife Habitat Improvement (KV)	Acres	---	870	580	870	580	668	668
T29 (FI 10)	Wildlife Habitat Improvement (APP)	Structures	---	2	0	2	0	12	0
T32 (FI 28)	Wildlife Habitat Improvement (KV)	Structures	---	7	5	7	5	407	407
T04 (FI 10)	Fish Habitat Improvement (APP)	Acres	400	210	160	210	113	342	342
T27 (FI 28)	Fish Habitat Improvement (KV)	Acres	---	14	10	14	10	1	1
T30 (FI 10)	Fish Habitat Improvement (APP)	Structures	---	150	110	150	115	215	215
T33 (FI 28)	Fish Habitat Improvement (KV)	Structures	---	14	10	14	10	0	0
T05 (FI 10)	T&E Species Habitat Improvement (APP)	Acres	64	64	22	64	22	64	22
T34 (FI 10)	T&E Species Habitat Improvement (KV)	Acres	---	4	3	4	3	2	2
T31 (FI 10)	T&E Species Habitat Improvement (APP)	Structures	---	2	2	2	2	5	0
T35 (FI 10)	T&E Species Habitat Improvement (KV)	Structures	---	25	5	25	5	1	1
RANGE									
T06 (FI 06)	Permitted Grazing Use	MAUM	43	42	42	42	42	43	42
T07 (FI 32)	Range Improvement (Structural)	Structures	---	10	10	10	10	5	4
T07A (FI 32)	Range Improvement (Non-Structural)	Acres	500	25	15	25	25	0	0
T08 (FI 06)	Allotment Management Plans	Plans	---	7	---	7	---	7	4
T09 (FI 07)	Noxious Weed Control	Acres	250	186	101	186	101	492	350
SOIL AND WATER									
T10 (FI 11)	Soil Inventory	Acres	---	80,000	40,000	80,000	42,000	120,000	73,000
T10A (FI 11)	Soil & Water Resource Improvement (APP)	Acres	320	200	86	200	100	200	67
T10B (FI 28)	Soil & Water Resource Improvement (KV)	Acres	---	63	63	63	63	75	75
LANDS									
T11 (FI 15)	Land Exchange	Acres	25	25	25	25	25	0	0
T11A (FI 13)	Special Uses	Acres	---	120	120	120	120	66	66
MINERALS									
T12 (FI 08)	Minerals Management	Actions	500	528	405	528	417	420	420
TIMBER									
T13 (FI 03,FI 30)	Program Volume (Total Volume)	MMBF	108	95	65	95	50	100	85
T14 (FI 30)	Program Volume (Salvage Volume)	MMBF	---	7	30	7	35	9	11
T14A (FI 03)	Program Volume (Non-Salvage)	MMBF	---	88	35	88	15	91	74
T28 (FI 03,FI 30)	Advanced Prep (NEPA)	MMBF	---	65	45	65	33	77	60
T15 (FI 05)	Silvicultural Exams	Acres	---	109,000	28,000	109,000	29,000	45,000	35,000
T16 (FI 20)	Reforestation - Planting (APP)	Acres	940	860	360	860	360	915	743
T17 (FI 20)	Reforestation - Site Prep (APP)	Aces	---	80	40	80	40	102	83
T18 (FI 26)	Reforestation - Planting (KV)	Acres	4,300	3,200	3,200	3,200	3,200	1,334	1,334
T19 (FI 26)	Reforestation - Site Prep (KV)	Acres	---	1,100	1,100	1,100	1,100	666	666
T20 (FI 21)	Timber Stand Improvement - (APP)	Acres	700	1,064	580	1,064	620	714	530
T21 (FI 27)	Timber Stand Improvement - (KV)	Acres	300	200	200	200	200	245	245
PROTECTION									
T23 (FI 02)	Fuels Management Activity and Natural Fuels	Acres	4,540	1,400	1,400	1,400	1,400	3,000	3,000
T44 (FI 31)	Fuels Management-Brush Disposal	Acres	---	3,500	3,500	3,500	3,500	2,800	2,800
FACILITIES									
T22 (FI 16)	Landline Location	Miles	20	15	15	15	15	20	16
T83 (FI 37)	Trail Construction/Reconstruction	Miles	---	20	16	20	16	20	16
T84 (FI 18)	Trail Maintenance Level 0 [1]	Miles	---	2,705	1,500	2,705	1,500	1,603	1,302
T81 (FI 36)	Capital Investment Roads	Miles	---	28	22	28	22	28	0
T82 (FI 38,FI 24)	Timber Purchaser Credit Roads	Miles	---	55	48	55	48	55	20
T86 (FI 17)	Road Maintenance	Miles	---	3,316	2,150	3,316	2,150	3,316	2,150

[1] Trail Maintenance Level 0 includes all available and useable system trails.

B. Are the Dollars and Workforce Costs of the Plan Implemented as Expected

Table 3 compares predicted average annual costs at two program levels with budget allocations and actual expenditures for fiscal years 1988 through 1992. Program Level 5 is approximately full Forest Plan funding while Program Level 2 is similar to the funding levels received in recent years.

Table 4 displays updated projected annual costs for fiscal years 1993-1995 at the same program levels shown in Table 3.

Dollars have been adjusted to constant 1992 values for Tables 3 and 4.

Review and validation of Forest Plan program costs identified calculation errors, oversight in adequate resource coordination and support costs, additional responsibilities such as sensitive wildlife species, and increases needed as the result of field verification during implementation and monitoring. These adjustments have been made to the Forest's Outyear Program and are displayed in Tables 3 and 4.

Throughout this report various types of funding are mentioned. Much of our funding is obtained directly through Congressional appropriations. Additional funding comes from trust funds that include deposits made to the Forest Service by timber purchasers and range permittees to cover the cost of resource protection. Other funds are derived through partnerships with other organizations and private parties on a cost share or matching fund basis.

The following paragraphs describe these funding types.

Appropriated Funds for National Forest System Lands

These are dollars appropriated by Congress to provide for the protection, management, and utilization of National Forest lands.

Range Betterment Funds

A range betterment program on National Forest lands is financed by a portion of grazing fee receipts. Fifty percent of grazing fee receipts are returned to the Forest to fund the installation of structural and nonstructural range improvements such as seeding, fence construction, weed control, water development, and fish and wildlife habitat enhancement. It is Regional policy that the range permittee cooperates by splitting the costs of labor and supplies. Often, the permittee cooperates in these activities by supplying the labor needed to implement and maintain the improvements.

Permanent & Trust Funds

Brush Disposal (BD)
After timber harvest operations, it is often necessary to dispose of brush and logging slash to protect and maintain National Forest resources. Timber sale contracts require that the timber purchaser complete this work when economical or expedient, or make a deposit to cover the cost when it is more practical for the Forest Service to complete the brush disposal work.

Timber Salvage Sales
Timber Salvage Sale funds are used for the design, engineering, and supervision of road construction for salvage sales and for sale preparation and administration of salvage timber harvest. These funds are used to salvage insect infested, dead, damaged, or down timber, and to remove associated trees for tree improvement. Part of the receipts from timber salvage sales are deposited in this account and used to prepare and administer future salvage sales.

Cooperative Work, Knutson-Vandenberg (KV) Funds
These are funds deposited by timber purchasers used primarily for reforestation, timber stand improvement, and other resource activities to improve the future productivity of the renewable resources on timber sale areas.

Cooperative Work, Other (CWFS Other) Funds
CWFS Other funds are deposits received from cooperators for protecting and improving resources as authorized by trust agreements. These deposits are used for the construction, reconstruction, and maintenance of roads, trails, and other improvements, and for timber scaling services, fire protection, and other resource purposes. Cooperative road maintenance deposits are made by commercial users of the Forest Road System in lieu of actually performing their commensurate share of road maintenance. These deposits are used in conjunction with the road maintenance appropriation to provide maintenance of system roads by the Forest Service.

Excess Timber Sale Receipts

These are monies that result from timber sale receipts (revenues) exceeding the amounts budgeted by Congress. Congress appropriates funds to cover resource management costs. Occasionally revenues exceed the amount initially budgeted. Congress has then given this excess to the Forests to accomplish additional resource management projects not accomplished with the initial appropriations. Excess timber sale receipts can be used for trail maintenance, trail construction, wildlife and fish habitat management, soil, water, and air management, cultural resource management, wilderness management, reforestation, and timber sale administration and management.

Challenge Cost Share Dollars

Challenge Cost Share agreements are federal funds matched by various States, and private, nonprofit organizations to jointly develop, plan and implement projects to enhance specific improvement activities. These funds are currently permitted for use in recreation, wildlife and fish cost-share programs.

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES

Funding Description	Fiscal Year 1988					Fiscal Year 1989				
	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
GENERAL ADMINISTRATION										
00 General Administration	2,195	1,660	1,899	1,931	88	2,195	1,655	1,516	1,760	80
RECREATION										
09 Recreation	770	583	618	618	80	1,011	761	666	741	73
WILDLIFE & FISH										
10 Wildlife and Fish	1,056	674	752	739	70	1,256	797	932	963	77
RANGE										
06 Range	273	245	241	252	92	320	239	211	264	82
07 Range (Noxious Weeds)	21	7	18	8	42	21	15	20	7	37
32 Range Improvement	23	17	22	29	129	23	16	23	25	110
SOIL & WATER										
11 Soil, Air, Water	606	456	352	316	52	599	400	427	391	65
MINERALS										
08 Minerals	385	307	291	295	77	388	293	266	328	85
TIMBER										
03 Timber Sale Prep/Administration	2,007	1,641	1,554	1,599	80	2,007	1,511	1,663	1,579	79
04 Timber Planning	136	102	242	305	226	134	102	157	285	137
05 Silvicultural Exams	393	297	399	356	91	393	297	471	489	125
20 Reforestation - Appropriated	640	466	747	761	119	641	482	690	542	85
21 Timber Stand Improvement - Appropriated	81	55	135	186	229	170	62	157	111	65
23 Tree Improvement	56	42	47	87	155	---	42	66	17	---
26 KV Reforestation	1,934	1,909	653	837	43	1,444	1,379	1,061	1,354	94
27 KV Timber Stand Improvement	186	183	50	133	71	76	90	56	63	83
28 KV - Other	125	123	217	315	252	520	461	261	265	51
29 Co-op Work, Forest Service, Other - Trust Fund	218	215	206	362	167	251	215	200	421	167
30 Timber Salvage Sales - Permanent Fund	104	123	124	106	102	120	102	147	197	165
PROTECTION										
01 Fire Protection	1,189	1,022	1,298	1,278	108	1,716	1,554	1,375	1,160	68
02 Fire Protection (Fuels)	49	38	106	90	185	73	54	50	47	65
19 Cooperative Law Enforcement	69	18	42	40	59	69	40	45	61	89
31 Brush Disposal (Perm. Fund)	514	506	542	396	77	597	507	474	470	79
LANDS										
13 Special Uses	103	64	53	64	63	99	74	50	42	42
15 Land Exchange/Ownership Status	75	33	44	43	59	70	52	32	65	94
16 Landline Location	187	142	134	142	76	187	116	124	97	51
43 Land Acquisition	12	5	42	25	192	8	6	16	660	7,725

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

	Fiscal Year 1988					Fiscal Year 1989				
Funding Description	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
FACILITIES										
12 Facility Maintenance	247	225	201	207	84	247	114	161	160	65
17 Road Maintenance [1]	798	603	698	1,095	137	798	601	1,159	1,147	144
18 Trail Maintenance	394	297	532	495	126	623	469	474	450	72
33 Recreation Construction	83	76	74	66	80	156	119	164	138	88
34 Facility Construction - Forest Admin.,Other	165	163	8	51	31	164	163	7	1	1
35 Engineering Construction Support	2,146	1,622	1,485	1,498	70	2,159	1,603	1,638	1,687	78
36 Construction--Capital Investment Roads	3,084	3,039	565	565	18	3,081	6,823	4,446	1,185	39
37 Trail Construction/Reconstruction	248	188	369	368	148	425	188	349	296	70
38 Timber Purchaser Road Construction	2,223	4,636	3,821	2,844	128	2,796	2,756	3,198	2,820	101
TOTAL	22,794	21,782	18,581	18,502	81	24,837	24,208	22,751	20,188	81

[1] Road Maintenance expenditures include 402.7 M$ (FY 1988) and 474.5 M$ (FY 1989) for Capital Construction (Restoration - Heavy Maintenance).

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

Funding Description	Fiscal Year 1990					Fiscal Year 1991				
	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
GENERAL ADMINISTRATION										
00 General Administration	2,166	1,669	1,382	1,369	63	2,166	1,744	1,412	1,615	75
RECREATION										
09 Recreation	1,179	722	666	833	71	1,447	855	736	885	61
WILDLIFE & FISH										
10 Wildlife and Fish	1,505	1,010	1,059	1,059	70	1,783	1,147	1,032	1,079	61
RANGE										
06 Range	365	267	236	251	69	397	288	241	280	71
07 Range (Noxious Weeds)	37	30	18	9	24	39	23	20	10	26
32 Range Improvement	25	18	25	16	65	25	28	24	17	71
SOIL & WATER										
11 Soil, Air, Water	769	459	612	603	78	823	523	543	572	69
MINERALS										
08 Minerals	437	344	259	283	65	447	334	228	245	55
TIMBER										
03 Timber Sale Prep/Administration	2,354	1,622	1,871	1,582	67	2,299	1,705	1,886	1,337	58
04 Timber Planning	185	102	153	87	47	185	122	60	105	57
05 Silvicultural Exams	619	297	976	428	69	517	389	483	521	101
20 Reforestation - Appropriated	632	484	553	492	78	632	477	728	607	96
21 Timber Stand Improvement - Appropriated	168	128	178	133	79	168	111	104	110	65
23 Tree Improvement	54	43	115	61	112	54	55	114	462	849
26 KV Reforestation	1,370	1,375	1,403	1,206	88	1,370	1,357	1,206	1,072	78
27 KV Timber Stand Improvement	73	73	36	24	32	73	72	54	90	124
28 KV - Other	541	517	443	437	81	541	537	500	287	53
29 Co-op Work, Forest Service, Other - Trust Fund	234	240	189	217	93	235	232	211	314	134
30 Timber Salvage Sales - Permanent Fund	337	115	703	705	210	854	334	670	990	116
PROTECTION										
01 Fire Protection	1,997	1,430	1,076	1,107	55	1,708	1,756	1,311	1,275	75
02 Fire Protection (Fuels)	102	54	124	87	86	156	50	46	79	51
19 Cooperative Law Enforcement	68	51	60	56	84	68	50	59	57	85
31 Brush Disposal (Perm. Fund) 0	566	568	525	526	93	567	561	510	757	134
LANDS										
13 Special Uses	97	57	40	36	38	96	67	50	32	33
15 Land Exchange/Ownership Status	75	46	34	63	84	75	67	44	115	153
16 Landline Location	185	131	122	125	68	185	133	122	128	69
43 Land Acquisition	26	11	22	15	58	26	28	5	10	40

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

Funding Description	Fiscal Year 1990					Fiscal Year 1991				
	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
FACILITIES										
12 Facility Maintenance[2]	244	119	149	127	52	244	184	158	164	67
17 Road Maintenance	954	623	646	1,027	108	954	687	687	645	68
18 Trail Maintenance[3]	615	472	583	610	99	615	516	719	663	108
33 Recreation Construction	149	148	10	22	14	149	147	52	91	61
34 Facility Construction - Forest Admin.,Other	0	157	0	6	600	326	323	0	0	0
35 Engineering Construction Support	1,913	1,632	1,476	1,411	74	2,029	1,611	1,489	1,386	68
36 Construction--Capital Investment Roads	2,925	2,934	2,348	2,348	80	2,924	2,898	2,475	2,475	85
37 Trail Construction/Reconstruction	672	340	300	222	33	779	361	375	493	63
38 Timber Purchaser Road Construction	2,653	2,661	3,001	3,002	113	2,652	2,628	1,489	1,309	49
TOTAL	26,291	20,949	10,893	20,585	78	27,608	22,402	19,793	20,279	73

[2]Carryover included, FY 1991
[3]Includes Frank Church, FY 1991

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

Funding Description	Fiscal Year 1990					Fiscal Year 1991				
	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
GENERAL ADMINISTRATION										
00 General Administration	2,166	1,669	1,382	1,369	63	2,166	1,744	1,412	1,615	75
RECREATION										
09 Recreation	1,179	722	666	833	71	1,447	855	736	885	61
WILDLIFE & FISH										
10 Wildlife and Fish	1,505	1,010	1,059	1,059	70	1,783	1,147	1,032	1,079	61
RANGE										
06 Range	365	267	236	251	69	397	288	241	280	71
07 Range (Noxious Weeds)	37	30	18	9	24	39	23	20	10	26
32 Range Improvement	25	18	25	16	65	25	28	24	17	71
SOIL & WATER										
11 Soil, Air, Water	769	459	612	603	78	823	523	543	572	69
MINERALS										
08 Minerals	437	344	259	283	65	447	334	228	245	55
TIMBER										
03 Timber Sale Prep/Administration	2,354	1,622	1,871	1,582	67	2,299	1,705	1,886	1,337	58
04 Timber Planning	185	102	153	87	47	185	122	60	105	57
05 Silvicultural Exams	619	297	976	428	69	517	389	483	521	101
20 Reforestation - Appropriated	632	484	553	492	78	632	477	728	607	96
21 Timber Stand Improvement - Appropriated	168	128	178	133	79	168	111	104	110	65
23 Tree Improvement	54	43	115	61	112	54	55	114	462	849
26 KV Reforestation	1,370	1,375	1,403	1,206	88	1,370	1,357	1,206	1,072	78
27 KV Timber Stand Improvement	73	73	36	24	32	73	72	54	90	124
28 KV - Other	541	517	443	437	81	541	537	500	287	53
29 Co-op Work, Forest Service, Other - Trust Fund	234	240	189	217	93	235	232	211	314	134
30 Timber Salvage Sales - Permanent Fund	337	115	703	705	210	854	334	670	990	116
PROTECTION										
01 Fire Protection	1,997	1,430	1,076	1,107	55	1,708	1,756	1,311	1,275	75
02 Fire Protection (Fuels)	102	54	124	87	86	156	50	46	79	51
19 Cooperative Law Enforcement	68	51	60	56	84	68	50	59	57	85
31 Brush Disposal (Perm. Fund) 0	566	568	525	526	93	567	561	510	757	134
LANDS										
13 Special Uses	97	57	40	36	38	96	67	50	32	33
15 Land Exchange/Ownership Status	75	46	34	63	84	75	67	44	115	153
16 Landline Location	185	131	122	125	68	185	133	122	128	69
43 Land Acquisition	26	11	22	15	58	26	28	5	10	40

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

	Fiscal Year 1990					Fiscal Year 1991				
Funding Description	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5
FACILITIES										
12 Facility Maintenance[2]	244	119	149	127	52	244	184	158	164	67
17 Road Maintenance	954	623	646	1,027	108	954	687	687	645	68
18 Trail Maintenance[3]	615	472	583	610	99	615	516	719	663	108
33 Recreation Construction	149	148	10	22	14	149	147	52	91	61
34 Facility Construction - Forest Admin.,Other	0	157	0	6	600	326	323	0	0	0
35 Engineering Construction Support	1,913	1,632	1,476	1,411	74	2,029	1,611	1,489	1,386	68
36 Construction--Capital Investment Roads	2,925	2,934	2,348	2,348	80	2,924	2,898	2,475	2,475	85
37 Trail Construction/Reconstruction	672	340	300	222	33	779	361	375	493	63
38 Timber Purchaser Road Construction	2,653	2,661	3,001	3,002	113	2,652	2,628	1,489	1,309	49
TOTAL	26,291	20,949	10,893	20,585	78	27,608	22,402	19,793	20,279	73

[2]Carryover included, FY 1991
[3]Includes Frank Church, FY 1991

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

	Fiscal Year 1992									
Funding Description	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5					
GENERAL ADMINISTRATION										
00 General Administration	2,165	1,716	1,640	1,921	89					
RECREATION										
09 Recreation	1,446	1,017	1,043	1,108	77					
WILDLIFE & FISH										
10 Wildlife and Fish	1,782	1,101	1,176	1,021	57					
RANGE										
06 Range	397	277	343	281	71					
07 Range (Noxious Weeds)	39	21	28	18	46					
32 Range Improvement	25	16	21	14	56					
SOIL & WATER										
11 Soil, Air, Water	823	501	569	642	78					
MINERALS										
08 Minerals	446	320	250	245	55					
TIMBER										
03 Timber Sale Prep/Administration	2,353	1,601	1,935	2,075	88					
04 Timber Planning	185	117	101	122	66					
05 Silvicultural Exams	517	373	430	545	105					
20 Reforestation - Appropriated	632	373	753	249	39					
21 Timber Stand Improvement - Appropriated	169	107	102	65	38					
23 Tree Improvement	54	53	121	236	437					
26 KV Reforestation	1,369	1,369	1,120	738	54					
27 KV Timber Stand Improvement	73	73	85	44	60					
28 KV - Other	541	541	591	352	65					
29 Co-op Work, Forest Service, Other - Trust Fund	235	235	219	592	252					
30 Timber Salvage Sales - Permanent Fund	854	854	998	765	90					
PROTECTION										
01 Fire Protection	1,707	1,718	784	1,405	82					
02 Fire Protection (Fuels)	156	48	45	66	42					
19 Cooperative Law Enforcement	67	48	59	85	127					
31 Brush Disposal (Perm. Fund)	567	567	523	436	77					
LANDS										
13 Special Uses	96	59	74	61	64					
15 Land Exchange/Ownership Status	75	75	23	66	88					
16 Landline Location	185	128	173	174	94					
43 Land Acquisition	26	27	47	127	488					

Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES, continued

	Fiscal Year 1992									
Funding Description	Program Level 5 (M 1992$)	Program Level 2 (M 1992$)	Allocation (M 1992$)	Expenditures (M 1992$)	% of Level 5					
FACILITIES										
12 Facility Maintenance[2]	244	165	229	226	93					
17 Road Maintenance	953	704	766	765	80					
18 Trail Maintenance[3]	615	631	958	940	153					
33 Recreation Construction	148	148	552	473	319					
34 Facility Construction - Forest Admin.,Other	225	225	0	0	0					
35 Engineering Construction Support	2,071	1,504	1,838	2,154	104					
36 Construction--Capital Investment Roads	2,923	2,784	878	878	30					
37 Trail Construction/Reconstruction	832	347	516	520	63					
38 Timber Purchaser Road Construction	2,650	2,525	1,325	1,400	53					
TOTAL	27,645	22,368	20,349	20,809	75					

[2]Carryover included, FY 1991
[3]Includes Frank Church, FY 1991

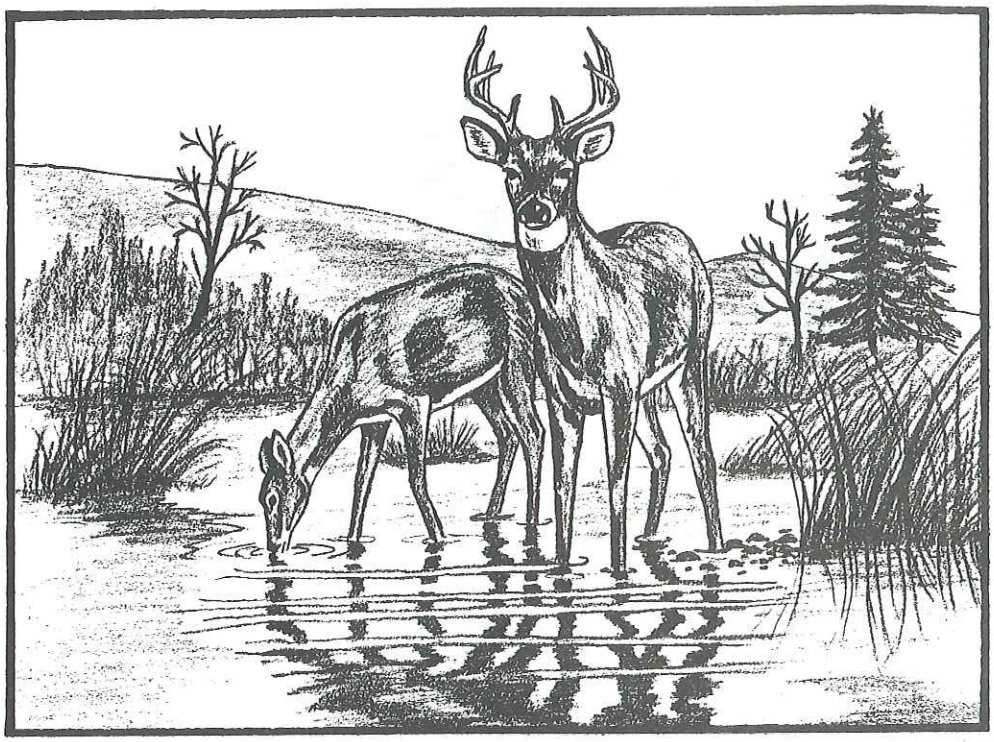
TABLE 4 - FOREST PLAN FUNDING NEEDS, FY 1992 - FY 1995

Funding Item	Description	FY 1993 Program Level 5 (M 1992$)	FY 1993 Program Level 2 (M 1992$)	FY 1994 Program Level 5 (M 1992$)	FY 1994 Program Level 2 (M 1992$)	FY 1995 Forest Plan Level (M 1992$)	FY 1995 Current Service Level (M 1992$)
GENERAL ADMINISTRATION							
00	General Administration	2,304	1,579	2,305	1,608	1,619	1,619
RECREATION							
09 (T01)	Recreation	1,539	1,002	1,539	1,085	1,946	1,274
WILDLIFE & FISH							
10 (T03,T04,T05,T29, T30,T31,T34,T35)	Wildlife and Fish	1,897	1,040	1,897	1,085	2,465	1,488&
RANGE							
06 (T06)	Range	422	296	422	296	866	623
07 (T09)	Range (Noxious Weeds)	42	20	42	20	62	35
32 (T07,T07A)	Range Improvement	66	24	66	24	30	30
SOIL & WATER							
11 (T10,T10A)	Soil, Air, Water	876	477	876	493	1,160	605
MINERALS							
08 (T12)	Minerals	474	257	474	296	468	335
TIMBER							
03 (T13,T14A,T28)	Timber Sale Prep/Admin	2,538	1,426	2,538	1,509	2,533	1,937
04	Timber Planning	283	180	283	191	217	126
05 (T15)	Silvicultural Exams	550	345	550	355	567	439
20 (T16,T17)	Reforestation-Appropriated	672	345	672	345	727	590
21 (T20)	Timber Stand Improvement - Appropriated	180	99	180	105	126	102
23	Tree Improvement	59	49	60	52	308	216
26 (T18,T19)	KV Reforestation	1,125	1,125	1,125	1,125	1,274	1,274
27 (T21)	KV Timber Stand Improvement	494	494	494	494	61	61
28 (T26,T27,T32,T33)	KV - Other	767	767	767	767	730	730
29	Co-op Work,Forest Service,Other	285	285	285	285	342	342
30 (T13,T14,T28)	Timber Salvage Sales	494	494	494	494	1,001	1,001
PROTECTION							
01	Fire Protection	1,881	1,881	1,881	1,881	3,107	3,107
02 (T23)	Fire Protection (Fuels)	95	95	95	95	323	323
19	Cooperative Law Enforcement	72	60	72	60	79	54
31 (T44)	Brush Disposal (Perm. Fund)	491	491	491	491	500	500
LANDS							
13 (T11A)	Special Uses	103	60	103	60	135	80
15 (T11)	Land Exchange/Ownership Status	80	64	80	69	90	20
16 (T22)	Landline Location	197	118	197	118	148	120
43	Land Acquisition	28	10	28	25	155	100
FACILITIES							
12	Facility Maintenance	260	153	260	158	271	180
17 (T86)	Road Maintenance	1,014	651	1,014	691	973	780
18 (T84)	Trail Maintenance	950	707	950	679	1,067	693
33	Recreation Construction	143	143	143	143	0	0
34	Facility Construction - Forest Admin.,Other	252	252	252	252	245	245
35	Engineering Construction Support	1,993	1,391	1,993	1,391	1,404	1,120
36 (T81)	Construction--Capital Investment Roads	2,812	2,812	2,812	2,812	2,739	2,739
37 (T83)	Trail Construction/Reconstruction	852	852	852	852	830	830
38 (T82)	Timber Purchaser Road Construction	2,550	2,550	2,550	2,550	2,484	2,484
	TOTAL	28,840	22,594	28,842	22,956	31,055	26,202

C. Forest Plan Monitoring Requirements

The results of monitoring and evaluation have been summarized and are discussed on the following pages. Each monitoring item lists: (1) what is being measured; (2) frequency of measurement; (3) reporting period; (4) variables which would initiate further evaluation; (5) the monitoring results; and (6) the evaluation of the monitoring results. The items are arranged by resource and follow the requirements in the Nez Perce Forest Plan (Table V-1).

WILDLIFE

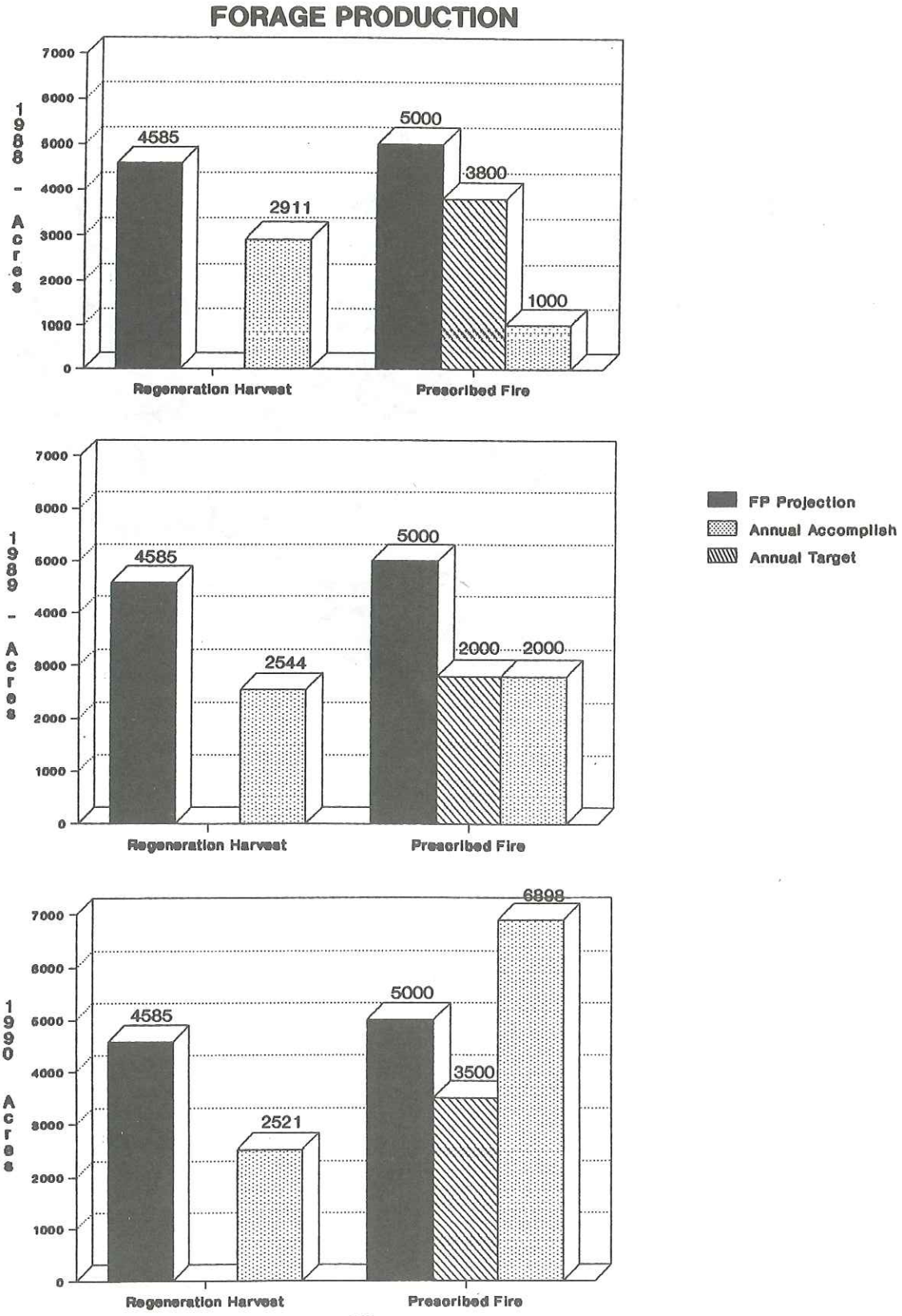


Item 1c:	Big-Game Habitat Carrying Capacity
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Significant trend deviations (evaluated at 5-year intervals) from planned or expected forage-generating activities or events (timber harvest, prescribed fire, and wildfire).

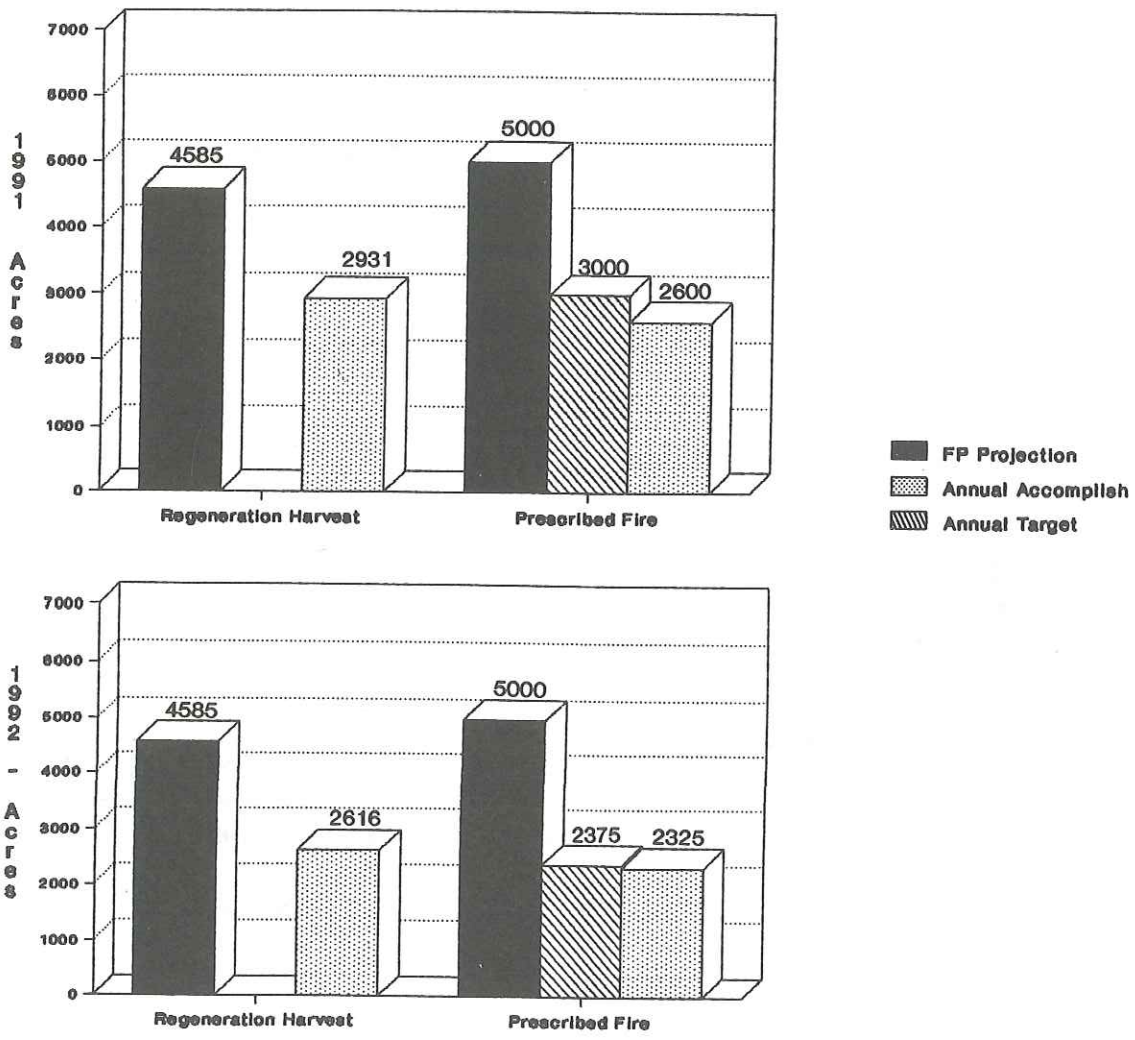
Forage Production

Monitoring Results:

Acres of timber harvest, acres burned by prescribed fire, and acres burned by wildfire are used as indices of forage production. Each of these variables is given for the Forest Plan projection, the FY 92 target, and FY 92 accomplishments in the following graph. FY 88-91 projections, targets, and accomplishments are also shown for comparison.



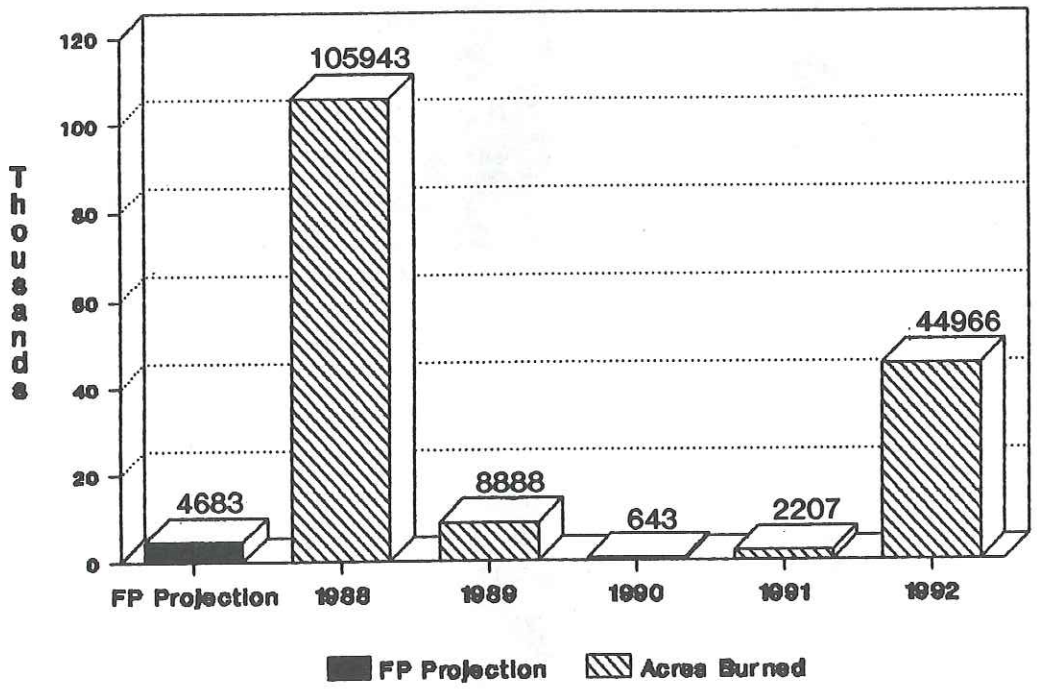
FORAGE PRODUCTION



Evaluation of Monitoring Results:

Forage production for wildlife is partly related to the rate of setback of natural succession away from conifer climax. Both timber harvest (regeneration harvest) and fires can set the stage for new forage. Some 4,585 acres of regeneration harvest were estimated by the Plan. On an average annual basis, only 59 percent of this amount was harvested the first 5 years. Prescribed fire treatments covered 15,823 acres the first 5 years. This amounts to 102 percent of the acreage targeted for treatment with available funding, but only 63 percent of that planned if full Forest Plan funding had been available. Projections of wildfire acreage are based on a running 10-year average. The estimate in 1987 was 4,683 acres per year. The extreme wildfires of 1988 and 1992 helped to push average wildfire acres to 347 percent above the years' level projected by the Plan. Though timber harvest fell short of planned acreages, prescription and wildfires both treated over three times as much acreage as was predicted by the Plan. Acres of wildfire helped to compensate for shortfall in other programs. As a result, overall Forest forage production will meet or exceed Forest Plan estimates.

WILDFIRE ACRES



Summer Elk Habitat

Monitoring Results:

Implementation Monitoring: For all planned projects during FY 1992, "Guidelines for Evaluating and Managing Elk Habitat in Northern Idaho" was used as a tool to evaluate whether or not objectives were met. Actual project implementation for cutting units and road location was consistent with the preferred alternative displayed in the NEPA document for all of the ongoing timber harvest activities. Big game calving/fawning area objectives were implemented for all applicable projects. Access management guidelines have been followed in 100 percent of the sample projects.

Early in Forest Plan implementation, before new projects were proposed, some summer elk objectives were recognized as not being met. Recognition of this fact prompted a Forestwide analysis. A significant number of the objectives established during Forest Planning are proving to be difficult or impossible to meet in the short term and, together with a variety of other factors, are complicating the attainment of other Forest outputs such as timber.

A stronger emphasis on implementing access restrictions will become necessary to meet objectives. No new timber project data is available for FY 92 decisions.

Effectiveness Monitoring: Due to scheduling and time conflicts, planned effectiveness monitoring with the Nez Perce Tribe was not accomplished. A review of the Bear Gulch Timber Sale for watershed issues found that sampled road closures were in place.

Evaluation of Monitoring Results:

Compliance with summer elk objectives relative to land-disturbing decisions and activities implemented in FY 92 has been mixed. Early in Plan implementation (through 1990), several sales were approved in which individual elk analysis areas failed to meet objectives. Since 1990, adherence to objectives has improved, but a Forestwide assessment was initiated. Based on interim results of a Forestwide effort to assess current summer habitat conditions relative to Forest Plan objectives, the following problems have been encountered: (1) some summer elk objective areas are too small in acreage to be evaluated with the elk model; (2) some summer elk objectives were not being met at the time the Forest Plan was approved; and (3) land management adjustments necessary to meet existing objectives in some areas will constrain recreation access more than anticipated, and will limit some future timber harvest opportunities. Since the Forestwide mix of acreages and levels of elk summer objectives are viewed as management standards, timber harvest opportunities that rely on new roading are to some degree dependent on the Forest meeting or exceeding these objectives before further harvest can occur. As a result, road closures and restrictions may have to be accelerated if conventional approaches to timber harvest and roading are to continue as planned.

The Forestwide analysis of newly delineated summer elk analysis units is approximately 75-80 percent complete. Based on analysis completed thus far, 31 percent of new units are currently below objective, while 48 percent of analyzed units are significantly (>5 percent) above objective and 21 percent are at or slightly above objective.

Moose Winter Range (MA 21)

Monitoring Results:

Pacific yew canopy cover and browse are important components of the critical moose winter habitat. In FY 92, the yew bark harvest program involved areas within key moose habitats on the Clearwater, Elk City, Selway, and Red River Ranger Districts.

Evaluation of Monitoring Results:

Forestwide, the limit of timber harvest to 5-percent-per-decade guideline and other moose winter range management guidelines have been followed for projects initiated under the Forest Plan. Biologists have begun evaluating what the potential effects of yew bark harvest may be on critical moose winter range. An inventory of the yew wood on the Forest will be used to better define Management Area 21 sites.

Moose populations remain stable or slightly increasing across the Forest, as they are Statewide (see Item 10).

Because harvest of Pacific yew bark was not factored into the original Forest Plan, inclusion of the Yew Conservation Guides will be made. The Yew Conservation Guides are a set of nationwide standards for management of yew designed to protect yew population viability, genetic variability, and other elements of biodiversity.

At a November 1992 meeting of Nez Perce NF wildlife biologists, the group acknowledged that MA 21 lands need to be redefined as a critical habitat component among a wide range of habitats used by moose on the Forest. Inclusion of the Yew Conservation Guides and alteration of the general definition of MA 21 are not expected to result in any changes to expected resource outputs.

Item 1d:	**Nongame Habitat**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Significant deviation from Forest standards on a project-by-project basis triggers further evaluation.

Old Growth (MA 20)

Monitoring Results:

Two project activities, Noble Creek and Grouse Timber Sales, that were planned or initiated in FY 92 involved old-growth standards. In both cases, there was no timber harvest scheduled in allocated old growth stands until decade 10 and/or in replacement stands until decade 16. This is in compliance with Forest Plan standards.

Evaluation of Monitoring Results:

Adherence to Forest Plan standards for retention and protection of old-growth from harvest has been very good throughout the first 5 years of Plan implementation. Meeting existing Forest Plan standards to qualify habitat types such as ponderosa pine, lodgepole, and subalpine fir as "old growth" has sometimes been difficult due to generalized criteria. Better habitat type-specific criteria for qualifying old-growth sites was produced by a Regional team of experts. These new criteria, called the Regional Definitions for the North idaho Zone, represent more refined, more accurate criteria which will be used in the future.

In 1992, the implications of past fire suppression actions on the Forest's ability to maintain and protect old-growth ponderosa pine and dry Douglas-fir habitat types from stand-replacing fires became evident. The Scott Fire (Salmon River RD) burned through portions of designated old-growth habitat. Evaluation of the fire results raised questions not addressed by the Plan, including: 1) Does long-term fire suppression in these habitat types predispose them to stand-replacing fires? 2) How should the Forest deal with old-growth areas that sustain impacts from such fires? 3) To protect these old-growth types, will re-

establishment of frequent underburning or some form of silvicultural thinning become necessary to protect them from stand-replacing fires? Additional analysis will be required to determine what actions may be needed.

The implications of old-growth fragmentation, as well as related concerns about connectivity, patch size, and fire effects, need to be more carefully analyzed and compared against historical landscape patterns to refine Forest Plan standards to ensure long-term maintenance of old-growth-dependent species. Much of this will be addressed by the Forest Ecosystem Management Interdisciplinary Group.

Snag Habitats

Monitoring Results:

There were a total of three projects initiated in FY 92 where snag management standards were applicable. Nonmerchantable snags were left in addition to replacement snags and snags needed to meet the snag management objectives in 13 ongoing projects. The quality, amount and distribution of snags within a project area boundary were inspected or verified for eight projects during project planning.

Evaluation of Monitoring Results:

Snag retention in harvest areas has proven to be a difficult problem to address. Though retention of snags and green replacements by contractor and sale administrator efforts is improving, broadcast burning of slash, and losses to fuelwood cutters takes a toll on remaining snag habitats in harvest areas. Inspection and verification of the quality, amount, and distribution of snags and replacement trees has improved since the early stages of Forest Plan implementation. The effects that elk winter range burns may have on retention of snags was raised as a concern. Since many of these areas have been impacted by severe fires in the past, the early seral conditions may not provide enough snags until the new timber stand matures.

The Forest may become forced to place species and size restrictions on snags removed by fuelwood cutters and modify site preparation prescriptions.

Threatened and Endangered Species Habitats

Monitoring Results:

Management and protection of threatened, endangered, and sensitive species habitats were evaluated in NEPA documents and through the Endangered Species Act, Section 7 process. In FY 92, no cases of "formal consultation" were required for any species except chinook salmon. The Snake River chinook salmon was listed in 1992, which resulted in a substantial Section 7 review of all ongoing projects and activities. (Refer to monitoring item 2e-2 in this report.)

Bitterroot Grizzly Bear Recovery Area

A local inter-Agency working group, represented by the Idaho Department of Fish & Game, the U.S. Fish & Wildlife Service, the U.S. Forest Service, and the Montana Department of Fish, Wildlife, and Parks, has been appointed to develop a plan addressing recovery, including a public involvement process. The Idaho Department of Fish and Game is the lead agency for the process. A draft recovery chapter for the Bitterroots is being prepared. The Forest Plan directed that habitat management and other activities be coordinated so as not to preclude or discourage recovery of the grizzly, even before the recovery decision was made.

■·■·■·WILDLIFE·■·■·■

Bald Eagle

The only bald eagles monitored in FY 92 and throughout the first 5 years of Plan implementation have been wintering birds. No nests have been found to date.

Peregrine Falcon

Only one active natural nest is known on the Forest. This nest is within the Shingle Forks Timber Sale and is being protected per consultations with the U.S. Fish and Wildlife Service.

Central Idaho Wolf Recovery Area (CIWRA)

In February 1992, a letter requesting clarification of the CIWRA's boundary and implications on land uses was sent to the Boise office of the U.S. Fish and Wildlife Service (USFWS). The reply, dated August 19, 1992, indicated that an important reason for informal delineation of the CIWRA is to inform the public where the USFWS thinks wolf populations are most likely to succeed within the State. Until recovery is achieved, the USFWS has stated that land use precautions aimed at minimizing wolf/livestock/human conflicts must remain a high priority outside the CIWRA boundaries.

Evaluation of Monitoring Results:

Monitoring results show that no projects were approved in FY 92 which would result in deterioration of habitats for the gray wolf, grizzly bear, bald eagle, or peregrine falcon.

Forest Service Sensitive Species

Monitoring Results:

The Forest accomplished cost-shared inventories and status surveys for the flammulated owl. A multi-year monitoring program for candystick was continued in FY 92. Forestwide surveys for the Oregon bluebell and Pacific dogwood were accomplished. In addition, numerous other project clearances were done for other sensitive plants and animals Forestwide.

New sightings of the wolverine, fisher, flammulated owl, boreal owl, black-backed woodpecker, Paysons milkvetch, candystick, evergreen kitten tail, bank monkey flower, and cluster lady's slipper were documented.

Evaluation of Monitoring Results:

Increased knowledge and management of sensitive species habitats continues to help ensure adequate protection for them.

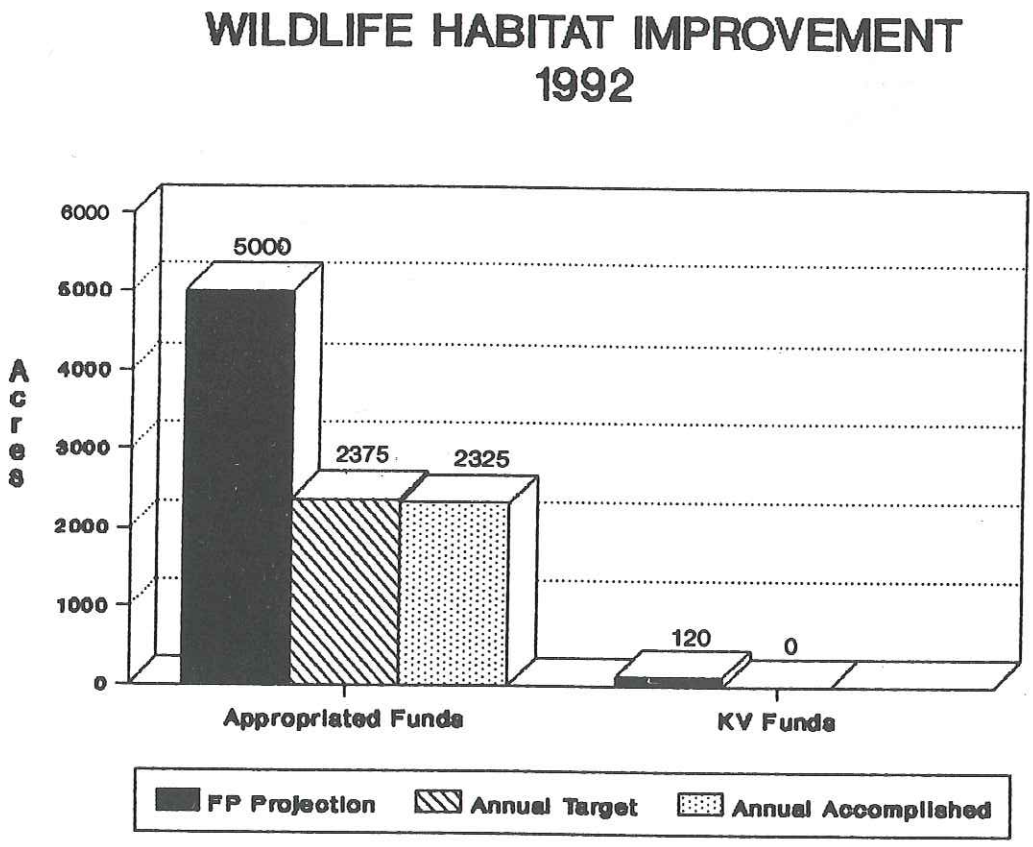
Since inception of the Forest Plan, the detailed consultations, analysis, and documentation process, coupled with increased numbers of sensitive species (10 animals, 4 fishes, 31 plants) has increased workloads dramatically and may extend biological coordination lead times for all land-disturbing activities. Analyses and biological evaluations (BEs) must now be done for newly listed and sensitive species designated after decision notice dates. Evaluation and information updating of BEs and species information applies until project completion. This may affect some "approved" projects and subject them to retroactive modifications at some point during their implementation.

Item 1e:	Acres of Big-Game Habitat Improvement
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	More than one year of variability from planned improvement acreages, excepting variances due to extreme fire conditions.

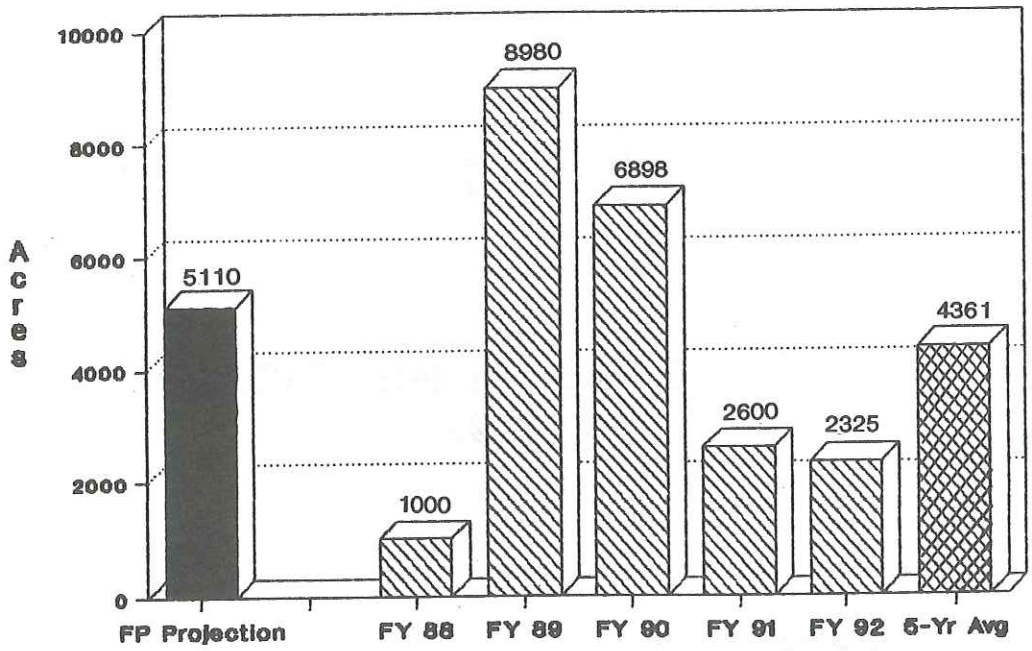
Wildlife Habitat Improvement

Monitoring Results:

The number of acres burned with prescribed fires is shown below for each funding source. Prescribed fire is the preferred winter range improvement treatment tool.



WILDLIFE HABITAT IMPROVEMENT CUMULATIVE 1988 - 1992



Evaluation of Monitoring Results:

The winter range accomplishment target for FY 92 was 2375 acres. Some 2325 acres were treated with prescribed fire. The Sable Creek burn and excess acreage of the Rackliff fire were the sites treated. The average annual objective of 5000 acres of winter range improvement has not been accomplished. The cumulative shortfall over 5 years is 9377 acres, but significant wildfire acreage on winter ranges has helped compensate for this shortfall.

A significant reason for the shortfall was inadequate funding, complicated by higher unit costs. Increased risks of wildfire, as illustrated by the FY 91-92 Rackliff burn, are recognized problems that must be faced. Based on reconnaissance information about priority habitat improvement sites for the next 5 years, unit costs will rise sharply, reducing attainable acreage treatable without increased funding. Also, concerns

about too much human access and disturbance impacts to elk may be supplanting winter range and forage as a dominant issue.

Given current Forest wildlife budget levels, which have fallen, no more than a few hundred acres of habitat improvement can be accomplished per year through the remainder of this Forest Plan decade unless funding improves. Efficiencies of scale play a major role in prescribed burn treatments. For this reason, during very low funding years elk habitat improvement work may shift toward access management efforts to yield the greatest net benefit and begin to address securing areas with large amounts of motorized access.

In the Forest Service settlement agreement for the Nez Perce Tribe's Appeal of the Nez Perce National Forest Plan (#2226), the Forest Service and Tribe agreed to the following:

> Should the Forest fall more than 8000 acres behind on planned winter range burn acreage for any reason other than complying with Regional Forester cease burn orders for Region-wide fire emergencies, the Tribe and Forest will collaborate on a monitoring and Forest Plan amendment process. The process will explore, evaluate, and recommend alternate ways to achieve compensatory winter range forage improvement. If both parties agree that no achievable alternatives are satisfactory, they will review previous burn accomplishment records and amend the Forest Plan objective of 5000 acres proportionately downward.

Given this evaluation of monitoring result, the Nez Perce Tribe and Forest need to work together on exploring, evaluating, and recommending alternative ways (if any) of achieving big game winter range improvement.

Item 10:	Population Trends of Indicator Species--Wildlife
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	3 to 5 years (FY 1990 to 1992)
Variability Which Would Initiate Further Evaluation:	Variability thresholds which will trigger further evaluation for each species must be tailored to each species based on the amount of existing data on a given species, natural population fluctuations; and for game species, impacts of harvesting on populations. Evaluation for big-game species will be done cooperatively with Idaho Department of Fish and Game. Variability thresholds for nongame and T&E species for which data is currently limited, inexact, or nonexistent can only be determined after sufficient baseline population data is collected. Except possibly for big-game and some T&E species, several years of population data must be collected before variability thresholds can realistically be determined.

Elk

Monitoring Results:

In addition to Hunt Units 16A and 17, surveyed since Forest Plan implementation, Hunt Units 19 and 20 were surveyed by Idaho Department of Fish and Game (IDFG) personnel, using the "Elk Sightability" method developed by the IDFG. Results are listed below:

Elk Population Estimated by Sightability*					
IDFG Big Game Hunt Units	1988	1989	1990	1991	1992
Unit 15	---	---	887+/- 83	---	---
Unit 16A	1028 +/- 261	---	---	961 +/- 201	---
Unit 17	4506 +/- 535	---	---	3783 +/- 279	---
Unit 19	---	1467 +/- 37	---	---	1497
Unit 20	---	1044 +/- 48	---	---	1237 +/- 61

*Represents total population estimate of animals on the winter range of each unit.

Bull:Cow Ratios (Bulls per 100 Cows)					
IDFG Big Game Hunt Units	1988	1989	1990	1991	1992
Unit 15	---	---	20.3 +/- 4.0	---	---
Unit 16A	35.4 +/- 14.3	---	---	23.3 +/- 8	---
Unit 17	26.3 +/- 5	---	---	22.2 +/- 3	---
Unit 19	---	20.8 +/- 2.2	---	---	16.9 +/- 2.4
Unit 20	---	25.7 +/- 4	---	---	31.2 +/- 4.6

Evaluation of Monitoring Results:

The Forest relies on information from Idaho Department of Fish and Game mid-winter aerial counts using "elk sightability." Insufficient funding prevents IDFG personnel from surveying the same hunting units every year.

Unit 15 - Total population estimates were significantly greater for 1993 over 1990. Bull:cow ratios for 1993 were significantly less than 1990 estimates.

Unit 16A - No significant differences were found between 1988 and 1991 estimates for total populations. Bull:cow ratios for 1991 were significantly less than results from 1988 surveys.

Unit 17 - Total elk population estimates for 1991 were significantly less than those for 1988. Bull:ratios were not significantly different.

Unit 19 - No significant differences were found between 1989 and 1992 estimates for total population, but bull:cow ratios were significantly less.

Unit 20 - Significant differences were found between 1989 and 1992 bull:cow ratios, but 1992 total populations were significantly greater than those for 1989. Significant differences may be attributed to weather conditions, the model, or real population differences.

Reported units constitute approximately 80 percent of the Nez Perce National Forest.

Elk Vulnerability - Managing access and habitat modifications to address Idaho Department of Fish and Game objectives for bull vulnerability extends beyond the Forest's legal responsibility for species viability. The Forest will work with IDFG to better understand this issue. Much needs to be learned about the many variables involved. Until these questions can be answered, the Forest elects not to incorporate into the Plan bull vulnerability standards, but will continue aggressive implementation of access management in concert with use of the elk guidelines model to address the issue on a project-by-project basis.

Moose

Monitoring Results:

Moose populations are not surveyed by the Idaho Department of Fish and Game with any techniques capable of making accurate population estimates. Moose continue to be seen in areas where they were formerly thought absent.

Evaluation of Monitoring Results:

Moose populations appear to be stable or slightly increasing based on incidental information and sightings made during elk surveys.

Bighorn Sheep

Monitoring Results:

Little information was collected on bighorn sheep populations in FY 92 except in Unit 18. The Idaho Department of Fish and Game has not surveyed populations in Unit 18 since 1987. The 1987 survey indicated a decline in that population. A disease outbreak in 1984 initiated a population decline. Another disease outbreak began in 1991 and is acknowledged to have impacted the population further. Further investigation into the disease is ongoing.

Evaluation of Monitoring Results:

Available information suggests that bighorn sheep populations in Units 17, 19, and 20 remain stable, but those in Unit 18 have declined. The primary reason for the decline is thought to be disease.

Gray Wolf

Monitoring Results:

Population monitoring is based on sighting, sign, and vocalization reports categorized by the U.S. Fish & Wildlife Service (USFWS) as "probable." Due to unknown reasons, the USFWS is behind on scoring of wolf reports. Unscored raw reports taken in FY 92 by Forest personnel included seven sightings from the Red River and Clearwater Ranger Districts and seven other reports of howling or other sign from the Red River Ranger District. A number of wolf howling surveys were conducted on the Forest, with no positive results.

To date, no confirmation of pack activity, active dens, or active rendezvous areas have been detected on the Forest.

Evaluation of Monitoring Results:

For the first 5 years of Forest Plan implementation, numerous sighting and sign reports suggesting the probability of local wolves have been documented on the Forest. Based on analysis of these reports, the highest probability of wolf occupation occurs in the Dixie-Red River area. Because wolves are very secretive and can be difficult to confirm, monitoring and followup investigation of reports will continue in an attempt to detect packs, active dens, and rendezvous areas. Most sightings and sign suggest that wolves using the Forest are single individuals. No firm evidence of pack activity has been documented.

Grizzly Bear

Monitoring Results:

Two sighting reports of grizzlies were documented in 1992. Hunters reported the bears, one in the Selway-Bitterroot Wilderness, one on the boundary of the Gospel-Hump Wilderness, but without further evidence, no confirmation of actual species was made. Black bears can often be confused with grizzlies. A photo or carcass, which is judged by grizzly biologists, is required for confirmation of identification.

Evaluation of Monitoring Results:

Despite reports of grizzlies, there has been no absolute confirmation of grizzly presence on the Forest in recent years.

Peregrine Falcon

Monitoring Results:

Four birds were successfully hacked in 1992 from the Graves Point Lookout site. "Hacking" involves the fostered release of captive young birds to a natural environment. A fifth hacked bird left the site early and was assumed lost. The proposed Pilot Knob area hack site was not used because of difficulty in obtaining birds. The Graves Point release in FY 92 marked the 28th peregrine falcon successfully hacked from the Graves Point site, making it one of Idaho's most successful reintroduction sites.

Peregrine falcons were common to north Idaho historically. A natural nest on the Salmon River Ranger District is north Idaho's first natural nest since recovery efforts began. This nest produced and fledged four young in FY 92. When added to the three fledged in 1990, the two fledged in 1991, and the other 28 hacked since 1988, this totals 37 birds successfully reintroduced to the local environment since inception of the Forest Plan. This nest is monitored and protected from human disturbance.

Three unconfirmed sighting reports were recorded during the year. Due to budget constraints, no surveys for new nests were conducted.

Evaluation of Monitoring Results:

The Nez Perce NF peregrine habitat management and species reintroduction efforts have become one of Idaho's most successful recovery programs. Teamwork of the Peregrine Fund, Idaho Department of Fish and Game, and Salmon River Ranger District have released a substantial number of peregrines locally, leading to north Idaho's first natural nest. It is highly likely that other, yet undiscovered, natural nests borne of this effort are present on or adjacent to the Forest.

Bald Eagle

Monitoring Results:

No nests have been discovered on the Forest. Most bald eagle occurrence on the Forest is during the winter months. Three FY 92 winter survey routes within or along the perimeter of the Forest yielded 17 adults and four immature birds. Transects sampled and the yearly counts from 1984 and 1986-1992 are shown below.

Survey Routes		1984	1986	1987	1988	1989	1990	1991	1992
Salmon River: White Bird-Vinegar Creek	Adult	1	2	1	2	2	5	3	2
	Immature	0	0	0	1	0	0	0	0
S.F. Clearwater: Farrens Creek-Crooked River	Adult	3	0	1	2	0	0	1	3
	Immature	1	0	0	0	0	0	1	0
M.F. Clearwater: Clear Creek-Selway	Adult	9	6	5	10	4	1	4	12
	Immature	0	2	2	2	3	1	4	4
Total		14	10	9	17	9	7	13	21

Survey efforts are a part of the National Wildlife Federation's annual bald eagle winter survey, in which District biologists take part.

Evaluation of Monitoring Results:

Bald eagle populations appear to remain relatively stable based on winter counts. Variable weather conditions during each year's survey may account for a large portion of sampling variability.

Pileated Woodpecker, Snag Dependent, and Other Forest Birds

Monitoring Results:

Five permanent survey routes totalling 12 miles were sampled using look/listen transects during FY 92. A variety of old-growth habitat types and elevations, including sites both adjacent to clearcuts and those in unharvested areas, were included in the survey route. Pileated woodpecker and all other breeding birds were censused by contract. A summary of 5 years of data is displayed below for pileated woodpecker. The common species observed during the 1992 surveys were Townsend's warbler, red-breasted nuthatch, varied thrush, Audubon's warbler, and golden-crowned kinglet. Several incidental reports of pygmy owls, barred owls, great grey owls, and a significant number of sightings of pileated woodpecker were reported from the Red River District.

Pileated Woodpecker Relative Index of Abundance

Year	1988	1989	1990	1991	1992
Totals	9	9	6	13	6

Evaluation of Monitoring Results:

Variability of sampled numbers suggests that larger sample size and more sampling replications would yield better, more reliable information. Based on the information gathered to date, the evidence suggests that pileated woodpecker populations are remaining fairly stable. Some year to year variability in numbers of birds sampled is not considered unusual. Long-term monitoring will provide a better basis from which to draw conclusions.

Pine Marten/Fisher

Monitoring Results:

Due to budget reductions, fewer fisher/pine marten transect miles were read in FY 92. One set of fisher tracks was confirmed along a 70-mile transect in the Selway-Bitterroot Wilderness. Fisher and pine marten tracks are sometimes difficult to differentiate in snow. Experienced biologists have begun separating tracks by species. Seven incidental sightings of fisher and five sets of fisher tracks were recorded on the Red River Ranger District. One incidental sighting of a pine marten was also made there.

Evaluation of Monitoring Results:

Up to 100 miles of winter track count routes have been surveyed. Difficulty in making positive identification of fisher versus pine marten tracks has complicated results. Based on the data collected to date, no trend in populations of either species can be concluded. Based on a local study, populations may be as much influenced by trapping as by changes in habitat. Consistent annual reading of transect routes may produce more useful data.

Goshawk

Monitoring Results:

Three active nests were discovered on the Salmon River Ranger District. One nest was within a corner of a timber sale unit. A 5-acre area around the nest will not be harvested in order to protect the nest. When discovered, all but 5 acres had previously been harvested. One active nest was discovered on the Selway Ranger District. One of the Salmon River nests was confirmed as a failure, while the remaining nests were successful. Six other goshawk sightings were recorded.

Limited efforts to detect goshawk nests proved successful in 1992. The Forest has begun to realize that the time, money, and personnel resources to adequately monitor this species were not accurately predicted. Fiscal Year '92 was the first time active nests were discovered on the Forest.

Evaluation of Monitoring Results:

Until 1991, lack of sufficient dollars and existing information about monitoring goshawk populations limited the Forest's ability to begin evaluating information upon which to estimate population trends. Goshawk population monitoring is based on monitoring active nest territories. The first active nests were discovered in FY 92.

Item 11:	**Validation of Resource Prediction Models: Wildlife**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	2 to 5 years (FY 1989 to 1992)
Variability Which Would Initiate Further Evaluation:	Major or significant refinements to wildlife models will be determined through coordination with other agencies including the Nez Perce Tribe and should be supported by research findings. Local biologist judgment and experience is currently being used to supplement and temper the elk guidelines model in specific management situations as recommended in the guidelines.

Discussion:

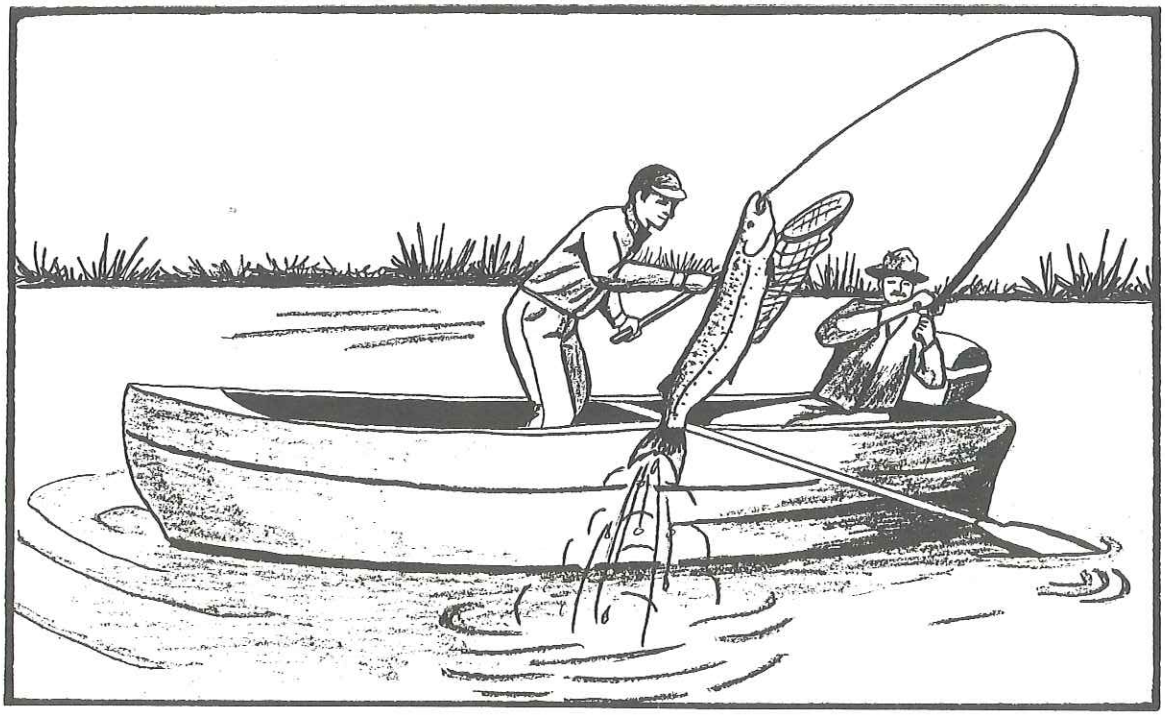
Efforts to develop a method of validating the North Idaho elk effectiveness model have discovered that the task will require significantly more dollars and personnel time than was originally anticipated. Due to inadequate funding and personnel resources, long-term pellet transects were not established in FY 91. The Idaho Department of Fish and Game (IDFG) has recognized that bull:cow ratios and bull age class objectives are not being met in all areas. Road-related factors affecting bull elk vulnerability issues are not addressed by the current elk model. The IDFG is developing a vulnerability model.

The Venture 20 project is scheduled to review the elk model and methodology for consistency across the Nez Perce and Clearwater National Forests. The Venture 20 project is a cooperative effort between IDFG, Nez Perce Tribe, Clearwater National Forest, and the Nez Perce National Forest.

Evaluation of Monitoring Results:

Validation of the North Idaho Elk Model was examined by an interagency team involving biologists of the Nez Perce Tribe, Idaho Department of Fish and Game, University of Idaho, and Clearwater National Forest. To properly validate the model would have required installing numerous pellet group transects, reading them over 10-15 years, and correlating relative elk abundance estimates compared to the habitat effectiveness levels each sample site was managed to. In addition, the effort would require a sizeable involvement and investment by Idaho Department of Fish and Game in gathering accurate counts of elk. Due to costs beyond the control of both agencies, the field validation has been deferred, but the Venture 20 technical team is scheduled to review the model, its variables, and its application across the Forest to ensure uniformity and consistency with available and updated information.

FISH



Item 1f:	Fish Habitat Improvements--Numbers of Acres and Structures
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Plan targets within a decade.

Monitoring Results:

Fish habitat improvements are reported as the number of structures and acres of improvements accomplished. Fish habitat structures include structures used to provide fish cover, feeding, and rearing habitat (e.g., log check dams, rock v-berms, boulder clusters, stumps, side channel improvements), to improve fish habitat by reducing bank or channel erosion (e.g., gabions, log deflectors, rock riprap), and to provide or improve fish passage (e.g., fish ladders). Acres of habitat improvement refers to nonstructural habitat

improvements that benefit fish. This includes the improvement or establishment of spawning and rearing habitat through gravel placement or cleaning, stream bank stabilization, riparian vegetation restoration, and the number of acres of fish habitat made available to fish by removal of barriers to fish movement.

Beginning in fiscal year 1990, habitat improvement dollars allocated to the Forest were broken out for anadromous and inland fisheries; prior to 1990 these funds were combined. For each mile of stream surveyed, one acre of accomplishment was reported.

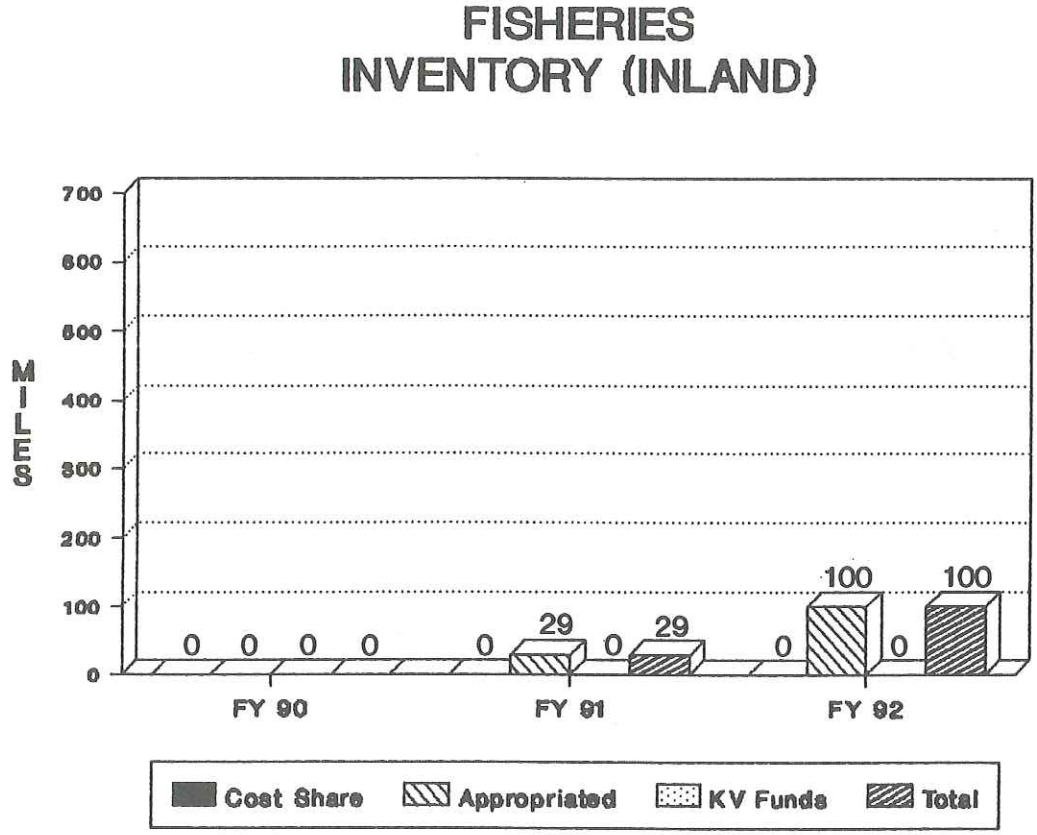
During 1992 the Forest accomplished 112 acres and 112 structures of fish habitat improvement work. This amounts to 55 percent of the Forest Plan annual projection of 410 acres and/or structures of habitat improvement. Also in 1992, the Forest accomplished 768 miles of stream inventory. The Forest Plan did not project an accomplishment figure for miles of stream inventory.

Fish habitat improvements and stream inventory can also be accomplished using Challenge Cost Share and Knutson-Vandenberg (KV) funds [1]. This year, the accomplishment in these funding areas was 3 miles of stream inventoried using KV dollars. The total miles of stream inventoried from all funding sources was 768. A summary of the acres, structures, and miles of stream inventoried accomplished with appropriated, contributed, or KV dollars is shown in the following table.

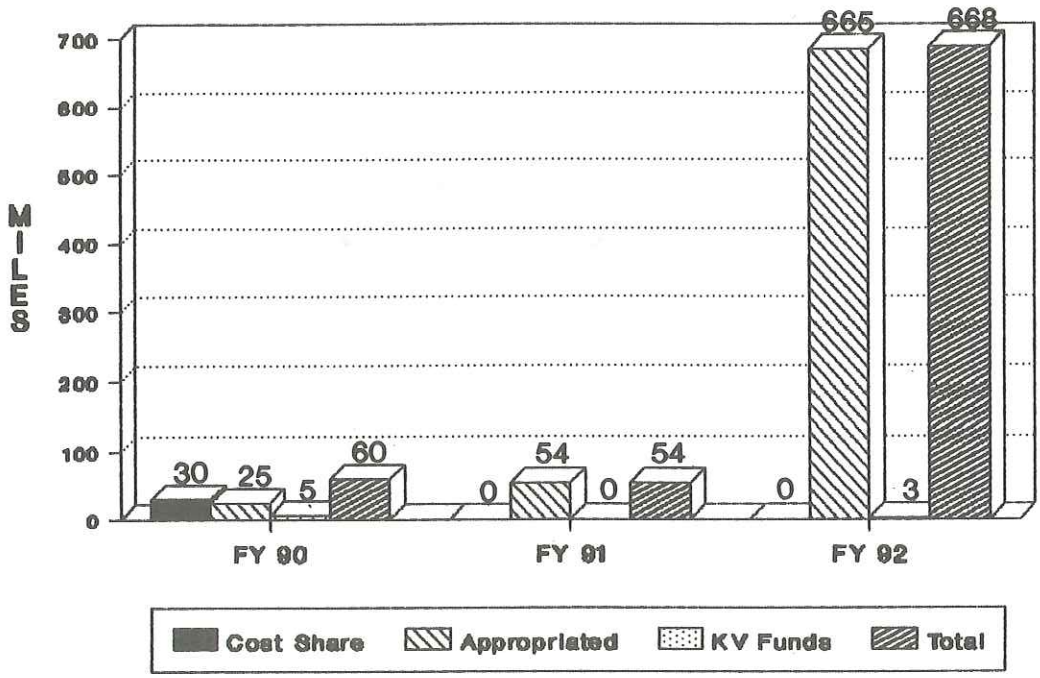
Fish Category	Funding Source	Acres Accomplished	Structures Complete	Miles of Inventory
Inland	Appropriated	12	2	100
Anadromous	Appropriated	100	110	665
Inland	Contributed	0	0	0
Anadromous	Contributed	0	0	0
Inland	KV	0	0	0
Anadromous	KV	0	0	3
Totals	All Sources	112	112	768

[1]Challenge Cost Share Funds - This program involves cost-sharing (in dollars, equipment, labor, etc.) with interested individuals, organizations, and agencies.
Knutson-Vandenberg Act funds - This is the authority for requiring purchasers of National Forest timber to make deposits to finance sale area improvement activities needed to protect and improve the future production of the renewable resources of Forest lands on timber sale areas.

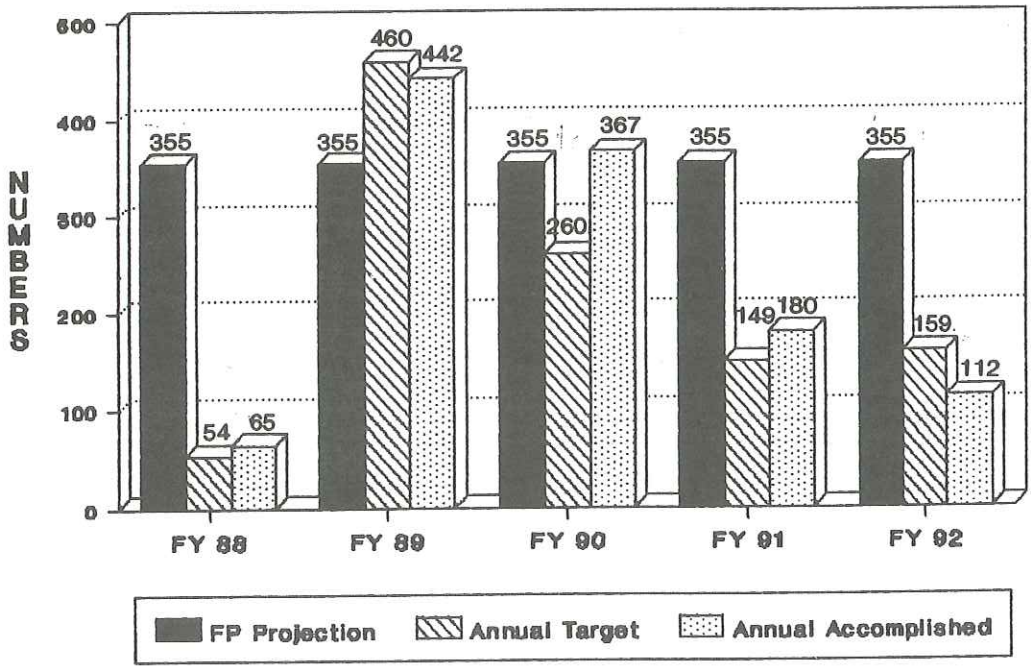
A breakdown of the number of structures, acres, and miles of inventory accomplished by funding source for fiscal years 1988, 1989, 1990, 1991, and 1992 is shown in the following graphs (inventory information is available for 1990, 1991, and 1992 only).

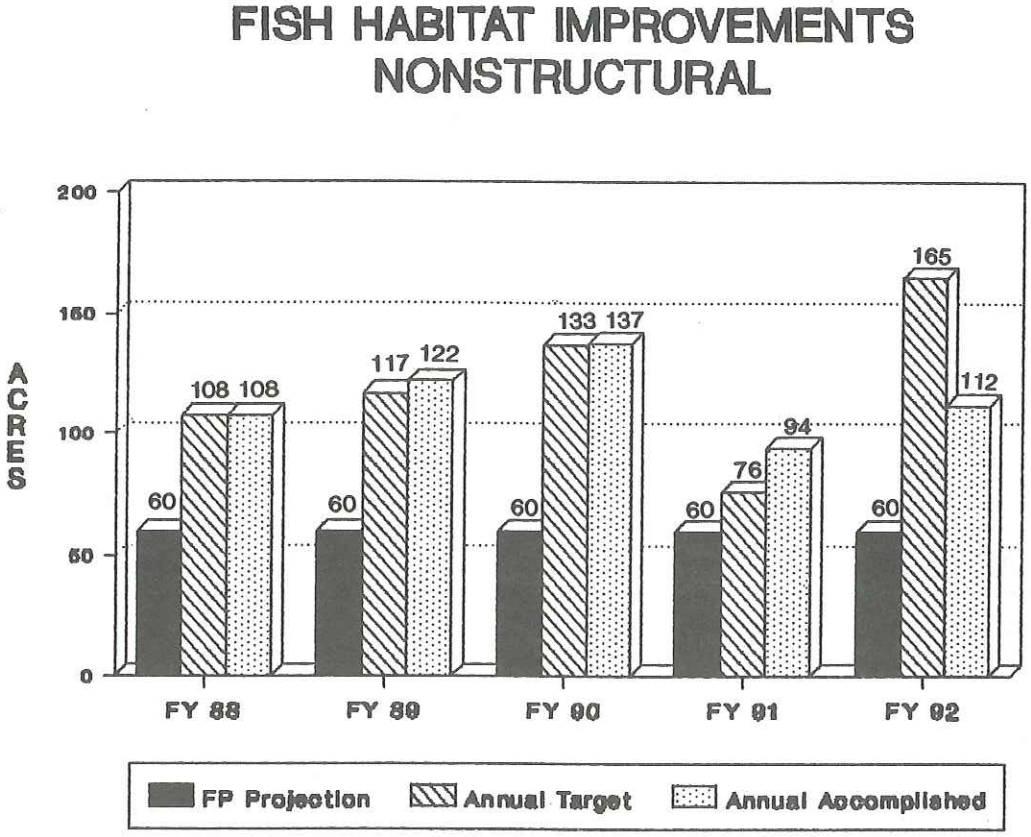


FISHERIES
INVENTORY (ANADROMOUS)



FISH HABITAT IMPROVEMENT
STRUCTURES





On May 22, 1992, spring/summer and fall chinook salmon in the Salmon River drainage and fall chinook salmon in the Clearwater River were listed as "threatened" under the Endangered Species Act. As a result of the listing and our role as a Federal Agency under the Endangered Species Act, the Forest's time has been focused on better understanding how Forest activities have affected the chinook salmon. As a result, not all habitat improvement targets were accomplished, and monitoring of habitat improvement projects did not occur at the level we'd like to improve our understanding of these projects.

The best Forest evaluation concerning the response of fish populations to habitat improvement structures was evaluated in Crooked River. These results were also included in the 1991 report. A discussion of that study is presented below.

> The use of summer habitat by juvenile hatchery and wild steelhead trout was assessed in Crooked River. This stream has been heavily impacted by gold dredge mining and partially rehabilitated by instream structure placement to increase pool habitat in areas lacking natural pools. Although wild steelhead trout were more abundant than hatchery steelhead trout in five study sections located in upper Crooked River, there were significant differences in the size and spatial distributions of these two groups of fish. Hatchery steelhead trout were observed mainly in pool habitat, whereas wild steelhead chose a variety of habitat types (e.g., pocketwater, riffles, alcoves). Habitat selection by wild fish may have been related to the size of the fish.

The following is a summary of the results considered to be important to fish habitat management on the Nez Perce Forest:[1]

- The highest number of juvenile wild steelhead trout were observed in pocket water habitats. The lowest number were found in riffle habitats.
- The highest number of juvenile hatchery steelhead were observed in pool habitat. They were found in the greatest numbers in artificially-created pools.
- Proper management of habitat for the summer rearing of juvenile wild steelhead trout might include the creation of more pocket water habitats with less emphasis on pool-creating structures.
- Large, deep pools are apparently used by hatchery-reared steelhead trout and larger resident cutthroat, rainbow, and bull trout. The creation of these pools may indirectly benefit wild steelhead trout, however, by reducing competition in non-pool habitats which apparently are preferred by wild fish.
- Data is needed on the winter habitat utilization for all salmonid species on the Forest to allow for a complete assessment of the benefits resulting from the placement of pool-creating structures. It is possible that deep plunge pools are important for winter-rearing habitat.

Evaluation of Monitoring Results:

Following is the range of costs for structures, acres, and inventories. It should be noted that these costs (per acre and structure) vary from site to site, depending on the objective of the work to be done, site conditions, location, etc. In terms of the cost per mile of inventory, costs vary as to the location and area accessibility, experience of the survey crew, amount and type of information to be collected, whether the survey is done by Forest Service crews or contracted out, etc. In general, costs for habitat improvement have remained approximately the same as FY 1991.

Cost Range/Improvement	1990 Costs	1991 Costs	1992 Costs
Range of Cost/Acre	$200 to $550	$200 to $600	$200 to $600
Range of Cost/Structure	$175 to $550	$200 to $600	$200 to $600
Range of Cost/Mile of Inventory	$500 to $1500	$550 to $1500	$550 to $1500

The Forest, for the past 5 years, has accomplished 85 percent of the projected Forest Plan fish habitat improvement and 103 percent of the targets assigned to the Forest. In FY 1992, the Forest received $350,000 to do fish habitat improvement work.

Item 2e-1:	**Fish Habitat Trends by Drainage**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	1 to 5 years (FY 1988 to 1992)
Variability Which Would Initiate Further Evaluation:	A measured decrease of 10% or more below established objectives

Monitoring Results

A minimum of 5 years of data are necessary in order to establish baseline habitat conditions and determine relative change in condition at the permanent monitoring stations. None of the 23 permanent Forest fisheries monitoring sites, displayed in the following table, were measured in fiscal year 1992. The table summarizes the type of information collected to date at each monitoring station.

[1]Information from: K.Thompson. April 1990. "Utilization of Instream Habitat Improvement Structures for Summer Rearing by Juvenile Hatchery and Wild Steelhead Trout in an Idaho Stream", M.S. Thesis, Humboldt State University, CA.

Permanent Monitoring Station Name	Site Surveyed In FY 92	Years Having Habitat Survey Data	Years Having Fish Density Estimates	Habitat Map of Site Available?
N.Fk.White Bird Creek*	No	1988,1989,1990	1988,1989,1990	Yes
S.Fk.White Bird Creek	No	1988,1989,1990	1988,1989,1990	Yes
N.Fk.Slate Creek*	No	1988,1989,1990	1988,1989,1990	Yes
Little Slate Creek	No	1988,1989,1990	1988,1989,1990,1991	Yes
Johns Creek*	No	1987,1988,1989,1990,1991	1987,1988,1989,1990,1991	Yes
North Meadow Creek	No	1988,1989,1991	1988,1989	Yes
N.Fk.Red River Upper*	No	1988,1989,1990	1989,1990	Yes
N.Fk.Red River Lower*	No	1989,1990	1989,1990	Yes
Trapper*	No	1988,1989	1989	Yes
S.Fk./W.F.Red River[1]	No	1988,1989,1990		Yes
Upper Big Mallard Cr.[2]	No	1987,1989,1990,1991	1989,1990,1991	Yes
Running Creek*	No	1988,1989,1990	1988,1989,1990	Yes
Bear Creek*	No	1988,1989,1990	1988,1989,1990	Yes
O'Hara Creek	No	1988,1989,1990,1991	1988,1989,1990,1991	Yes
Gedney Creek	No	1989,1990,1991	1989,1990,1991	Yes
Meadow Creek Lower[3]*	No	1988,1989,1990,1991	1988,1989,1990,1991	Yes
Meadow Creek Middle[4]*	No	1990	82-83,87-88,1990	Yes
Sable Creek	No	1987,1988,1990	1983,1987,1988,1990	Yes
Butte Creek	No	1987,1988,1990	1987,1988,1990	Yes
Tenmile Creek*	No	1988,1990	1988,1990	Yes
Lower Crooked River*	No	1988,1990	1988,1990	Yes
Lower Newsome Creek*	No	1988,1990	1988,1990	Yes
Upper Newsome Creek*	No	1988,1990	1988,1990	Yes

*Stream also monitored by Idaho Dept. Fish and Game (IDFG) for population densities.

[1] These stations were dropped from Forest Plan (amended in FY 88), but a channel and substrate survey was conducted in cooperation with Intermountain Research Station personnel.
[2] This station is incorrectly called "Slide Creek" in the Forest Plan, after the Slide Creek Sale. Actual site is on Big Mallard Creek. It is being used to monitor a road crossing. The Forest Plan will be amended to reflect this name change.
[3] Station location moved upstream 100m in 1989 to a location with a better diversity of habitat.
[4] Only fish populations are sampled at this station.

Three baseline monitoring stations were established in McComas Meadows. Part of the effort in establishing these permanent stations involved gathering and documenting data relating to bank profiles and channel morphology in order to study the system changes with time. The monitoring stations and transects for the North and South Forks of Whitebird Creek also were remarked and relocated.

Evaluation of Monitoring Results:

Permanent Forest fisheries monitoring sites were established to monitor general fisheries habitat condition across the Forest (Forest Plan, 1987).

Preliminary data analysis indicates there are budgeting, managerial, and technical issues that are compromising the quality and, therefore, the usefulness of the data. Monitoring is given a low priority due to the mix in tasks that District biologists must accomplish. As a result, monitoring has not received adequate funding and is accomplished only if there is time remaining in the fall after other work has been completed. Training in data collection techniques is lacking and methodologies have changed through the short timeframe in which the monitoring program has existed.

Permanent Forest fisheries monitoring sites (see previous table) were not measured in 1992 due in part to increased workloads related to the evaluation of on-going management activities on the Forest to assess their effect on chinook salmon, as required under the Endangered Species Act.

Although it was to be accomplished at the District level, the data collected at the monitoring stations has not been summarized. Furthermore, data was supposed to be collected for a minimum of 5 years at a particular monitoring station in order to establish a baseline habitat condition. Organization to determine which permanent monitor stations would be measured each year has been lacking; therefore, data has not been collected consistently. Planning and collecting monitoring data has received low priority due to the workloads associated with timber sale accomplishment. Most stream survey data must be collected during base flows, so a limited amount of time is available to accomplish all stream survey work. One solution to accomplish consistent collection of data at monitoring stations would be to have a field crew

specifically for monitoring stations across the Forest. A lot of the data that has been collected in the past is inconclusive in determining a baseline habitat because data collection methodologies have varied from year to year.

One permanent monitoring station which has had 5 years of data collection is Johns Creek. There are large variations in such parameters as acting debris, potential debris, pool quality, and instream cover. These inexplicable variations cannot be rationalized by changes in habitat condition and must be attributed to changes in methodology or erroneous data collection in the field. As a result of the inconsistencies in methodology and performance by the stream monitoring personnel, the usefulness of the data is limited, and determining any valid results is inconclusive.

STREAM SURVEYS:

Basinwide Surveys -- The following systems were surveyed using the Basinwide Stream Survey technique (Nez Perce National Forest Basinwide Survey Methodology, 1991): Main Red River and its major tributaries, including Ditch Creek, Otterson Creek, and Upper Main Red River; Upper Main Slate Creek; Rainy Day Creek; Red Horse Creek; West Fork O'Hara Creek; Hamby Creek; and several streams draining directly into the South Fork Clearwater River.

The Main Red River data is currently being analyzed and the information will be essential in the near future for an environmental analysis of the effects resulting from past management activities, including timber harvest, road construction, grazing, and recreational activities. All of the Red River watersheds except Otterson Creek are listed in the Forest Plan as priority drainages (Forest Plan, 1987).[1]. It was estimated in the Forest Plan that restoration of priority drainages to 90 percent of habitat potential would be completed by 1990. The Red River survey will provide the information needed to assess the current condition of these watersheds and determine if the 90 percent objectives have been achieved.

Red Horse Creek is listed in the Forest Plan as below carrying capacity due to a lack of diversity (pool structure). This is a result of past practices involving placer mining which removed pool creators such as boulders and large woody debris in the stream channel. Data collected on Red Horse Creek will assess the current condition of the watershed and determine if the 90 percent objective has been achieved.

Sediment is the primary limiting factor in Hamby Creek, with improvements scheduled in order to reach the 90 percent habitat potential objective. The basinwide survey data will help determine if the goal has been obtained.

The South Fork face drainages stream survey was conducted to meet the requirements of the Hungry/Mill Integrated Resource Analysis. The South Fork face drainages are located in the south central portion of the Clearwater Ranger District. The following streams were surveyed: Bivouac Creek, Bully Creek, Cove Creek, Dump Creek, Grouse Creek, Jungle Creek, and South Fork Dump Creek. None of the streams contained fish; therefore, the total stream miles surveyed was limited.

Walk-Through Surveys -- A walk-through survey identifying channel types (Rosgen, 1992)[2] was conducted on Big Creek and all of its tributaries in order to complete the 1990 basinwide survey. A reconnaissance survey of Robbins Creek, Chessler Creek, Whitsher Creek, and Bullion Creek was done in order to assist in the Scott Fire analysis.

High Lakes Surveys -- There were 12 high mountain lakes surveys conducted on the Red River Ranger District, and 10 high mountain lakes ecological inventories (in conjunction with eight synoptic lake inventories) performed on Moose Creek Ranger District. The data is currently being analyzed. These studies are examples of ongoing collaborative efforts with the Idaho Department of Fish and Game to assess natural reproduction, which will assist in determining future stocking practices.

[1] Appendix A-6, Table A, Nez Perce National Forest Plan, 1987.
[2] The Hierarchy of River Inventories, Dave Rosgen, 1992

WATERSHED CONDITION INVENTORIES:

Watershed condition inventories were performed in the Main Upper Slate Creek and Little Slate Creek watersheds; approximately 10,000 acres in the Cove/Fish area; and in the Stillman Falls analysis area. The Cove/Fish analysis area is approximately 30,000 acres in size and is located on the south side of the South Fork Clearwater River. The area starts just south of Snowhaven Ski Area and extends down past Jungle Point. The western boundary runs along several ridges an the area extends eastward so that it includes all streams draining into the South Fork Clearwater from the south. The analysis area includes the following drainages: Bivouac Creek, Bully Creek, Cove Creek, Dump Creek, Grouse Creek, Jungle Creek, and South Fork Dump Creek. The Stillman Falls analysis area encompasses approximately 42,000 acres on the south side of the Selway River. The area starts approximately 7 miles southeast of Lowell and extends southeast to the Selway District boundary. The area includes all streams which drain into the Selway River from the south side, between Hamby Creek and West Fork O'Hara Creek. Refer to monitoring item 2h of this report for additional information on watershed condition analysis.

Item 2e-2:	**Impact of Management Activities on the Chinook Salmon**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	

Discussion:

On May 22, 1992, the spring/summer and fall chinook salmon in the Salmon River drainage and the fall run chinook salmon in the Clearwater River were listed as "threatened" under the Endangered Species Act.

As a result of the listing of the chinook salmon, approximately 500 individual timber sale units were "field checked" for compliance with Forest Plan Standards that require riparian areas to be managed for the protection of riparian-dependent resources. In cases where it appeared that sale design was inadequate to provide such protection, corrective measures were designed by an ID team and implemented through sale administration. In total, 186 harvest units were modified. Some units required more "correction" than others, although most changes fell into the category of minor. Some of the changes were substantial, leading to environmental modifications of the West Fork II, China Cow, and Black Cougar Timber Sales.

The listing of the salmon required a quick response by the Forest to meet consultation requirements with the National Marine Fisheries Service (NMFS), the agency responsible for coordinating salmon recovery.

During the past few months, Forest biologists have completed "biological evaluations" for nearly 9,000 individual activities associated with 425 projects that are currently under contract, permit, or being implemented. The purpose of these evaluations was to determine effects these projects and activities might have on chinook recovery. Slightly more than half of the projects were determined to have "no effect" on chinook populations and are proceeding. Most of the remaining projects were determined as being "not likely to adversely affect" chinook populations or chinook habitat. Any determination other than "no effect" requires concurrence from NMFS.

On February 16, 1993, the Forest Service and NMFS agreed upon a process to refine the evaluations that were completed in 1992. Under the new approach, projects wil be grouped by sub-watersheds in the Salmon and Clearwater River drainages and a cumulative effects determination will be made for all activities in a particular sub-watershed. This new process will allow for a more comprehensive look at the effects all activities, when combined, may be having on the listed species of salmon.

The following table summarizes the number of Forest activities which were determined to have no effect (NE), a beneficial effect (BE), a not likely to adversely affect (NLAA), or a likely to adversely affect (LAA) on chinook salmon, grouped by major drainage areas. In the Selway and South Fork Clearwater drainages, only fall chinook are listed as "threatened" under the Endangered Species Act (ESA). In the Salmon River basin, both fish stocks, which the National Marine Fisheries Service (NMFS) has recognized as ecologically significant units (ESU), are present, namely spring/summer and fall chinook. The number and percentage in the total column sum effects determinations of fall chinook in the Selway, South Fork Clearwater, and Salmon River basins. Spring/summer chinook in the Salmon River basin were excluded in the totals to avoid double-counting projects which have determinations on both ESU.

The miscellaneous category includes a number of different activities.[1] Minor activities in recreational, silvicultural and timber areas are included in this general category. For example, this includes very small timber sales for such projects as fence building. Facilities are also included in this category. Facilities refer to the existence of permanent structures such as the compound on a ranger station to facilitate such needs as housing. Also included in this category is reentry of a rock source to crush gravel for road surfacing, and fire protection.

[1] Information from Nez Perce National Forest Assessment of Ongoing Management Activities, 1992.

Forest Project/Activities Effects on Chinook Salmon

		Major Drainage					
Forest Activity	Determined Effect	Selway River	So.Fk. Clearwater River	Salmon River Fall Chinook	Salmon River Spring Chinook	Total	Percent of Total
Timber	NE[1]	3	33	8	7	44	55
Timber	BE[2]	0		0	0	0	0
Timber	NLAA[3]	5	12	16	17	33	41
Timber	LAA[4]	0	0	3	3	3	4
Total		8	45	27	27	80	
Silviculture	NE	0	7	17	16	24	69
Silviculture	BE	0	0	0	0	0	0
Silviculture	NLAA	0	0	11	12	11	31
Silviculture	LAA	0	0	0	0	0	0
Total		0	7	28	28	35	
Recreation	NE	16	21	23	15	60	90
Recreation	BE	0	0	0	12	0	0
Recreation	NLAA	2	1	4	0	7	10
Recreation	LAA	0	0	0	0	0	0
Total		18	22	27	27	67	
Engineering	NE	7	30	31	15	68	73
Engineering	BE	0	0	1	2	1	1
Engineering	NLAA	4	12	8	8	24	26
Engineering	LAA	0	0	0	0	0	0
Total		7	30	43	43	80	
Range	NE	3	5	5	3	13	29
Range	BE	0	0	0	0	0	0
Range	NLAA	4	12	8	8	24	53
Range	LAA	0	0	8	10	8	18
Total		7	17	21	21	45	
Mining	NE	0	12	5	4	17	55
Mining	BE	0	0	0	0	0	0
Mining	NLAA	0	2	11	12	13	42
Mining	LAA	0	0	1	1	1	3
Total		0	14	17	17	31	
Fish/Water	NE	11	24	7	7	42	89
Fish/Water	BE	0	1	2	2	3	7
Fish/Water	NLAA	0	1	1	1	2	4
Fish/Water	LAA	0	0	0	0	0	0
Total		11	26	10	10	47	
Misc.	NE	7	10	5	4	22	55
Misc.	BE	0	0	0	0	0	0
Misc.	NLAA	1	1	14	15	16	40
Misc.	LAA	0	0	2	2	2	5
Total		8	11	21	21	40	
Grand Total	NE	47	142	101	71	290	68
Grand Total	BE	0	1	3	16	4	1
Grand Total	NLAA	12	29	76	91	117	28
Grand Total	LAA	0	0	14	16	14	3
GRAND TOTAL		59	172	194	194	425	

[1]No Effect
[2]Beneficial Effect
[3]Not Likely to Adversely Affect
[4]Likely to Adversely Affect

Evaluation of Monitoring Results:

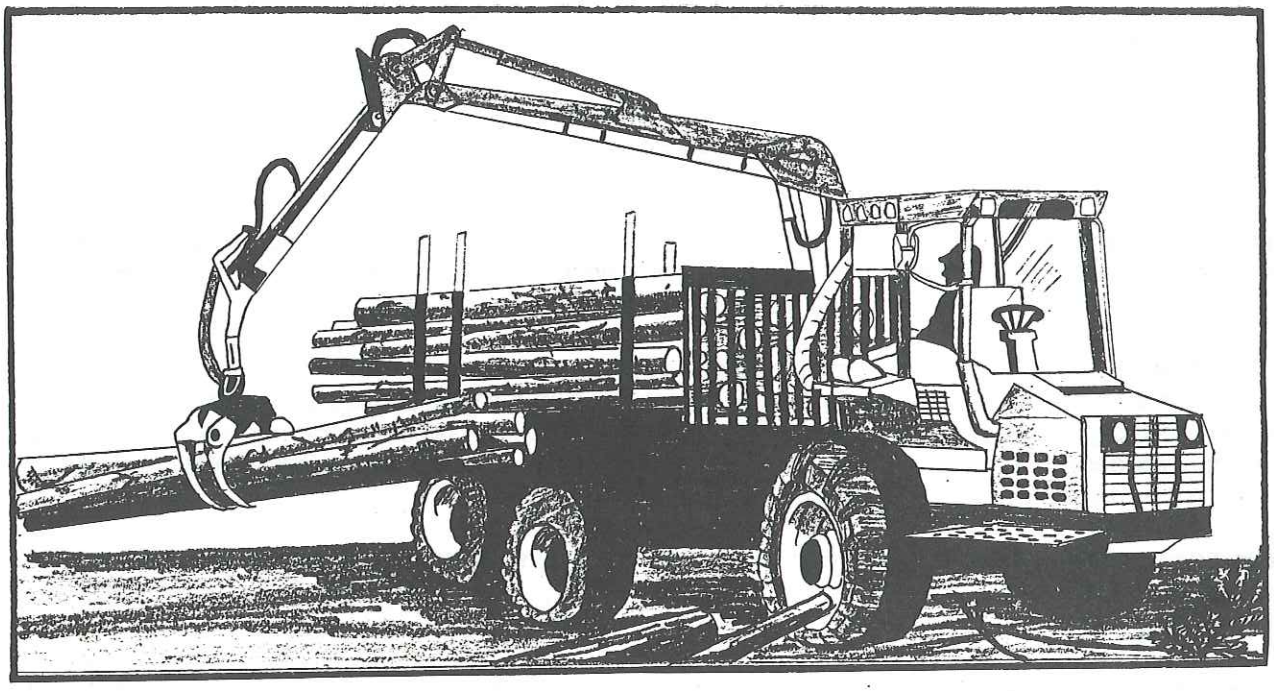
Out of 425 Forestwide projects, 190 (68 percent) are considered no effect on the chinook salmon, 4 (1 percent) of the activities are considered to be a beneficial effect, 117 (28 percent) are not likely to adversely affect, and 14 (3 percent) are likely to adversely affect. A large number of the adverse effect determinations are a result of timber and range activities.

Livestock grazing is the activity which has the most adverse effect on chinook salmon. Out of a total of 45 range projects, 61 percent of the projects were determined to adversely affect the chinook salmon.

Timber projects (80) and engineering projects (93) are the two activities which are involved in the most Forest projects.

A large number of the adverse effects determinations are in the Salmon River drainage. This is a result of activities occurring directly in the areas where chinook salmon spawn. For the Selway and South Fork Clearwater basins, the effects must transfer to the downstream areas in the main stem of the Clearwater River where fall chinook occur. The chinook salmon are directly affected by activities as a result of the proximity of the activities.

TIMBER



Item 1h-1:	Allowable Sale Quantity (ASQ) Sold By Components
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Any change in ASQ achievement altering the implementation of the long-term goals and objectives displayed in Forest Plan Chapter 2 (Forestwide Management Direction) and Chapter 3 (Management Area Direction) may necessitate a Forest Plan Amendment.

Discussion:

The allowable sale quantity (ASQ) is defined as the maximum timber volume that may be sold during the planning period from the suitable land base. The ASQ is a sold-volume ceiling, and is monitored yearly against the average annual ceiling of 108 MMBF chargeable volume. This chargeable volume is divided into two components: regular (green live and recently dead resulting from insect/ disease or fire) and noninterchangeable (pulp/cedar products and endemic mortality). Fuelwood volume (both commercial and personal use), volume from unsuitable lands, and volume (such as posts and poles) that is too small or defective to meet Regional Utilization Standards for sawlogs/pulp/cedar products is nonchargeable and is not considered as part of the ASQ achievement when it is sold.

Although this item is monitored on an annual basis, actual ASQ achievement will be based on the decade total. Yearly figures may be above or below the Forest plan ASQ ceiling of 108 MMBF (103 MMBF regular and 5 MMBF noninterchangeable).

Why is the Volume Sold and Offered Different for the Same Fiscal Year? -- It is not uncommon for the volume sold and offered to be different in the same fiscal year. For instance, in FY 92, the volume sold was 15.6 MMBF and the volume offered was 49.8 MMBF (see tables on pgs. 58 and 61).

A timber sale is considered offered when it is advertised in the local newspaper. In most cases, 30 days elapse between this advertisement and the actual bidding for the timber. A sale is considered sold when the timber sale contract is signed by the qualified high bidder. Usually, it takes from 1-3 weeks to complete the necessary work required prior to signing the contract. Thus, the time between the sale offering (advertisement in newspaper) and selling (contract signing) is normally 40 to 50 days.

The last day of the fiscal year is September 30. For a variety of reasons, most sales on the Forest are offered near the end of the fiscal year. Given the 40-50 day delay period, sales offered after mid-August are considered offered in one fiscal year and sold in the next fiscal year.

This is exactly what occurred in FY 92. Four timber sales with a total volume of 34.2 MMBF (the difference between 49.8 MMBF offered and 15.6 MMBF sold) were offered on the following dates: September 10, September 17, and two sales on September 24. These four sales will be awarded in FY 93 and the 34.2 MMBF will be shown as sold in the FY 93 Monitoring Report.

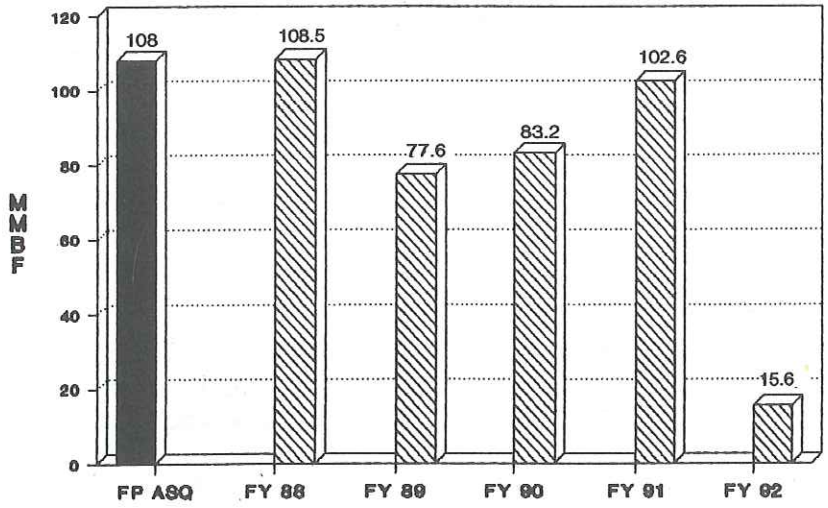
Monitoring Results:

CHARGEABLE VOLUME SOLD IN FY 1988-1992[1]
(Volume Credited Toward ASQ on an Annual Basis)

Components	Volume (MMBF)				
	FY 88	FY 89	FY 90	FY 91	FY 92
Regular	104.8	68.9	70.2	94.3	1.3
Noninterchangeable (NIC)					
Pulp	1.3	7.6	10.3	4.8	14.2
Cedar Products	2.4	1.1	2.7	3.5	0.1
Total	108.5	77.6	83.2	102.6	15.6

[1] The ASQ accomplishment breakdown was based on the Nez Perce Periodic Timber Sale Accomplishment Report accumulated as of September 30, 1992 (fiscal year summary).

CHARGEABLE VOLUME SOLD BY YEAR (FY 1988-1992)



The scheduled 5-year review of the Forest Plan will begin in fiscal year 1993. Five years of sold sale monitoring have shown that the Nez Perce has sold 83 percent of the scheduled acres, which contained only 72 percent of the average annual ASQ volume. There are very strong indications that the timber yield estimates (volume/acre) contained in the Forest Plan were overestimated **(see Table 11-a)**. This issue will be addressed in the Forest Plan review.

Analysis of the two ASQ components on the Forest (regular green and non-interchangeable) shows that in the first half of the decade the Forest has sold 66 percent of the sawlog component and 192 percent of the non-interchangeable (NIC) component (pulp and cedar products).

In fiscal year 1992, the Forest sold 1.6 MMBF of the nonchargeable component (not counted as part of the ASQ). This was primarily firewood (both commercial and personal use) and post/pole material.

ASQ VOLUME SOLD TO DATE

Avg. Annual ASQ	1992 Chargeable Volume Sold	Total Chargeable Volume Sold to Date*	% of Avg. Annual ASQ Sold for 5 Years
103.0MM/year (sawlogs)	1.3MM	339.5MM	66
5.0MM/year (pulp/cedar prod)	14.3MM	48.0MM	192
108.0 MM/year (total)	15.6 MM	387.5 MM	72

* In fiscal years 1988-1992, which are the first 5 years of the decade covered under the Forest Plan.

FUTURE ASQ SELL REQUIRED TO MEET DECADAL CEILING

Total Decadal ASQ Ceiling	Total Chargeable Volume Sold to Date*	% of Decadal Ceiling	FY 93-97 Avg. Annual Sell Required to Meet ASQ
1,030MM (sawlogs)	339.5MM	33	138.1MM/year
50MM (pulp/cedar prod)	48.0MM	96[1]	0.4MM/year[1]

* In fiscal years 1988-1992, which are the first 5 years of the decade covered under the Forest Plan.

[1] As of February 5, 1993 (4 months into FY 93), the Forest has sold 53.0 MMBF in the noninterchangeable (NIC) component of the ASQ. The 50 MMBF decadal NIC ceiling was exceeded on October 8, 1992.

Evaluation of Monitoring Results

In order to meet the decadal ASQ ceiling, the Forest must offer an average of 138.1 MMBF/year during the last 5 years of the decade. The timber management section on the Forest is currently in a downsizing mode. Timber funding is expected to decrease. Other resource standards are proving to be much more constraining on timber harvest than originally anticipated. We suspect that yields were overestimated in the Forest Plan. Taken together, these factors indicate that selling the full first decade ASQ is highly unlikely. In FY 92, the Forest experienced a significant falldown in acres and volume sold. During the last month of FY 92, the Forest offered four sales with a combined volume of 32.6MM on 2,314 acres. These sales will be sold in FY 93 and the ASQ credited towards FY 93. Volume per acre on these four sales is 14.0MBF/acre, which further supports the suspected error in net MBF/acre yield estimates contained in the Forest Plan.

Item 1h-2:	**Financed Volume Offered Attainment by Components**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	

Discussion:

Each year Congress appropriates funding to accomplish annual timber targets. Given the fluctuation in funding from year to year, these annual "timber targets" are not necessarily the same as the Forest's average annual ASQ. The achievement of financed "timber targets" differs from ASQ achievement in the following ways:

1. Accomplishment of "timber targets" takes place when a sale is offered ... as opposed to ASQ accomplishment credited when a sale is sold. Normally, 45-60 days elapse between sale offering (advertisement in local paper) and sale selling (signing contract). Sales offered near the end of the fiscal year may be credited toward the "timber target" in one fiscal year and credited toward ASQ in the next fiscal year.

2. Nonchargeable offered volume (firewood and posts/poles) may be included in "timber target" achievement. The ASQ volume does not include nonchargeable volume.

Monitoring Results:

CHARGEABLE AND NONCHARGEABLE VOLUME OFFERED IN FY 1988-1992

	Volume (MMBF)				
	FY 88	FY 89	FY 90	FY 91	FY 92
Assigned Target	103.0	108.0	104.0	100.0	77.0
Accomplishment (Volume Offered)[1]	104.6	107.7	84.5	86.9	49.8
% of Accomplishment	102	99	81	87	65

[1] Target accomplishment based on yearend Periodic Timber Sale Accomplishment Report (PTSAR) taken from the STARS database yearend summary.

Evaluation of Monitoring Results:

The Forest was financed to offer 98.4 MMBF/year during the first 5 years of the decade. Actual accomplishment was 86.7 MMBF/year (88 percent of assigned timber target).

In FY 90-92, the Forest fell short of meeting its financed timber target by 60.0 MMBF. Reasons for the target shortfall are shown below:

40% - Sales delayed because NEPA analysis not completed as scheduled
- Additional data gathering and analysis necessary
- Additional public involvement needed
- New analysis requirements
  Optimistic completion schedules

30% - Sales delayed because of circumstances related to the threatened listing of salmon

17% - Sale delayed because of reversal of decision after appeal

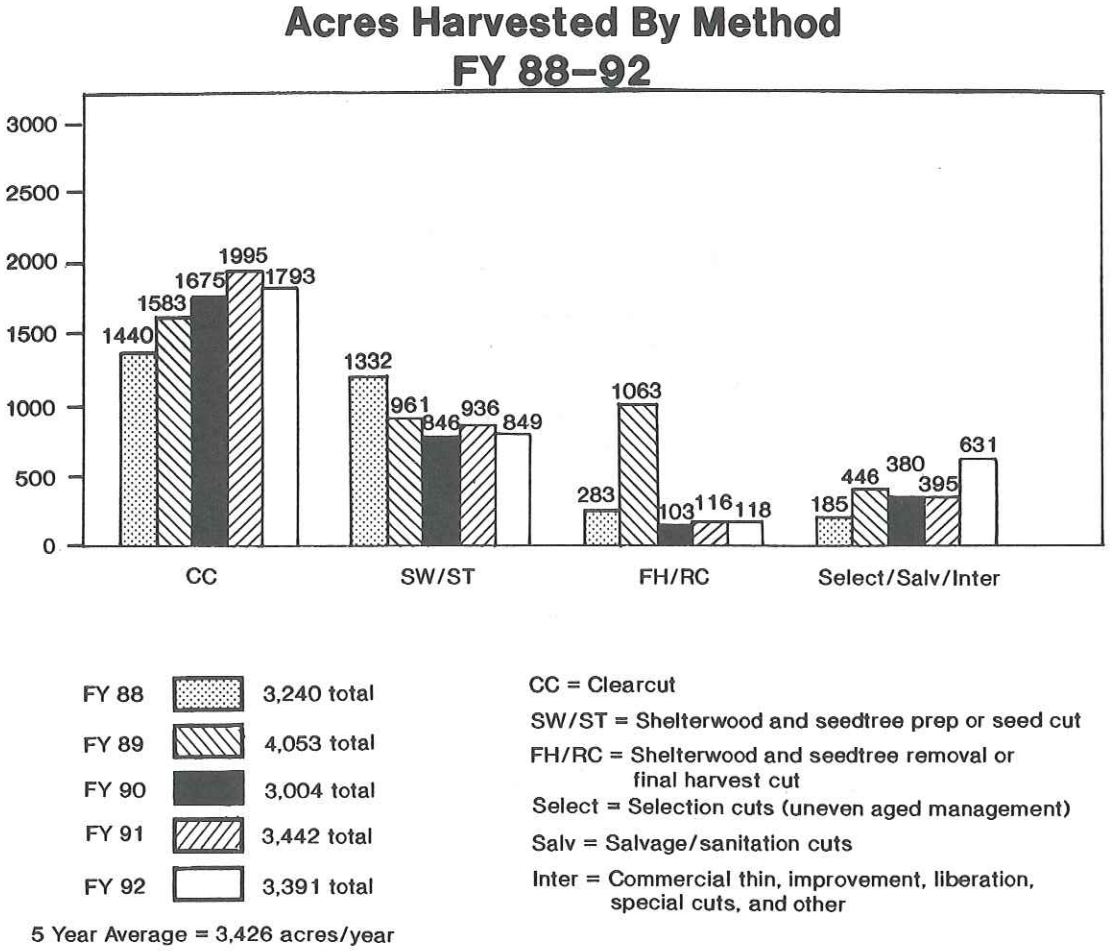
13% - Miscellaneous delay reasons
- Unresolved road right-of-way dispute
- Poor economics of sale

Due to reductions in timber and timber-related funding, future financed "timber targets" are not expected to increase. The FY 93 financed "timber target" on the Nez Perce is 66MMBF. For the period FY 94-97, the Forest expects timber funding sufficient to offer between 50-70 MMBF per year.

Item 1i:	Acres Timber Harvested by Method (Includes Precommercial Thinning)
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary review.

Monitoring Results:

Precommercial thinning occurred on 1,205 acres which is approximately 121 percent of planned accomplishments. Harvesting took place on 3,391 acres (53 percent clearcut, 25 percent seed and prep cut from shelterwood and seed tree, and 22 percent from other cutting methods). It should be noted that harvest acres represent the acres actually harvested in FY 92, and do not necessarily correspond to acres sold. Most sales have a contract life of from 2-6 years. It is likely that some of the harvested acres may have come from sales sold as early as 1985, which was 2 years prior to Forest Plan implementation.



Evaluation of Monitoring Results:

Some harvested acres are from sales sold before Forest Plan implementation and are reflective of market conditions and were not subject to Forest Plan standards when sold. This partially explains the number of clearcut acres harvested. Since the total volume under contract is more than double the average yearly harvest volume, actual harvest acres are, in part, a reflection of market conditions.

Item 2f:	**Vegetative Response to Treatments**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Data and analysis which would indicate that projected yields from regnerated stands are in error.

Discussion:

Permanent growth plots provide a means to assess and predict the results of silvicultural treatment. Their primary function is to assess the accuracy of yield tables in the linear programming model for forest planning. These yield tables were built using Prognosis, a stand growth simulation model. Since 1979, 60 permanent plots have been established (in the 1991 Monitoring Report, 71 plots were reported, but 11 did not contain sufficient data clusters to continue monitoring). Thirty-five of these plots have been remeasured. Most of these growth plots have been established in regenerated stands following clearcut or shelterwood harvest. Many have been thinned to stocking levels consistent with stocking levels in Forest Plan regenerated yield tables.

Remeasurement of the early plot installations has been delayed, as focus of the program has been on establishing plots in the full array of productivity classes and species types commonly managed on the Forest. Many of the early exams were not entered in the R1EDIT data processing system. Last year (1992), sufficient plots were remeasured to begin comparison of growth of these plots with Prognosis projections that were made when they were initially established.

Evaluation of Monitoring Results:

Data entry and analysis of growth projections of some of these early plot installations should be completed this year. Comparison of field recorded diameters, heights, and trees per plot between measurements indicates that growth projections for regenerated stands in Forest Plan yield tables are reasonable.

Item 4:	Acres of Harvested Land Restocked Within 5 Years
Frequency of Measurement:	Annual for 1-, 3-, and 5-year-old regenerated stands (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Significant deviation from 5-year regeneration period after data is reviewed by an interdisciplinary team.

Discussion:

Data for this item comes from the Timber Stand Management Record System and is summarized with the reforestation history (12/2/92), reforestation index (11/23/92) report, and reforestation status (12/2/92) report. Inventory results for FY 1992 will not be available until March 1993.

Monitoring Results:

Ninety-four percent of the stands planted in the past 5 years are progressing toward satisfactory stocking (are stocked). Replants are scheduled on acres (6 percent) needing additional stocking. Natural regeneration is certified or progressing on 94 percent of stands harvested since 1976.

Evaluation of Monitoring Results:

Reforestation success has remained static to slightly improving since Forest Plan monitoring began. Dry summers extending into fall and animal damage have been the primary contributors to seedling mortality.

Item 5:	Site-Specific Examination to Determine Suitability of Land for Timber Management
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	10 years (FY 1997)
Variability Which Would Initiate Further Evaluation:	Significant changes in suitable acres.

Discussion:

Forest lands physically sutiable for timber production are lands for which technology is available to ensure timber production without irreversible damage to soils productivity or watershed conditions, and lands for which the possibility of adequate restocking within 5 years is reasonably sure. Cost efficiency is not a factor in the determination of physical suitability.

Nonforest lands, forest lands withdrawn from timber production (wilderness and other classified lands), lands incapable of producing industrial wood, and lands for which there is inadequate response information available to project responses to timber management are identified as unsuitable for timber production.

The Forest Plan identified 1,070,414 acres of forest land as "tentatively suitable" for timber production. The Plan determined that all these lands were technologically suited, no irreversible resource damage would occur, and that restocking could be assured (78,906 acres of generally low site lands had been subtracted because there was inadequate response information to project responses to timber management). This 1,070,414 acres were reduced by 158,745 acres to account for East Meadow Creek (60,851 acres) and other lands not appropriate for timber production over the planning horizon (97,894 acres). This leaves 911,669 acres of suitable forest land.

Since the Forest Plan was implemented in 1987, land suitability classes have been assigned to individual stands. This is done during the compartment exam process and by interdisciplinary analysis for proposed projects. As stands are delineated, examined, or considered for treatment, suitability is assigned and recorded in the timber stand data base.

Evaluation of Monitoring Results:

Preliminary suitability assignments on the unclassified portion of the Forest is nearly complete. These assignments have largely been based on the same generalized criteria used for forest planning. The primary benefit has been a more site-specific assignment of suitability than that provided by the Plan. It has also been possible to delineate nonforest openings in forest lands which may have been considered suitable in the Plan. There is no indication that total suitable or unsuitable acreages have changed substantially from Plan assumptions.

Unfortunately, less than one-fourth of the Forest has been analyzed on a project level in an interdisciplinary manner necessary to make determinations of unsuitability due to irreversible resource damage, assurance of restocking, or inadequate response information. Furthermore, analysis teams and resource specialists have identified several issues which must be resolved to make suitability determinations. For example, do we have adequate information to predict response to timber management in parts or all of the grand fir mosaic? In what portions, if any, of certain kinds of riparian areas are timber harvest activities possible without irreversible damage to resources? Do we have enough information to predict response to timber management or regeneration success on unstable landtypes or in high elevation, low site conditions?

The issue of economics confuses the suitability issue. Can regeneration be assured on certain droughty landtypes or in heavily used wildlife areas without extraordinary establishment or protection costs? What cost

in mitigation measures to build roads in fragile landtypes or log with expensive harvest methods in low volume or value stands can we afford?

Presently we avoid harvest in many stands because of all these conditions, in effect creating an ever-growing class of "de-facto" unsuitable lands on the Forest. These and other issues relating to suitability have been raised in preliminary issue identification for the 5-year review. The Forest must clarify these issues and develop criteria to be uniformly applied in future suitability determinations.

The results of monitoring changes in suitability are **scheduled to be fully evaluated in the FY 1997 Monitoring and Evaluation Report.**

Item 6:	**Maximum Size of Opening for Harvest Units**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annual
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary team review.

Discussion:

Openings, as addressed in the Northern Region Guide, apply to all even-aged silviculture systems which include clearcut, shelterwood, and seed tree. Openings occur when even-aged systems are initiated where timber management is the driving objective as the stands don't meet the stocking levels of the desired future condition. The only exception would be a preparatory cut in a shelterwood system. Even-aged silviculture systems may or may not create openings for other resource objectives depending on the desired outcome of the harvest.

Monitoring Results:

Stands exceeding 40 acres in size, and sold during prior years but harvested in 1992, are as follows:

> A 47-acre clearcut was modified to meet logging system limitations, and address forest health and regeneration needs, while meeting Forest Plan standards for riparian resource protection.

Evaluation of Monitoring Results:

All harvest activities greater than 40 acres and those adjacent to other openings are evaluated against National Forest Management Act and Forest Plan requirements. Interdisciplinary review determined that resource objectives are being met.

Item 11:	Validation of Resource Prediction: Timber (Sold Acres in FY 88-92)
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	2 to 5 years (FY 1988 to 1992)
Variability Which Would Initiate Further Evaluation:	If validation efforts show a need for changes to existing resource predictions.

Monitoring Results:

Validation Monitoring: The Forest Plan contains estimates of the following four elements for the acres contained in timber sales scheduled to be sold during the first decade. These estimates were used to help derive the Forest's allowable sale quantity (ASQ) ceiling.

- Net volume per acre by silvicultural system
- Total acres by silvicultural system
- Distribution of total acres (%) by silvicultural system
- Total acres by Management Area (MA)

The following four tables display the Forest Plan estimates as well as actual FY 88-92 data taken from sold sales during this period. Sales contained in the actual FY 88-92 sold data include all sales of chargeable (ASQ) volume having an appraisal (Forest Supervisor and District Ranger authority timber sales). Offered sales that did not sell are not included.

Table 11-a -- Sold Net Volume/Acre by Silvicultural System

Silvicultural System	Forest Plan Estimated Volume/Acre (MBF)	FY88 Vol/Acre (MBF)	FY89 Vol/Acre (MBF)	FY 90 Vol/Acre (MBF)	FY 91 Vol/Acre (MBF)	FY 92 Vol/Acre (MBF)	Weighted Avg.* FY 88-92 (MBF)
Clearcut(Units)	32.5	24.5	24.1	19.7	24.9	15.9	23.3
Clearcut(Rd ROW)	32.5	29.4	16.4	17.8	19.0	none sold	20.8
SW Prep Cut[1]	none planned	19.3	none sold	5.3	none sold	none sold	5.9
SW/ST Seed Cut[2]	18.3	15.5	15.4	15.9	15.6	none sold	15.6
SW/ST Final Cut[3]	5.0	5.6	8.4	7.3	5.9	none sold	6.6
Sanitation/ Salvage	none planned	8.9	11.1	2.5	4.1	1.8	3.6
Commercial Thin	5.9	none sold	none sold	2.5	12.2	none sold	10.7
Selection Cut[4]	12.6	4.6	none sold	12.8	none sold	8.0	5.9
Weighted Average	22.6	16.3	20.6	15.7	17.3	3.5	17.0

*Weighted by acres sold

Table 11-b -- Distribution of Sold Acres by Silvicultural System

Silvicultural System	Forest Plan Scheduled Distrib.%	FY88 Distrib.%	FY89 Distrib.%	FY 90 Distrib.%	FY 91 Distrib.%	FY 92 Distrib.%	Weighted Avg.* FY 88-92 Distrib.%
Clearcut(Units)	36	40	61	51	35	9	44
Clearcut(RdROW)	inc above	3	4	5	9	none sold	5
SW Prep Cut[1]	none planned	<1	none sold	2	none sold	none sold	<1
SW/ST Seed Cut[2]	56	24	22	23	37	none sold	27
SW/ST Final Cut[3]	3	29	6	10	11	none sold	17
Sanitation/ Salvage	none planned	1	1	7	7	84	4
Commercial Thin	2	none sold	none sold	1	1	none sold	1
Selection Cut[4]	3	3	none sold	1	none sold	7	1
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 11-c -- Total Acres Sold by Silvicultural System

Silvicultural System	Forest Plan Scheduled Acres/Year	FY 88 Acres Sold	FY 89 Acres Sold	FY 90 Acres Sold	FY 91 Acres Sold	FY 92 Acres Sold	Average FY88-92 Acres/Year
Clearcut(Units)	1,710	2,607	1,989	2,146	1,923	15	1,736
Clearcut(RdROW)	inc.above	239	144	191	503	none sold	215
SW Prep Cut[1]	none planned	3	none sold	69	none sold	none sold	14
SW/ST Seed Cut[2]	2,705	1,549	731	990	2,029	none sold	1,060
SW/ST Final Cut[3]	130	1,921	374	455	602	none sold	670
Sanitation/ Salvage	none planned	52	23	317	396	145	187
Commercial Thin	100	none sold	none sold	34	67	none sold	20
Selection Cut[4]	125	189	none sold	31	none sold	12	46
Totals	4,770	6,560	3,261	4,233	5,510	172	3,948

[1] First entry in a 3 or 4 step shelterwood. The goal is to open up the canopy to improve seed production.

[2] Regeneration cut, where the trees left will provide the seed for the next stand of trees.

[3] Final harvest of a SW/ST ... commonly called an "overstory removal". Figures shown in the actual sold volume/acre include both final harvest of "managed stands" and liberation harvest (overstory removal in natural stands)

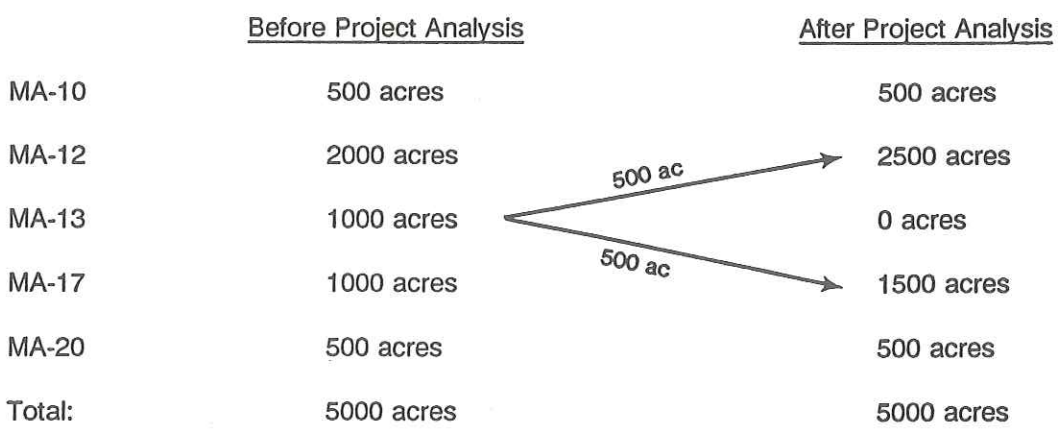
[4] This refers to uneven aged management...either group or individual tree selection.

Table 11-d -- Total Acres Sold by Management Area (MA)

MA Code	Management Emphasis	Forest Plan Scheduled Acres/Year	FY 88 Ac.Sold	FY 89 Ac.Sold	FY 90 Ac.Sold	FY 91 Ac.Sold	FY 92 Ac.Sold	Average FY88-92 Acres/Year
10	Riparian	180		139	103	176		84
12	Timber	2,543	5,083	2,374	3,305	3,501	160	2,885
13	Aggreg(12/17)	75						
14	Aggreg(12/16/17)	60						
15	Aggreg(12/16)	702						
16	Elk/Deer Winter Range	500	1,245	509	150	1,424		666
17	Visual/Scenic	388	71	173	647	409	12	262
18	Aggreg(16/17)	197						
20	Old Growth	none planned	35	22	--	--	--	11
21	Moose Winter Range	110	126	44	28	--	--	40
23	Municipal Watersheds	15						
	TOTALS	4,770	6,560	3,261	4,233	5,510	172	3,948

Management areas (MA) 13, 14, 15, and 18 are aggregates of other management areas. For instance, management area 13 includes intermingled acreages of MA-12 (timber) and MA-17 (visual/scenic); the exact acres of each MA are unknown. During project analysis, these aggregate MAs will be broken into their respective parts based on site-specific data.

For example, a 5000-acre analysis area with 1000 acres of MA-13 might end up with the following allocation after project analysis:



Aggregate MAs will always be zero after project analysis, due to further refinement into their actual component MAs. Since the four aggregate MAs are composed of MA-12, MA-16, and MA-17, one would expect sold acres to exceed Forest Plan-scheduled acres in these MAs.

Evaluation of Monitoring Results:

From the actual data for sold sales in FY 88-92, the following trends can be identified:

- Actual net cruised volume/acre (all silviculture systems) on sold sales continues to be less (25 percent) than that estimated in the Forest Plan (see Table 11-a). In looking at individual silviculture systems, the largest volume/acre difference between Forest Plan and actual FY88-92 figures continues to be in clearcutting (28 percent less) followed by SW/ST seed cuts (15 percent less). The SW/ST final harvest units yielded 32 percent more net volume than the Forest Plan estimate. Other systems also varied, but the sample size is too small to be significant.

- Actual FY 88-92 data for silvicultural system distribution also varies significantly from the Forest Plan estimates (see Tables 11-b and 11-c). More clearcut and final cut units are being sold, with fewer sold in SW/ST seedcut systems.

- More harvesting is occurring in Management Area 12 (timber emphasis) than was scheduled in the Forest Plan (see Table 11-d).

- The combined FY 88-92 sold acres are 17 percent less than the average annual sold acres estimated in the Forest Plan.

In order to be more consistent with the Forest Plan, future sales should consider less clearcut/final harvest prescriptions and more shelterwood/seed tree regeneration seed cuts. Also, given the falldown in volume per acre in sold sales compared with Forest Plan estimates, the Forest will continue to monitor closely and explore existing inventory data to determine if the FY 88-92 trends can be expected to continue.

Roadless Volume and Acres Sold

The following acres and timber volume sold on the Nez Perce NF were within inventoried roadless areas. During the first 5 years of Forest Plan implementation, the Forest sold less volume in inventoried roadless areas than the decadal Forest Plan projection. It is expected that roadless volume percentage of total volume sold during the second half of the decade will increase.

Roadless Volume and Acres Sold by Fiscal Year

Fiscal Year	Roadless Volume Sold (MMBF)	Roadless Cutting Unit & Road Right-of-Way Acres
1988	6.3	246
1989	1.7	76
1990	7.4	402
1991	31.3	1,568
1992	0.0	0
Total	46.7	2,292

Roadless Volume and Acres as a Percentage of Total Sold

Total Chargeable Volume Sold MMBF (FY88-92)	Actual Roadless Volume Percent-age	Total Sold Acres Included in Cutting Unit Road Right-of-Way, FY 88-92	Actual Roadless Acres Percent-age	Forest Plan Decadal Roadless Sell Estimate (%)
387.5	12	19,736	12	30

Roadless Acres Sold by Roadless Area

Number	Name	District	Sold Acres	Percent of Total Sold Acres
1921	Gospel Hump (Jersey-Jack)	Red River	833	36
1851	Little Slate Creek	Salmon River	667	28
1235	Dixie Summit - Nut Hill	Red River	402	18
1855	Salmon Face	Salmon River	174	8
1844	Clear Creek	Clearwater	150	7
1852	John Day	Salmon River	66	3
	Total		2,292	100

Volume Per Acre Trends

Monitoring Results:

In 1992, an analysis was made to determine the reasons for the apparent shortfall in volume per acre timber yields from Forest Plan projections. Three factors appear most important:

1. Yield Table Accuracy - Yields were projected by the Prognosis Model using a sample of stands from the 1973 forest inventory. In the past 10 years, the Forest examined many stands to support the prescription and compartment exam program and to build the Timber Stand Management Record System (TSMRS) into the data base for future Forest planning. The following table compares Forest Plan yield table volumes with average volumes from stand exams in TSMRS:

Comparison of Forest Plan and TSMRS Yields (MBF/Acre)

		Timber Productivity Class 3 (120+ cu.ft./ac/yr/)		Timber Productivity Class 4 (85-119 cu.ft./ac./yr.)		Timber Productivity Class 5&6 (20-84 cu.ft./ac./yr.)	
Decade	Age	Plan	TSMRS	Plan	TSMRS	Plan	TSMRS
1985	80	18.3	18.5	19.8	17.1	13.9	14.8
1995	90	21.2	19.7	22.3	18.4	15.1	15.3
2005	100	24.0	21.2	24.7	20.1	16.1	15.6
2015	110	26.8	23.0	27.0	22.1	16.7	16.3
2025	120	29.3	24.2	29.2	22.7	17.2	16.8
2035	130	31.7	26.3	31.0	23.5	17.7	17.6
2045	140	33.6	28.3	32.7	24.5	18.0	18.1
2055	150	35.3	30.2	34.1	26.0	18.8	18.7
2065	160	36.7	32.3	35.3	31.3	18.5	18.5
2075	170	37.7	33.1	36.3	26.1	18.7	20.6
2085	180	38.7	34.7	37.1	27.2	18.9	20.3

For productivity classes (PC) 3 and 4, the lands from which 92 percent of the harvest in the first decade was scheduled, Plan volumes were 3-8 MBF/acre higher (10-25 percent) for all age classes than volumes from recent stand examination. The reasons may be due to collapsing too many timber condition classes into single classes to identify analysis areas, underestimating defect and mortality in Prognosis projections, and the inventory may not have adequately sampled the suitable land base.

2. Availability of Scheduled Acres - The Forest Plan Model, FORPLAN, scheduled outputs from higher volume lands than could be harvested due to constraints not modeled in the Plan. Between 1988 and 1991, the Forest harvested 10 percent more acres in productivity classes (PC) 5&6 lands than the Plan scheduled. Since yields in PCs 5 and 6 are 20-40 percent lower than PCs 3 and 4, one reason experienced yields are less than Plan projections is the Forest has harvested more stands with lower yield outputs than scheduled.

Some factors causing this shift of harvest from MAs and PCs as planned are economics, elk habitat objectives, riparian area management, visual quality objectives, and old growth allocations. For example, 27 percent of the first decade harvest was to come from MA 16 - deer/elk winter range, but only 12 percent of the first 4 years' harvest was from MA 16. Also, although the amount of MA 17 (visual emphasis) has increased (see Section D, Site-Specific Verification of Management Plan Assignments), the amount of harvest in the first 5 years of Plan implementation from MA 17 is less than the Plan modeled. This may be due to the difficulty and expense of accessing typical winter ranges and implementing prescriptions to meet visual quality objectives. The effect in the short run is to concentrate more harvest in a smaller portion of MA 12 (Timber), which may not cause an immediate yield reduction, but in future years will severely limit options to harvest as modeled.

Second, acres of riparian may have been significantly underestimated. The Forest Plan estimated that approximately 2 percent of suitable lands are riparian, but NEPA analysis indicates 8-12 percent may be. The tendency has been to not harvest or harvest a significantly reduced proportion of these lands than the Plan scheduled.

Third, there has been a tendency to allocate portions of MA 12 as old growth because it is unlikely that some of the Plan old growth allocations (subalpine fir-spruce stands, lodgepole, or regenerated stands) will ever meet the size or decadence criteria to function as old growth as defined in Appendix N of the Plan. The effect of all this is to confine harvest to smaller portions of the drainage and into stands of younger age, smaller diameter, or stands which have been previously harvested.

3. Prescriptions and Yield Proportions - Snag replacement and reserve prescriptions were not represented in FORPLAN yield proportion coefficients. Green trees left for snags could account for 1-2 MBF/acre reduction in yield. Regeneration harvest with reserves, over 1200 acres since 1988, are usually 2-8 MBF/acre lower than yield table projections.

In summary, not only are we harvesting a lower proportion of acres from higher productivity classes (thus higher yield lands) than planned, but existing volumes from 10 years of stand examination are lower than yields projected for the same lands, and prescriptions with lower yields are being implemented which were not modeled. The following table displays the volume per acre for Plan-scheduled regeneration harvest in the first decade with that which would have been projected from the lands actually harvested and yields as estimated from recent stand exams:

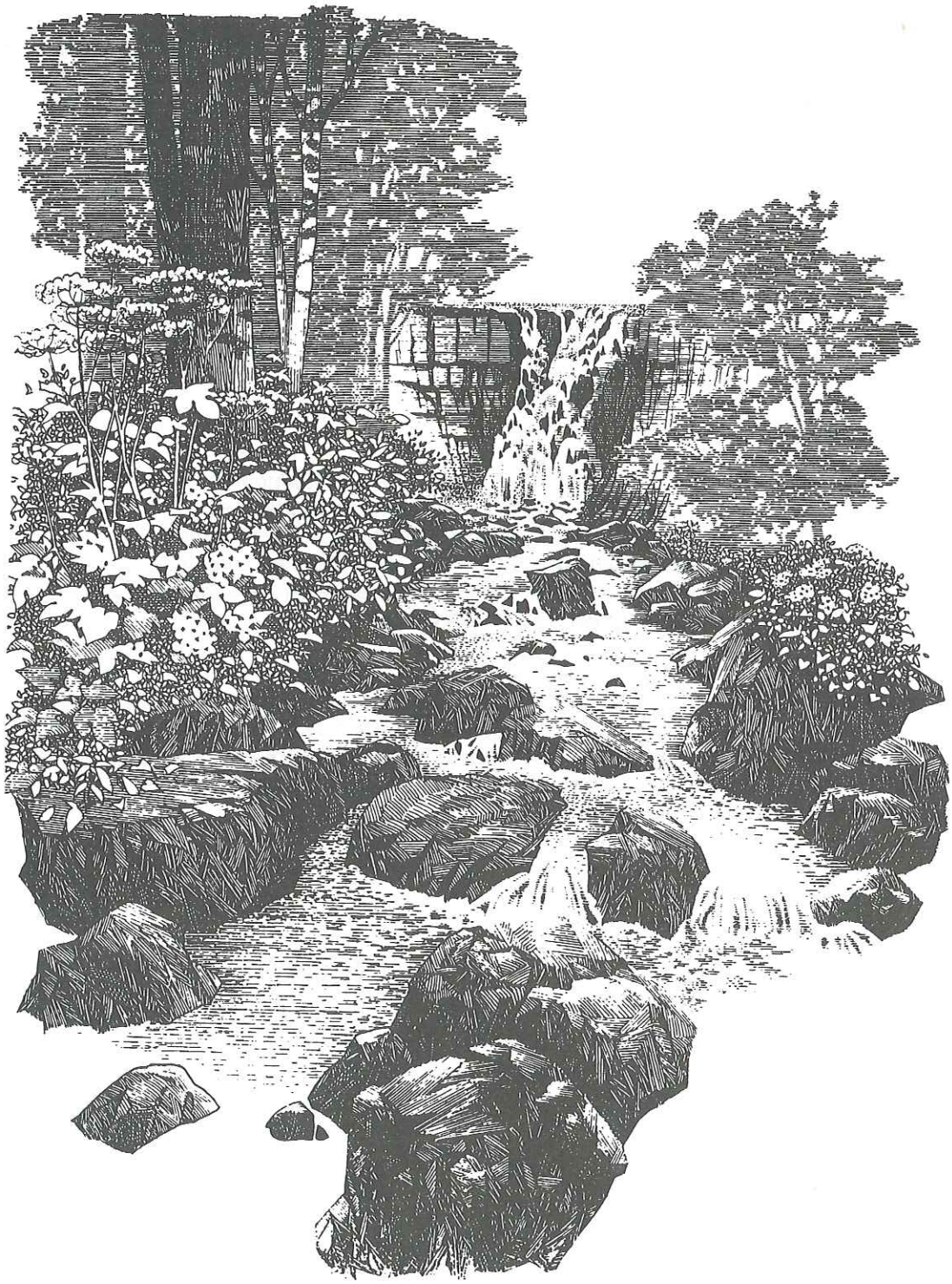
Comparison of First Decade Plan and Revised Yields Estimates

Timber Productivity Class	Treatment Type	Average Age	Proportion of Total Acres Scheduled First Decade (fr FORPLAN VI)	Forest Plan Yield Table Volume/ Acre (MBF)	Proportion of Total Acres Harvested 1988-1991 (fr TSMRS)	Average Volume/ Acre from TSMRS (MBF)
3	CC	134	.24	31.7	.18	26.3
	SW	141	.20	20.2	.14	17.0
4	CC	126	.20	31.0	.28	23.5
	SW	123	.29	17.5	.22	17.6
5/6	CC	127	.00	17.7	.09	17.6
	SW	127	.07	10.6	.09	10.6
Weighted by Harvest Proportion			1.00	23.7	1.00	19.2

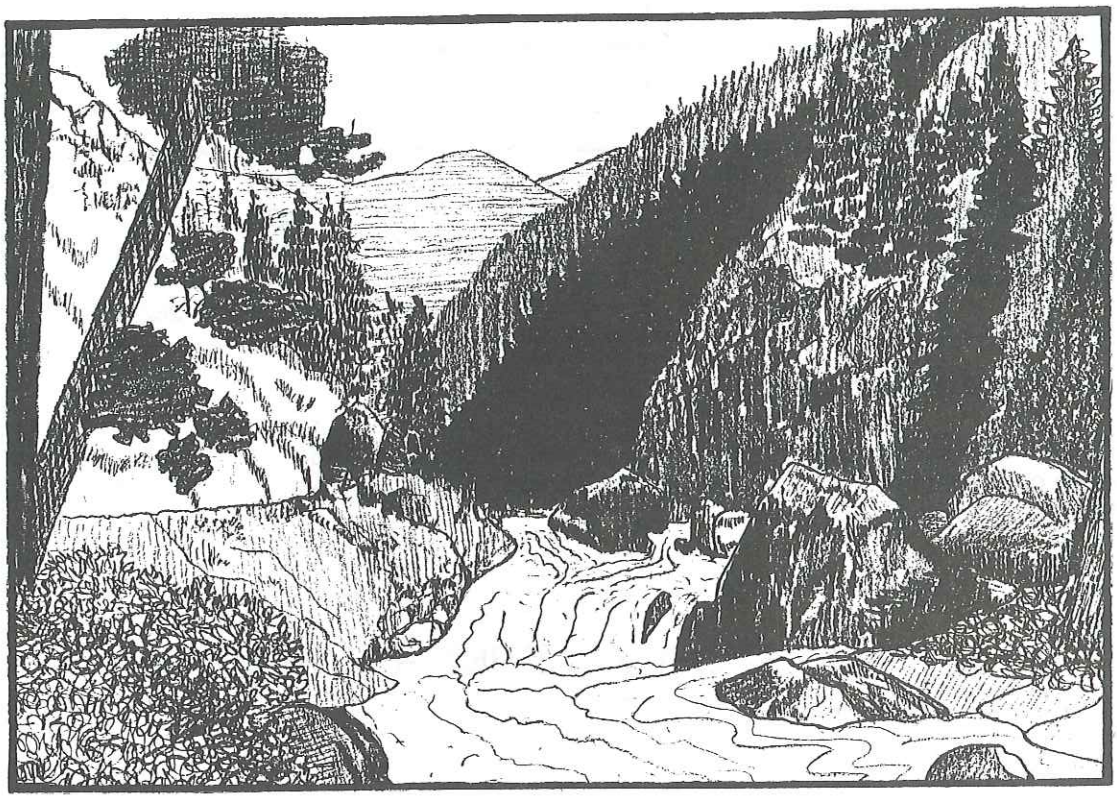
Evaluation of Monitoring Results:

These figures, 23.7 vs. 19.2 MBF/acre, compare closely with the 1991 Monitoring Report (page 53) for Sold Net Volume/Acre (22.6 vs. 17.0 MBF/acre). If these TSMRS volumes were further reduced by 1-2 MBF/acre to account for volume in reserve tree and snag replacement prescriptions, the weighted average volume per acre (17.2 MBF) for acres harvested would about equal that (17.0 MBF) for acres sold. These factors alone would indicate a projected timber output 22 percent lower than the Plan allowable sale quantity (80.7 MMBF vs. 103 MMBF of green sawlogs per year for the first decade).

It is unlikely that an 80 MMBF output could be achieved for very many years. As three-fourths or more of acres harvested are confined to MA 12 (as is the trend), it will be difficult to achieve Forest Plan standards and guidelines in these areas. Furthermore, the proportion of intermediate harvest and reserve prescriptions will increase, causing a reduction in volume sold per acre. Also, the amount of MA 12, as evidenced by results of NEPA analysis, is less than predicted by the Plan model (see Section D, "Site-Specific Verification of Management Area Assignments").



SOIL AND WATER



Item 1j:	Soil and Water Rehabilitation and Improvements
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If the Forest did not achieve its assigned target for the fiscal year.

Discussion:

Soil and water rehabilitation and improvement activities include the revegetation of disturbed areas such as roads, mines, stream banks and trails. Improvements can also include riparian pasture fencing, road obliteration, road drainage improvement and stream channel stability work.

Monitoring Results:

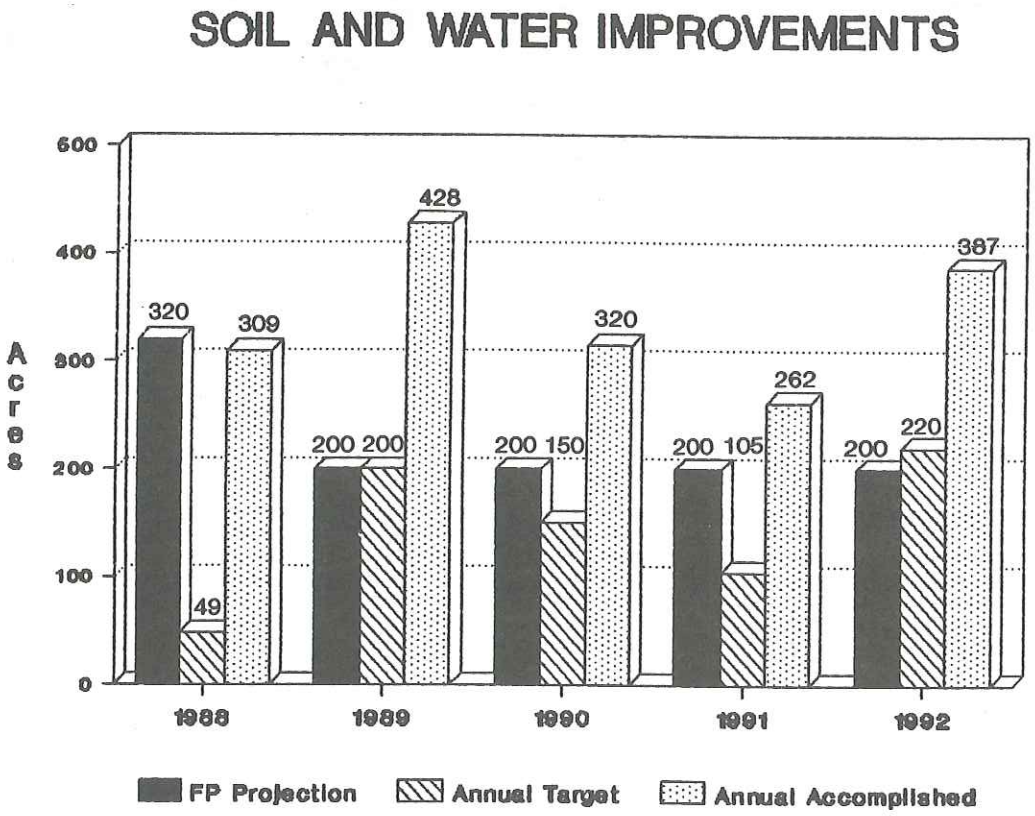
The assigned target for soil and water improvements using appropriated funds in Fiscal Year 1992 was 220 acres. The Forest Plan goal is 200 acres per year.

SOIL AND WATER IMPROVEMENTS ACCOMPLISHED IN FISCAL YEARS 1988-1992

	Acres Improved				
Funding Source	1988	1989	1990	1991	1992
Appropriated Soil and Water	74	131	159	120	214
Knutson-Vandenberg Act (KV)	52	93	82	85	79
Road Maintenance	113	57	76	25	82
Other Funding Sources	70	147	3	32	12
TOTAL	309	428	320	262	387

Evaluation of Monitoring Results:

In FY 92, the Forest accepted some additional improvement targets at mid-year and was able to exceed the Forest Plan goals for improvement using appropriated funds. This was further exceeded by accomplishing work through other funding sources.



Item 2g:	Impacts of Management Activities on Soils
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If more than 20 percent of an activity area has sustained significant or permanent impairment of the productivity of the land.

Discussion:

Soil monitoring is conducted during project planning, implementation, and following completion of management activities to determine how closely Forest Plan management standards are being followed.

Implementation Monitoring determines if the potential for soil damage was evaluated during project development and if designated best management practices (BMPs) were applied.

Effectiveness Monitoring determines if the implemented practices were adequate to (1) maintain 80 percent of an activity area in a productive condition without detrimental compaction, displacement of surface soil, or puddling (loss of soil structure); and (2) minimize erosion and sloughing on road cuts and erosion on other activity areas.

Validation Monitoring determines whether the data, assumptions, and coefficients used in soil and vegetation response models are correct.

Monitoring Results:

Implementation Monitoring: Implementation monitoring was conducted during the course of Forestwide and District field reviews. Field reviews were used to develop better recognition of soil and site characteristics that affect productivity, slope stability and tentative suitability.

Most Environmental Analyses completed in 1992 used soil information to describe soil limitations and opportunities within assessment areas. This information was used to assist in project design and development of specific mitigation measures. Soil and riparian inventories were used to help identify areas of wet soils susceptible to displacement and puddling, and specific mitigation measures were prescribed for these areas.

Soil information was used in the determination of tentative suitability, and was consistently used to predict sediment production. Predicted sediment was used to help select number, location, and scheduling of activity areas.

Implementation monitoring identified the following issues that affect soil productivity:

- Water bars and other erosion control measures were generally implemented as specified.
- Continued emphasis on incorporating district watershed and soil productivity concerns into road construction and reconstruction planning and implementation is warranted.
- Site-specific road designs well fitted to the land to minimize disturbed area and sediment production seemed to be most successfully implemented where this close coordination occurs.

Effectiveness Monitoring: Quantitative soil effectiveness monitoring was conducted on roadside revegetation measures for erosion control. Sampling in 1991 was stratified by landform, soil parent material groups, aspect, and habitat type group of adjacent hillslopes. Results from analysis in 1992 indicate:

- Cattle impacts tended to be slight in most areas, but locally important, and more impactive on sites supporting palatable nonnative grasses, and loose, sandy soils.
- On road cuts 6 years old or more, cover provided by the forest seed mix is usually poor. Successful long-term revegetation depends on colonization by native forbs, grasses, shrubs, and trees. Plant cover differs in amount and species composition mostly by climate as indexed by habitat type, and by geologic parent material. Longer, steeper cutslopes support less cover than short, gentle ones. Shade afforded by adjacent hillslopes or forest vegetation can be important to revegetation success.
- Cut and fill slopes in decomposed granitics are the most difficult to revegetate successfully, even on short, relatively gentle slopes.

Effects on soil productivity of repeated summer burning on elk winter range were monitored as part of a cost-shared program with the University of Idaho, with financial support from the Rocky Mountain Elk Foundation (see 1990 Annual Monitoring Report, page 26). Laboratory analysis is complete for organic matter and preliminary statistical analysis indicates that:

- Ceanothus increased after summer burning, but was relatively little affected by aspect or elevation of the burn area. Scouler willow response was affected by elevation and age since burn.
- Elk use was highly correlated with abundance of ceanothus and Scouler willow. White-tail deer use was higher in areas of higher tree cover, on older burns.
- Total soil organic matter was decreased by burning and continued to accumulate throughout the 100 years included in sampling. Organic matter levels did not vary significantly by aspect or elevation.
- Soil litter showed the same trend but had increased to preburn levels by 80 years. Recovery of preburn levels of soil litter occurred faster on north aspects than south.

Informal qualitative monitoring on Forest reviews evaluated effectiveness of road design measures in reducing disturbed area, and minimizing sediment production and delivery through use of closely fitted designs using terrain and vegetation features to develop appropriate design measures.

Qualitative monitoring of road cut and fill revegetation suggests the following:

- Wet, slumpy road cuts are not well adapted to the standard Forest seed mix. Site-specific prescriptions for alder, willow, or other adapted, deep rooted species would be more successful.
- Revegetation using the standard forest mix on high elevation sites was not often successful, except for annual rye for temporary stabilization. Adapted species are suggested.
- Cursory monitoring of recent road construction indicated that certain segments needed followup treatment to rock eroding ditches, reseed, plant, fertilize, or otherwise attain specified levels of mitigation.

Quantitative soil effectiveness monitoring was conducted on one timber sale. One harvest unit had been tractor logged over most of the unit and grapple piled. The bottom part of the unit had been cable logged and grapple piled. Total soil damage (compacted, displaced, puddled, or eroded) averaged 37 percent of the area in the tractor unit and 18 percent in the cable and grapple part of the unit. Overall soil damage averaged 32 percent and violated Forest Plan standards which specify that not more than 20 percent of an activity area be detrimentally impacted. Impacts of unrestricted tractor skidding appeared to be responsible for most of the soil disturbance, while grapple piling, even on slopes of 35 to 40 percent, did not add appreciably to soil disturbance. Adherence to designated skid trails or cable systems would have reduced soil impacts.

Qualitative evaluation of a cut-to-length system operating on private land suggests that this harvesting method may reduce soil impacts by reducing the amount of land in roads, and restricting degree of soil compaction and rutting within units. Units scheduled for harvest in 1993 will be monitored, if feasible, to evaluate soil impacts more quantitatively.

Qualitative evaluation of a "slash buster" used after timber harvest to prepare sites for planting indicate that soil disturbance could be reduced by using this method where appropriate, instead of traditional dozer piling. Quantitative monitoring is suggested for 1993.

Qualitative monitoring on one timber sale indicated that large organic debris may have been insufficiently provided for in harvest and site preparation prescriptions. Provision for large organic debris for maintenance of site productivity was not addressed in Forest Plan standards. Although generally prescribed for in recent sales, there is a need to review these prescriptions and assure that harvest and site preparation methods are compatible with them, and that most recent research is being applied. Sampling of natural disturbance regimes scheduled for 1993 should help add to our understanding of amounts and distribution of large organic debris.

Qualitative review of wildfires in 1992 indicated that incidence and extent of severe fire may be increasing, possibly due to recent drought or due to accumulated fuels as a consequence of a long history of fire suppression. Severe fires can increase risk of erosion and loss of soil productivity.

Tentative suitability analysis is the process of identifying Forest lands biologically capable, administratively available, and technically suitable. Tentatively suitable forest lands are those where timber harvest can occur without irreversible damage to soils, productivity, or watershed conditions; for which there is reasonable assurance that such lands can be adequately restocked; and for which there is management direction that indicates that timber production is an appropriate use of that area. The Forest plan assumed 245,323 acres nonforest lands not capable of timber production. An additional 78,906 acres do not have assurance of adequate restocking. Together, these two classes are 23 percent of the land base available for timber production. No lands were deemed unsuitable on the basis of irreversible soil and watershed damage. More recent but incomplete information from stand-specific (not necessarily field verified) District suitability assignments, is 5.3 percent nonforest, 2 percent unsuitable due to irreversible resource damage, 2.5 percent not having adequate assurance of restocking, and 1 percent incapable of producing industrial wood. Together, these are 10.8 of the available land base. The discrepancy may be due primarily to where evaluation has occurred: areas of nonforest grassland and high elevation or very droughty forest types where restocking is difficult have been little examined. There appears to be much inconsistency in how criteria for suitability are applied, and the degree to which data bases reflect current assignments. Many stands have been assigned no suitability code yet.

Validation Monitoring: Two validation monitoring projects were initiated on the Forest in 1992.

A Regionwide sampling program, designed to describe soil, vegetation, and terrain by broadscale sampling units for correlation with spectral imagery, included sampling on the Nez Perce, Clearwater and Idaho Panhandle National Forests. Sampling in 1993 will focus on natural disturbance regimes to describe seral vegetation, soils, spatial attributes, and fire history on sample sites, many in wilderness. The vegetation classification can be applied to broadscale vegetation analysis, and site-specific information can be used to design management practices that better fit within the range of natural variability.

Mapping began in 1992 to describe broadscale land units for comparative analysis of stream system composition, channel substrate condition, and response by geology, landform, and stream channel type. This stratification will be used to help characterize natural ranges in kind, rates, and geomorphic sources of substrate materials, and better describe changes in stream substrate in response to management.

Evaluation of Monitoring Results:

Improved use of soil information in project analysis and design, and better understanding and mitigation of soil impacts associated with road construction, logging, and site preparation were two needs identified in the Forest Monitoring Report of 1989, and continue to merit increased emphasis.

Improved coordination and greater attention to site-specific terrain and vegetation has resulted in roads better fitted to the landscape, with less disturbed area and less erosion. Making revegetation measures and followup treatments equally site-specific would add to their effectiveness. Projects funded through ecosystem management in 1993 will focus attention on some of these needs.

Use of soil information in integrated resource analysis and project design has improved on most Districts. Refinements of woody debris prescriptions should be sought to better provide for the function of this material.

Since 1987, monitoring of soil impacts indicates that tractor logging with dozer piling consistently violates Forest Plan standards: percent of the activity area detrimentally impacted ranged from 33 to 38 percent on the three units sampled. One District has moved completely away from dozer piling. Dozer piling on most neighboring Forests has declined even more. Grapple piling, when combined with confinement of tractors to preplanned designated skid trails, will meet standards, averaging around 18 percent area detrimentally impacted.

New harvest systems and new combinations of existing systems are being applied on a trial basis, and opportunities to evaluate their impacts on the soil resource will be sought.

Fuel hazard and fire risk assessment procedures scheduled for development in 1993 and 1994 will help assess the risk of soil impacts associated with increased severe fire, and indicate areas needing preventive fuel treatment.

Soil impacts due to repeated prescribed burning are potentially significant. Additional monitoring is needed to evaluate these impacts against the natural range of variability of soil properties operating in natural fire regimes.

Consistently determined suitability assignments need to be recorded in the timber stand data base, to provide better information for the 5-year review, and to get better estimates of acres available for treatment and timber yields.

Item 2h:	**Impacts of Management Activities on Water Quality**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If violations of Idaho State Water Quality Standards were detected or if Forest Plan fish/water quality objectives were not met within acceptable time frames.

Monitoring Results:

Effectiveness and Validation Monitoring: The Forest collected water quality data at nine stations (Rapid, Little Slate, Johns, Upper Red, South Fork Red, Trapper, Wall, South Fork Clearwater, Selway, Main Horse, and East Fork Horse). Variables measured varied between stations, but included discharge, suspended sediment, bedload sediment, water temperature, and conductivity. The Forest's Soil, Air and Water Program also maintained seven precipitation storage gages, five precipitation recording gages, five hygrothermographs and two snow courses. Additional weather monitoring is conducted by fire personnel.

A report entitled "Hydrologic Data Summary and Monitoring Analysis - Water Year 1991" was issued. This report summarizes streamflow and climatic data collected on the Forest during Water Year 1991 (October 1, 1990 through September 30, 1991). It also provided a more detailed analysis of water quality and related monitoring results than the annual Forest Plan monitoring report. A similar report is planned for Water Year 1992. These reports are available through the Forest Hydrologist at Forest Headquarters.

A cooperative monitoring study was continued by the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ) on Big and Little Elk Creeks. These are Stream Segments of Concern under the Idaho Antidegradation Policy. The key objectives are to evaluate effectiveness of Best Management Practices and to determine beneficial use status. The primary activity being assessed are the proposed Rumpus/ Lightning Timber Sales, but other activities are also ongoing in the watersheds.

The study is headed by the DEQ with cooperation by the Forest and the Cottonwood Area Office of the Bureau of Land Management. The study will be a first local application of DEQ's statewide monitoring protocols. Key parameters to be measured include cobble embeddedness, percent surface fines, interstitial space index (free space between rocks in the channel), fish populations, macroinvertebrates, vegetation indicators, pool-riffle ratio, channel profiles and thalweg profile (depth along the deepest part of the channel). Preliminary results of the first two years of monitoring were reported by the DEQ at the Third Annual Nonpoint Source Monitoring Results Workshop, held in Boise in January, 1993.

Stream surveys are done routinely to determine existing status of stream condition, fish habitat and fish species present. These surveys have resulted in new information which changes previous assumptions in some streams. Examples include refined data about the condition of a stream relative to its Forest Plan fish/water quality objective or a revised list of species known to be present in the stream.

Evaluation of Monitoring Results:

Analysis of sediment yield data from the gaged water quality monitoring stations is ongoing. Preliminary analysis including partial records for five of eight gages was done in 1991. A further analysis and expansion of this work is planned as a graduate student thesis project, in part funded by the Forest.

As a result of the Forest's ongoing stream survey program, it has been determined that existing conditions and Forest Plan fish/water quality objectives and associated sediment yield and entry frequency guidelines need to be updated in several watersheds. For example a stream that was thought to contain only steelhead and resident fish (80 percent fish/water quality objective stream) has been discoverd to also contain chinook salmon. To properly manage for the chinook salmon, the fish/water quality objective for the stream needs to be changed from 80 percent to 90 percent. The fish/water quality objectives and other items mentioned above are listed in Appendix A of the Forest Plan. The Appendix was last amended in March 1989.

SPECIAL STUDY:

Comparison of Selected Water Quality Variables In the Selway, Lochsa, and South Fork Clearwater Rivers

The Nez Perce and Clearwater National Forests have sampled suspended sediment and turbidity in the Selway, Lochsa, and South Fork Clearwater Rivers during the spring runoff period since 1988. Collection of summer water temperature data began in 1991. The objectives of these studies are to compare water quality conditions in the three rivers and to provide information which may be useful for main stem river cumulative effects analyses.

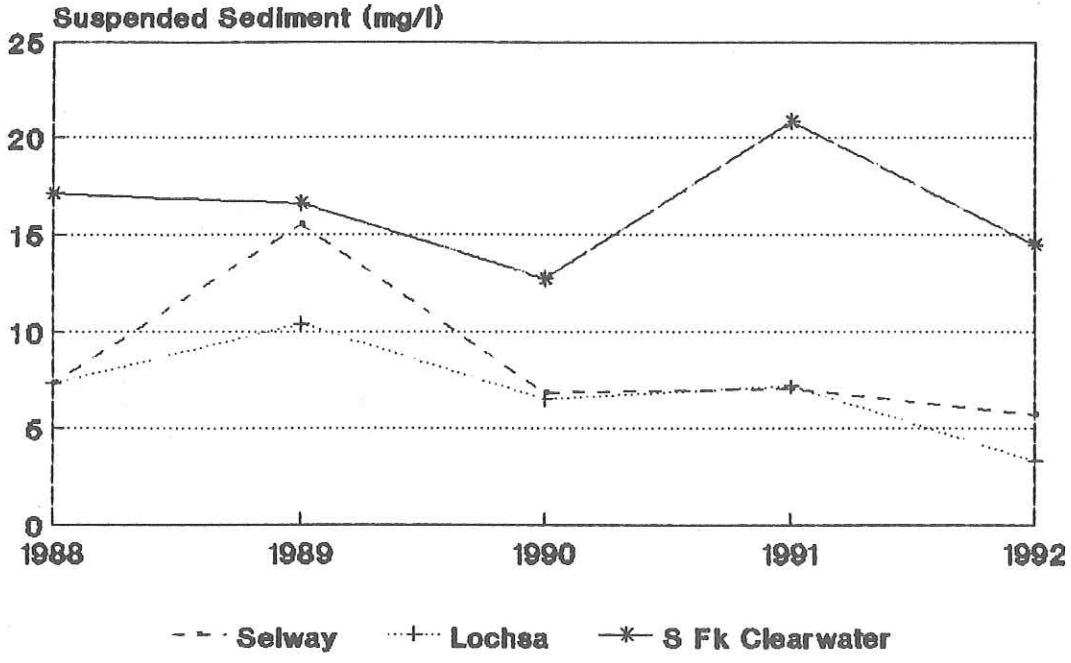
The three watersheds being sampled are 1910, 1180, and 830 square miles in area, respectively. Mean annual discharges are 3760, 2860, and 8770 cubic feet per second. Watershed geology is about 90 percent Idaho Batholith and 10 percent metasediments in the Selway and Lochsa Rivers. The South Fork Clearwater is about 40 percent Idaho Batholith, 39 percent metasediments, 16 percent miscellaneous igneous, and 5 percent soft sediments. Disturbance history varies considerably by watershed, with the Selway being the least developed and the South Fork Clearwater the most.

Springtime suspended sediment concentrations are virtually identical in the Selway and Lochsa Rivers, with a 6-year mean of 8.6 and 7.3 milligrams per liter, respectively. Concentrations were about twice that high in the South Fork Clearwater River, with a 6-year mean of 16.7 mg/l. Inadequate sample numbers were collected to discern annual trends among the three rivers. A positive, but poor, relationship was found to exist between turbidity and suspended sediment concentration.

Summer water temperature monitoring was conducted using electronic recording thermographs. Equipment and deployment problems resulted in only brief periods data are available simultaneously for all three sites. During a 10-day period in mid-August 1991, the means of maximum daily temperatures for the Selway and Lochsa were 22.7 and 22.2 degrees Centigrade. During the same period, maxima in the South Fork Clearwater averaged 19.9 C. Results were similar in 1992. Addition of a monitoring site near the mouth of the South Fork Clearwater showed significant temperature increases in a downstream direction.

The 5-year study showed the measured variables to have a clear and consistent relationship among the three rivers. Since data collection of this type is very expensive and relatively few samples are obtainable annually, it is proposed that the sediment portion of this study be curtailed for about 5 years. At that time, it may be valid to restart the study to determine if the sediment relationships among the three rivers has changed.

Suspended Sediment vs Year
1988 - 1992



SPECIAL STUDY:

Forestwide Watershed Condition Analysis

Introduction: This analysis is a broad level ("coarse filter") assessment of the condition of watersheds on the Nez Perce National Forest. It was prepared in response to a Regional Forester request for a Regionwide assessment of watershed condition (2530 letter dated June 8, 1992).

Results of this analysis will provide background data for the 5-year review of the Forest Plan and help to determine whether Forest Plan fish/water quality objectives are achievable. This information may also provide one basis for understanding potential conflicts with other resource outputs. This process can also assist in prioritization of watershed improvement needs.

This analysis incorporates readily available information and includes assumptions on a Forestwide basis. It is not intended to replace project level cumulative effects analyses, but to examine watershed health relative to Forest Plan objectives. The strategy used in the analysis was to examine watershed sensitivity and disturbance along with conditions in the channel to place watersheds into categories of concern. The analysis uses a combination of existing data sources and professional judgment/knowledge to classify watershed condition into one of the following three categories:

L = Watershed is of low concern/priority for watershed condition. This generally means that the stream is at or above Forest Plan objectives and the land-disturbing activities or recent natural disturbances have not seriously affected watershed condition.

M = Watershed is of moderate concern/priority for watershed condition. This generally means that the stream is near or slightly below Forest Plan objectives. Land-disturbing activities or recent natural disturbances have affected watershed condition, but the impact is moderate.

H = Watershed is of high concern/priority for watershed condition. This generally means that the stream is significantly below Forest Plan objectives. Land-disturbing activities or recent natural disturbances have seriously affected watershed condition.

Methods: Major watersheds on the Forest were delineated, excluding the Hells Canyon National Recreation Area, which is managed by the Wallowa Whitman National Forest. Watersheds range in size from 1,597 acres to 203,508 acres. Nested watersheds (secondary watersheds) were delineated within larger watersheds which have a wide range of conditions and activities in order to eliminate "buffering effects." Face drainages and smaller tributaries to the major rivers (Selway, South Fork Clearwater, and Salmon) were not included in this analysis. Only National Forest System lands were used in this analysis. Of the 2.2 million acres on the Nez Perce National Forest, over 1.8 million were included in this analysis. Cumulative effects on main stem rivers are beyond the scope of this analysis and were not considered.

Watershed sensitivity was simplified to a function of the surface erosion potential of the watershed landscape and the ability of its channel network to transport sediment. A watershed with highly erosive soil in a high-energy transport zone, is less sensitive than the same watershed in a low-energy depositional zone.

Several sources were used to obtain information about the disturbance in a watershed. Road, harvest, and fire data were obtained for each watershed from the Nez Perce Watershed Database. This information is qualified by the fact that the database is in various stages of currency depending on how recently updates were done for a particular watershed. Also, fire is poorly tracked in the database in that it presently contains only human-caused fires. It is assumed that disturbance indicator information from the database is a conservative amount.

Under the Forest Plan, fish/water quality objectives are stipulated which outline the desired channel conditions for fish habitat and water quality. The objectives are expressed in terms of percent of natural potential

of the watershed or stream to produce fish and water quality. The Forest Plan objective for the main stem of each watershed was compared to the estimated current condition of that channel. Nine parameters (cobble embeddedness, temperature, bank cover, bank stability, instream cover, pool quality, pool:riffle ratio, potential debris, and active debris) are used to represent the fish habitat condition. Current condition levels were estimated using the most recent available data, which could include analysis of stream surveys, visual observation of the stream, or, in the absence of newer data, the level estimated in Appendix A of the Forest Plan. Watersheds were rated as outlined in the matrix below:

FOREST PLAN CONDITION

Plan Objective	Current Condition		
100 percent	90-100	71-89	<=70
90 percent	90-100	71-89	<=70
80 percent	80-100	61-79	<=60
70 percent	70-100	51-69	<=50
Concern Rating:	Low	Mod	High

For example, if the Forest Plan objective for a watershed is 80 percent and the current condition for that watershed is at 65 percent, the watershed is considered in moderate condition. These categories were developed using the same low, moderate, and high concern definitions used for the overall watershed condition. District technical staff were also asked to rate the overall condition of each watershed based on these same concern categories outlined for this watershed condition analysis.

Watershed sensitivity, disturbance and condition indicators were combined to determine an overall watershed condition. This was done using a point system to systematically classify each of the watersheds into one of the three watershed condition categories.

The results of the point system watershed condition rating were verified by comparison to the District specialists' initial call on overall watershed condition, review by the Forest Hydrologist, and followup review by technical staffs on each District. In most cases, the point system outlined above placed the watersheds in the same condition class as the professional judgment of the Forest's watershed and fisheries personnel. In approximately 15 percent of cases, the watershed condition determination resulting from the process outlined above was modified, based on additional data and professional judgment. The watersheds which were changed, and the reasoning, are specified in the watershed condition datatable which follows.

Results/Implications: The final watershed condition determination is presented in the table on pages 89 and 90 entitled "Watershed Condition" and on the map found on page 88. A color-coded map displaying these results is on file with the Forest. A summary of the results is presented below:

Watershed Condition	% Analysis Area	% Analysis Area (Non-Wilderness)
Low	53 %	33 %
Moderate	25 %	34 %
High	22 %	33 %

The coarse filter watershed condition analysis is a general Forestwide assessment appropriately used for broad scale applications. It is not intended for project-level analysis and is not expected to be completely accurate when scrutinized by individual watersheds. It does provide a picture of how constrained future resource management options may be based on present condition of watersheds. It also provides a starting point for prioritization of rehabilitation needs.

It is necessary to understand how wilderness watershed condition was interpreted in this analysis. The current thinking on the Forest is that wilderness watersheds are managed primarily for natural condition as

opposed to some particular level of natural potential. As a result, wilderness watersheds will invariably receive a low concern or "green" condition unless significantly disturbed by human activity. This was done with full recognition of the fact that watershed condition under natural influences will change over time.

The ability to meet Forest Plan fisheries objectives is closely linked to existing watershed condition. This coarse filter analysis of watershed conditions has several implications for the fisheries program and the attainment of Forest Plan objectives. The implications lie in four main areas: upward trend commitments, management for threatened and endangered species, fisheries program priorities, and budget and personnel requirements.

In the Nez Perce Forest Plan a number of streams are listed as being below their fisheries habitat quality objective. In some below-objective watersheds, improvement projects began in the early 1980s and work continues in these and other watersheds. These projects include improvements such as the placement of log weirs, large woody debris, and bank stabilization structures. However, this coarse filter watershed analysis shows that some of these watersheds are in the "high concern" category. These watersheds are not at their objective, even though they have received habitat improvements, for one or more of the following reasons:

1) The historic upslope sources of the problems were not adequately addressed;

2) The original disturbance was severe and recovery to Plan levels will take a long (decades) period of time; and

3) Continued disturbance which exacerbates the problem is still occurring.

Determinations made during the analysis of ongoing Forest activities, conducted to meet Section 7 requirements of the Endangered Species Act for Snake River chinook salmon, were related to conditions in the watershed. It is notable that 65 percent of all "likely to adversely affect" determinations made were in "high concern" watersheds, while only one project was given a "likely to adversely affect" determination in a "low concern" watershed. Also, 55 percent of non-wilderness Forest watersheds that contain chinook (including Clearwater River stock which are not listed under ESA) are in the "high concern" category, 12 percent are in the "moderate concern" category and 33 percent are "low concern category. Obviously, a conservation strategy which ensures that Forest activities are not adversely affecting chinook will involve plans to improve conditions in the "high and moderate concern" watersheds. Continued activities in these watersheds will be warranted only if concurrent upward trends in habitat capacity can be assured.

The priorities of the fisheries program have been profoundly affected by the listing of the chinook salmon as threatened. The bull trout has been petitioned for listing and will affect an even greater portion of land on the Forest. The results of the coarse filter watershed condition analysis suggests that 80 percent of the Bull trout habitat is in "high concern" watersheds (excluding wilderness). Overall, this analysis has reinforced the Forest's knowledge of the connections between watershed condition and fisheries habitat and will provide a basis for directing priorities and improvement efforts.

Planned outyear timber sales are also affected by watershed condition. In addition to watersheds placed in the three condition classes (H, M and L), the timber analysis considered implications of the unevaluated river face drainages. The effect on future development activities in these face drainages would be similar to that of the "L" watersheds. Most of the outyear timber sales planned to sell in FY93 - FY97 have not yet passed the National Environmental Policy Act (NEPA) analysis stage of planning. Their inclusion in the timber sale database is based on cursory position statement analysis.

In order to assess the probable outcome of outyear timber sales as they pass through gate 2, a "Planned Timber Sale Overlay" has been developed. Superimposing this timber overlay with the color coded watershed condition overlay should provide the land manager with an "early glimpse" of the probable outcome of the planned timber sales. Sales in the yellow "M" watersheds could potentially suffer some reduced volume as a result of decreased roading. Sales located in the red "H" watersheds will most certainly suffer reduced volume and may even be dropped from the program. These sales in "H" watersheds should be taken through the gate 1 National Forest Management Act (NFMA) analysis and position statement feasibility study as soon

as possible to determine their "go" or "no-go" status. Sales located in the "M" and "H" watersheds should be closely examined to determine if helicopter yarding or cut-to-length forwarding could be used to reduce roading requirements while still maintaining planned timber outputs. The analysis covers only Supervisor's Office authority sales (greater than 2 million board feet)

FY 93 - FY 97 Sale Summary

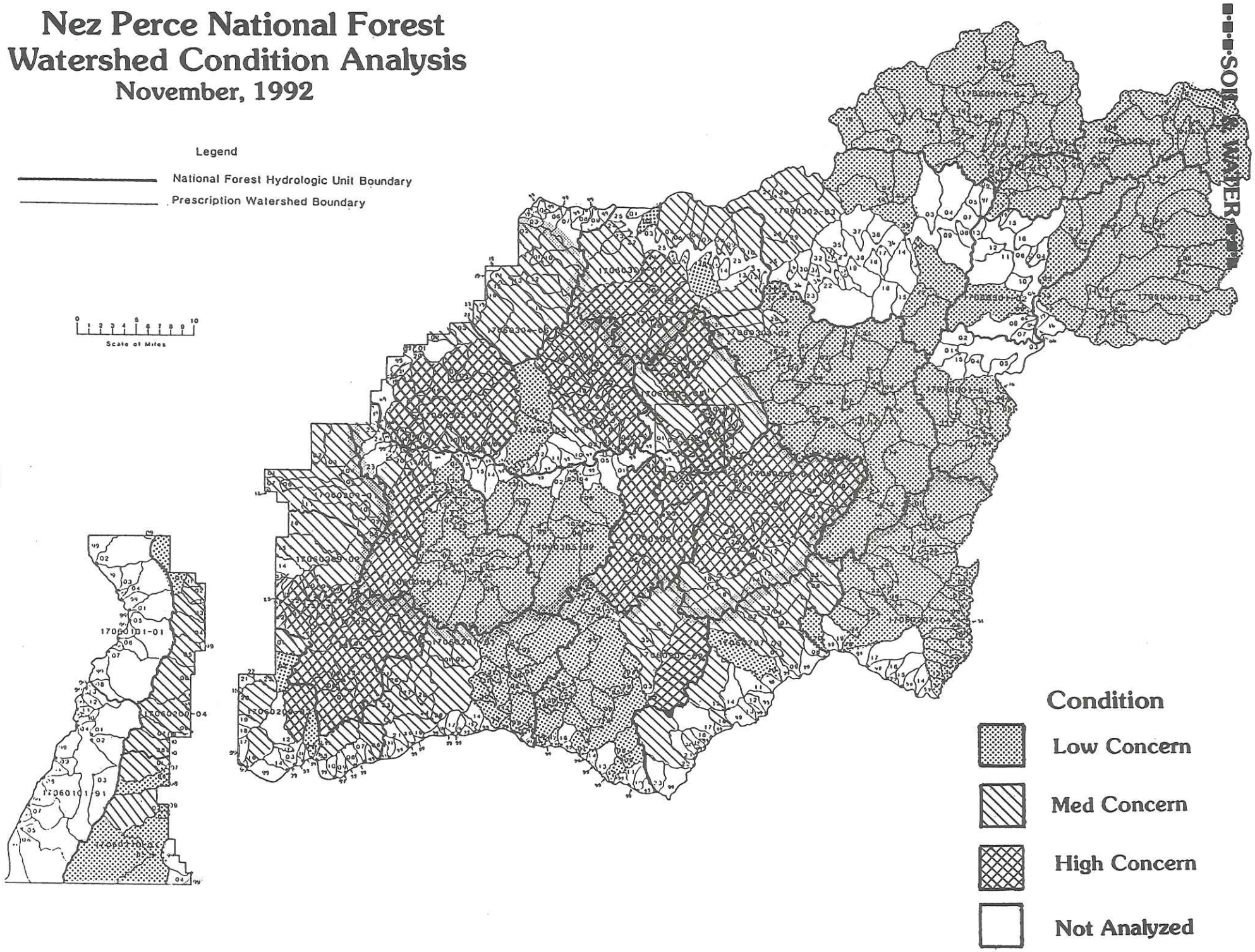
	Number of Sales	Planned Volume (MBF)	Percent of Total Volume
Low Concern Watersheds and Face Drainages	10	68,300	21%
Medium Concern Watersheds	22	157,100	48%
High Concern Watersheds	15	99,400	31%

Range management options are also affected by watershed condition. To assess this implication, the primary impact considered was the effect of grazing on riparian condition. Nine out of 39 allotments showed riparian conflicts in watersheds of high concern. These will receive high priority for review and Allotment Management Plan revision if necessary. In these allotments, it is highly probable that the range use, along with other resources, significantly contributes to the overall watershed condition, as well as riparian.

There are 16 allotments that have riparian conflicts, but are in watersheds of low and moderate concern. The focus here for the range resource will be to concentrate on the direct relationship between the range practices and the riparian needs.

The watershed condition analysis will be a useful tool to display the effect of existing watershed condition on implementation of the Forest Plan and resource outputs such as fisheries production, water quality, timber and range. It is also expected that this analysis will be used in the fifth year review of the Forest Plan and in the scoping phase of NEPA project analysis. Although direct comparisons are difficult, it is evident that watershed conditions on the Forest are not as favorable as assumed in the Forest Plan. The results of this analysis amplify the case for increased program emphasis on watershed and fisheries habitat management, including inventory, detailed assessment, and improvement.

Nez Perce National Forest
Watershed Condition Analysis
November, 1992



Watershed Condition Table

WS NUMBER	WS NAME	WS ACRES	WS SENS	RANGE	MINER	ROADS	HRVST	OTHER	RD DEN	% DIST	DISTRICT	FP COND	PTS/COND	ADJUSTMENTS	COND
17060207-01-13	SHEEP CREEK	32,974	L	I	S	I	I	S	L	L	L	L	2/L	OK	L
17060207-01-19	WIND RIVER	41,347	M	S	S	S	S	S	L	L	L	L	7/M	OK	M
17060207-01-24	MEADOW CREEK (D1)	17,892	H	S	S	S	S	S	M	L	M	M	11/H	- Low % dist, Florence Pond	M
17060207-02-07	CROOKED CREEK	84,483	M	I	S	S	I	S	L	L	L	L	5/L	OK	L
17060207-02-02	UPPER CROOKED CREEK	17,471	M	I	S	S	I	S	M	L	M	H	8/M	+ Dredge mine impacts	H
17060207-02-03	BIG CREEK	18,004	M	S	S	S	I	S	L	L	M	M	7/M	OK	M
17060207-02-12	INDIAN CREEK	5,407	M	I	I	I	I	I	L	L	L	L	2/L	OK	L
17060207-02-18	BULL CREEK	9,774	M	I	I	I	I	S	L	L	-	M	4/L	OK	L
17060207-03-09	BIG MALLARD CREEK	36,530	M	S	I	I	I	S	L	L	M	H	6/M	OK	M
17060297-03-10	LITTLE MALLARD CREEK	8,215	M	I	S	I	I	I	L	L	L	H	5/L	OK	L
17060207-03-16	RHETT CREEK	12,348	M	I	S	I	I	I	L	L	L	H	5/L	+ Mining impacts	M
17060207-03-22	JERSEY CREEK	10,001	L	I	I	S	S	I	L	H	L	H	6/M	OK	M
17060207-04-18	BARGAMIN CREEK	69,989	M	I	I	I	I	I	L	L	-	L	2/L	OK	L
17060207-04-20	MYERS CREEK	3,204	L	I	I	I	I	S	L	L	L	L	1/L	OK	L
17060207-75-31	SABE CREEK	19,254	M	I	I	I	I	S	L	L	-	-	3/L	OK	L
17060207-76	BIG SQUAW CREEK	13,523	M	I	I	I	I	I	L	L	-	-	2/L	OK	L
17060209-01-01	WHITE BIRD CREEK	44,101	L	S	I	S	S	I	M	H	-	L	6/M	OK	M
17060209-01-01	N.F. WHITE BIRD	21,104	L	S	I	S	S	I	M	H	M	L	6/M	OK	M
17060209-01-07	S.F. WHITE BIRD	22,997	M	S	I	S	S	I	M	H	L	L	8/M	OK	M
17060209-02-12	SLATE CREEK	78,224	H	S	S	S	S	I	M	M	H	M	11/H	OK	H
17060209-02-01	N.F. SLATE CREEK	8,442	L	S	I	S	S	I	M	M	M	M	6/M	OK	M
17060209-02-05	LITTLE SLATE CREEK	36,631	H	S	I	S	S	I	M	M	H	H	11/H	OK	H
17060209-02-15	SKOOKUMCHUCK CREEK	15,322	L	S	S	S	S	I	H	H	-	M	9/M	OK	M
17060209-02-15	S.F. SKOOKUMCHUCK	5,865	L	S	I	S	S	I	M	H	M	M	7/M	OK	M
17060209-02-16	N.F. SKOOKUMCHUCK	9,466	L	S	I	S	S	I	H	H	M	M	8/M	OK	M
17060209-03-01	JOHN DAY CREEK	9,922	M	I	I	S	S	I	M	M	-	L	6/M	OK	M
17060209-03-01	E.F. JOHN DAY	3,624	M	I	I	S	S	I	H	H	M	L	8/M	OK	M
17060209-03-02	MIDDLE FORK JOHN DAY	3,795	M	I	I	S	S	I	L	L	M	L	4/L	OK	L
17060209-03-03	ALLISON CREEK	12,925	M	S	I	S	S	I	M	M	H	H	9/M	+ 1991 flash flood impacts	H
17060209-03-04	VAN CREEK	2,654	M	S	I	I	I	I	M	M	M	L	5/L	OK	L
17060209-03-05	KELLY CREEK	5,241	M	S	S	S	S	S	H	H	M	L	11/H	- High energy channel	M
17060209-03-06	ROBBINS CREEK	3,239	M	S	S	S	S	S	M	M	M	L	9/M	OK	M
17060209-03-16	BERG CREEK	3,891	M	S	I	S	S	I	H	H	M	L	9/M	OK	M
17060209-03-20	FIDDLE CREEK	5,408	M	I	I	S	S	I	H	H	M	L	8/M	OK	M
17060209-04-01	DEER CREEK	3,873	L	S	I	S	I	I	M	M	H	L	4/L	OK	L
17060209-04-03	CHRISTIE CREEK	2,651	L	S	I	S	S	I	H	M	M	L	6/M	OK	M
17060209-04-04	SHERWIN CREEK	3,726	L	S	I	S	S	I	H	M	M	L	6/M	OK	M
17060209-04-05	CHINA CREEK	3,070	L	S	I	S	S	I	M	L	M	M	5/L	+ Recent harvest activities	M
17060209-04-06	COW CREEK	6,947	L	S	I	S	S	I	H	H	M	M	8/M	OK	M
17060209-04-07	KESSLER CREEK	2,210	L	S	S	S	S	I	H	H	M	M	9/M	OK	M
17060209-04-08	S.F. RACE CREEK	4,343	L	S	I	S	S	I	M	M	M	H	7/M	OK	M
17060209-04-09	W.F. RACE CREEK	6,795	L	S	I	S	S	I	M	H	M	M	7/M	OK	M
17060210-01-01	SQUAW CREEK	5,236	L	S	I	S	S	I	M	L	M	H	6/M	OK	M
17060210-01-02	SHINGLE CREEK	7,964	L	S	I	S	S	S	M	M	M	H	8/M	OK	M
17060210-01-03	RAPID RIVER	27,231	L	S	I	I	I	I	L	L	L	L	1/L	OK	L
17060210-01-06	PAPOOSE CREEK	3,125	L	S	I	S	S	I	M	L	M	L	4/L	OK	L
17060301-01-08	RUNNING CREEK	37,172	H	I	I	I	I	I	L	L	L	L	4/L	OK	L
17060301-02-03	PETTIBONE CREEK	20,600	M	I	I	I	I	S	L	L	-	L	3/L	OK	L
17060301-02-09	DITCH CREEK	9,094	M	I	I	I	I	I	L	L	L	L	2/L	OK	L
17060301-03-13	BEAR CREEK	116,390	M	I	I	I	I	S	L	L	L	L	3/L	OK	L
17060302-01-02	JOHNSON CREEK	1,800	M	I	I	S	I	S	L	L	L	L	4/L	OK	L
17060302-01-04	RACKLIFF CREEK	5,426	M	I	I	I	S	S	L	L	M	H	6/M	OK	M
17060302-01-05	NINETEENMILE CREEK	1,989	M	I	I	I	S	S	L	M	H	H	7/M	OK	M
17060302-01-06	SLIDE CREEK	2,381	M	I	I	I	S	S	L	L	M	H	6/M	OK	M
17060302-01-07	BOYD CREEK	3,665	M	S	I	I	S	S	L	L	M	H	7/M	OK	M
17060302-01-08	TWENTYTHREEMILE	1,597	M	I	I	I	S	S	L	L	M	H	6/M	OK	M
17060302-01-10	GLOVER CREEK	5,720	M	I	I	I	S	S	L	L	L	H	6/M	OK	M
17060302-01-12	FALLS CREEK	7,570	M	I	I	I	S	I	M	M	H	H	7/M	OK	M

Watershed Condition Table

WS NUMBER	WS NAME	WS ACRES	WS SENS	RANGE	MINER	ROADS	HRVST	OTHER	RD DEN	% DIST	DISTRICT	FP COND	PTS/COND	ADJUSTMENTS	COND
17060302-01-16	ISLAND CREEK	3,866	M	I	I	I	S	I	M	L	-	M	5/L	OK	L
17060302-01-21	O'HARA CREEK	37,970	H	I	I	S	S	I	M	M	H	H	10/M	+ Mass erosion/channel impacts	H
17060302-01-22	GODDARD CREEK	9,275	H	I	I	S	S	I	M	L	H	H	9/M	OK	M
17060302-01-23	ELK CITY CREEK	1,800	M	I	I	S	S	I	L	M	M	M	6/M	OK	M
17060302-01-24	SWIFTWATER CREEK	3,933	M	I	I	S	S	S	M	M	H	H	9/M	OK	M
17060302-02-01	MEADOW CREEK (D7)	145,238	H	I	I	I	I	S	L	L	L	L	5/L	OK	L
17060302-02-26	LOWER HORSE CREEK	9,597	H	I	I	S	S	S	M	L	-	M	9/M	OK	M
17060302-03-10	MARTEN CREEK	21,018	M	I	I	I	I	I	L	L	-	L	2/L	OK	L
17060302-03-25	GEDNEY CREEK	30,908	H	I	I	I	I	S	L	L	L	H	7/M	OK	M
17060302-03-39	THREE LINKS CREEK	27,431	M	I	I	I	I	S	L	L	-	L	3/L	OK	L
17060302-05-11	MOOSE CREEK	203,508	M	I	I	I	I	S	L	L	-	L	3/L	OK	L
17060302-04-10	N.F. MOOSE CREEK	100,995	M	I	I	I	I	I	L	L	-	L	2/L	OK	L
17060302-05-11	E.F. MOOSE CREEK	94,268	M	I	I	I	I	I	L	L	-	L	2/L	OK	L
17060304-06-02	LITTLE TINKER CREEK	2,864	M	I	I	I	I	S	M	M	M	M	6/M	OK	M
17060304-06-11	CLEAR CREEK	42,099	M	I	I	S	S	S	M	M	H	H	9/M	OK	M
17060304-06-11	CLEAR CREEK (SUB)	19,156	M	I	I	S	S	S	M	H	-	H	10/M	M	M
17060304-06-15	S.F. CLEAR CREEK	16,495	M	I	I	S	S	S	M	M	-	H	9/M	M	M
17060304-06-16	HOODOO CREEK	6,447	M	I	I	S	S	I	H	H	-	M	9/M	M	M
17060305-01-01	JOHNS CREEK	72,150	L	I	I	I	I	I	L	L	L	M	1/L	OK	L
17060305-01-13	TROUT CREEK	4,289	L	I	I	I	I	I	H	M	-	M	4/L	OK	L
17060305-01-15	AMERICAN CREEK	5,626	M	S	I	S	S	I	M	H	-	M	9/M	+ Mass Erosion Impacts	H
17060305-01-18	MILL CREEK (BIG CANYON)	23,249	M	S	I	S	S	S	H	H	M	H	12/H	OK	H
17060305-01-20	GROUSE CREEK	3,552	L	I	I	S	S	S	H	H	-	L	7/M	OK	M
17060305-01-23	BULLY CREEK	3,469	L	I	I	S	S	I	H	H	-	L	6/M	OK	M
17060305-01-25	COVE CREEK	3,606	L	I	I	S	S	I	H	H	-	L	6/M	OK	M
17060305-02-03	TENMILE CREEK	34,410	M	I	I	I	I	I	L	L	M	L	2/L	OK	L
17060305-02-11	TWENTYMILE CREEK	14,545	M	I	I	I	I	I	L	L	M	L	2/L	OK	L
17060305-02-13	WING CREEK	5,329	L	I	I	I	I	I	L	L	-	L	0/L	OK	L
17060305-03-01	CROOKED RIVER	45,659	H	I	S	S	S	I	M	M	H	H	11/H	OK	H
17060305-04-26	RED RIVER	103,348	H	S	S	S	S	S	H	H	H	H	15/H	OK	H
17060305-04-11	RED RIVER (SUB)	32,025	H	S	I	S	S	S	M	M	H	H	12/H	OK	H
17060305-04-15	S.F. RED RIVER	24,165	M	I	I	S	S	S	M	M	M	H	9/M	OK	M
17060305-05-16	AMERICAN RIVER	58,612	H	S	I	S	S	S	M	M	H	M	11/H	OK	H
17060305-05-04	BIG ELK CREEK	8,939	M	I	I	S	S	I	M	M	H	M	7/M	OK	M
17060305-05-05	LITTLE ELK CREEK	5,122	M	I	I	S	S	I	M	H	H	H	9/M	+ Recent analysis results	H
17060305-05-06	UPPER AMERICAN RIVER	15,258	H	S	S	S	S	S	M	L	-	M	11/H	OK	H
17060305-05-10	E.F. AMERICAN RIVER	11,395	M	S	I	S	S	I	M	L	H	M	7/M	OK	M
17060305-05-11	KIRKS FORK	6,457	M	I	I	I	I	I	L	L	M	M	3/L	+ Recent analysis results	M
17060305-06-08	NEWSOME CREEK	42,576	H	I	S	S	S	I	L	M	H	H	10/M	+ Past/ongoing mine impacts	H
17060305-06-09	LEGGETT CREEK	4,918	M	I	S	S	S	I	H	M	H	M	9/M	OK	M
17060305-06-14	SILVER CREEK	16,509	M	I	I	I	I	I	L	L	L	L	2/L	OK	L
17060305-07-01	GREEN CREEK	2,997	M	I	I	S	I	I	M	H	M	M	7/M	OK	M
17060305-07-02	SEARS CREEK	2,348	M	S	I	S	I	I	L	M	L	H	7/M	OK	M
17060305-07-03	WALL CREEK	2,325	L	I	I	I	I	I	L	L	L	M	1/L	+ Recent analysis results	M
17060305-07-06	PEASLEY CREEK	9,112	H	I	I	S	S	I	M	H	H	H	11/H	OK	H
17060305-07-08	COUGAR CREEK	7,731	M	I	I	S	S	S	H	H	H	H	11/H	OK	H
17060305-07-11	MEADOW CREEK (D4)	24,115	M	S	I	S	S	S	M	H	H	H	11/H	OK	H
17060305-07-16	EARTHQUAKE CREEK	3,045	L	S	I	S	S	S	H	H	-	H	10/M	+ 86% disturbed acres	H
17060305-07-18	SCHWARTZ CREEK	2,267	M	I	I	I	I	I	M	H	L	H	7/M	+ High disturbance headwaters	H
17060305-07-20	LIGHTNING CREEK	3,881	M	S	I	I	I	I	M	H	M	H	8/M	+ 87% disturbed acres	H

Watershed Condition Table Definitions

WS NUMBER:	NPNF prescription watershed number
WS NAME:	Watershed name
WS ACRES:	Watershed acres (from Watershed Database)
WS SENS:	Watershed sensitivity concern rating (L = low concern, M = moderate; H = high)
RANGE:	District specialist call on whether current or historic range activities are significantly affecting watershed condition (significant/insignificant)
MINER:	District Specialist call on whether current or historic mineral activities are significantly affecting watershed condition (significant/insignificant)
ROADS:	District specialist call on whether current or historic road activities are significantly affecting watershed condition (significant/insignificant)
HRVST:	District specialist call on whether current or historic harvest activities are significantly affecting watershed condition (significant/insignificant)
OTHER:	District specialist call on whether any other current or historic activities are significantly affecting watershed condition (significant/insignificant). The majority of these significant calls are due to fires; a few are due to recreation, water withdrawals and various other activities
RD DEN:	Road density (mi/sq mi) in watershed: L = 0-0.9; M = 1.0-2.9; H = 3.0 +
% DIST:	Percent of watershed disturbed: L = 0-9.9; M = 10-19.9; H = 20+
DISTRICT:	Initial overall watershed condition call made by district specialist before watershed condition analysis results were completed (as a result of a previous information request).
FP COND:	Relationship between the current channel condition and the Forest Plan objective: L = low concern/priority, watershed is at or above Forest Plan objective; M = moderate concern/priority; H = high concern/priority
PTS/COND:	Point total from previous columns and preliminary watershed condition: L = 0-5, M = 6-10, H = 11-15 points
ADJUSTMENTS:	Changes (+/-) made to initial decision matrix results based on district and SO technical staff review
COND:	Adjusted overall condition of the watershed (L, M or H)

Item 2i:	Water Quality: Project Level Administrative Reviews and Field Studies
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If the reviews or studies discover violations of Forest Plan standards or Idaho Water Quality Standards.

Discussion:

Implementation Monitoring: Forest Plan implementation monitoring of timber harvest and associated road construction and reconstruction activities was conducted on four timber sales and associated roads in 1992. The selection of these projects was based upon recommendations of the Forest Hydrologist and Forest Interdisciplinary Monitoring Team Leader.

Projects initially considered for possible monitoring reviews were: Burnt Backbone Timber Sale and associated roads, Noble/Grouse Creek roads, Upper West Fork roads, Wing Creek/Twentymile road, Bear Gulch Timber Sale and associated roads, and No Business Timber Sale and associated roads.

The Forest Interdisciplinary Monitoring Team Leader reviewed on-the-ground projects that had been suggested by the Forest Hydrologist to determine the appropriateness of these projects, relative to water, riparian, and soil resources, for the monitoring team to review. During this review by the Team Leader, possible monitoring stop locations were identified on maps and on the ground. Based upon this pre-field review by the Team Leader and after discussion with the Forest Hydrologist, the following projects were selected for monitoring: Burnt Backbone Timber Sale and associated roads, Upper West Fork Timber Sale and associated roads, Bear Gulch Timber Sale and associated roads, and No Business Timber Sale and associated roads. Two of the originally considered projects were dropped because of time constraints and/or the appropriateness of spending the Team's time reviewing these projects.

The field reviews by the monitoring teams involved walking harvest units, walking and driving of roads, and stopping at pre-selected and non-pre-selected locations to discuss how the Forest was meeting Forest Plan and National Environmental Policy Act (NEPA) document direction relative to management of water, riparian, and soil resources. At monitoring stop locations, Forest technical staff led discussions related to that which was being monitored and a determination was made if the Forest was or was not meeting Forest Plan and Forest Practices Act Rules. At the conclusion of the day, a team discussion on monitoring findings occurred. One of the major objectives of this discussion was to get a team agreement on monitoring findings. These findings were recorded on a monitoring checklist and in notes kept by the technical staff.

Monitoring Results:

Burnt Backbone Timber Sale (Monitored on Sept. 24, 1992): This timber sale is located on the Selway Ranger District, within the Horse Creek watershed. Three units within this timber sale were monitored by the team (Units 4, 5, & 9). All of these units had a leave tree mark prescription and had been skyline yarded. A total of 14 Forest Plan or NEPA document management direction items on the monitoring checklist were rated during project monitoring. The purpose of the monitoring was to determine if project implementation had complied with the management direction. The project met management direction for nine checklist items, or 64 percent of the items the project was evaluated against.

Timber Harvest Unit 9 met Forest Plan management standards for water and soil. No riparian areas were reviewed by the team in Unit 9. The portion of the protected stream course reviewed in this unit did not meet the definition for a riparian area (dry draw).

Timber Harvest Unit 4 was found to have departures from compliance with meeting Forest Plan standards in relation to mitigation measures to prevent mass wasting, having site-specific riparian prescriptions, and preventing management activities that might lead to changes in stream channel geomorphology and channel sediment.

Timber Harvest Unit 5 had the same departures from Forest Plan standards as Unit 4 with the exception that it had no defined stream channel. The riparian area reviewed was a small head water wetland.

The temporary road in Unit 9 and the system road accessing these units (Road 2116) met Forest Plan standards and the Idaho Forests Practices Act.

Departures from Forest Plan standards could have been avoided if we had identified leave trees in Harvest Units 4 and 5 to provide root strength for preventing mass wasting. In Unit 4 leave trees were also needed to provide for large woody debris recruitment.

The Nez Perce Tribe representative pointed out that the Tribes and Columbia River Inter-Tribal Fish Commission (CRITFC) position is that the Class II stream in Unit 4 should have a 100-foot buffer strip on either side.

The Idaho Department of Lands Forest Practices Act Advisor indicated that the activities reviewed on the Burnt Backbone Timber Sale met all Forest Practices Act (FPA) Rule requirements.

Upper West Fork Timber Sale (Monitored on Sept. 25, 1992): This timber sale is located on the Red River Ranger District, within the West Fork of Red River watershed. This sale constructed approximately 9.6 miles of road and reconstructed approximately 4.2 miles of road. It consists of 18 timber sale units, one of which is of a clearcut prescription. At the time of the monitoring review all of the road work had been completed and the timber harvest had only recently begun. One unit within this timber sale was monitored by the team (Unit 12). This unit had a leave tree mark prescription and was being skyline yarded. A total of 18 Forest Plan or NEPA document management direction items on the monitoring checklist were rated during project monitoring. The purpose of the monitoring was to determine if project implementation had complied with the management direction. The project met management direction for 16 checklist items, or 89 percent of the items the project was evaluated against.

Approximately 4.2 miles of new road construction and 0.4 miles of road reconstruction were driven. Due to time limitations, not all of the road segments were reviewed at length but, rather, the review concentrated on selected points: three stream crossings by Road 9535 were monitored for sediment mitigation, plus sediment mitigation in general was reviewed for Roads 9535 and 9535E.

Timber Harvest Unit 12 met Forest Plan management standards for water, soil, and riparian management.

At the start of the review, it was noted that, in general, the road work did a good job of minimizing impacts upon the watershed. Specifically, it was noted that design standards, including drainage control, surfacing, the design of ditchlines, and clearing limits conformed well with the site-specific lay of the land. There were, however, several specific points of concern noted as follows.

The monitoring team found that the three road crossings met Idaho Forest Practices Act Rules. Departures in Forest Plan standards were identified at the second stream crossing due to straw bales being left in the stream which were diverting the flow. At the Middle Fork Red River crossing, excessive slash was used in constructing the slash filter windrow. Slash from the windrow has encroached on the stream channel.

Road 9535 was generally of higher quality condition than that required to meet Forest Plan management standards for soil and water management. Near the Middle Fork Red River stream crossing, the group felt a departure in meeting Idaho Forest Practices Act Rules had occurred. It consisted of a small area of road cutslope that was unstable and eroding. Sediment from this area had reached the Middle Fork Red River.

On Road 9535E, it was found that we had not implemented the sediment mitigation measures that were specified in the Environmental Assessment (EA) for the project. The EA specifies that at least 80 percent of

potential sediment will be mitigated on all roads and timber harvest units. Sediment mitigation for Road 9535E was estimated to be 70 percent. The monitoring team felt that 70 percent mitigation was appropriate for this segment of road.

The Nez Perce Tribe representative pointed out that the Tribe and CRITFC want to see the following no-harvest buffer strips around riparian areas:

Class I Streams, 200-foot buffer strip on each side of channel.

Class II Streams, 100-foot buffer strip on each side of channel.

Wetlands, 75-foot buffer strip.

Intermittent Streams, 50-foot buffer strip on each side of channel.

The Idaho Department of Lands Forest Practices Act Advisor indicated that activities reviewed in the Upper West Fork Timber Sale met Forest Practices Act Rule requirements.

Bear Gulch Timber Sale (Monitored on Oct. 8, 1992)**:** This timber sale is located on the Salmon River Ranger District and is in the Slate Creek watershed. One unit within this timber sale was monitored by the team (Unit 8). This unit had a clearcut prescription and had been skyline yarded. Three Class II Streams ran through this unit. These are headwater streams. Sediment mitigation in general was reviewed for Road 441H which is the access road for Unit 8. A total of 18 Forest Plan or NEPA document management direction items on the monitoring checklist were rated during project monitoring. The purpose of the monitoring was to determine if project implementation had complied with the management direction. The project met management direction for 8 checklist items, or 44 percent of the items the project was evaluated against.

Timber Harvest Unit 8 met Forest Plan management standards for soil management. Stream courses were designated for protection on the timber sale area map. A good job was done of keeping logging debris out of the streams. Monitoring identified several departures in meeting Forest Plan management standards:

These departure include (1) not leaving enough trees standing along the Class II streams for large woody debris recruitment and shade; (2) locating a log landing in a Class II stream protection zone (SPZ); (3) no site-specific riparian prescriptions to protect the riparian resources; (4) effect on wetlands were not considered for all alternatives during the Environmental Analysis (EA) process; (5) preferential consideration was not given to riparian-dependent resources in cases of unresolvable conflict; (6) Road 441H did not have sufficient ground cover to minimize erosion; and (7) sediment mitigation was estimated to be at 50 percent. The EA stated that we would provide for 75 percent sediment mitigation.

The Idaho Department of Fish and Game would like the Forest to treat Class I and Class II streams with similar protection measures.

The Nez Perce Tribe and CRITFC want a 100-foot, no-timber-harvest buffer on each side of Class II streams.

The Forest Practices Act Advisor pointed out that a log landing was located in a Class II Stream Protection Zone, a fire trail was located in the same SPZ, and that active erosion was occuring on the system road. These problems constitute noncompliance with FPA Rules.

No Business Timber Sale (Monitored on Oct. 8, 1992)**:** This timber sale is also located on the Salmon River Ranger District and is within the Slate Creek watershed. This timber sale constructed approximately 14.5 miles of road and reconstructed approximately 3.9 miles. The road work occurred during 1991 and 1992. The Environmental Assessment (EA) was completed in 1983. Environmental effects were reassessed in 1989 and found to comply with the Forest Plan. Sediment mitigation levels for roads of 75 percent and 80 percent were used for effects analysis in the original EA. A total of 13 Forest Plan or NEPA document management direction items on the monitoring checklist were rated during project monitoring. The purpose of the monitoring was

to determine if project implementation had complied with the management direction. The project met management direction for 10 checklist items, or 77 percent of the items the project was evaluated against.

The No Business Timber Sale was authorized with the Decision Notice and Finding of No Significant Impact of the Main Slate Creek Drainage Environmental Assessment, dated March 1983. This EA analyzed the effects of three timber sales in the main Slate Creek drainage: the North Fork Face Sale along Peter Ready Ridge between the North Fork Slate and Main Slate Creeks; the Bear Gulch Sale in the Bear Gulch and Little Van Buren drainages immediately northwest of Slate Point; and the No Business Sale immediately northeast of Slate Point.

The EA proposed access into the No Business Sale from the Slate Creek Road (#354) and included estimates of 11.9 miles of road construction and 15.9 miles of road reconstruction, with that portion of reconstruction on existing Road #354 being aggregate placement only.

During road location and layout activities for the Bear Gulch Sale in the summer of 1984, slope conditions in the vicinity of the crossing of Little Van Buren Creek raised concerns regarding slope stability and road construction costs. These concerns were based upon the steepness of the slopes, the evidence of rock, both bedrock and loose material, and the channel gradients of the streams in the area. As a result of these concerns, value engineering/value analysis was conducted in the fall of 1984 to assess the cost of accessing these eastern units of the Bear Gulch Sale from the No Business Sale. An addendum to the EA was signed in November 1984 that modified the original sale proposals by deleting four units from the Bear Gulch Sale, dropped the road crossing Little Van Buren Creek, added the four units to the No Business Sale, and added an access road from the No Business Sale to the four units. Sale preparation and road design proceeded for the Bear Gulch Sale. It was awarded in 1988 and logging was completed in 1991.

Sale preparation activities continued for the No Business Sale as well. However, due to a variety of factors, including review of design standards for the reconstruction of Rd. #354 for safety, and the need for additional reconstruction on Rd. #354 to provide for access to a suitable rock source, it became evident that costs associated with accessing the No Business Sale had been underestimated. Additional field work was performed and additional cost analysis was done to again assess the most reasonable means of accessing the No Business Sale area and protecting the resources.

In May 1990, a field review and geotechnical analysis of the route crossing Little Van Buren Creek was performed. The resulting "Slope Stability Study of the Bear Gulch/No Business Timber Sale Connector Route" report indicated that with appropriate design and contract controls, the road could be constructed with a minimum of slope failure hazard and minor road maintenance needs. This report built on and summarized extensive geotechnical evaluation completed by Richard Kennedy, Doug McClelland, and Rod Prelwitz. An addendum to the EA in November 1990 modified the sale proposal to access the No Business units from Rd. #441 with the route crossing Little Van Buren Creek.

Sale preparation and road design were then completed. All roads incorporated measures designed to mitigate potential sediment to a minimum of 80 percent. The timber sale was awarded in July 1991; roads were constructed in the period between fall, 1991 and fall, 1992.

One unit within this timber sale was monitored by the team (Unit 5). This unit has a leave tree mark prescription and is planned to be logged with tractors. Roads 441F and 2038 were monitored by driving approximately 7.5 miles of their lengths to see if sediment mitigation specified in the EA were achieved.

Timber Harvest Unit 5 was not harvested at the time of this review. If timber harvest occurs as planned (as indicated by the marked trees), the unit, upon completion of harvest, should generally meet Forest Plan management standards. The team is concerned that log skidding may occur through riparian areas which would be a violation of Forest Plan standards and the Idaho Forest Practices Act. Effects on wetlands within the harvest unit were not considered for all the alternatives during the Environmental Analysis process.

Roads 441F and 2038 generally appeared to meet the 80 percent sediment mitigation standards specified in the EA. Due to time constraints, a site by site analysis was not possible.

As mentioned for the previous timber sales reviewed, the Nez Perce Tribe and CRITFC want to see no-harvest buffer strips around riparian areas.

The Forest Practices Act Advisor was unable to attend this part of the monitoring review.

Evaluation of Monitoring Results:

Burnt Backbone Timber Sale: Forest Plan implementation met Forest Plan standards for soil and water for most of the areas reviewed. The two riparian areas reviewed had departures from meeting Forest Plan standards for riparian areas.

The monitoring showed that we need to be more effective in identifying riparian areas and in developing site-specific riparian prescriptions for them. It also highlighted the fact that the Tribe and CRITFC have different views than the Forest on how riparian areas should be managed.

Upper West Fork Timber Sale: In general, Forest Plan implementation met Forest Plan management standards for the soil, water, and riparian resources. Road 9535E did not meet the mitigation specified in the Environmental Assessment for the area. Even though the monitoring team felt that the level of mitigation was appropriate for the road, we need to document these departures and make sure the public is aware of these changes in our contract with them (the EA).

The Nez Perce Tribe and CRITFC have different views than the Forest on whether or not to allow timber to be harvested within and adjacent to riparian areas. The Tribe, CRITFC, and the Forest need to work on resolving their differences on management of riparian areas.

Bear Gulch Timber Sale: Forest Plan implementation monitoring showed that timber harvest activities in Harvest Unit 8 met Forest Plan standards for soil management.

The monitoring revealed departures from Forest Plan standards regarding riparian management in Harvest Unit 8. The Forest needs to do a better job in developing site-specific riparian prescriptions.

Sediment mitigation standards for Road 441H did not meet the standards specified in the EA.

As mentioned in the previous two timber sale evaluations, the Nez Perce Tribe, CRITFC, and the Forest have some basic disagreements on how riparian areas should be managed. It also appears the Idaho Department of Fish and Game would like the Forest to manage Class I and II streams in a similar manner.

Several departures from Idaho Forest Practices Act Rules were identified. These Rules are required Best Management Practices under the Idaho Water Quality Standards and must be followed. A variance procedure is available and should be used when equal or better results can be achieved through alternative methods.

No Business Timber Sale: As timber harvesting moves ahead as planned for Harvest Unit 5, it appears the project should meet Forest Plan Management Standards, if Forest Practices Act requirements can be addressed. A concern, however, is that during the Environmental Analysis process effects on small wetlands are not being evaluated. The Forest Service representative and sale administer need to work with the purchaser to provide the appropriate protection.

Road sediment mitigation for Roads 441F and 2038 was determined to generally meet Forest Plan standards. Given time constraints, a site by site analysis was not possible.

Summary Evaluation for All Four Timber Sales That Were Monitored:

A total of 63 Forest management direction compliance ratings were given for the four timber sales and associated roads that were reviewed. The monitoring findings show management direction was met for 43 checklist items, or 68 percent of the items the projects were evaluated against.

Where timber harvesting is occurring with skyline systems, the Forest is meeting Forest Plan standards for soils.

Departures in meeting water management standards are occuring on timber sales.

Departures in meeting Forest Plan management standards for riparian areas are occurring on timber sales.

The Nez Perce Tribe, CRITFC, and the Idaho Department of Fish and Game would like to see the Forest manage riparian areas differently than we currently are. We need to work with them on resolving this issue.

Forest Practices Act Rules are generally being met, but a small number of departures are occurring. There was no evidence that the Forest is utilizing the established variance procedure.

Item 2j:	**Impacts of Management Activities on Riparian Areas**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Activity areas found in significant violation of Forest Plan standards.

Discussion:

Riparian area monitoring is conducted during project planning, implementation, and following completion of management activities to determine how closely Forest Plan management standards are being followed.

Implementation monitoring determines (1) if riparian areas are delineated and evaluated during project design; (2) if preferential consideration is given to riparian area-dependent resources in cases of unresolvable conflict; (3) if appropriate provisions of the Idaho Forest Practices Act (BMPs) are applied, or a variance sought; and (4) if effects on wetlands and floodplains are considered in project development.

Forestwide riparian implementation monitoring was conducted on four timber sales. Additional monitoring was carried out through District field reviews, project design, and implementation.

Implementation monitoring was conducted on all ongoing activities with the potential to affect Snake River chinook salmon habitat. Refer to monitoring item 2e-2 for more information on this subject.

Effectiveness Monitoring determines (1) if management practices have caused detrimental changes in water temperature or chemical composition, blockages of water courses, or deposits of sediment that seriously and adversely affect water conditions and fish habitat; and (2) if cover and security for riparian-dependent species have been maintained.

Qualitative effectiveness monitoring was conducted on field reviews of timber sales in four watersheds that included road construction and timber projects with potential to impact riparian systems.

Effectiveness monitoring was carried out as part of the review of ongoing Forest activities that have the potential to affect anadromous fisheries habitat. See discussion under item 2e-2.

Effectiveness monitoring was carried out in field reviews of two range allotments with the assistance of a consulting fisheries biologist.

Validation Monitoring is used to describe riparian dependent resources, their values, and predict effects of management (Forest Plan II-12). The riparian classification project initiated in 1989 continued in 1992, with emphasis in wilderness systems where basinwide stream surveys had also been collected, for later cross correlation.

Monitoring Results:

Implementation Monitoring: Riparian areas are now consistently delineated during integrated resource analysis using National Wetland Inventory maps and field observation. Actual acres of riparian areas are calculated from these delineations during the management area validation process. Acres assigned to Management Area 10 may be less than all riparian acres, because narrow riparian areas too small to delineate as stands occur in stands assigned to other management areas. Some small riparian areas may be missed in this process, with the result that site-specific management prescriptions are not developed for them.

Many timber sale contracts were developed prior to current provisions of the Idaho Forest Practices Act and our present understanding of best management practices. Continued emphasis is necessary through timber sale administration and other available measures to adapt existing contracts to achieve current riparian protection objectives.

Clarification policy regarding management of riparian areas was issued by the Forest in December 1991. This outlines procedural steps necessary to support Forest Plan direction for riparian areas in project-level implementation documents. This policy states that "Project-level NEPA documents must therefore demonstrate through analysis that riparian-dependent resources will be protected or enhanced." This requires "adequate site-specific data, analysis and documentation".

Identified departures from Forest Plan standards were usually due to a lack of site-specific riparian prescriptions and lack of analysis of riparian resources and interactions with upland processes. In the reviewed timber sale units, riparian prescriptions were needed to reduce the potential for mass wasting in draws, the potential for detrimental changes in stream channel geomorphology, and to provide for large woody debris recruitment and shade.

Current timber sales contract and administration usually comply with Idaho Forest Practices Act rules as a minimum, and often exceed them in terms of retention of streamside tree cover and soil integrity. Some departures from Idaho Forest Practices Act rules were cited during implementation monitoring: yarding trees across Class II streams, a log landing and a fire trail located in a Class II stream protection zone, and active erosion on a system road.

Effectiveness Monitoring: Idaho Best Management Practices for vegetation management, along Class II streams in particular, do not meet the intent of Forest Plan standards for riparian area-dependent resources.

Ability to describe riparian-dependent resources and analyse riparian processes within a watershed context, is a basic requirement to implement current riparian management direction. This means describing existing condition, how it fits within the range of natural variability for that stream type and watershed setting, and the site-specific management to provide for riparian function as well as beneficial uses.

Adjustment of timber harvest prescriptions to address the listing of the chinook salmon was primarily through elimination of timber harvest in riparian areas. The long-term consequences of no disturbance in Forest riparian areas are little understood. Tribal and CRITFC policy favoring no-harvest buffer strips prompted discussion of timber stand dynamics in riparian areas, and the possible role of natural disturbance regimes in riparian function. Field reviews with a consulting fisheries biologist also voiced the need to better understand the role of fire and timber stand changes over time, and how these affect stream processes.

The training session and field review of two range allotments emphasized the need for ecological classification, analysis of limiting factors, and attention to features of channel morphology and vegetation condition to assess condition, trend, and recovery potential in riparian range systems.

More quantitative monitoring of stream sediment and temperature conditions is discussed under item 2h.

Validation Monitoring: The riparian classification project continued in 1992. The objectives were to describe the stream systems, soils, and vegetation of these areas, their equilibrium state, and response to disturbance. Coordination with fisheries survey objectives and methods requires continued emphasis. Channel types, vegetation complexes, and riparian landforms are being found to be predictable based on landform association, valley bottom type and gradient, geology, and bioclimatic zone. This responds to the research need to predict cumulative effects of management on watershed and fishery values (Forest Plan II-12: Fish/Water No. 8) and to the need for a classification system with which to delineate and evaluate riparian areas (Forest Plan II-22: Forestwide Management Direction for Riparian Areas), as well as the need to develop appropriate best management practices and standards for monitoring impacts.

In Forest planning, riparian areas are modeled with lower timber yields. The Plan estimated 11,589 acres of mapped MA 10 and 10,214 acres of riparian inclusions in other management areas, within a total area of about 1.2 million acres (excludes wilderness and wild and scenic rivers) or about 2 percent of the land. Preliminary site-specific estimates based on stream length and a minimum management zone of 50 feet either side of intermittent streams and 100 feet either side of perennial streams, plus the acres of wetlands not associated with streams, indicate that perhaps 3 to more than 12 percent of an analysis area may require management for riparian area-dependent resources.

Evaluation of Monitoring Results:

Delineation of riparian areas is being done consistently and will provide good information on the extent of this environment on the Forest. This information needs to be compiled by project area, or selected watersheds across the Forest. Because management areas are recorded on a stand basis, and few stands are dominantly riparian, MA 10 acres from the timber stand data base will seldom amount to actual acres of riparian area and should not be used as the basis for adjustments to Forest Plan timber yields.

Although wetlands are being well delineated, evaluation has proven more difficult. Their dependent resources, functions, and the management necessary for their maintenance, are poorly understood. Synthesis of available research would be useful.

Provisions of the Idaho Forest Practices Act rules regarding timber harvest are well understood and usually consistently applied. Training for Forest personnel new to Idaho will be a continuing need.

The minimal best management practices required for Class II streams by the Idaho Forest Practices Act rules are recognized as a particular area of concern where improved inventory and interdisciplinary analysis are needed.

Stream surveys to describe watershed and fisheries condition are being used more extensively to describe riparian condition. More interdisciplinary analysis using watershed and landscape level information is required to describe riparian function, and the appropriate role of management.

Livestock grazing has impacted localized riparian areas. Updating operating plans and allotment management plans to apply our understanding of ecosystem functions in range riparian areas is required to bring range management into compliance with Forest and National riparian management direction. This needs particular emphasis in below-objective watersheds. Rapid assessment procedures for rangeland riparian condition and trend are needed to assist this effort.

An action item identified in 1990 still needs attention. Timber stand inventory systems need to be adapted to the linear nature of riparian forest stands. The record keeping system should be adapted to allow analysis of riparian plots between stands. Conversion of R1EDIT plot data to ECODATA format is anticipated to address this concern. Riparian area stand dynamics are poorly understood, as well as the implications for riparian function with and without natural or human-caused disturbance. Analysis of riparian timber plot data by habitat type, cover type, and age class, scheduled for 1993, may help us understand succession in riparian

stands and its effects on such features as shade and woody debris recruitment, and the natural frequency and intensity of disturbance in riparian stands.

Item 11:	Validation of Resource Prediction Models: Water Quality and Fish:
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	2 to 5 years (FY 1989 to 1992)
Variability Which Would Initiate Further Evaluation:	If validation efforts show a need for changes to existing predictive models.

Monitoring Results:

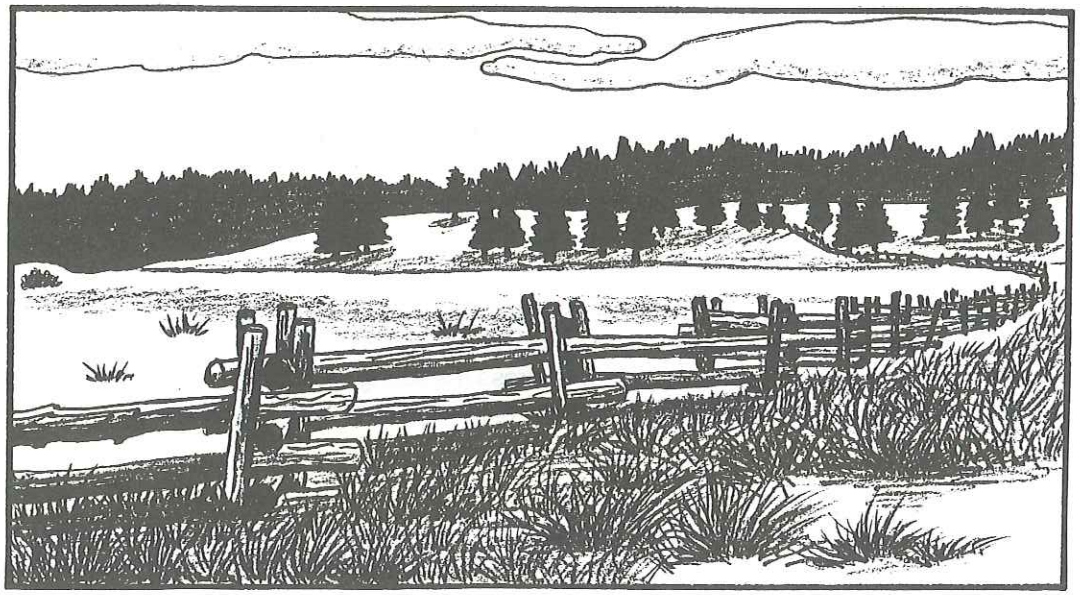
Validation Monitoring: Validation efforts are ongoing for three of the Forest's predictive models. They are the water yield, sediment yield, and fish habitat response models.

Water Yield Model Tests: The Intermountain Research Station released a report in 1989 on streamflow responses to road building and timber harvesting in Horse Creek. In this paper, measured data are compared to model predictions. This report suggests that the equivalent clearcut area (ECA) approach tends to overestimate natural yields and underestimate increases in water yield in small watersheds. The watersheds for which results have been reported to date are smaller than those for which the ECA procedure was developed. It is suggested that managers should consider the effects of water yield increases on smaller drainages. It is also noted that instantaneous peak flows may be more relevant than monthly or annual flow increases in determining effects of timber harvest.

Sediment Yield Model Tests: As discussed above, a preliminary sediment yield analysis comparing measured and modeled annual sediment yields was completed in 1991. Further validation utilizing the remaining Forest data is planned, pending approval of a University of Idaho master's thesis project. Additional work evaluating results of the Horse Creek research study is underway at the Intermountain Research Station.

Fish Response Model Tests: Validation of the Fish Response Model is an ongoing effort. Some data have been collected in conjunction with the Intermountain Research Station, but analysis has not been completed.

RANGE



Item 1g:	Animal Unit Months (AUMs) Grazing Permits
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Forest Plan Estimate of Permitted AUMs

Monitoring Results:

The Forest permitted 41,500 animal unit months (AUMs) in fiscal year 1992. Actual use information indicated that permittees are placing the permitted number of livestock on the allotments. However, adjacent landowners allowed unauthorized livestock to use National Forest lands in a few locations.

Evaluation of Monitoring Results:

The Forest is proposing to eliminate this monitoring item and record the number of permitted AUMs in Table 1 (pages 4-14) of this Report, comparing outputs and activities in the Annual Monitoring and Evaluation Report with those projected in the Forest Plan.

Item 1I:	Range Analysis and Allotment Management Plan (AMP) Updates
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Forest Plan Estimate of Completed AMPs

Discussion:

This year the program included Allotment Management Plan (AMP) revisions, gathering resource data for planned revisions, monitoring riparian zones, conducting allotment inspections, providing information for integrated resource analysis, gathering information to address the listing of Chinook as a threatened species under the Endangered Species Act and consulting with National Marine Fisheries Service.

Monitoring Results:

Three allotments were analyzed and management plans revised during 1992. Analysis began on four allotments scheduled for AMP revisions in 1993. Twenty-two active allotments are in need of revision to ensure vegetation management is occurring in compliance with the Forest Plan and other resources are receiving appropriate protection. Forest Plan standards have been incorporated into Part 3 of all grazing permits. Forest Plan standards will be administered through the permits until AMPs can be revised.

National direction emphasizes that all Forests are to prioritize allotments based on resource conditions. The preceding Nez Perce Allotment Update Priority Schedule is the most recent version of the Forest schedule. It displays the Forest Plan status, the year each allotment is scheduled for updating, and the key resource values that may affect management of each allotment. In addition, the Forest has implemented a tracking system to assist in planning and to monitor progress in revising management plans.

Evaluation of Monitoring Results:

The Forest intends to bring all allotments into compliance with Forest Plan standards and guidelines based on the priorities outlined in this schedule. Currently, 26 percent of the allotment management plans meet Forest Plan standards and guidelines. The information contained in the schedule reflects the best information available at this time and is based on current funding levels. The schedule will be updated annually to reflect changes in resource information and funding. At the current funding level and Forest priority, all allotments that do not meet Forest Plan standards and guidelines will be updated by FY 97.

Fourteen grazing allotments are currently vacant. Term Grazing Permits have not been reissued on these allotments. The Grants Process and a new AMP will be completed prior to reallocation of grazing on vacant allotments. Due to the current funding level, vacant allotments are low priority for revised AMP's, and will follow completion of active allotments.

Inspection of selected allotments indicated that annual operating plans were followed in most cases; however, many are based on AMPs that have not been updated to incorporate Forest Plan standards. On several

allotments, livestock used pastures which were scheduled for rest or deferment, and utilization exceeded proper use levels in some key areas and riparian zones. In several riparian ecosystems, livestock are adversely impacting stream banks, meadow vegetation composition and water quality. Our monitoring indicates updating AMPs to address riparian, wilderness, timber management, big game and recreation values, combined with quality permit administration, will ensure Forest Plan standards are met.

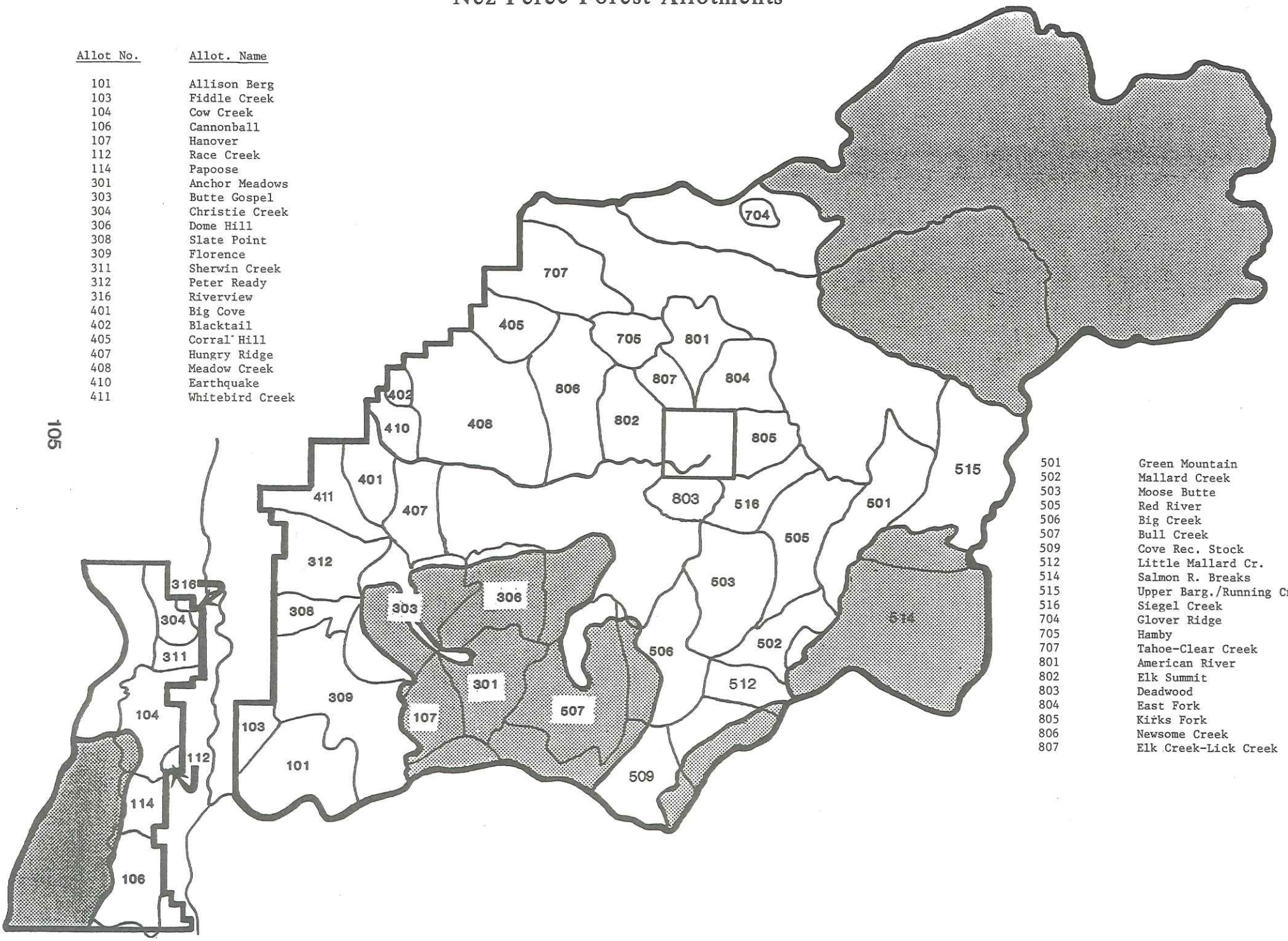
Allotment Management Plan Update Schedule

Allotment Name[1]	Forest Plan Status	Schedule	Key Resource Values
Race Creek	Meets	Complete	Riparian
Blacktail	Meets	Complete	Big Game
Glover Ridge	Meets	Complete	Big Game
Christie Creek	Does Not Meet	1993	Riparian
Hungry Ridge	Does Not Meet	1993	Riparian/Wildlife
Sherwin Creek	Does Not Meet	1993	Timber/Riparian
Peter Ready	Does Not Meet	1993	Timber/Veg.Succession
Riverview	Does Not Meet	1993	Riparian
American River	Does Not Meet	1994	Riparian
Hanover	Does Not Meet	1994	Wilderness/Riparian
Butte Gospel	Does Not Meet	1994	Wilderness/Riparian
Whitebird Creek	Does Not Meet	1994	Vegetative Succession
Elk Cr.-Lick Cr.	Does Not Meet	1995	Riparian
Allison-Berg	Does Not Meet	1995	Timber Management
Florence	Does Not Meet	1995	Riparian
Mallard Creek	Does Not Meet	1995	Riparian
Cow Creek	Does Not Meet	1996	Wilderness/Timber Mgmt.
Meadow Creek	Does Not Meet	1996	Big Game
Cannonball	Does Not Meet	1996	Wilderness/Recreation
Corral Hill	Does Not Meet	1996	Vegetative Succession
East Fork	Does Not Meet	1996	Riparian
Papoose	Does Not Meet	1997	Riparian
Newsome Creek	Does Not Meet	1997	Timber Management
Green Mountain	Does Not Meet	1997	Riparian/Big Game/T&E
Fiddle Creek	Does Not Meet	1997	Timber Management
Tahoe-Clear Creek	Meets	1998	Riparian/Timber Mgmt.
Earthquake	Meets	1998	Riparian/Big Game
Elk Summit	Meets	1998	Timber Management
Hamby	Meets	1998	Timber Management
Kirks Fork	Meets	1998	Riparian
Moose Butte	Vacant[2]	-	Riparian/TbrMgt/Big Game
Deadwood	Vacant	-	Riparian
Big Cove	Vacant	-	Timber Management
Big Creek	Vacant	-	Riparian
Anchor Meadows	Vacant	-	Wilderness/Riparian
Bull Creek	Vacant	-	Wilderness/Riparian
Dome Hill	Vacant	-	Wilderness/Riparian
Red River	Vacant	-	Riparian
Siegel Creek	Vacant	-	Riparian/TbrMgt/Big Game
Slate Point	Vacant	-	Riparian
Cove Rec. Stock	Vacant	-	Wilderness'Riparian
Little Mallard Cr.	Vacant	-	Big Game
Salmon R. Breaks	Vacant	-	Wilderness/Riparian
Bargamin/Running	Vacant	-	Wilderness/Riparian

[1]See Nez Perce Forest allotment map on following page.
[2]Vacant alloitments are allotments with no term permit holders.

Nez Perce Forest Allotments

Allot No.	Allot. Name
101	Allison Berg
103	Fiddle Creek
104	Cow Creek
106	Cannonball
107	Hanover
112	Race Creek
114	Papoose
301	Anchor Meadows
303	Butte Gospel
304	Christie Creek
306	Dome Hill
308	Slate Point
309	Florence
311	Sherwin Creek
312	Peter Ready
316	Riverview
401	Big Cove
402	Blacktail
405	Corral Hill
407	Hungry Ridge
408	Meadow Creek
410	Earthquake
411	Whitebird Creek



RECREATION

Item 1a:	Recreation Visitor Days
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 Years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Significantly different trends in recreation use occurring on the Nez Perce following a 5-year evaluation.

■·■·■·RECREATION·■·■·■

Discussion:

During the past several years, the Recreation Information Management (RIM) system has been in a state of flux pending the approval of a new system at the National level. All that is currently being reported is recreation use by activities, and in most cases the estimates of use are not statistically accurate.

Monitoring Results:

RECREATION USE BY ACTIVITY - FY 1988-1991

	Recreation Use (MRVD)[1]				
Activity Category	FY 88	FY 89	FY 90	FY 91	FY92
Camping, Picnicking, and Swimming	207.0	241.9	241.9	241.9	241.9
Mechanized Travel and Viewing Scenery	173.6	193.2	193.2	201.5	202.7
Hiking, Horseback Travel, and Water Travel	75.3	76.6	76.6	84.0	89.7
Winter Sports	10.0	10.4	10.4	13.3	13.4
Resorts, Cabins, and Organizational Camps	10.0	11.5	11.5	7.6	7.6
Hunting	88.9	91.4	91.4	91.4	95.2
Fishing	31.5	33.7	33.7	33.7	33.7
Non-Consumptive Fish and Wildlife Use	2.0	3.2	3.2	3.2	3.3
Other Recreational Activities	57.5	59.6	59.6	60.6	60.6
Total	655.8	722.5	722.5	737.2	748.1
Wilderness Use (included above)					
Gospel-Hump	21.5	21.5	21.5	21.5	21.5
Frank Church-River of No Return	10.0	10.0	10.0	10.0	22.0
Selway-Bitterroot	51.6	51.6	51.6	51.6	51.6
Total (included above)	83.1	83.1	83.1	83.1	95.1

[1]Thousand recreation visitor days

Evaluation of Monitoring Results:

The results of monitoring recreation use were scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report. Apart from traffic count data, however, little effort was placed on gathering accurate visitor use information in 1992. Accuracy of RIM use estimates will improve only when gathering such information is given a priority. The lack of a National system also needs to be remedied. The Regional Office is taking steps to assist in improving our visitor use data by developing a Regionwide format for reporting visitor use.

Item 1b:	Acres of Recreation Opportunity Spectrum (ROS) Category
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 Years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Following a 5-year period, variation which would indicate that Forest Plan direction requiring a full range of recreation opportunities is not being met, or if the semi-primitive classes are being lost more quickly than specified in the Plan.

Discussion:

The Recreation Opportunity Spectrum (ROS) is used to evaluate the recreation potential of the Forest. This spectrum defines six classes of recreation opportunities on a continuum ranging from primitive, where human disturbance is minimal, to urban, where sights and sounds of people are predominant. These classes are defined in relation to physical settings and recreation activities and experiences. The Nez Perce has been inventoried, mapped, and divided into four ROS classes. Currently, the Forest has no rural or urban class settings.

Monitoring Results:

Recreation Opportunity Spectrum (ROS) mapping for the existing situation was completed in 1979. No subsequent mapping has been done on a Forestwide basis since then to update ROS categories or to determine adopted ROS classifications for areas resulting from Forest Plan implementation. On individual projects and areas, ROS is being considered most of the time as part of the environmental analyses. This does not present a Forestwide picture, however. A comprehensive review of ROS changes will be needed to determine if Forest Plan direction is being met.

From interim reports, it is evident that timber harvest activities and road construction in previously unharvested and unroaded areas are substantially reducing areas of semiprimitive nonmotorized and motorized ROS classes, converting these to roaded natural class. This is consistent with effects identified in the Forest Plan Environmental Impact Statement.

In fiscal year 1992, several projects on the Nez Perce National Forest were chosen at random for interdisciplinary team monitoring. Most of the interdisciplinary teams included a District employee with responsibilities in recreation. Documentation of these reviews indicated that recreation was often considered in environmental analyses and ROS was usually being used as a tool to assess the projects.

Evaluation of Monitoring Results:

In reviewing what has been completed using ROS, it has become evident that another category, Roaded Modified, needs to be formally adopted for use by the Forest. Roaded Modified, used throughout the Pacific Northwest Region of the Forest Service, has been used in some Nez Perce analyses. It best describes the recreation spectrum characterized by timber harvest units and road systems, but little in the way of recreation-oriented developments. It falls between the Semi-Primitive Roaded and Roaded Natural categories. A Forest Plan amendment would be the best way to formally adopt the Roaded Modified ROS.

In 1990, the three north Idaho Forests sponsored an ROS training session which was well attended. This has helped in the understanding and application of ROS to the Nez Perce NF. With changes in personnel and with heightened awareness of recreation, more needs to be done. What is needed is a review and

revision of ROS maps Forestwide, incorporation of ROS into all environmental analyses, and a mechanism for updating ROS acreage changes in a data base.

Item 2a:	Off-Road Vehicle Impacts
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Unacceptable impacts caused by off-road vehicle use.

Monitoring Results:

The Off-Road-Vehicle (ORV) Monitoring Plan referenced in Appendix O of the Nez Perce Forest Plan was replaced with an Access Management Monitoring Plan for the Forest. Methodology for the systematic monitoring of ORV use has not been completed.

ORV use on the Forest has been increasing in popularity and variety. Snowmobiles, three- and four-wheel all-terrain vehicles, and traditional four-wheel drive vehicles all contribute to this use. ORV conflicts with established foot and horse use on newly reconstructed trails is an emerging issue.

The most prevalent use violation is illegal use of vehicles on closed roads, many of which are gated. Use is restricted on many roads for wildlife security, to prevent soil erosion, and to reduce road maintenance. However, no in-depth monitoring has been conducted to determine whether these adverse effects have occurred due to ORV use. Off-road vehicles can be damaging to soil, water, and vegetation. This is particularly true where trail systems with a 24-inch tread width are used by vehicles with 42 to 52-inch tread width. Other damage by ORVs occurs off roads and trails through hill climbs and in ORV play areas.

Each year, gates are broken or circumvented, with resultant impacts. Efforts to reduce these impacts include posting of up-to-date orders at each gate, explanatory signs describing reasons for the closures, increased enforcement actions, publicity of successful prosecutions, and weekend hunter patrols to provide contact with visitors and an opportunity to explain road restrictions.

A significant accomplishment in 1991 was total revision of the combined Nez Perce Visitor/Travel Map, which updated travel management displays and formatted these in a user friendly, easier to understand format.

Review of randomly selected projects chosen for monitoring indicate that little is being done in the way of ORV monitoring. Specific instances of ORV abuse are handled on a case-by-case basis.

Evaluation of Monitoring Results:

Through further development and implementation of the Access Management Plan, the Forest needs to develop a systematic method to monitor ORV use and impacts. Some of the methodology is documented in the Access Management Guidelines, but not enough to satisfy the requirements of the Forest Monitoring Plan.

Item 2b:	Adequacy of Cultural Resource Protection, Impacts on Cultural Resources
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1993)
Variability Which Would Initiate Further Evaluation:	A change in Section 106 of the National Historic Preservation Act of 1966 or other pertinent cultural resource laws and regulations could necessitate altering the cultural resource monitoring procedure to comply with the changes.

Monitoring Results:

During fiscal year 1992, 33 projects were inventoried for compliance with Section 106 of the National Historic Preservation Act as specified in the Forest Plan. The total number of projects inventoried was limited due to budget constraints. As a result, 3,664 acres were inventoried for cultural resources and 37 new archaeological sites were recorded.

Since implementation of the Forest Plan, several American Indian religious rites areas have been identified on the Forest.

Cultural Resource Inventory Results

Fiscal Year	Number of Projects Inventoried	Number of Acres Inventoried	New Archaeological Sites Recorded
1988	50	3,753	36
1989	22	2,600	17
1990	35	3,137	37
1991	33	4,286	29
1992	33	3,664	37

In addition to the new sites recorded, 22 previously recorded sites were re-visited and their documentation updated. Of the 22 sites monitored, 19 were determined as eligible for nomination to the National Register of Historic Places (NRHP). Specific mitigation measures were recommended for the preservation of these 19 eligible sites.

Adequacy of Cultural Resource Protection

Fiscal Year	Sites Inventoried	Evidence of Vandalism/Damage
1988	10	0
1989	28	3
1990	7	0
1991	42	2
1992	22	0

Volunteers helped with the clean-up of four separate dump sites along the Wild and Scenic River portion of the main Salmon River. Any historic artifacts were gathered and catalogued.

Evaluation of Monitoring Results:

None of the 22 sites monitored were impacted. Monitoring of the 22 sites revealed that the recommended protection measures were effective.

One current method being used to monitor cultural resources includes re-surveying sites and recording discernible effects or changes through completion of site report amendments or updates.

In some cases it would be valuable to establish measurements for more precise monitoring of sites eligible to the National Register of Historic Places. This could be accomplished by identification of a permanent datum or controlled mapping point for each site. Recording bearing and distance measurements from the site datum to its boundaries and associated features would allow us to accurately detect and document any changes or effects on a site during monitoring.

With the current Cultural Resource Management (CRM) funding level it is not feasible to implement this procedure. An increase in the CRM budget will be needed in order to develop a systematic procedure for more precise monitoring of sites. This is particularly needed for sites that are surrounded by on-going management activities or are located in highly used areas such as along the Salmon and Selway Rivers.

There is a need to provide better protection for the cultural resources in the Pilot Knob/Pilot Rock Nez Perce Indian religous rites area and other religious rites areas that are located on the Forest.

Item 2c:	**Limits of Acceptable Change in Wilderness**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	If, after a 5-year review period, changes in wilderness exceeded acceptable limits.

Specific Items Monitored for the Selway-Bitterroot Wilderness:

The following Forest Plan monitoring requirements are identified in Appendix A of the Selway-Bitterroot Wilderness (SBW) General Management Direction, 1992 update. This is the first year that monitoring of these items has occurred. Following are the results of this monitoring:

No monitoring was conducted in fiscal year 1992 for the following Selway-Bitterroot Wilderness monitoring items:

SBW Monitoring Item 1: Impacts of human activities on the composite wilderness resource; **SBW Monitoring Item 2:** Impacts of management activities on the composite wilderness resource; **SBW Monitoring Item 5:** Number of other parties encountered per day; **SBW Monitoring Item 6:** Number of other parties camped within sight or sound; **SBW Monitoring Item 16:** length of stay; and **SBW Monitoring Item 18:** Change in vegetation cover on runway surfaces.

Monitoring was conducted in fiscal year 1992 for the following Selway-Bitterroot Wilderness monitoring items:

SBW Monitoring Item 3: Number of sites per square mile; and **SBW Monitoring Item 4:** Number of sites at a particular impact level per square mile.

Monitoring Results:

Twenty percent of the total identified sites were inventoried in FY 92 as scheduled in the Forest Plan.

Evaluation of Monitoring Results:

Eight problem areas were identified and reported in the SBW State of the Wilderness Report. Further analysis of the inventory data was not funded. No actions have been taken to correct problem areas.

SBW Monitoring Item 7: Problem areas managed to correct sub-standard conditions.

Monitoring Results:

No action was taken to correct sub-standard conditions in problem areas.

Evaluation of Monitoring Results:

Not meeting Forest Plan standards at identified problem areas.

SBW Monitoring Item 8: Identification and correction of sub-standard signing.

Monitoring Results:

In FY 92, 70 percent of Moose Creek District's trail signs were replaced and brought up to standard.

Evaluation of Monitoring Results:

Continued emphasis on replacement of substandard signage and placement of new signs will be required to bring us into full compliance. Trail, boundary, and portal signing still need funding.

SBW Monitoring Item 9: Evaluating maintenance and reconstruction project plans against management direction.

Monitoring Results:

All trail maintenance and reconstruction projects were programmed according to opportunity class objectives identified in the Forest Plan.

Evaluation of Monitoring Results:

Trail maintenance and reconstruction projects complied with Forest Plan direction.

SBW Monitoring Item 10: Achievement of trail maintenance objectives.

Monitoring Results:

In FY 92, trail maintenance objectives were met on 98 percent of the mainline trails[1], 10 percent of the secondary trails[2], and 5 percent of the way trails[3].

Evaluation of Monitoring Results:

Recent trail maintenance funding levels are allowing the Moose Creek District to meet Forest Plan standards for mainline trails. At present funding levels, maintenance standards are not being met on approximately 50 percent of the District's secondary trails, and nearly 100 percent of the way trails. Many of the District's way trails have been without maintenance for 30 years.

[1] Mainline - Primary facility designed to provide access to a large block of land, usually at the easiest difficulty level. This facility will normally provide portal to portal or major access to points of intersection with secondary systems and provide for multi-purpose management objectives. Use is normally 100 users or greater per season. Maintenance should be performed annually or biannually.

[2] Secondary - Secondary facility designed to provide internal access or disperse users from mainline facilities. These facilities are usually in the More Difficult class and use is less than 100 users per season. Maintenance is usually performed every 2 to 3 years.

[3] Way - (Primitive) Low priority system designed to service an area usually of Hiker standard in the most difficult class. The system services annually less than 100 people. Maintenance is usually user performed or reviewed every 3 to 4 years for public safety erosion hazards.

SBW Monitoring Item 11: Achievement of trail reconstruction objectives.

Monitoring Results:

Trail reconstruction objectives were met on all FY 92 funded projects.

Evaluation of Monitoring Results:

Reconstruction objectives are being met on funded projects. However, less than 5 percent of the needed trail reconstruction is being funded each year.

SBW Monitoring Item 12: Impact to non-system trails.

Monitoring Results:

Non-system trails are noted and mapped in conjunction with other activities. As problem areas are identified, the specific impacts are described and reported in the SBW State of the Wilderness Report.

Evaluation of Monitoring Results:

Although problem areas are being identified, current funding levels are not adequate to correct problems.

SBW Monitoring Item 13: Number of landings per day.

Monitoring Results:

FY 92 funding did not permit full-time staffing at Moose Creek airstrip. Records were kept for the days personnel were present. Shearer Airstrip was not monitored.

Evaluation of Monitoring Results:

Incomplete data collected does not permit accurate analysis. In FY 92, Moose Creek airstrip was monitored approximately 75 percent of the time. During that time, 670 flights were recorded. With present funding trends, it is expected that personnel coverage of the airstrip for monitoring purposes will continue to be reduced. Funding requests for electronic counters for Moose Creek and Shearer airstrips have been submitted.

SBW Monitoring Item 14: Number of landings per year by user type; and **SBW Monitoring Item 15:** Proportion of landings by user type.

Monitoring Results:

In FY 92, Moose Creek airstrip was monitored approximately 75 percent of the time. During that time, 670 flights were recorded.

Evaluation of Monitoring Results:

Incomplete data collected does not permit accurate analysis.

SBW Monitoring Item 17: Condition of runway surface and facilities.

Monitoring Results:

Both Shearer and Moose Creek airstrips were inspected by Regional aviation personnel in FY 92.

Evaluation of Monitoring Results:

Regional inspectors rated both Moose Creek and Shearer airstrips in good condition.

Other Wilderness Monitoring:

Monitoring Results:

Detailed summaries were prepared in 1992 describing overall management of the Selway-Bitterroot and Frank Church-River of No Return Wildernesses. One has also been prepared for the Gospel-Hump Wilderness. These reports to Congress provide good monitoring information on the Nez Perce National Forest's wilderness. Reports for the Selway-Bitterroot and Frank Church-River of No Return Wildernesses are particularly detailed, and review copies are available upon request.

Following is a summary of wilderness implementation plans, Limits of Acceptable Change (LAC) planning, and wilderness fire plans for the Nez Perce National Forest:

Selway-Bitterroot:

Currently operating under Selway-Bitterroot Wilderness General Management Direction, 1992. This document was originally signed by the Regional Forester in 1982 and was replaced by a Forest Plan amendment with the 1992 General Management Direction.

The 1992 amendment included Limits of Acceptable Change planning for recreation, trails, and airfield management. Management direction is currently being written for wildlife and vegetation management with additional planning scheduled for soil, water and air, administrative sites, and special uses.

Gospel-Hump:

A management plan for the Gospel-Hump Wilderness was completed in 1985 and incorporated by reference into the Forest Plan for the Nez Perce National Forest. Campsite condition inventories are completed annually, as funding allows, to establish baseline information for the LAC process.

Further assessment using LAC has begun in limited steps, principally collecting baseline campsite inventory data.

Frank Church - River of No Return:

Currently operating under a management plan tied to Forest Plan. LAC process for validating management direction is scheduled to begin in 1993 in a coordinated four-Forest effort. Campsite condition inventories are completed annually, as funding allows, to establish baseline information for the LAC process.

Status of Wilderness Fire Management Plans for Wildernesses on the Nez Perce National Forest:

Selway-Bitterroot:

The fire management plan, suspended in 1988, was revised in May of 1990, and was in effect during the 1992 fire season. The plan does not allow for planned ignition. For further information, see the Fire section of the Selway-Bitterroot Wilderness "State of the Wilderness Report." A copy of this fire management plan can be obtained by contacting the Selway-Bitterroot Wilderness Coordinator, Moose Creek Ranger District, P.O. Box 464, Grangeville, ID, (208/983-2712).

Gospel-Hump:

The fire management plan, suspended since 1988, is currently undergoing revision and should be in effect for the 1993 fire season, pending public review and Regional Forester's approval. The plan does not allow for planned ignition.

Frank Church - River of No Return:

The fire management plan, suspended since 1988, was revised and in effect during the 1992 fire season. The plan does allow for planned ignition.

Coordinated Wilderness Management

Coordination of wilderness management programs and activities among adjacent administering units of the same wilderness has improved greatly during the past 2 years. Results of this coordination are evident in all wildernesses administered by the Nez Perce NF.

In the Gospel-Hump Wilderness, administered entirely by the Nez Perce NF (Red River and Salmon River Ranger Districts), preseason and on-the-ground coordination meetings were held in 1992. Information on 1992 accomplishments has been assembled for the annual report to Congress, and revision of the prescribed natural fire plan for the Gospel-Hump Wilderness is nearly completed.

Coordinated management of the Selway-Bitterroot Wilderness (SBW) has been formalized by creating a SBW Leadership Policy Council and Steering Group comprised of members from the Clearwater, Bitterroot, and Nez Perce National Forests, as well as the Regional Office. For 1992 activities, a comprehensive Wildernesswide report has been prepared, entitled "Selway-Bitterroot Wilderness, 1992, State of the Wilderness Report." It contains a detailed monitoring report for the SBW.

A review copy of the SBW State of the Wilderness report is available from the SBW Coordinator at the Moose Creek Ranger District, P.O. Box 464, Grangeville, ID 83530, or (208)983-2712.

A similar coordination structure has been established for the Frank Church-River of No Return Wilderness (FC-RONR). A number of significant accomplishments in organization and management occurred in 1991. Key changes affecting the Nez Perce NF included continuing management of an additional 193,000 acres previously administered by the Bitterroot NF, and an expanded field and wilderness education effort. These accomplishments are documented in the 1992 Annual Wilderness Report for the FC-RONR Wilderness, available from the FC-RONR Wilderness Coordinator, Salmon National Forest.

Evaluation of Monitoring Results:

A great deal of effort is being put into completion of the Selway-Bitterroot Limits of Acceptable Change (LAC) planning process, and into beginning the planning process for the Frank Church-River of No Return Wilderness. The result should include detailed resource analysis, and both implementation and effectiveness monitoring requirements. Similar efforts in other wildernesses on the Forest are not as far along. Wilderness management is being given close scrutiny at the local, regional and national levels. Most management activities receive detailed environmental analysis. Problems brought up most by wilderness managers include insufficient funding and personnel, difficulty in keeping qualified personnel because of

lack of career opportunities in wilderness management, and a continuing need to better communicate with the public and Forest Service employees regarding the proper use and management of wilderness.

Coordinated wilderness management efforts are resulting in better, more consistent management on the ground. Improved budget accountability, wilderness planning, and better coordination among all managers of a particular wilderness are all evident. Specific accomplishments, including monitoring efforts, are included in the individual annual reports prepared for each wilderness.

Item 2d	Achievement of Visual Quality
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	After 5 years of monitoring, an assessment indicates visual quality objectives are not being met.

Monitoring Results:

Visual Resource Management (VRM) classes were mapped Forestwide over ten years ago, prior to the development and implementation of the Nez Perce National Forest Plan. The major task remains to review these original VRM objectives and update, or adapt, them to meet current on-the-ground conditions and Forest Plan direction.

An important step toward achieving visual quality direction occurred in 1989 with the approval of Forest Plan Amendment #4. This amendment added definitions to aid in understanding the terms "adopted", "inventoried", and "interim" visual quality objectives (VQO's). It modified existing standards to remove inconsistencies in VQO's, to make the standards more attuned to procedures described in Agriculture Handbook 462 - The Visual Management System, and to specify a methodology for documenting visual quality decisions.

The Nez Perce National Forest has not employed a full-time landscape architect for nearly a decade. Visual quality, however, is being considered and documented in most on-the-ground activities. Through a combination of contract landscape architect involvement, assistance from the Forest Architect, and District visual resource management paraprofessionals, most Districts are making adequate progress toward meeting the visual quality objectives of the Forest Plan. Analysis is being made on a project-by-project basis. When VQO's are adopted, the areas are mapped and documented.

Evaluation of Monitoring Results:

On most Districts, some progress is being made in understanding and achieving VQOs. The Forest program relies upon District paraprofessional visual resource specialists, contract landscape architects, and occasional assistance from the Forest Architect. Although this assumption of responsibilities seems to be resulting in achievement of VQO's on some Districts, the program needs to be strengthened on others.

Item 2n:	Management of Designated or Eligible Wild, Scenic, or Recreational River Segments
Frequency of Measurement:	Annually (October 1, 1990 to September 30, 1991)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Following a 5-year period, information which would indicate management direction for designated or eligible wild, scenic, or recreation rivers is not being followed.

Discussion:

The Nez Perce National Forest manages parts of four rivers classified under the Wild and & Scenic Rivers Act, and 13 rivers that are eligible for classification. The four classified rivers include the Selway (40 miles Wild, 21 miles Recreational); Middle Fork Clearwater (11 miles Recreational); Rapid (12 miles Wild); and Salmon (66 miles Wild).

Eligible river segments are listed in Appendix P to the Forest Plan. Appendix P also includes a listing of outstanding features of each eligible segment.

Monitoring Results:

Designated Rivers:

Salmon (Wild) -- Compatible uses occurring on the Salmon River include private and outfitted boating (floating and powerboating); administration of scenic easements; continuing work to acquire additional easements; continuing work on a land exchange; and trail maintenance. Some mining activity has been occurring on private property within the corridor. Lack of funding for the lands program has limited the acquisition of additional scenic easements, and there has not been adequate funding in recreation to adequately monitor the recreation program on the river.

Middle Fork Clearwater -- Administration of scenic easements shows compliance with direction.

Selway -- The **wild** segment of the Selway is managed through the direction of a fully instituted management plan and a very strict permit season. The river program is staffed with one seasonal river ranger, one or two volunteer boatmen, and a shuttle service. Six patrol trips down the river were made during the control season. These folks take care of the logistics of cleaning the river, monitoring intensities of use, and serving the public.

The **recreational** segment of the Selway is continually monitored for compliance with direction dealing with road management, administrative facilities, scenic easements, visual management, trail management, recreation, and water quality.

Rapid River -- Trail work and grazing occurred along this corridor. These are in compliance with management direction.

Eligible River Segments

Bear Creek, Moose Creek, and Three Links, eligible wild rivers located on the Moose Creek Ranger District, are recommended to be managed as wild rivers. Their management direction is contained in the Selway-Bitterroot Management Plan. These strategies comply with area management direction.

Slate Creek -- Grazing, road maintenance, mining, trail work, and fish structure construction all occurred within the segment eligible as a Recreational River. These activities are compatible with management direction. Reaches are also eligible for wild river classification.

White Bird Creek -- Cattle grazing and trail maintenance, both compatible with direction for this eligible recreation river.

Running Creek -- No management activities, in compliance with Forest Plan direction (trail clearing by users along Trail 529). This stream is eligible for scenic and recreation classification.

Bargamin Creek -- Trail maintenance, in compliance with Forest Plan and Frank Church-River of No Return Management Plan direction. Reaches of Bargamin Creek are eligible for scenic and wild classification.

Lake Creek -- Trail maintenance, in compliance with Forest Plan and Gospel-Hump Management Plan direction. Segments eligible for recreation and wild rivers.

Meadow Creek (Tributary to Selway River) -- Grazing allotment in use status; in compliance with Forest Plan direction for this eligible wild and recreation river.

South Fork Clearwater River (Recreational) -- Modification of a clearcut unit on the Shooting Star Timber Sale occurred in FY 1990 because it can be seen from the South Fork Highway (M.P. 37). Minor aspects of the harvesting became visible prior to modification. Idaho Highway Department waste dump sites are a visual concern (do not meet partial retention), and occupy potential visitor parking sites. Visual resource management on the Shooting Star timber sale area was analyzed by a certified landscape architect during the NEPA process.

Johns Creek -- Deeply incised canyon provides outstanding vistas and ruggedness. Chinook salmon, steelhead and cutthroat trout habitat. Current management is compatible with maintaining eligibility status.

Salmon River -- Bill introduced in Congress in 1992 for designation of lower Salmon River, but not acted upon. Current management is compatible with eligibility criteria.

West Fork Gedney Creek -- Diversity of geology, vegetation, and other bological components. Spawning habitat for chinook salmon and wild steelhead trout. Current management maintains eligibility.

Evaluation of Monitoring Results:

Based on limited monitoring information, it appears that management of designated Wild, Scenic, and Recreational Rivers meets management direction for the segments.

Management of eligible segments also appears to meet management direction. Lack of funding in the recreation and lands programs inhibits the monitoring and management of these segments, and of completing the suitability analyses for the eligible segments. The Middle Fork Clearwater Management Plan needs updating.

The Forest Plan identifies a segment of White Bird Creek as an eligible waterway for the Wild and Scenic River system. None of this eligible waterway is on Forest Service land. The Forest Service has no authority to conduct a Wild and Scenic River suitability study on lands where the eligible waterway is entirely outside the Forest boundary. The Forest will be encouraging the State of Idaho or the National Park Service to take the lead role in conducting the suitability study.

PROTECTION

Item 1k:	Acres and Numbers of Wild and Prescribed Fires
Frequency of Measurement:	Annually (October 1, 1991 to September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Unusual number of person-caused fires over the 10-year average indicating a trend of a specific cause(s). Unusual number of acres burned if unexplainable, such as unusually severe fire danger based on the burning index and the energy release component.

Discussion:

The drought continued on the Forest with a substantial increase in the number of wildfires and burned acres. Readiness, consisting of trained initial attack fire-goers along with modern equipment, ranks high on the Forest priority list to combat wildfire events. The 10-year average of acres burned and number of wildfires reflect a steady increase in both categories.

Monitoring Results:

ACRES AND NUMBER OF WILDFIRES

	Number of Fires						Acres Burned					
Types of Fires	1988	1989	1990	1991	1992	10-Yr.Avg.[1]	1988	1989	1990	1991	1992	10-Yr.Avg.[1]
Lightning Fires	122	310	178	238	264	174	102,236	8,850	95	176	44,913	18,070
Lightning Fires with Control Strategy	106	310	155	238	216	161	59,426	8,850	83	176	44,741	12,142
Lightning Fires with Contain, Confine Strategy	16	0	23	0	48	13	42,810	0	12	0	172	5,928
Person-caused/ Misc.Fires	21	16	24	32	16	17	3,707	38	548	2,031	53	2,228
Total Fires	143	326	202	270	280	191	105,943	8,888	643	2,207	44,966	20,298

[1] The 10-year average is the average for the past 10 years.

PRESCRIBED NATURAL FIRES (WILDERNESS)[1]

	1988	1989[3]	1990	1991	1992	10-Year Avg.[2]
Number of Fires	3	0	2	13	12	13
Acres Burned	520	0	0	3,311	39	1,878

[1] See the Selway-Bitterroot Wilderness "State of the Wilderness Report" fire section for further information.
[2] The 10-year average is the average for the past 10 years.
[3] In 1989 there was a moratorium on prescribed natural fires.

Individual fire reports were completed on all 1992 fires.

The Nez Perce Forest, along with other Federal, State, and private agencies of the North Idaho Airshed Group, continued their dialogue and cooperation to minimize or prevent the accumulation of smoke in Idaho, to meet State and Federal ambient air quality standards.

The Forest has two fuels targets (acres). One concerns the use of fire protection dollars, and the other, brush disposal funds. The target for use of fire protection dollars was 750 acres. This target was exceeded by 57 acres. Both natural and activity fuels (logging debris) were treated with these funds.

The Forest target, 2,426 acres, treatment of activity fuels with the use of brush disposal funds, was not attained. However, it fell short by only 60 acres. Fall burning conditions were again unfavorable due to dry conditions.

The Forest Fire Management program was not funded at the most cost-efficient level as described by the National Fire Management Analysis System. However, the Forest did receive an additional $824,000 of

severity funding in support of the fire management organization. Of this amount, approximately $673,000 was spent.

Fuel treatment/prescribed fire was planned and utilized in accomplishing land management objectives.

Evaluation of Monitoring Results:

All Individual Fire Reports were submitted as required. Forest Plan and Regional projections for treatment of activity fuels were not met. Treatment projections of natural fuels were attained.

Item 7:	**Insect and Disease Activity**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Significant increases in population or damage levels of insects or diseases

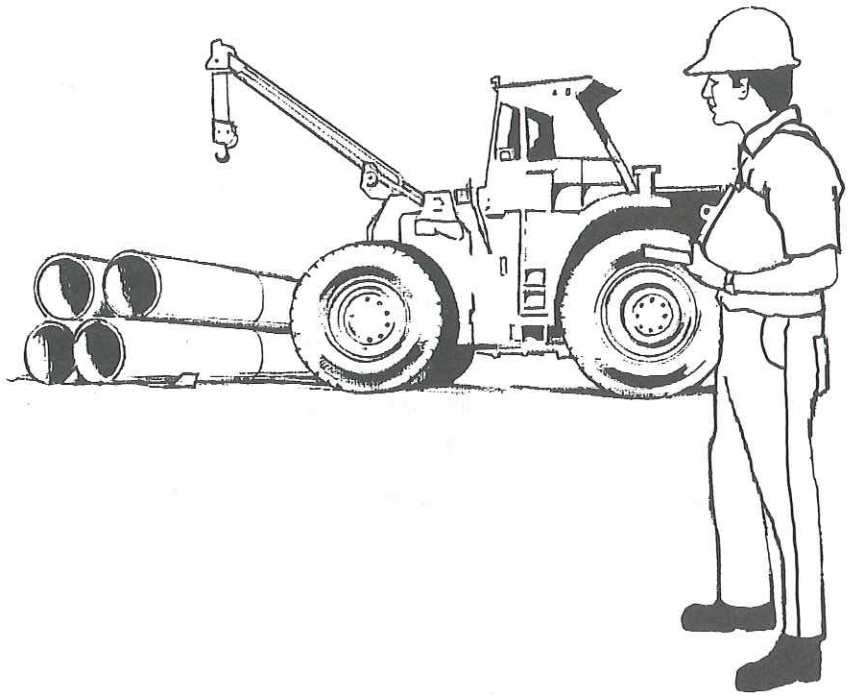
Monitoring Results:

The area of mountain pine beetle-infested lodgepole pine and ponderosa pine was reduced from 1991. Mountain pine beetle infestations, along with numerous other minor pests, remained relatively stable. Western pine beetle and fir engraver infestations declined from 1991. The balsam wooly adelgid remained in subalpine and grand firs in 1992. Douglas-fir beetle infestations increased significantly with the major increases being in the vicinity of 1991 forest fires. Western spruce budworm infestations increased over the Forest and will be monitored extensively in 1993. Root disease continues to be a major problem in Douglas-fir and a minor cause of mortality in other tree species. (An aerial survey conducted by Regional Office entomologists is the data source).

Evaluation of Monitoring Results:

In general, insect and disease conditions do not warrant area-wide control efforts. Silvicultural prescriptions will address stand treatment needs and mitigate the effects of insect and disease activity where possible. General insect and disease conditions will continue to be monitored to determine trends.

FACILITIES



Item 2k:	Mitigation Measures Used for and Impacts of Transportation Facilities on Resources
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	If reviews or studies indicated that mitigation was not being implemented as specified or if effectiveness was not near the levels predicted.

Discussion:

Facilities on the Forest include buildings and administrative sites, property boundaries, and the transportation system of Forest roads and trails. Construction and maintenance of all facilities improves the safety and health of both Forest employees and the visiting public.

Buildings and Administrative Sites -- Monitoring the health and safety of Forest buildings and administrative sites is not a monitoring requirement of the Forest Plan. Federal, State, and County laws and regulations govern the construction, maintenance, and use of structures, potable water systems, and sewage treatment systems.

The Forest has three public community water systems that serve Fenn Ranger Station, Red River Ranger Station, and Slate Creek Ranger Station. There are also three other seasonal work center water systems and ten recreation site water systems. Bacteriological testing is done monthly during the year at the community systems and monthly during the use season for the other systems. This year, analysis for primary chemicals was done on the community systems. If the systems fail testing requirements, they must be closed to use. In 1992, the Forest reported no problems with potable water testing.

The Forest maintains three sewage treatment plants, one each at Fenn, Red River, and Slate Creek Ranger Stations. Effluent from these plants is tested monthly in accordance with each site NPDES (National Pollution Discharge Elimination System) Permit requirements. The information is then forwarded to the Environmental Protection Agency. The Forest did not discover any problems through effluent testing this year.

Property Boundaries -- There are approximately 350 miles of boundary between Forest lands and private landowners. There is an additional 330 miles of wilderness boundaries on the Forest. These boundaries are not yet all marked. Maintenance of existing posted boundaries continues at about 10 miles per year. Wilderness boundary is located when needed for specific projects. In 1992, approximately 6 miles was located. Private boundaries have been located at the rate of 23 miles per year. As the more difficult terrain and the areas where corners have not been reestablished for nearly 100 years remains, the rate of boundary location and posting is dropping to 10-15 miles per year.

Transportation System (Roads and Trails) -- Monitoring is conducted during project planning, implementation, and throughout the duration of use. Project planning provides rationale for required mitigation. Upon implementation, monitoring is continuous during contract administration as documented in contract daily diaries and during program management as documented in the facility maintenance records.

Monitoring is also performed during interdisciplinary project reviews and in the annual program review.

Mitigation is accomplished using a combination of practices and specific measures. Five specific practices are:

a. **Transportation Planning,** which is a detailed office effort using maps, photos, historical data, land hazard information, and geotechnical information to identify and avoid possible stability problems and mass hazard areas and to hold road mileage to the lowest possible.

b. **Route location,** which ground-truths the results of the planning, refines locations,and provides further information on possible problem areas.

c. **Contract Preparation,** which assures that mitigation measures are incorporated into drawings and specifications to be followed when the facility is built.

d. **Administration,** which assures compliance with the contract.

e. **Maintenance,** which assures that the facility continues to function and provide the level of mitigation originally intended.

In addition to Best Management Practices and the practices listed above, specific design measures can be employed to reduce effects of facilities on resources. Some of these measures are:

f. **Designed and controlled cut slopes, fill slopes, road width, and road grades.** These effectively reduce sediment production by fitting the roads to the land.

g. **Designed and controlled ditches, cross drain spacing, and culvert discharge.** These prevent water from running long distances over exposed ground. **Dewatered (dry) culvert installations and special drainage** such as rock filter blankets and rock buttresses were demonstrated to be effective in the Horse Creek study.

h. **Stabilization of road surface and ditch lines over 6 percent with competent rock** (rock that does not rapidly disintegrate). The effectiveness of this measure in reducing surface erosion from these sources is dramatic, often over 90 percent.

I. **Slash Filter Windrows.** This measure was developed on the Nez Perce Forest as part of the Horse Creek study. It consists of placing logging slash at the base of fill slopes and below culverts where fish passage is not required. It is a very effective treatment; sediment leaving fill slopes is reduced by 80 to 95 percent.

j. **Seeding and fertilizing cut slopes, fill slopes, and other disturbed areas.** The objective is to reduce soil erosion from these sources after one growing season. Effectiveness has been rated at 85 percent or better once vegetation has become established.

Some of these measures are immediately effective, such as culvert dewatering. Slash filter windrows are effective immediately and during the first few years; after that they may become near capacity and in some instances begin to decompose. By that time though, revegetation becomes established and more effective.

Monitoring Results:

Implementation Monitoring: All engineering projects for FY 1991 included specific mitigation measures to reduce facilities' impacts on resources. The following mitigation measures were used (not all were used on every project).

- Windrowing of construction slash at the toe of the fill.
- Rock surfacing of the entire road or at contributing areas.
- Layer placement and compaction of major fills.
- Grass seeding and fertilization of cut/fill slopes and disturbed areas.
- Rocking of ditchlines.
- Incorporating critical logging system controls into the design to minimize length of time of exposed soil.
- Straw bales to control erosion.
- Temporary waterbars to control erosion.
- Special project specification 204 (sps 204) to control timing of installation of mitigation measures.
- Installation of gates and or barriers to control traffic.
- Permanent waterbars (for trails)
- Controlled timber haul
- Placement of durable pit run rock blanket on fillslopes at major culvert installations to control erosion.
- Installation of drop inlets at critical locations to control erosion.
- Construction of rock buttress retaining structures.

The following tables identify principal mitigation measures specified/implemented by road project.

Table 2k-1 MITIGATION MEASURES SPECIFIED ON PROJECTS IN FY 1992

Project	Planned Sediment Mitigation (%)	Windrow Slash	Rock Surfacing	Rock Ditches	Grass Seeding Fertilization	Straw Bales	SPS 204[3]	Layer Place Fills	Critical Logging Controls (designed into Package)	Temporary Waterbars	Gates Traffic Control	Total Project Cost $M[4]
PUBLIC WORKS												
Red River Crushing	NA	NA	NA	NA	X		X	NA	NA	X	NA	295,200
Skookumchuck[2]	80	X	X	X	X	X	X	X	NA	X		275,500
Selway Bridges[2]	NA	NA	X	NA	X	X	X	NA	NA	X	NA	226,100
Nut Basin [1] [2]	80		X		X	X	X	NA	NA	X	NA	296,700
TIMBER SALES												
Jack Creek	80	X			X	X	X	X	X	X	X	559,300
Little Cougar		X	X	X	X	X	X	X	X	X	X	8,100
Silver West [2]	80	X	X	X	X	X	X	X	X	X	X	860,900
Twentymile	80	X	X	X	X	X	X	X	X	X	X	368,700
Mackey Day	80	X	X	X	X	X	X	X	X	X	X	762,200

[1] These projects were designed to assist in providing an "upward trend" in the affected watersheds.

[2] These projects included reconstruction to address sedimentation concerns, safety, and/or user serviceability.

[3] Special Project Specification - These are mitigation measures for construction practices.

[4] Cost of mitigation measures is only a portion of the total project cost.

Special Study: Whitewater Road Reconstruction Monitoring

Project History

Forest Road #421, commonly known as the Whitewater Road, extends from Road #1190 near Jack Creek Summit to the Salmon River. This 17.2-mile road ranges from T27N R9E S28 to T25N R9E S21 on the Red River Ranger District.

Rd. #421 was originally constructed in 1937-38 to access the Whitewater Ranch, a private property on the Salmon River. It was built to the "truck trail" standards of that era and was a single-lane native (dirt) surfaced road that was narrow, winding, and steep, especially as it traversed the Salmon River breaks (Mallard EIS, page 57).

The Mallard Draft Environmental Impact Statement (EIS) was released for public review and comment in April 1990. This EIS was proposed to implement the Nez Perce Forest Plan by scheduling management practices on management areas in accord with Forestwide and management area objectives and standards in order to move toward a desired future forest condition. The project included several areas of timber harvest as well as road construction and reconstruction.

Rd. #421 was recommended for reconstruction during the Mallard Project since the costs and the adverse environmental impacts of reconstruction would be far less than those of constructing new roads, or safety or sediment concerns of using the existing road. The road was designated for hauling timber to proposed Rd. #10085 near Noble Creek. A 14-foot travelway with minimal clearing would be designed for mixed traffic. From proposed Rd. #10085 to Vista Point, the road would be rebuilt to a 12-foot travelway. The objectives of this latter portion would be to reduce existing erosion problems and to improve access to dispersed recreation areas. Three bridges on the road were nearing the end of their design life and were designated for replacement under the project (Mallard EIS pages 19, 111-112).

The Record of Decision for Mallard EIS dated December 1990 stated Rd. #421 clearing was to be kept to a minimum, and the travelway was to be 14 feet wide. Slash was to be removed or buried unless needed for windrows to catch sediment. The road was to be snow-plowed to width to accommodate mixed vehicular traffic during the winter if winter log haul was used (Record of Decision, Mallard Timber Sales, pages 6, 10).

Mallard Creek Public Works (Rd. #421 reconstruction) was submitted to the Regional Office for funding under the capital investment program. The project identified Rd. #421 as one of the main collector facilities accessing the Gospel-Hump 1-921 and Mallard Creek 1-847 RARE II released areas. The project was proposed to reconstruct a CCC-constructed facility to a single-lane, 14-foot roadway with ditches and turnouts. The work would consist of clearing, grading, drainage, base stabilization for erosion control, and the replacement of two treated timber structures and one open bottom arch to facilitate logging and recreation uses (FY90 Nez Perce Capital Construction Programs FY91-95, page 7).

Design

Forest Transportation Planning was completed in 1981. Area Transportation Planning was completed originally in 1984 and then revised in 1989. Preliminary designs for Rd. #421 reconstruction were completed during the winter of 1989-90 by an engineering design team at the Nez Perce National Forest Supervisor's Office. The design included a 14-foot wide travelway with ditches. Rock retaining walls would be built at the first two crossings of Mallard Creek. This would prevent the streambanks from falling into the creek every spring during high water and therefore reduce sedimentation to the creek in the long term.

A preliminary review of the proposed reconstruction was conducted in July 1990 with Ranger Steve Williams, Forest Engineer Mike Cook, Jim Babb, a local resident, and Dennis Baird, Idaho Environmental Council. Mr. Babb and Mr. Baird were especially invited since they had written to the Forest expressing concerns about the Whitewater Road during the draft review period of the Mallard EIS. This group reviewed past uses of the road and potential problems that could be corrected with reconstruction. This included realigning the road in three spots to correct existing instability problems in the cutbank.

Later that summer, Red River District Ranger Steve Williams and Forest Engineer Mike Cook completed a joint field review of the proposed road reconstruction and mitigation efforts. Several recreation considerations were added to the proposed design. These included adding snowmobile parking, widening approaches to allow for parking, preserving or replacing stock chutes, and designing several dispersed recreation sites and trailheads.

The reconstruction designs were reviewed again on September 25, 1990 by Mike Cook, Wayne Wright, and Gary Furman from SO Engineering and Ranger Steve Williams and Mark Peterson from Red River Ranger District. Preliminary designs indicated the road would be minimal lowboy standard to junction of Rd. #10025 and then log truck to the end of the project. Lowboys would require a pilot car. Not every turnout would be able to pass a lowboy with another vehicle. Turnouts will be approximately 5-7 per mile, not necessarily intervisible. Select clearing would be done to improve sight distance. Typical sections were changed to a mix of 14-foot width outsloped surface with no ditch, 14-foot insloped surface and a one-foot ditch, and 14-foot flat surface with no ditch. All typical sections were to be surfaced with competent rock. Other specific design details discussed concerned rocking ditches, slope revegetation, fish passage, and additional parking. The reconstruction designs were revised during the winter of 1990-91 to reflect these changes (internal memo dated 9-25-90).

Visual quality was reviewed by Kathy Snodgrass, the Forest paraprofessional landscape architect, on November 13, 1990. She reviewed about 2 1/2 miles of clearing limits that had been staked after the September 25 field review. She gave clearing recommendations to attain the visual quality objective of partial retention (letter to Steve Williams dated 11-13-90).

The Idaho State Heritage Foundation surveyed the Mallard Area and found several populations of Payson's Milkvetch. This plant was on the Forest Service Region 1 Sensitive Species List. The foundation did not notify the Forest until late fall of 1990. Joe Bonn, SO Engineering, and Alexia Cochrane, District Botanist, found several plant populations during a field survey of the Rd. #421 project in July 1991. These populations were noted and the designs for reconstruction were altered to minimize impacts to the plant.

FACILITIES

A cultural resource inventory of the Mallard Public Works Project (reconstruction of Rd. #421) was completed August 29, 1991 and received concurrence from the State Historical Preservation Office on September 9, 1991.

Final designs for the Mallard Public Works Project were completed in early August 1991. The contract was offered for bids and awarded in September to Seubert Excavators, Inc. of Cottonwood, Idaho. Work began in July 1992 and about 98 percent was completed before the end of the field season. Placement of magnesium chloride will complete the contract in 1993.

Implementation Monitoring

Several monitoring reviews were conducted in 1992 by line officers, engineers, fisheries biologists and hydrologists. Implementation reviews focused on the use of sediment mitigation measures and the degree of road reconstruction. The purpose of implementation monitoring is to determine if activities were implemented as outlined in the Cove and Mallard Final Environmental Impact Statements (FEISs).

Results--The following measures were fully implemented on Rd. #421: rock surfacing, ditch rock, seeding of cut and fill slopes and construction of sediment traps below culverts. Slash filter windrows, rock stabilization walls, and planting of shrubs on unstable cut slopes were implemented on portions of the reconstructed road. The degree of road reconstruction (i.e. "minor", "moderate", or "major") is a qualitative estimate of the amount of ground disturbance associated with a project and has implications for how much sediment is produced. Definitions and sediment modeling recommendations for "major" and "moderate" road construction are documented in a draft implementation guide to the fish/water quality objectives of the Nez Perce Forest Plan (Gerhardt, 1991). Based on these definitions, approximately 65 percent of Rd. #421 was evaluated by District hydrology personnel to be major reconstruction and 35 percent was moderate reconstruction.

Conclusions--The FEIS describes the use of mitigation measures in general terms, and the measures implemented on Rd. #421 meet those standards. The analysis of the effects of sediment used for the FEIS gives a more specific idea of mitigation measures. If effective, the mitigation measures used, averaged over the entire road, should also meet the intent of that analysis. The degree of road reconstruction was assumed to be "moderate" in the FEIS watershed analysis, therefore sediment yields from the 65 percent of Rd. #421 which was major reconstruction is estimated to exceed the levels predicted in the FEIS.

Effectiveness Monitoring

Effectiveness monitoring was used to evaluate whether implemented mitigation measures and best management practices (BMP's) were effective in meeting their objective (generally to prevent or reduce sediment). Since road reconstruction was just completed this summer, the full evaluation of practices was not possible. However, certain practices can be evaluated soon after implementation to determine effectiveness.

Results--Slash filter windrows, rock surfacing, and retaining walls, where implemented, were evaluated and are estimated to be very effective in reducing sediment impacts to streams. Potential improvements in the following techniques were noted, which would improve their effectiveness: ditch rock size and placement, sediment trap construction at cross drains, and construction of sediment traps in live water.

In the sediment modeling done for the Cove and Mallard FEISs, an assumption of 70 percent mitigation effectiveness was used for Rd. #421. This means that 70 percent of potential road sediment production from surface erosion is expected to be retained on the road prism through application of mitigation measures. The field reviews described above suggest that this assumption was reasonably accurate.

Conclusions--The following suggestions are presented to improve the effectiveness of the specific measures.

> Ditch rock should be of adequate size so that it is not transported in ditches and be free of fine sediment. Placement of ditch rock also needs to be high enough on the cut slope to prevent eroding the toe of the cut slope (Note: the specific "typical" in the road reconstruction contract for Rd. #421 did not show the ditch rock high enough on the cut slope).

Cross drain sediment traps for this project were constructed with straw bales and loose straw was placed behind the bales. This loose straw reduces the capacity of the traps (in one case the sediment had already overflowed the trap). In the future, loose straw should not be placed in the sediment traps.

Straw bales were placed in small live water crossings during construction to filter construction related sediment. These straw bales were not removed from the channels after construction. Leaving these sediment traps in live water channels has the potential to increase bank erosion (around the bales), and prevent fish passage. Creating temporary in-channel sediment traps can be a viable BMP. If in-channel sediment traps are used, the trapped sediment should be removed from the channel and the straw bales (or other blockage devices) should be removed soon after construction.

Validation Monitoring

Validation monitoring is used to determine if the data and assumptions in the FEIS are correct. Sediment yield modeling was used as a tool in the FEIS to predict increases in sediment yield due to management activities. The sediment yield analysis in the FEIS was updated to reflect actual implemented activities and official changes to the FEIS (Gloss, 1992). The results of this analysis help to determine if the data and assumptions used in the FEIS were correct.

Results--Based on the activities implemented as of fall 1992, the analysis showed that estimated peak sediment yields for three of the seven prescription watersheds, with ground disturbing activities, did not significantly change from the FEIS analysis. One watershed was estimated to have a smaller peak sediment yield, and three were estimated to have a larger peak sediment yield than predicted in the FEIS.

Conclusions--A few specific assumptions and coefficients used in the FEIS watershed analysis were different from what was implemented on the ground (i.e. degree of road reconstruction, disturbed road width, etc.). This information does not show that data, assumptions, coefficients or analysis done in the FEIS was incorrect, but shows the uncertainty involved with predicting future activities. The uncertainty associated with sediment yield modeling, while not quantified, is well established. This analysis pointed out the additional need to consider the changes which will likely occur during site specific implementation of activities. While it is never possible to predict all of these changes, the fact that they may occur should be taken into consideration when interpreting the results of an analysis.

Overall Conclusions

Results of this watershed monitoring illustrate the complexities involved in the modeling and prediction of sedimentation effects of road reconstruction projects. The Forest has done a reasonable job with the implementation of Rd. #421 reconstruction as authorized under the Cove and Mallard FEISs but there is room for improvement. Specific suggestions for improvement are presented in this paper. Monitoring and use of the "feedback loop" has and will continue to be important in the implementation of Rd. #421 reconstruction and other Cove and Mallard activities.

Some of the items identified through this monitoring effort have already been corrected or additional measures taken to compensate for them (Red River Ranger District, 1992). Other additional mitigation measures have been outlined and implementation is being pursued (Wood, 1992). Continued efforts should be made to ensure suggested improvements identified through monitoring are implemented.

While much of this monitoring has focused on an increase in short term impacts and suggestions to improve mitigation measures, the long term impacts of this reconstruction are also important to consider. The type and amount of traffic on this road is expected to change in the future due to logging activities in the area. Previously, portions of this road were eroding due to slumping cut slopes, areas of extensive rutting due to poor drainage, and surface erosion. Increasing the traffic load upon the road in that condition would have produced unacceptable erosion, sedimentation, and safety concerns. The reconstruction of this road with an increase in mitigation measures, even though disturbed area increased, better accomodates the traffic and is expected to reduce sedimentation over time by stabilizing the pre existing problem areas. Once the ground disturbed by the reconstruction stabilizes (e.g. vegetation established on the cut and fill slopes), the new rock surfacing, ditch rock, improved drainage, and rock buttresses are expected to reduce the total erosion which would have been produced from this road.

Monitoring activities associated with the Cove and Mallard FEISs will continue to be important. While this monitoring showed some activities have involved more ground disturbance than originally estimated in the watershed analysis of the FEISs, it has been limited to one project. The effects of other projects authorized by the FEISs also need to be considered. For example, Grouse Timber Sale roads employed 80% sediment mitigation measures rather 70% mitigation measures as estimated in the watershed modeling. Less road mileage will be built in the Noble Timber Sale than originally estimated. Finally, the Lone Park Timber Sale in the Upper Big Mallard and South Fork Big Mallard drainages is currently being evaluated for log forwarding harvest technology, with a corresponding reduction in road construction.

References

Gloss, Dave 12/92. "Cove Mallard Sediment Analysis Update: Based on Activities Implemented as of Fall 1992". Located in Cove Mallard project file and district watershed files.

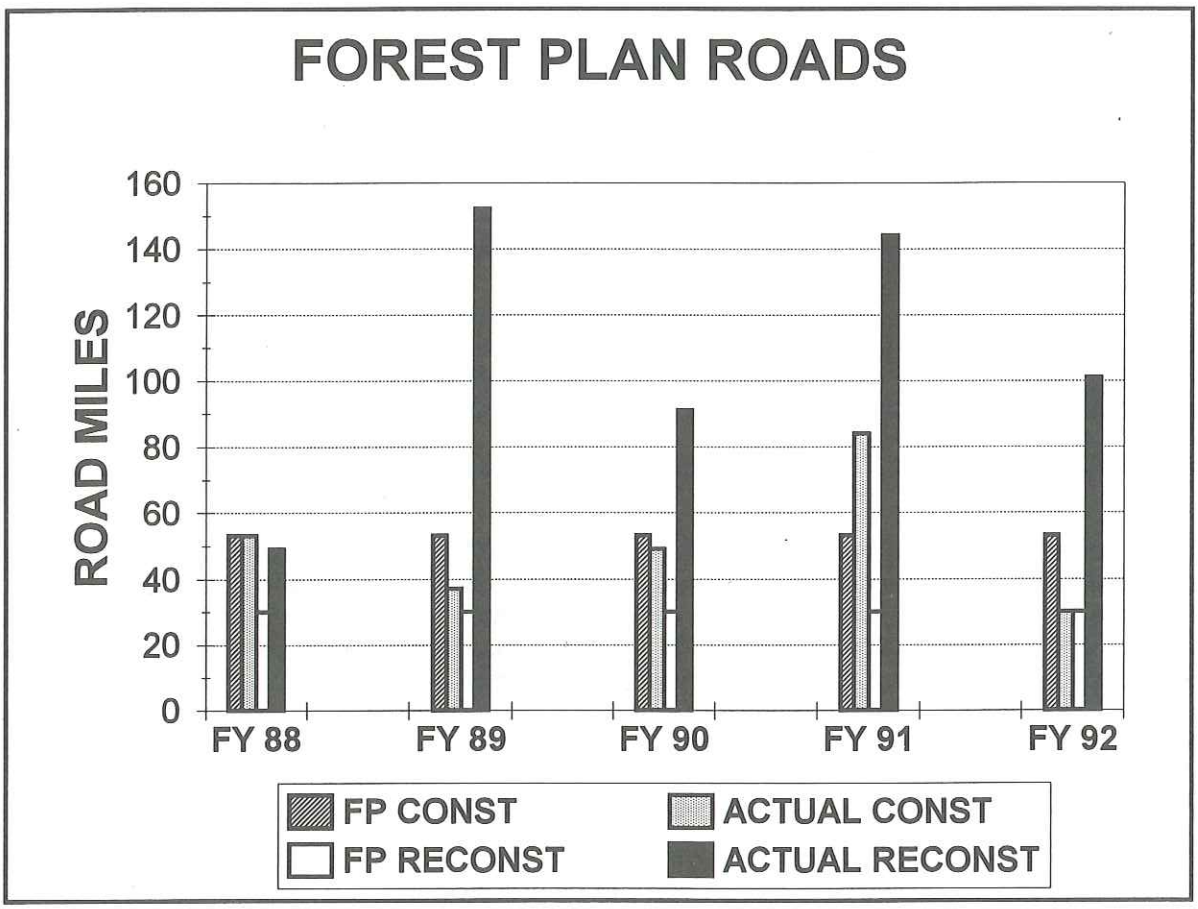
Red River Ranger District, 1992. Watershed File: "Cove Mallard Implementation Monitoring." "Whitewater Road (Rd. #421) Sediment Mitigation Plan" by D. Gloss and B. Beegle, 10/28/92).

Gerhardt, Nick, 1991. "Care and Feeding of Appendix A: An Implementation Guide to the Fish/Water Quality Objectives of the Nez Perce National Forest Plan" Draft dated 9/4/91. Compiled by Nick Gerhardt, Forest Hydrologist.

Nez Perce National Forest, 10/26/92. 1950/2430 Memo: Implementation of Mallard EIS--Jack Timber Sale. From Michael King to Mallard EIS Project File.

Wood, Robert, E. 11/23/92. "Whitewater Road #421 Sediment Mitigation Plan" Reply to 7100, letter to Mike Cook.

A total of 30 miles of road were constructed in FY92 and 101 miles of road were reconstructed. The Forest Plan predicted an average 53 miles of construction and 30 miles of reconstruction annually in the first decade. Table 2k-1a shows the miles of road constructed and reconstructed annually since FY88, compared directly with Forest Plan predictions.



While the annual miles vary, the total 253 miles of road constructed since 1988 is less than the 265 miles predicted in the Forest Plan. The total miles of road reconstructed far exceed the mileage predicted in the Forest Plan.

Road Maintenance

Over $50,000 of road maintenance funds was spent in FY 1992 on sediment mitigation projects. These included rebuilding the Allison Creek Bridge abutments, repairing road ditches, reshaping roadways to improve drainage, installing various types of road drainage structures, cleaning ditches, cleaning or replacing culverts, and cleaning sediment traps.

Sediment mitigation was also accomplished through Forest Road Program funding as shown in Table 2k-2. These projects were accomplished solely to reduce their sediment contributions.

Table 2k-2 MITIGATION ON REHABILITATION PROJECTS THROUGH FOREST ROAD PROGRAM FUNDING

PROJECT	DESCRIPTION	COST ($)
Gospel Hump Erosion Control	7 miles of base and ditchline stabilization	52,800
Hamby-Coolwater Rocking	10 miles of base and ditchline stabilization	140,600
Newsome-Bear Rocking	10 miles of base and surface rock	68,600
Forestwide Materials	Purchase seed, straw, and filter cloth for erosion control; culverts, woven-wire baskets	34,000

Roads on the Forest are on a rotating schedule for maintenance. The level of maintenance varies by road. Level 1 maintenance takes care of only the drainage problems and signs on closed roads. Level 2 maintenance is on restricted roads and takes care of the drainage, signs, and the road surface for high clearance vehicles. Open roads are maintained at Levels 3-5 that address drainage, signs, and the surface for passenger cars. The only difference between levels 3-5 is the type of road surface, ranging from gravel to pavement. The following chart shows the accomplishments for FY 92. If the work was completed to Forest Service Manual standards, it is categorized "To Standards," If some maintenance was performed on the road, but it was not completed fully to standards, it is listed as "Less than Standard."

ROAD MILES MAINTAINED*

Maintenance Level	To Standard (Mi.)	Not To Standard (Mi.)
Level 1	930	74
Level 2	490	250
Level 3-5	670	268
Total	2090	592

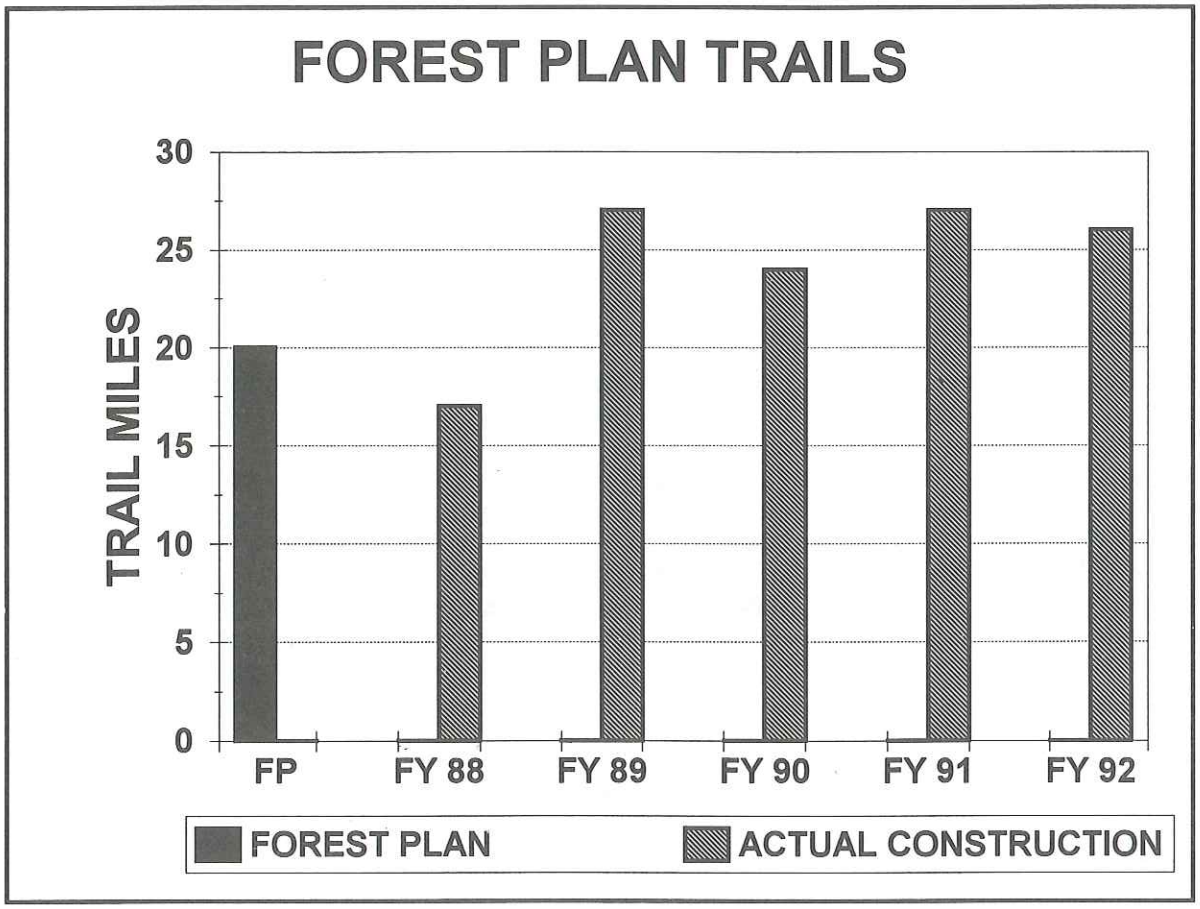
*Includes purchaser maintenance.

Restricted and open roads are periodically trimmed of overhanging brush and trees. The objective is to maintain sight distance for vehicle drivers and is a safety concern. In FY 92, 186 miles of road were brushed.

Signs along the roads are a safety item for the driving public and also give information. In FY 92, 200 new signs were installed on the Forest and 260 signs were replaced. These signs are installed following the Manual of Uniform Traffic Control Devices, which is a Federal Highway Standard and is the same for all Federal, State, and County roads in the United States.

Trails

There are currently 3,011 total miles of trail on the Nez Perce National Forest. The Forest Plan projected 20 miles of trail would be constructed or reconstructed every year. Chart 2k-1b shows how the miles of trail actually constructed or reconstructed exceeded the Forest Plan every year except FY 88.



In FY 92, 1,979 miles of trail had some level of maintenance. While the Forest Plan did not project the trail miles maintained each year, the Forest has been steadily increasing the accomplishment, from 1,064 miles in FY 88 to the 1,979 miles accomplished in FY 92.

TRAIL MILES MAINTAINED

Maintenance Level	Total Miles Maintained
Level I	1758
Level II	48
Level III	26
Less than Level I	147
Total Maintained	1979
Total System	3011

Implementation monitoring occurs during the normal execution of the Forest's workload. These documents are also on file in the planning records at the Forest Headquarters in Grangeville.

Effectiveness Monitoring: Effectiveness of mitigation measures is based upon information contained in the research summary "Reduction of Soil Erosion on Forest Roads," Intermountain Research Station General Technical Report INT-264 by Edward R. Burroughs Jr. and John G. King; "Effectiveness of Mitigation Practices and Specific Measures Associated With Facilities Proposed for Wingcreek-Twentymile EIS", Nez Perce National Forest, 1988; State Forest Practices Act and attendant BMP's; "Guidelines for Evaluating and Managing Summer Elk Habitat in Northern Idaho", Wildlife Bulletin No. 11, 1984, Idaho Department of Fish and Game; and in the "Nez Perce Access Management Guide", Nez Perce National Forest, 1988 as amended.

Based upon this information and field reviews, it is expected that required mitigation for projects implemented in FY 92 has been attained and will be met in FY 93.

Evaluation of Monitoring Results:

The measures and practices being used to reduce sedimentation are effective, but do not totally stop all sediment movement. Continual attention and sensitivity to the watershed resource is required to ensure desired results are achieved. Flexibility to incorporate research findings and to take advantage of innovative construction and administrative techniques needs to be maintained.

Item 2l:	Adequacy of Transportation Facilities to Meet Resource Objectives and User Needs
Frequency of Measurement:	Continuous
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	If public opinion is significantly against the Nez Perce access management program or if the program shows serious negative impacts upon resources.

Discussion:

The monitoring of item 2l is continuous. Due to the nature of transportation systems and their impacts upon management and use of the Forest, this monitoring is both very important and very complex. Consequently, monitoring information comes from a variety of sources: facility maintenance records, environmental assessment documents, public letters and requests, and biological evaluations. The Nez Perce Access Management Guide also contains methodology and documentation designed to assist in monitoring.

Monitoring Results:

In 1984, Nez Perce Engineering instituted a traffic surveillance program, using current state-of-the-art inductive loop equipment. The program initially started with 15 and has grown to 45 sites. Future monitoring and evaluation will be limited with the reduction of funding in Engineering. New surveillance sites will be dependent on funding from other resource management areas.

The objective of having a traffic surveillance program is to provide managers data on use of selected Forest roads. This information can be utilized in (1) justification for commitment of capital investment funds for reconstruction of existing system roads; (2) preparation of Recreation Improvement Management (RIM) reports; (3) access management planning; (4) identifying high use/high maintenance roads, and allocation of road maintenance dollars to take care of them; and (5) design criteria, i.e., ADT (average daily traffic) counts, mandate turnout spacing, surface types, lane requirements, and signing. Utilization of the data in this report is not limited to the above applications.

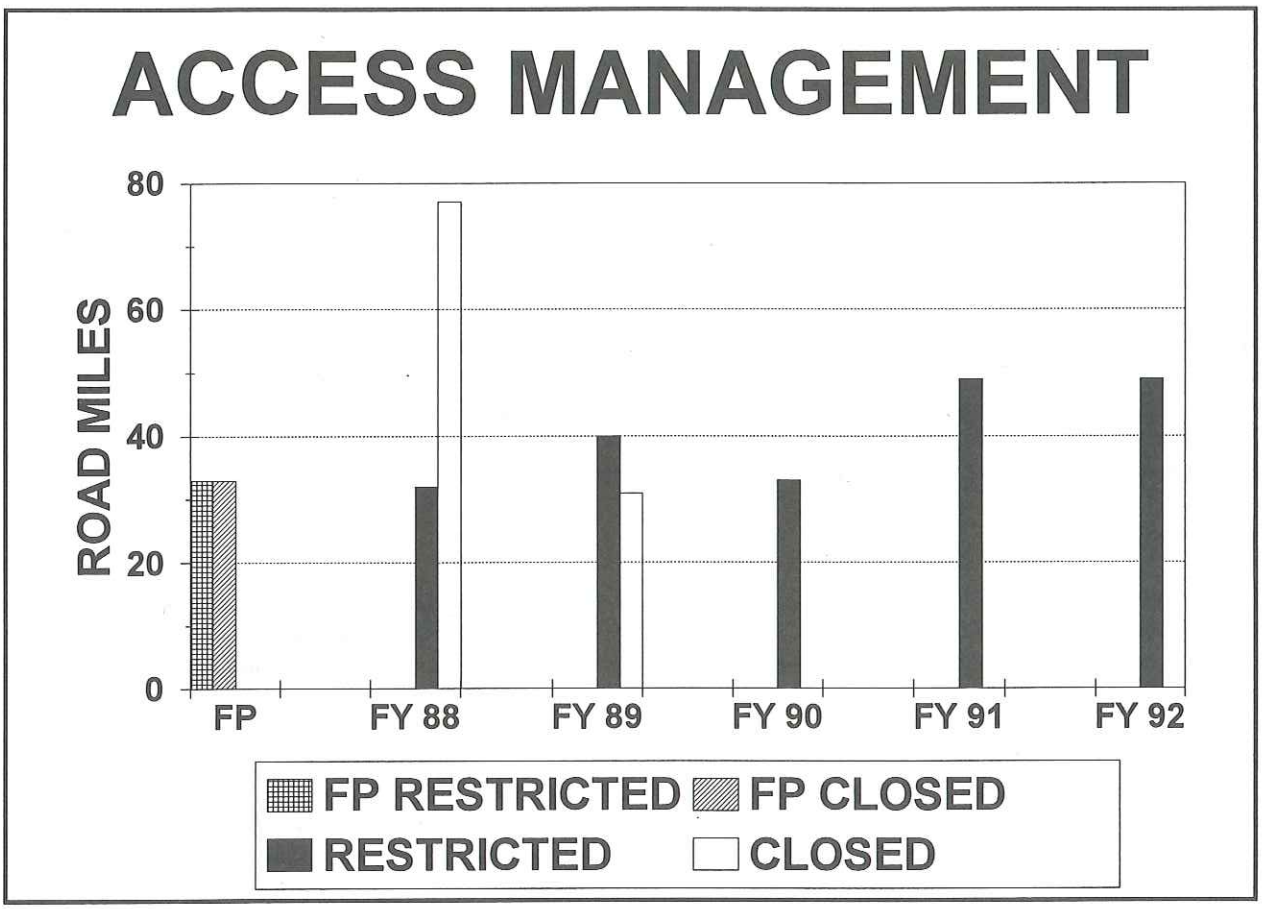
To properly analyze traffic data, there needs to be a minimum of 5 years on record. At the present time, we have 5 to 9 years of data collected from 28 sites, and anywhere from 1 to 4 years on the remaining 12 surveillance sites. Analysis from sites with 5 or 9 years of collected data show fluctuations in use volume during the monitoring period. For the most part, volume fluctuation that we are experiencing is attributed to commercial use (logging), fire traffic, and road construction or reconstruction on a particular road. Without an in-depth study of the present data, we cannot reasonably project any long-term trends, but you can observe some high use periods which occur yearly on a particular road. There does not appear to be any noticeable increase or decrease attributed to recreational use. The data indicate the highest recreational use on monitored roads is during hunting season.

The three highest traffic volume roads on the Forest are #223, Selway Road; #221, Grangeville-Salmon Road; and #1614, Salmon River Road. These roads are arterials and collectors with a majority of the traffic on the County-maintained portions of these roads.

The Forest has implemented the Access Management Guide for 5 years. Many roads and trails are either restricted or closed to protect other resources.

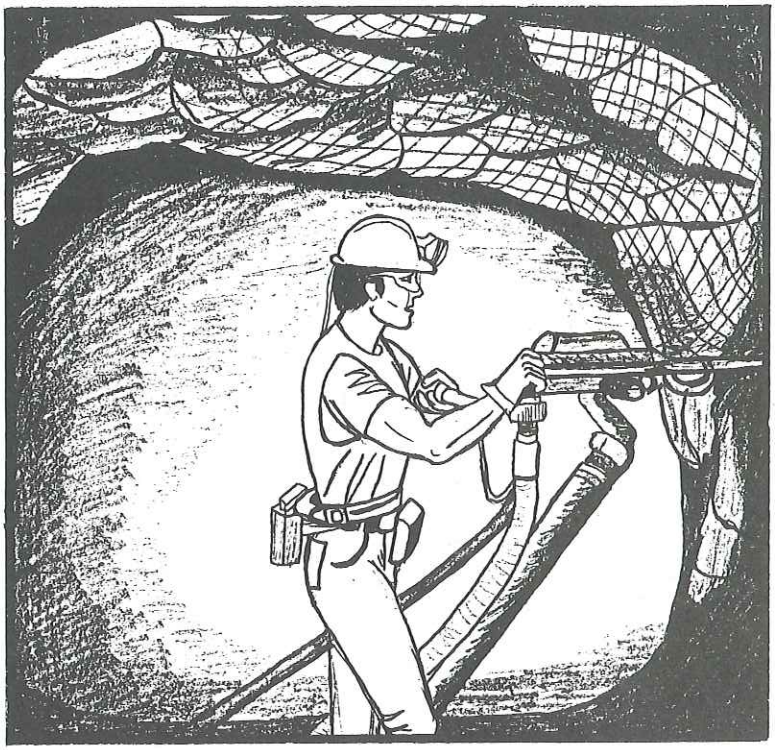
The Forest Plan projected that 33 miles of road would be permanently closed and 33 miles would have some restrictions each year. Table 2l-1 shows the actual management of access. Restricted miles have

increased slightly, and the miles of road permanently closed have plummeted from a high 77 miles in FY 88 to zero in FY 90-92.



Evaluation of Monitoring Results:

Effects of the access management program require time to be realized. Preliminary indication is that the Nez Perce Access Management program is working and that the Guide does provide the tools necessary for successful attainment of an integrated access management program. A formal program to monitor the effectiveness of road closures may be started in FY 93.



Item 2m:	Adequacy of Mining Operating Plans and Reclamation Bonds
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Operating plans which need to be updated or modified; bonds which need to be increased, decreased, or returned; or case files which can be closed out.

Monitoring Results:

In order to meet Forest Plan direction in minerals, it is necessary to have Plans of Operations which contain adequate measures to protect surface resources. It is also important that mining operations be implemented in accordance with the approved Plans. Reclamation bonds must be adequate to cover reclamation of areas disturbed by mining. However, once the operator completes reclamation work, the bond needs to be

released. Item 2m measures how well the Forest is implementing the Plan in these areas. Monitoring data is obtained from case files, from routine inspections by District employees, and from interdisciplinary team field reviews.

Out of 86 active Plans of Operation, three need modification or updating to more accurately describe existing surface disturbance and/or changes in the operation. In two of these cases, the Districts are working with the operators to update their plans. In one case, the District has been unable to gain the cooperation of the operator and the operator has been placed in noncompliance with his approved plan. A review of the bonds associated with these plans indicated that four need to be increased or decreased to more accurately reflect reclamation costs. The following table displays this data:

Ranger District	Active Plans of Operation[1]	Plans Needing Modification	Bonds Needing Revision	Bonds Needing Release
Salmon River	7	0	0	0
Clearwater	0[2]	0	0	0
Red River	16	2	1	0
Moose Creek	0	0	0	0
Selway	0	0	0	0
Elk City	45[3]	1	3	0
TOTAL	68	3	4	0

[1]Does not include Notices of Intent
[2]Although the Clearwater District did not have any active operations this year, there is still one inactive operation which needs to be reclaimed.
[3]Case files were not reviewed, but estimates were made in each category.

The Forest Plan management direction for minerals states "Exploration and development of mineral resources will be facilitated by providing timely responses to Notices of Intent and Operating Plans." In recent years, issues concerning cultural resources and the listing of the chinook salmon as being threatened, in addition to greater analysis needs relating to watersheds and riparian areas, has greatly slowed response times to mining proposals. Regulation timeframes are not always met. Due to low funding in the minerals program for the past 3 years, adequate levels of inspection are not always occurring.

The heap leach operation in the Elk City area discussed in the last Monitoring Report has been put on hold due to low gold prices. The company is currently trying to sell the property.

Evaluation of Monitoring Results:

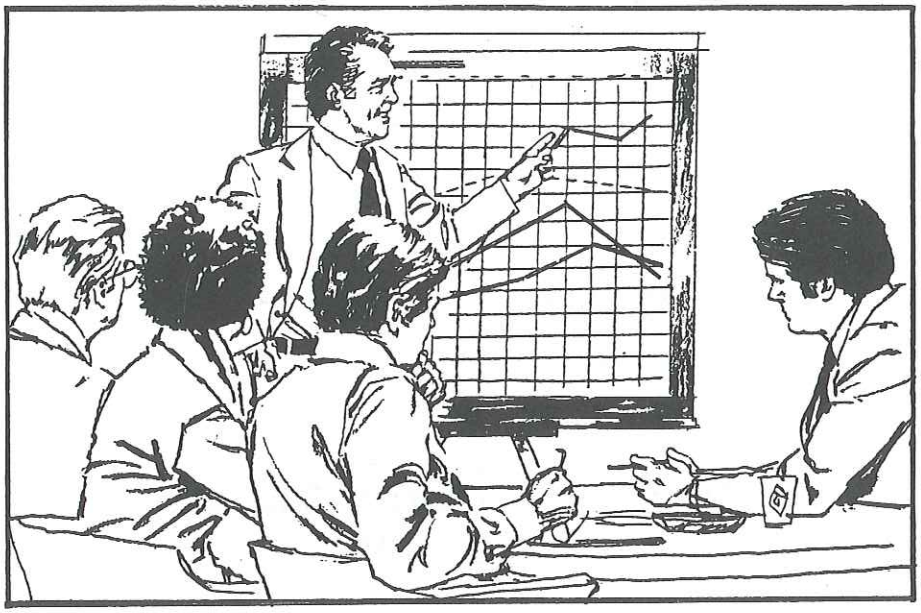
These monitoring results indicate that the Forest is carrying out its minerals management responsibilities in conformance with Forest Plan direction in most, but not all, instances. The above data indicate that 4 percent of all active operations on the Forest are not fully in compliance with their approved Plan of Operations or need to have their Plans modified to better protect surface resources. Six percent of operations on the Forest need to have their reclamation bonds adjusted to better reflect the cost of reclamation. For the most part, the Forest is promptly returning bonds once reclamation is completed.

The following chart compares the above figures with those from previous years. Zero percent in each category would indicate the lowest degree of variation from Forest Plan direction.

PERCENT OF TOTAL

Year	Plans Needing Modification	Bonds Needing Revision	Bonds Needing Release
1988	13	11	unknown
1989	6	15	7
1990	9	9	8
1991	7	15	3.5
1992	4	6	0

On the Forest as a whole, some unnecessary disburbance to surface resources is occurring. The major obstacles to achieving full Forest Plan implementation appear to be: (1) the lack of adequate staffing and funding in minerals; and (2) the inability (in one case) to obtain the cooperation of the operator.



Item 3:	Cost of Implementing Resource Management Prescriptions
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Changes in appropriations and expenditures to the degree that accomplishment of the Forest Plan's long-term goals and objectives are affected will necessitate a Forest Plan Amendment.

The Forest's Outyear Program which tracks the funding levels needed to fully implement the Forest Plan is reviewed and updated annually.

Monitoring Results

Review and validation of Forest Plan program costs identified calculation errors, oversight in adequate resource coordination and support costs, additional responsibilities such as sensitive wildlife species, and increases needed as the result of field verification during implementation and monitoring. These adjustments have been made to the Forest's Outyear Program.

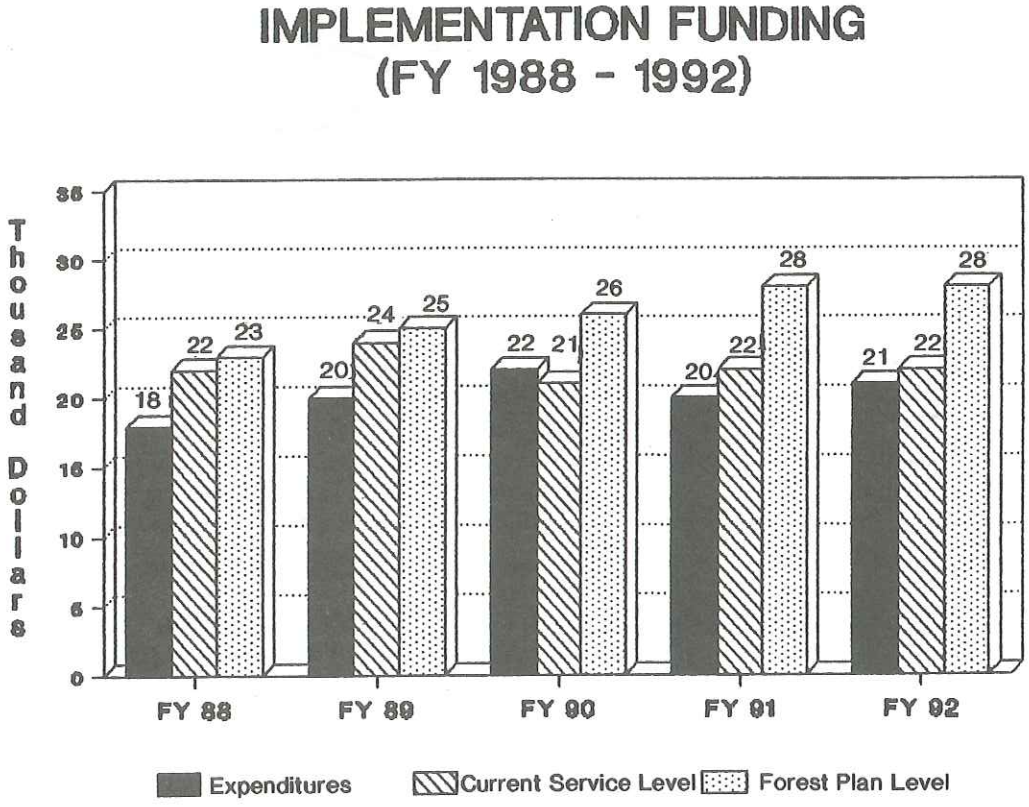
Table 3, found in the beginning of this report, displays predicted average annual costs, budget allocations, and actual expenditures for the fiscal years 1988, 1989, 1990, 1991, and 1992. Dollars have been adjusted to constant 1992 values.

Table 4 displays projected annual costs of full implementation for outyears FY 1993 - 1995. This table updates projected annual costs shown in Appendix K of the Forest Plan. Corresponding activities and outputs for the Forest Plan period are displayed in Table 2.

Funding for fiscal years 1988 and 1989 were 81 percent of what was needed to fully implement the Forest Plan. Funding for FY 1990 was 78 percent of full Forest Plan implementation needs. In 1991, funding was 73 percent of full Forest Plan implementation needs and, in 1992, funding was 75 percent of full Forest Plan implementation needs.

Evaluation of Monitoring Results

Funding levels received have consistently been less than Forest Plan funding levels. It is unclear what effect these decreased budgets will have on the long-term goals and objectives of the Forest Plan. However, the activity and output levels of some resources projected at Forest Plan funding levels have not been attained and as shown in Table 2, may not be attained in the future.



The chart shown above shows that funding levels received by the Forest have been lower than predicted in the Forest Plan. The funding amount shown in the Forest Plan Level is that needed to fully implement the Forest Plan. The funding amount shown in the Current Service Level is similar to budgets received in previous years.

The effects of this reduced funding level can be seen in the sections of this report describing individual resource areas.

Item 3a:	Forest Resource-Derived Revenues
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	5 Years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Any change in resource-derived revenues altering the implementation of Forest Plan long-term goals and objectives will necessitate a Forest Plan Amendment.

Resource outputs to which dollar values were assigned constitute the priced benefits included in the FORPLAN PNV (present net value) calculations. While both market and nonmarket benefits were used in the Forest Plan to determine total priced benefits, only certain resource benefits were used to determine the allocation and scheduling of prescriptions in FORPLAN. Only timber and range revenues are used in calculating returns to the government.

Monitoring Results

Rev-enues	Projected Annual Forest Plan Revenues (FY 92$)	Actual FY 1988 Revenues (FY 92$)	Actual FY 1989 Revenues (FY 92$)	Actual FY 1990 Revenues (FY 92$)	Actual FY 1991 Revenues (FY 92$)	Actual FY 1992 Revenues (FY 92$)
Timber	$24,313,000	$5,270,261	$8,150,408	$7,300,527	$4,743,869	$7,909,620
Range	$58,000[1]	$39,903	$42,741[2]	$44,530	$38,184	$37,257

[1]Projected grazing revenues have been held constant over time because grazing fees to not rise with inflation.
[2]Range revenues in the 1989 monitoring report omitted collections amounting to $860.

Timber Revenues

The timber revenues used in this report are taken from the Timber Sale Program Information Reporting System (TSPIRS). The differences between projected Forest Plan timber revenues and actual timber revenues are due to two factors. First, we are not experiencing stumpage values as high as predicted in the Forest Plan. Stumpage values used in developing the Forest Plan were approximately $213/MBF in constant FY 92 dollars. The experienced stumpage value for FY 1991-1992 was $149/MBF in constant FY 92 dollars. Second, timber harvest in fiscal years 1988 through 1992 was lower than the predicted average annual harvest displayed in the Forest Plan (Table 1).

Prior to the completion of the Forest Plan, sensitivity analysis was performed examining the effect of lower stumpage values on land allocation. Appendix D of the Forest Plan Final Environmental Impact Statement (EIS) discusses this analysis. The analysis illustrated that while there would be significant changes in revenues, there would be little change in the programatic allocation of the Forest Plan.

The revenue increase experienced in 1989 over 1988 can be attributed primarily to the increase in timber sale receipts. More timber was harvested in 1989, perhaps a function of more favorable market conditions.

The revenue decrease from 1990 to 1991 was a largely a result of different accounting methods used in TSPIRS between 1990 and 1991. In particular, established Purchaser Credits for roads were used in 1990, while charged Purchaser Credits for roads were used in 1991. The method of depreciating roads also changed in 1991.

The revenue increase from 1991 to 1992 was due to the higher volume of timber harvested and an evening out of the accounting method used for Purchaser Credit Roads which was changed in the previous year.

The annual Timber Sale Program Information Reporting System (TSPIRS) displays gains and losses before and after Payments to States. Payments to States is the payment to the State of Idaho representing 25 percent of timber-related revenues processed through the Forest Timber Sale Accounting System (TSA).

TSPIRS Payment to States

	FY 1988 (FY 92$)	FY 1989 (FY 92$)	FY 1990 (FY 92$)	FY 1991 (FY 92$)	FY 1992 (FY 92$)
Gain/Loss Before Payments to States	338,001	1,591,414	722,415	-2,078,220	-222,431
Payments to States	1,110,640	1,348,846	1,322,745	1,300,208	2,001,874
Gain/Loss after Payments to States	-772,639	242,568	-600,330	-3,378,428	-2,224,305

Range Revenues

Differences between projected Forest Plan range revenues and actual range revenues are attributed to changes in grazing fees and a change in how revenues are calculated.

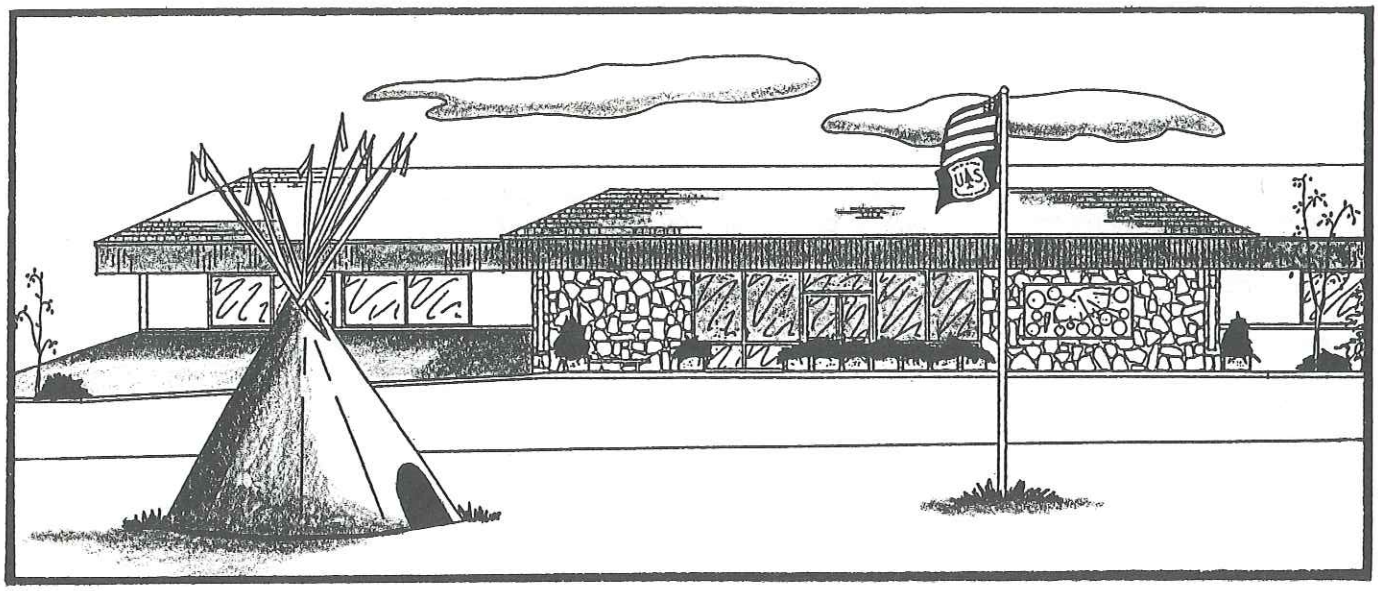
The range revenues in the Forest Plan were incorrectly calculated by multiplying the 1986/1987 grazing fee against the permitted Animal Unit Months (AUMs), instead of Authorized Head Months of use. Range revenues are correctly calculated by multiplying the current grazing fees against the Authorized Head Months of use. A "Head" is defined as a grazing animal 6 months or older.

In Fiscal Year 1992, grazing fees were $1.92 per head month for cattle and horses, and $0.38 for sheep. In 1992, 20,926 cattle head months and 12,355 sheep head months were billed.

Evaluation of Monitoring Results

It is unclear what effect the difference in revenues received and expected will have on the Forest Plan's long-term goals and objectives.

EFFECTS ON ADJACENT LANDS, RESOURCES, OTHER AGENCIES



Item 8:	**Effects of National Forest Management on Lands, Resources, and Communities Adjacent to the Forest**
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable effects determined by the Forest Interdisciplinary Team.

■·■·■·EFFECTS ON COMMUNITIES/RESOURCES/LANDS·■·■·■

Discussion:

The management direction in the Forest Plan is intended to provide a balanced consideration of Forest resources in meeting the present and future needs of society as well as those of future generations. It relies on the application of scientific knowledge, conservation leadership and wise stewardship, in partnership with other public agencies, tribal governments, communities, and others that are interested and affected by Forest management.

Five years of monitoring have provided the following results. Effects identified in past years' monitoring may or may not continue to affect our neighbors in 1992. Results that have been adopted as Action Items (see Appendix) are not repeated here from previous years' monitoring reports.

Monitoring Results:

Identified during FY 1992 Monitoring:

Land Exchange: The McComas Meadows land exchange was completed this year. With this exchange 490 acres of Federal land passed to private ownership and 720 privately owned acres became Federal land. Forest Service land within the Nez Perce National Forest boundary has increased slightly (626 acres) from September 30, 1987 (2,223,367 acres) to September 30, 1992 (2,223,993 acres).

Clear Creek Coordinated Resource Management Plan (CRMP): Improvement work in the Clear Creek watershed on private, Federal, State, and Tribal lands continued under the CRMP process in 1992.

Wall Creek Municipal Watershed Planning: A capital investment road project in the Wall Creek Watershed was completed in 1992 which will help reduce sediment in the municipal watershed which serves the town of Clearwater.

Elk City Wagon Road: With completion of the Elk City Wagon Road management plan in 1992, there may be a small increase in recreation traffic through the towns of Clearwater and Elk City.

Prescribed Burning: Prescribed fire in the spring of 1992 reduced fuel buildup hazards along the South Fork of the Clearwater River. This spring burning also helped rehabilitate winter game range. Some short-term smoke impact resulted from this activity.

Forest Service Payments to Idaho County from All Receipts: Idaho County receives a payment equal to 25 percent of total gross receipts. Gross receipts for FY 92 were $8,171,925.76. Timber receipts account for approximately 98 percent of the gross receipts.

Payments to Idaho County from Nez Perce NF (All Receipts)

Fiscal Year	Nominal Dollars	Constant 1992 Dollars
1992	$2,042,981	$2,042,981
1991	$1,303,797	1,341,080
1990	1,276,546	1,372,633
1989	1,243,278	1,391,795
1988	995,846	1,164,389
1987[1]	845,957	1,025,046
1986[1]	1,104,748	1,377,953
1985[1]	1,228,458	1,577,626
1984[1]	596,575	795,477
1983[1]	454,011	632,038
1982[1]	338,171	490,201
1981[1]	1,168,039	1,819,373
1980[1]	1,243,044	2,125,826

[1] Receipts received prior to implementation of the Forest Plan.

Rural Development Program: In 1992, eligible communities were able to apply for rural development planning and project grants through Title 23 Subtitle G of the Food, Agriculture, Conservation and Trade Act of 1990 ("Farm Bill"). Communities receiving planning grants included Cottonwood, Grangeville, Riggins, and the Nez Perce Tribe. Project grants were awarded to Grangeville for partial development of Eimers Park. Grants awarded totaled $33,500 in FY 92 for communities sponsored by the Nez Perce National Forest.

Watershed Management: There are numerous streams which originate on the Forest and flow onto adjacent ownerships. Questions are periodically raised about the impacts of National Forest management on these streams, most commonly with reference to water temperature and sediment yield. Monitoring is ongoing to evaluate off-Forest impacts. Some results of this monitoring are discussed under Item 2h in the Soil and Water section.

Undeveloped Campsites: Sometimes Forest activities hinder the public's access and use of popular undeveloped campsites. People want to be informed of activities that may affect undeveloped camping areas they have historically used.

Identified During FY 1991 Monitoring:

Livestock Management: The removal of natural barriers to livestock movement, as the result of timber harvest and road construction, is making it more difficult for permittees to manage their livestock.

Tribal Access to the Forest: Traditional campsites used by the Nez Perce people are being used heavily by non-Indians. Indian families are being denied access to these sites because of their occupancy by non-Indian people. Traditional campsites have/are being developed for other uses.

Pacific Yew Harvesting: The harvesting of Pacific Yew material for treatment of cancer may affect the traditional rights of the Nez Perce Tribe to gather yew material. Coordination meetings with the Tribe identified concern for certain areas. No harvest was proposed in those areas.

How the Forest treats the demand for Pacific Yew bark may affect other Government agencies' interests (i.e., Idaho Department of Fish and Game and their interest in how we manage habitat for moose).

The Pacific yew program provided an economic boost to the local economy. Forest spending and north Idaho's bark processing facility located in Orofino, Idaho, contributed to this. The bark plant paid approximately $3,500,000 to bark collectors, who were mostly from the immediate area.

The Forest received $674,000 above Forest Plan implementation budget for the yew program. We hired additional personnel, contracted $159,000 in inventory work, and purchased additional goods and needed services.

Identified During FY 1990 Monitoring:

Efforts to Improve Anadromous Fish Runs: Fish habitat potential for a number of the drainages on the Forest has been increased. This should result in a higher natural production of anadromous fish from these drainages. Fish habitat improvement projects on private land have strengthened working-together relationships with the landowner.

Private Landowners: Grazing permittees and other adjacent landowners are concerned with the increasing numbers of elk that are using their land.

Riparian Area Management: There can be a significant difference in the value of timber resources among riparian areas. The Forest needs to take this into consideration when making riparian management decisions.

Pacific Yew Bark: The availability of Pacific Yew bark from the Forest for treatment of cancer may affect peoples' health. How The Forest treats the demand for Pacific Yew bark may affect other agencies' interests, i.e., Idaho Department of Fish and Game and their interest in how we manage habitat for moose.

Rock Pit Management: Miners have expressed concern that we have a double standard in how we manage rock pits and the management we are requiring for their mining operations.

Identified During FY 1989 Monitoring:

Effects of Increased Recreation Use on Local Residents: Some local residents are feeling the effect of increased recreation use within our Wild and Scenic River Corridors.

Clear Creek Coordinated Resource Management Plan: A concern has been expressed about monitoring water temperatures in Clear Creek. Water temperature monitoring was conducted on Clear Creek in 1988 in conjunction with a Coordinated Resource Management Plan.

Sales of Miscellaneous Forest Products Such as Beargrass and Mushrooms: Permits are required for mushrooms and beargrass, but not other miscellaneous products. Charges and permit language are not standardized. Environmental concerns have not been researched and documented.

Identified During FY 1988 Monitoring:

Nez Perce Tribe and Columbia River Inter-Tribal Fish Commission: The Nez Perce Tribe and the Columbia River Inter-Tribal Fish Commission expressed the following concerns:

- The Forest failed to evaluate the economic, social, political, and religious impacts of its treatment of fish habitat on the Columbia River Treaty tribes;
- The Forest has not considered its role in the Northwest Power Planning Council's objective of doubling Columbia Basin fish runs by the year 2000;
- Cumulative impacts of roaded development on fisheries, both Forestwide and Basinwide, are not addressed;
- The Nez Perce Tribe has expressed concerns that the Forest needs to provide for the protection of Native American religious, gathering, archeological, and burial sites for present and future generations;
- The Forest Plan should provide them the opportunity to exercise their Treaty rights.

Evaluation of Monitoring Results:

The exchange of ownership of some lands had some impact on adjacent landowners. Ranchers who previously grazed cattle in McComas Meadows are not presently able to. Those landowners who previously shared property lines with the Federal government now share those property lines with other private landowners. How those adjacent lands are managed by new owners over time could have a variety of impacts on adjacent landowners.

Prescribed burning to reduce the risk of wildfire and to improve big game winter range has caused smoke impacts on local residents.

The payment to Idaho County from all receipts from the Nez Perce National Forest in fiscal year 1992 was higher than any payment (in constant 1992 dollars) during the previous 11 years.

Nez Perce NF personnel need to continue working with community leaders and economic development organizations to administer "Farm Bill" programs and other components of rural development.

The Forest needs to work more closely with permittees to review activities that may affect their livestock management.

When competing activities (i.e., an activity's contribution toward allowable sediment yields) are identified in a watershed, we need to make a special effort to keep the affected people apprised of how the activities may affect them.

Efforts to improve anadromous fish runs have strengthened the Forest's working relationship with the public. If improved fish habitat equates to a higher natural production of anadromous fish, this will benefit Tribal, sports, and commercial fishing entities.

We need to hold Forest Service activities, such as watershed and fisheries improvement and rock pit management, to the same standards that we are requiring of activities initiated by non-Forest Service parties.

Local residents are interested in how projects will affect their access to the Forest, particularly in relation to traditional use areas.

The Forest needs to continue to work closely with the Nez Perce Tribe to ensure that implementation of the Forest Plan maintains or improves opportunities for members of the Tribe to exercise their Treaty rights.

Item 9:	Effects of Other Government Agencies' Activities on the National Forest
Frequency of Measurement:	Annually (October 1, 1991 - September 30, 1992)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable effects determined by the Forest Interdisciplinary Team.

Monitoring Results:

State of Montana and State of Idaho (Air Quality): The Forest joined the North Idaho Airshed Group in 1990. This group's objective is to minimize or prevent the accumulation of smoke in Idaho to meet State and Federal ambient air quality standards when prescribed burning is necessary. From time to time, the State of Montana and the State of Idaho have asked us to curtail our burning for air quality purposes, but this did not occur in 1992.

State of Idaho Department of Lands: Under our cooperative agreement with the State of Idaho Department of Lands, cooperation and exchange of firefighting resources is continuing. This was beneficial to the Forest in fighting Forest fires. The Idaho Department of Lands (IDL) cooperated and assisted the Forest with suppression of large fires.

The Forest invited the local Forest Practices Act Advisors to participate in three implementation monitoring reviews. The Department organized a field review in the Elk City area of site-specific Best Management Practices required in Stream Segments of Concern under the Idaho Antidegradation Program.

The Idaho Mining Advisory Committee held its annual field review on the Forest and visited several sites in the Dixie and Elk City area.

Idaho Department of Health and Welfare (IDHW) Division of Environmental Quality (DEQ): The DEQ continued its lead role in a water quality monitoring project on Big and Little Elk Creeks. These are Stream Segments of Concern located in the Elk City area. DEQ personnel were also involved with implementation monitoring reviews.

Idaho Department of Water Resources (IDWR): Under provisions of the Stream Channel Alteration Act, the Forest consulted with the IDWR with respect to mining, road construction, and instream improvements. The Department is also involved in administering the Snake River Water Rights Adjudication. The Forest continued its data compilation efforts to support future water rights claims under the adjudication.

State of Idaho Outfitters and Guides Licensing Board: Through formal agreement, the Forest Service and the Board coordinate the permit and enforcement process for outfitters and guides providing public services on National Forest System lands.

Idaho Department of Fish and Game (IDFG): The Venture 20 project involving the IDFG, the Nez Perce Tribe, and the Forest began operating in FY 1992. Big game winter surveys conducted by the IDFG provided data for monitoring big game populations. The nongame division of the IDFG assisted in monitoring the Shingle Creek peregrine nest results in FY91. They provided funding, through Kelly Creek Flycasters, for the Mullens fisheries habitat improvement project. They also conducted a cost-shared Forest survey for the flammulated owl and provided assistance to the Forest in monitoring and enforcing compliance with access restrictions. The Department has been a partner with us in development of the Selway fish pond and Watchable Wildlife project. They have also furnished money through Trout Unlimited and some of their people helped with a riparian fencing project.

Idaho State Historical Preservation Office (SHPO): The Idaho State Historic Preservation Office monitors the Nez Perce National Forest's compliance with Section 106 of the National Historic Preservation Act of

1966. This office reviews all cultural resource reports and site record forms. If a cultural resource is to be impacted by a Forest activity, the impact is mitigated through consultation with SHPO.

Idaho Department of Parks and Recreation: The Idaho Department of Parks and Recreation provided funds, equipment, and people to groom snowmobile trails. The Department is providing funding for the construction of an off-highway vehicle trail system in the Silver-Cougar area. These programs benefit the Forest and provide services the public demands.

Idaho State Board of Aeronautics: The Board periodically inspects Moose Creek and Shearer Airfields, and has been involved in the planning effort and proposals for the other airstrips.

Idaho Conservation Data Center (ICDC): The ICDC cooperated with the Forest in conducting presence/distribution surveys for three sensitive plants and one sensitive owl.

Idaho County: The County maintains the Salmon River Road, Dixie Road, Crooked River Road, etc. under cooperative agreements. Coordination of maintenance soil disposal by the County has resulted in a positive trend for sediment reduction.

Idaho County Sheriff's Office (ICSO): The ICSO monitors Forest Service radios during non-official hours, provides assistance on patrols, security monitoring and arrests during an Earth First! protest. The two agencies also cooperate in search and rescue missions.

Nez Perce Tribe/Columbia River Inter-Tribal Fish Commission: The Nez Perce Indian Tribe, as in previous years, assisted the Forest in cultural awareness, recruitment, training and firefighting activities. This assistance was of value in helping the Forest diversify its workforce and accomplish resource management objectives.

This year, the Tribe monitored some of our activities and provided us with feedback on their findings. Some of these findings have been incorporated into this report. The Nez Perce Tribe has also been helping us monitor our effectiveness in implementing elk summer range objectives. The Tribe's participation strengthens the Forest/Tribe working-together relationship and provides valuable assistance to the Forest monitoring efforts.

Negotiations are continuing on the Columbia River Inter-Tribal Fish Commission's appeal of the Forest Plan. This includes negotiators from Forest Service Regions One, Four, and Six. The main effects of the negotiations with the Commission are:

1. The refinement, type, and amount of wildlife- and fisheries-related data that's being collected and analyzed for project implementation.

2. Stronger acknowledgement of Treaty rights on public lands within the Nez Perce National Forest.

U.S. Army Corps of Engineers (COE): The COE was consulted on projects involving wetlands under provisions of Section 404 of the Clean Water Act. Agency personnel also participated in training sessions on implementation of Section 404 regulations.

U.S. Fish and Wildlife Service (USFWS): Several hundred biological evaluations were conducted for threatened and endangered, and sensitives species in FY 92. The USFWS provided input to much of the process.

U.S. Department of Agriculture (USDA): The National Cancer Institute (NCI) has a "Cooperative Research and Development Agreement" (CRDA) with Bristol-Meyers Squibb (B-M S) for the research and development of Taxol, a promising anticancer drug. The Secretary of Agriculture signed a cooperative agreement in 1991 with B-M S, for the Forest Service to provide the bark of Pacific yew (Taxus brevifolia), a source of Taxol.

This led to an immediate review of existing timber sales for Pacific yew. A new permit system was developed, and collections required administration.

■·■·■·EFFECTS OF OTHER GOVT. AGENCIES ON FOREST·■·■·■

The second year of the cooperative agreement with Bristol-Meyers Squibb and the National Cancer Institute resulted in many additions and revisions of administrative policies and methods. A national task force completed An Interim Guide for the Conservation and Management of Pacific Yew.

- Reforestation prescriptions in units with yew were examined for compliance with the Interim Guide. This resulted in revision of many burn prescriptions, with new methods and technologies tried. In many cases, the new preferred treatments were more costly than those previously planned in KV planning.
- An Environmental Analysis was completed on 1040 acres of potential harvest area in time for the bark harvest season.
- Harvest administration policies were increased substantially. A preharvest estimate and load tags were added and the permit was standardized.
- An extensive inventory was completed to identify future sources.

USDA exceeded its goal of collecting 750,000 pounds of (dry) yew bark for NCI. The Nez Perce NF was a major contributor to this effort by collecting 145,000 pounds of yew bark in 1992.

National Cancer Institute (NCI): NCI is using Taxol, a chemical processed from the bark of Pacifc yew, for clinical trials on ovarian cancer patients.

The Nez Perce NF contributed 17 percent of the bark collected by USDA, more than any other National Forest.

Bureau of Land Management (BLM): The BLM and Nez Perce National Forest were involved in cooperative cadastral surveys. This was very beneficial to both agencies, with excellent results. An annual coordination meeting takes place. Activities coordinated include timber, range, mining, recreation, and water monitoring.

Bonneville Power Administration (BPA): The Forest submitted to BPA, and received approval for, a 3-year project to improve fish habitat, stream channel stability, and riparian condition along several miles of Red River located on private lands. Included in the project is public acquisition of a significant portion of critical meadow habitat.

National Marine Fisheries Service (NMFS): On May 22, 1992, the spring and summer run chinook salmon in the Salmon River drainage and the fall run chinook salmon in the Clearwater River were listed as "threatened" under the Endangered Species Act. That determination required a quick response by the Forest to meet consultation requirements with the National Marine Fisheries Service (NMFS), the agency responsible for coordinating salmon recovery.

Evaluation of Monitoring Results:

As in previous years, in fiscal year 1992 the Forest benefited from cooperative agreements with other government agencies and the Nez Perce Indian Tribe. These agreements resulted in the establishment of closer working relationships, the sharing of technical support, project cost sharing, and better resource protection.

In order to meet the consultation requirements with NFMS, the Forest was required to reprogram a major part of its work for several months to enable biological evaluations to be made for nearly 9,000 individual activities associated with over 400 projects that are or were under contract, permit, or being implemented. The purpose of those evaluations was to determine effects these projects and activities might have on chinook recovery.

This section addresses monitoring information that is not identified as a requirement in the Nez Perce National Forest Plan (Table V-1). The Forest feels this information is important to monitor as part of Forest Plan implementation.

1. Nez Perce National Forest Accessibility for People with Disabilities

Discussion:

The Architectural Barriers Act (ABA) of 1968 requires that all public buildings, facilities and programs funded in whole or part with federal funds be accessible to and usable by physically disabled persons. Section 504 of the Rehabilitation Act of 1973, as amended in 1978 states, "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any program or activity conducted by Federal financial assistance or by any Executive Agency". The Americans with Disabilities Act (ADA) of 1990 which provides standards - even when no Federal funds are involved - for addressing discrimination against individuals with disabilities in employment, transportation, telecommunications, and services operated by private entities.

In 1991 the Nez Perce Forest Human Resource Team identified the need to evaluate accessibility of Forest facilities to people with disabilities. In June of 1991 a survey was initiated, using the newly developed Forest Service accessibility survey tool, to determine the accessibility of Forest campgrounds/picnic areas. In addition, the need was identified to evaluate Forest Service facilites. A special emphasis program was created in 1992 to deal with issues concerning people with disabilities. During the initial monitoring stages of facilities we realized the need for TDD (Telecommunication Devices for the Deaf) to allow better communication with our publics. TTDs have been installed in five District offices and the Forest Headquarters. To access these phone lines, use the regular District phone numbers, or (208) 983-2280 for the Headquarters office.

General Description of the Different Levels of Accessibility (Interim Draft, Design Guide for Accessible Outdoor Recreation).

Accessible	Challenge Level 1	Challenge Level 2
All facilities are accessible for most people with disabilities without assistance. Facilities meet Uniform Federal Accessibility Standards (UFAS).	Most facilities are useable with effort by the "average" person with a disability. Generally meets UFAS requirements.	Site and facilities are useable unaided by an athletic disabled person, or by an "average" disabled person with assistance.

■·■·■·OTHER MONITORING·■·■·■

Monitoring Results:

Accessibility by Challenge Level

Facility	Accessible	Challenge Level 1	Challenge Level 2
Fish Creek Pavillion *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Fish Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Castle Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
South Fork Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Race Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Slims Camp Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Selway Falls Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
O'Hara Bar Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Spring Bar Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Spring Bar Boat Ramp Parking Area	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Allison Creek Picnic Area	Not Accessible at this level	Not Accessible at this level	Accessible at this level

* These facilities are listed in our 1991 Visitors Guide to Idaho County as being accessible to people with handicaps.

Evaluation of Monitoring Results:

Eleven Forest facilities were reviewed to determine their accessibility to people with disabilities. None of the 11 facilities were found to be accessible at the Accessible and Challenge Level 1 levels. All facilities were accessible at the highest challenge level (Challenge Level 2). In 10 of the 11 facilities, it was difficult for someone in a wheelchair to use the toilet facility. Five of the 11 facilities had toilets that were labeled with the international sign for accessibility to people with disabilities.

The Nez Perce Forest has a number of recreation areas that have a great potential for service to people with disabilities. The activities director from one of the local nursing homes indicated that they would love to take some of their residents to the forest if they could be assured of having accessible campgrounds and picnic facilities. Projects are scheduled for FY 93 that should greatly increase accessibility at the Fish Creek and Spring Bar campgrounds.

The Selway pond project is designed to provide fishing access for the disabled, and is scheduled for completion in FY 1993.

Recommendations have been given to the Forest on how to make the facilities reviewed, accessible to people with disabilities.

2. Environmental Analysis Accomplishments Related to Timber

Monitoring Results:

Following is the Forest Supervisor-authority environmental analysis accomplishment since the Forest Plan went into effect.

Fiscal Year	No. of Decisions	Included No. of Sales	Total Acres Analyzed	Proposed Harvest Acres	Percentage of Analysis Acres Actually Proposed for Harvest	Proposed Harvest Volume (MM)[1]
88	3	3	24,400	1,662	6.8	27.0
89	8	15	164,480	5,908	3.6	102.1
90	2	7	38,296	4,677	12.2	42.1
91	3	11	81,964	6,164	7.5	88.5
92	*1	*1	*4,034	*351	*8.7	*10.4
5-Yr.Avg.	3.4	7.2	72,635	3,752	5.2	54.1
Total	17	36	363,174	18,762	--	270.5

[1] Proposed harvest volume figures in this table are different than those exhibited in Table 1 on pages 5 and 9 because of the rounding off of numbers.

*The one decision made in FY 1992 (Swiftwater EA) was appealed; the appeal was upheld by the Regional Forester for the Northern Region of the Forest Service, and the Forest is now doing an EIS.

As of the end of fiscal year 1992 (5 years since the Forest Plan went into effect), the Forest had completed site-specific analysis of 34 percent of the total suitable land base of 911,669 acres. Volume per acre for all proposed projects shown above is 14.1 MBF/acre. Of the 17 total decisions, 3 were Environmental Impact Statements, and 14 were Environmental Assessments.

Evaluation of Monitoring Results:

Many National Environmental Policy Act (NEPA) documents require more than 1 year to complete. This results in high variability from year to year with respect to the number of decisions and acres analyzed.

Much of the proposed harvest volume is planned to sell in fiscal years 1993-1995. The 14.1 thousand board feet per acre estimated for future projects further substantiates the overestimate of volume/acres in the Forest Plan found in sales sold to date.

Although 34 percent of the suitable acres were analyzed, only 24 percent of decadal allowable sale quantity (ASQ) was proposed for harvest on those same acres. Unless this 30 percent volume shortfall can be made up on other acres (which is not likely), the Forest will fall short of decadal ASQ.

3. Harvest of Pacific Yew Bark for Cancer Research

Discussion:

In recent years, the National Cancer Institute has been researching a promising new drug, Taxol. Found in Pacific yew and other Taxus species, early testing has proven favorable on ovarian and other cancers.

In 1991, the National Cancer Institute entered into a Cooperative Research and Development Agreement with Bristol-Meyers Squibb (B-MS) for clinical and commercial development of the clinical drug Taxol. In June, Secretary of Agriculture Madigan signed a Cooperative Agreement with B-MS, stating that the USDA Forest Service will provide bark from the Pacific yew (Taxus brevifolia) for the studies. This is a 5-year agreement.

This was the second year that large scale harvesting of the bark of Pacific yew occurred on the Nez Perce National Forest.

Monitoring Results:

The Bureau of Land Management and Forest Service goal was 750,000 pounds of dry yew bark. Nationally, the Forest Service collected 776,000 pounds; of this, the Nez Perce National Forest collected 145,000 pounds. The bark was collected on 1,871 acres this year. Collection areas were within existing timber sale harvest units and also in areas set up specifically for yew harvest.

Harvest from timber sales was 88,000 pounds of bark. This occurred within 81 timber sale units or road construction projects on 11 timber sales.

Yew-only harvest areas yielded 57,000 pounds of bark This was collected in 11 harvest areas identified in an Environmental Assessment completed in the spring. Bark collection occurred from May through August, while the sap was flowing and the bark could be easily peeled. Trees were felled leaving a high stump to promote sprouting for replacement trees. The bark was hand-peeled from the limbs and bole down to pieces 1 inch in diameter.

Evaluation of Monitoring Results:

The Forest provided a substantial portion (17 percent) of the bark collected by USDA.

All harvest units were adjacent to roads, where peelers could carry their sacked bark to vehicles. In some instances, access permits were issued to allow vehicles to enter roads that were otherwise closed. The pro-active approach the Forest took in responding to NCI's need resulted in the Nez Perce being the largest producer of yew bark in the National Forest system.

All timber sale units were examined for Pacific yew. Bark collection occurred where yew trees would have been destroyed by planned management activities.

Yew-only harvest areas were established following the Environmental Assessment that was completed in April. Yew harvest followed the recommendations of An Interim Guide to the Conservation and Manage-

ment of Pacific Yew. This included harvesting only 50 percent of the trees/bark within an area, establishing gene pool reserves, and other protective measures.

4. Site-Specific Verification of Management Area Assignments

Discussion:

After selection of the preferred alternative for the Forest Plan, an attempt was made to assign management areas across the Forest. This was done with very little site-specific data and in a very short period of time. The only permanent storage of these assignments was in the Forest's Spatial Fitting Data Base (FP17E), which actually stored only the number of acres of each management area within each capability area, not exactly where each management area was located on the ground. This process is briefly described on pages 1-2 of Chapter 3 and Appendix D of the Forest Plan. Descriptions of each management area can be found in Chapter 3 of the Forest Plan.

During project planning, these management area assignments were reviewed by the ID Team involved with the project, using site-specific information. Where the team felt the original assignments were not appropriate for the capability of the land, these assignments were changed. The final management area assignments were stored in the Timber Stand Data Base (TMSTAND), which is the major storage system for describing the land on the Forest and for recording management intent for the land. A major limitation of the Timber Stand Data Base is that only one management area can be assigned to each stand. When resolution of management areas needs to be very fine, as in the case of MA 10, the Timber Stand Data Base cannot always store enough detail to accurately reflect management intent for that area.

Site-specific project planning and management area verification has been completed for 15 projects covering approximately 290,000 acres since the plan was signed. The following table shows the results of these analyses, with the columns labeled "Tentative" from the original management area assignments stored in FP17E and the columns labled "Final" from the Timber Stand Data Base.

Management Area Validation Monitoring

Project Name	MA 1 Tentative (acres)	MA 1 Final (acres)	% Change	MA 2 Tentative (acres)	MA 2 Final (acres)	% Change	MA 3 Tentative (acres)	MA 3 Final (acres)	% Change	MA 4 Tentative (acres)	MA 4 Final (acres)	% Change	MA 6 Tentative (acres)	MA 6 Final (acres)	% Change	MA 7 Tentative (acres)	MA 7 Final (acres)	% Change
Salmon River District																		
Scott Salvage	21	0	-100															
Clearwater District																		
Wing Cr-Twentymile	740	381	-49															
Silver Cougar	380	18	-95															
Hungry Mill	833	897	8															
Clear Creek	494	88	-82															
Red River District																		
Spike Ridge	27	0	-100															
Cove	2,300	0	-100							0	10	~						
Mallard																		
Selway District																		
Upper Swiftwater	9	16	78															
Middle Fork	0	492	~															
Elk City District																		
Wing Cr-Twentymile	1,344	1,207	-10															
Chocolate Moose	484	0	-100															
Boyer	329	175	-47															
E Fork American R.	946	799	-15															
Lower Crooked River	227	92	-59															
Total	8,134	4,165	-49							0	10	~						

Management Area Validation Monitoring (Cont)

Project Name	MA 8 Tentative (acres)	MA 8 Final (acres)	% Change	MA 10 Tentative (acres)	MA 10 Final (acres)	% Change	MA 11 Tentative (acres)	MA 11 Final (acres)	% Change	MA 12 Tentative (acres)	MA 12 Final (acres)	% Change	MA 16 Tentative (acres)	MA 16 Final (acres)	% Change	MA 17 Tentative (acres)	MA 17 Final (acres)	% Change
Salmon River District																		
Scott Salvage				48	0	-100				1,950	1,947	0	2,323	2,722	17	214	0	-100
Clearwater District																		
Wing Cr-Twentymile				286	0	-100				13,032	9,812	-25	4,131	6,151	50	691	2,599	278
Silver Cougar				517	174	-66	0	6,715	~	28,551	19,356	-32	5,907	9,849	67	105	91	-13
Hungry Mill				738	437	-41				22,183	8,253	-63	4,553	11,522	153	104	4,796	4,512
Clear Creek				459	0	-100				8,978	6,400	-29	8,134	11,461	41			
Red River District																		
Spike Ridge				127	97	-24				52	144	177	48	0	-100	1,762	2,016	14
Cove	978	1,277	31	827	1,960	137	4	0	-100	39,504	27,787	-30	1,825	1,002	-45	9,681	22,212	129
Mallard				707	2,059	191				6,935	3,654	-47				10,903	13,735	26
Selway District																		
Upper Swiftwater	23	17	-26	233	0	-100				987	2,532	157	1,503	974	-35	917	190	-79
Middle Fork	1,521	1,752	15	37	24	-35				2,569	5,558	116	7,076	2,531	-64	1,493	2,365	58
Elk City District																		
Wing Cr-Twentymile				433	36	-92				17,652	16,302	-8	1,275	1,491	17	1,812	4,456	146
Chocolate Moose				104	0	-100				4,280	3,584	-16	511	1,256	146	319	323	1
Boyer				181	37	-80				3,683	3,546	-4	177	507	186	336	603	79
E Fork American R.				494	227	-54				9,513	9,943	5	116	388	234	569	970	70
Lower Crooked River				174	137	-21				2,137	2,150	1	563	896	59	1,331	1,034	22
Total	2,522	3,046	21	5,365	5,188	-3	4	6,715	1,678	162,006	120,968	-25	38,142	50,790	33	30,237	55,390	83

Management Area Validation Monitoring (Cont)

Project Name	MA 19 Tentative (acres)	MA 19 Final (acres)	% Change	MA 20 Tentative (acres)	MA 20 Final (acres)	% Change	MA 21 Tentative (acres)	MA 21 Final (acres)	% Change	MA 22 Tentative (acres)	MA 22 Final (acres)	% Change	MA 23 Tentative (acres)	MA 23 Final (acres)	% Change	Total Tentative (acres)	Total Final (acres)	% Change
Salmon River District																		
Scott Salvage	172	63	-63	483	937	94										5,211	5,669	9
Clearwater District																		
Wing Cr-Twentymile				3,139	2,922	-7	1,022	858	-16							23,041	22,763	-1
Silver Cougar				3,017	2,517	-17	1,226	419	-66							39,703	39,139	-1
Hungry Mill				2,326	3,488	50	0	1,543	~							30,737	30,736	0
Clear Creek				1,837	2,151	17	3,911	4,025	3							23,813	24,125	1
Red River District																		
Spike Ridge				273	19	-93										2,289	2,276	-1
Cove	865	0	-100	5,154	7,321	42	803	0	-100							61,941	61,569	-1
Mallard	339	0	-100	2,568	1,891	-26										21,452	21,339	-1
Selway District																		
Upper Swiftwater				382	441	15	8	0	-100							4,062	4,170	3
Middle Fork				1,059	1,429	35	20	0	-100							13,775	14,151	3
Elk City District																		
Wing Cr-Twentymile				3,342	3,723	11	3,839	3,251	-15							29,697	30,466	3
Chocolate Moose				464	503	8	1,113	997	-10				0	443	~	7,275	7,106	-2
Boyer				483	170	-65	1,403	1,370	-2							6,592	6,408	-3
E Fork American R.				997	1,489	49	1,729	833	-52							14,364	14,649	2
Lower Crooked River				262	478	82	635	480	-24							5,329	5,267	-1
Total	1,376	63	-95	25,786	29,479	14	15,709	13,776	-12				0	443	~	289,281	289,833	0

Evaluation of Monitoring Results:

Major changes in management area allocation are occurring during project level planning. This is dramatically illustrated by the 25 percent reduction in acres assigned to MA 12 (timber emphasis), the 33 percent increase of MA 16 (deer, elk winter range emphasis) acres and the 83 percent increase of MA 17 (timber, visuals emphasis) acres across the 290,000 acres analyzed. These changes occurred because ID teams, using site-specific information, felt that the management area assignments originally made at the time the Plan was being written did not fit the ground. Changes of this magnitude will likely have an effect on the amounts of goods and services the Forest can provide.

The situation for MA 10 (riparian emphasis) is quite different. The Plan stated that "As additional acres of riparian areas are identified and mapped during project planning, the acres in this management area will increase." Most project level planning has concluded that 8 to 12 percent of the project area should be considered riparian area and thus MA 10. However, the current assignments of MA 10 in TMSTAND show that for most project areas, there has been a significant decrease from the original MA 10 allocation.

The increase in MA 10 acres that was expected in the Forest Plan and found during project level planning is not shown in the TMSTAND data base because even though many stands contain some riparian area, the entire stand can only occasionally be assigned to MA 10. The resolution allowed in the data base is not sufficient to record the occurrence of MA 10. The Cove and Mallard project areas are exceptions to this trend. There are many more large riparian areas in the Cove and Mallard project areas than in most areas of the Forest. These large riparian areas can be identified as stands and coded into TMSTAND as MA 10. Even in these project areas, the amount of MA 10 may be under-represented in the data base for the same reasons mentioned for other project areas.

It is important to accurately record where MA 10 occurs. A possible means of more accurately recording the occurrence of MA 10 is to develop a local extension to the TMSTAND data base to allow the recording of small areas of MA 10.

Effects of these changes will be examined during the 5-year review.

III. RESEARCH NEEDS

The following research needs have been identified during implementation of the Forest Plan. They will be recommended to the Regional Forester for inclusion in the Regional research program proposal.

1. The Elk Guidelines Habitat Suitability Index (HSI) model represents a composite of factors and variables affecting elk behavior from all over the west. There is a need for cooperative research to help refine the Northern Idaho Elk Guidelines HSI Model so variables characteristic of Northern Idaho will be more properly represented and the model better tailored to local conditions.

   Status: To date, the Clearwater National Forest has taken the lead in generating a proposed method for validating the North Idaho Summer Elk Model. The method, developed with the cooperation of the University of Idaho, the Nez Perce Tribe, and the Idaho Department of Fish and Game, uses elk pellet transect data. Budget limitations currently prevent the implementation of the method on the Forest.

2. Moose winter range questions need to be addressed:

   a. What silvicultural system best maintains the yew component in the grand fir/Pacific yew association?

   b. How can fuels be managed and still retain Pacific yew?

   c. What is the optimum spatial arrangement of yew throughout the Forest?

   d. What is the optimum stand size for yew?

   e. How many acres of the grand fir/Pacific yew association exist on the Forest?

   f. Does the Forest Plan adequately address the definition and protection of key moose winter habitat which has no Pacific yew component?

3. The consequences of repeated burning, and of maintenance of forest ecosystems in prolonged seral brush stages, need to be evaluated.

4. Determine the relative effectiveness of fertilization compared to burning for improving wildlife habitat.

5. Determine and define corridor attributes needed to link old-growth stands.

6. The type of riparian conditions to manage for needs to be determined. Stand dynamics for riparian habitat types are poorly described. Silviculturists need to be able to predict effects of timber management on stand regeneration, competition, future stand composition, and insect and disease patterns. Methods need to be developed to monitor the effects of timber harvest and other activities on riparian areas.

7. Habitat relationships and limiting factors for most sensitive species (plant and animal) are poorly understood. Research is needed to better define critical habitat components for these species and risk posed by Forest management activities.

IV. FOREST PLAN CHANGES BEING CONSIDERED

Following are thoughts regarding possible changes to the Forest Plan.

Management Area 11 (MA11)

1. The Silver Creek area is dominated by the Pilot Knob and Pilot Rock Nez Perce Indian Tribe Religious Rites Area. The Record of Decision for the Forest Plan stipulates that the Religious Rites Area will be managed with no additional roads and no scheduled timber harvest.

   A proposal has been made to change MA 11 and remove the Silver Creek area from this management area. The proposal includes assignment of the Silver Creek area to a unique management area with goals and standards specific to the requirements of this special area. Coordination with the Nez Perce Tribe will be an integral part of making these changes to the Forest Plan.

   > Quote from the Decision Notice and FONSI for the Silver-Cougar Timber Sales signed by Forest Supervisor Tom Kovalicky on 7/25/90.
   >
   > "My analysis also identified the need to amend the Forest Plan to more explicitly address the goals and objectives for the Sacred Area by establishing a unique management area designation. My analysis also identified potential management area boundary changes that could improve protection of this important area. Standards for management practices for a new management area will need to be explored in cooperation with the Nez Perce Tribe."

2. The Forest has identified lands that are "unsuitable" for timber management and where the primary management goal is to provide for high quality fish and wildlife habitat and water quality. It appears that these lands should be assigned to MA 11. In the future, we will be considering changing the Forest Plan to include them in MA 11.

Management Area 10 (MA10)

As a result of Forest Plan monitoring reviews, the Forest Interdisciplinary Team identified the need to change MA 10 to incorporate direction on riparian management from the Record of Decision for the Forest Plan and the Plan itself into MA standards. Direction from the new Forest riparian policy statement needs to be incorporated into the Forest Plan.

Management Area 21 (MA21)

As a result of Forest Plan monitoring reviews and a review of issues to consider during the 5-year review, the Forest Interdisciplinary Team identified the need to change the Forest Plan with a new definition and new management direction for MA21 reflecting current knowledge about the winter habitat needs of moose. The Team also recommended that the National Yew Conservation Guidelines be incorporated into the Forest Plan.

Monitoring Item 1g - Animal Unit Months Grazing Permits

We will be proposing to eliminate this monitoring item and record the number in Table 1 (see page 4) of this report.

Fish/Water Quality Objectives

Update Appendix A of the Forest Plan to reflect current knowledge regarding fish/ water quality objectives, existing condition, sediment yield guidelines, and entry frequency guidelines.

Winter Range Burning

Change the Forest Plan to indicate that while demand for winter range improvements remains high, future attainable acreages will depend on availability of adequate funding and unit costs of treatment.

Air Resource Management

Change the Forest Plan to comply with the Regional Air Resource Management Plan.

Old Growth Definitions

Change the Forest Plan to incorporate the new Regional definitions of old growth (Regional Definitions for the North Idaho Zone) to acknowledge the diversity of types of old growth on the Forest.

Forest Plan Monitoring Plan

Change Table V-1 -- Forest Plan Monitoring Requirements and Appendix O of the Forest Plan to reflect current Forest Plan monitoring needs.

Roaded Modified Recreation Opportunity Spectrum (ROS)

In the Plan where it addresses Recreation Opportunity Spectrum, include a Roaded Modified ROS category.

V. PLAN AMENDMENTS

Amending the Nez Perce National Forest Plan is a normal process of improving our ability to care for the land, and amendments to the Plan are anticipated. Sixteen amendments and one revised amendment have been issued and several others have been proposed. They are listed in the "Proposed Amendments" section of this report.

Following are summaries of those amendments made to date. A copy of any amendment(s) can be obtained by contacting the Nez Perce National Forest Supervisor's Office.

Amendment #1: Clarifies our intent to protect potential Wild and Scenic Rivers upon their inclusion into the National Wild and Scenic Rivers system, by providing more detailed Forestwide standards.

Proposed changes in the management standards were developed following guidance contained in the Wild and Scenic River Evaluation section of the Forest Service Land and Resource Management Planning Handbook (FSH 1909.12, Chapter 8).

Amendment #1 (REVISED): Revised Forest Plan Amendment #1 is exactly the same as the original amendment except that the following statement has been removed. The amendment was necessary to settle an appeal of Amendment #1.

> "Boundaries may include adjacent areas needed to protect the resources or facilitate management of the river corridor."

Amendment #2: Clarifies the Forest's definition and management of motorized recreation on the Nez Perce National Forest.

Amendment #3: Modifies standards listed in Chapter II (Forestwide Management Direction) and Chapter III (Management Area Direction). Clarification is provided in changes to the minerals section of Chapter VI (Summary of the Analysis of the Management Situation) and the glossary and monitoring items.

The specific standards modified are those relating to minerals, wildlife and fish, and riparian area management, and to provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

The need for changes and clarification in management standards was the result of negotiations with the Independent Miners Association's appeal of the Nez Perce National Forest Plan. An interdisciplinary team developed the settlement agreement that addressed the appellant's concerns and a proposal for correcting the Plan.

Amendment #4: Modifies standards listed in Chapter II (Forestwide Management Direction), modifies the visual resource standards in Chapter III (Management Area Direction) and modifies specific monitoring requirements in Forest Plan Appendix O dealing with visual resource management.

The need for changes and clarification in management standards was the result of environmental analysis of proposed timber sales and road construction in the Wing Creek-Twentymile area. During the comment period of the Wing Creek-Twentymile Draft Environmental Impact Statement, concern was expressed on conflicting Forest Plan language pertaining to visual resource management. An interdisciplinary team was used to analyze the concerns and develop a proposal for correcting the Forest Plan.

Amendment #5: Corrects errors displayed in the Nez Perce National Forest Plan Appendix A, Forest Fishery/Water Quality Direction by Prescription Watershed. These objectives provide management direction in terms of the maximum estimated increase in sediment over baseline conditions that can be approached or equaled for a specific number of years per decade.

Some of the changes are planning errors made in identifying sediment yield and entry frequency guidelines. Site-specific analysis and stream surveys have also revealed that some streams were incorrectly identified as not supporting anadromous fish. The errors were identified through environmental analysis of proposed timber sales and road construction. An interdisciplinary team was used in identifying the needed changes and proposing the corrections.

Amendment #6: Corrects errors in Forest Plan Chapter II (Forestwide Management Direction), Chapter III (Management Area Direction), Chapter V (Implementation), Chapter VII (Glossary), and Appendix A (Fishery/ Water Quality Direction).

The corrections made in this Forest Plan amendment provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

An error was identified through environment analysis of a proposed timber sale and associated road construction and habitat improvement project. Forest Plan Appendix A describes current fishery habitat quality in the West Fork of Red River (Prescription Watershed 17060305-04-18) as 50 percent of potential habitat quality. The West Fork of Red River is in a pristine natural condition. This watershed is roadless and no management activities are known to have occurred in either the watershed or the stream. The stream is, therefore, in a pristine, natural condition and it is appropriate to display it at 100 percent of potential habitat quality.

The Forest Interdisciplinary Monitoring Team identified additional typographical errors in the Forest Plan. This Forest Plan amendment includes the correction of those errors.

Amendment #7: Clarifies language found in the following sections:

Chapter II (Forestwide Management Direction)
Chapter V (Implementation)
Chapter VI (Summary of the Analysis of the Management Situation)
Appendix O (Forest Plan Monitoring)

The specific items modified provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

The need for changes and clarification in management standards was the result of negotiations with the Nez Perce Indian Tribe on their appeal of the Nez Perce National Forest Plan. An interdisciplinary team was used in developing the settlement agreement that addressed the appellant's concerns and developed a proposal for correcting the Forest Plan.

Amendment #8: The purpose of Forest Plan Amendment #8 is to clarify language in Appendix O (Forest Plan Monitoring Requirements).

During this past year the Forest Interdisciplinary Monitoring and Evaluation Team identified some items in the Forest Plan Monitoring Requirements Appendix that need correction or clarification.

These items focus on fish and wildlife monitoring. Specifically, the changes relate to forage production, wildlife population trends, and fisheries and watershed monitoring station costs.

The corrections made in this Forest Plan amendment provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

Amendments #9 and #10: These amendments deal with management practices specific to the Cove and Mallard Timber Sales as described in the recently released Final Environmental Impact Statements for those sales. Amendment No.9 was formally adopted in the Mallard Record of Decision, and Amendment No. 10 was formally adopted in the Cove Record of Decision. Both of these amendments correct oversights in the Forest Plan.

These two amendments apply only to the timber sales analyzed in the Cove and Mallard Environmental Impact Statements. They do not apply to other timber sales on the Forest.

The two amendments will allow clearcutting and sanitation/salvage harvesting within Management Areas 12 and 17.

Amendment #11: Forest Plan Amendment No. 11 makes adjustments in the Forestwide monitoring program and updates the fish/water quality objectives in Appendix A to the Plan. The changes in the monitoring program were recommended by the Forest Interdisciplinary Monitoring Team in the Nez Perce National Forest Monitoring and Evaluation Report for FiscalYear 1989; the objective was to make the program more comprehensive. The revised fish/water quality ojectives are based on recent stream surveys. Specific changes in both the monitoring program and the fish/water quality objectives are listed in the Decision Memo for Amendment No. 11.

Amendment #12: Amendment 12 makes minor changes to the Wall Creek Municipal Watershed direction (Management Area 22) contained in the Nez Perce Forest Plan. These changes relate to improving the range of management practices identified in the Forest Plan, and specifically to items such as notifying the Water District if a fire occurs in the watershed and taking special precautions with machinery and chemicals.

Amendment #13: Amendment 13 brings the Plan into compliance with legal requirements and Forest Service directives dealing with animal damage control. It should be noted that the amendment does not authorize any specific projects.

Amendment #14: Amendment 14 has been voided, as directed by the Washington Office of the Forest Service. This amendment dealt with separately showing the allowable sale quantity (ASQ) that came from inventoried roadless areas and roaded areas.

Amendment #15: Amendment 15 amends the Frank Church-River of No Return Wilderness Management Plan and the Forest and Land Management Plans for the Bitterroot, Boise, Challis, Payette, Nez Perce, and Salmon National Forests.

The amendment changes wording in the Wilderness Management Plan related to reducing the storage of items and removal of plumbing fixtures from the wilderness. The amendment only modifies the schedule of implementation.

Amendment #16: Amendment 16 adopts programmatic changes in management direction for the Selway-Bitterroot Wilderness. These changes should enable wilderness managers to better meet both the letter and the intent of the Wilderness Act.

VI. LIST OF PREPARERS

The following individuals contributed to the development of the Monitoring and Evaluation Report for the Nez Perce National Forest for fiscal year 1992. Members of the Forest Interdisciplinary Monitoring Team are designated with an asterisk (*).

UNIT	NAME	AREA OF EXPERTISE
Supervisor's Office	Nick Gerhardt *	Watershed
	Dick Artley*	Timber
	Dave Hayes*	Timber
	Leonard Lake*	Range
	Roger Ward *	Silviculture
	Nancy Rusho *	Minerals
	Dave Green *	Implementation Analysis and Economics
	Brian Vachowski*	Recreation
	Ali Abusaidi*	Cultural Resources
	Ollie Goldammer*	Fire
	Pat Green *	Soils/Ecology
	Gary Kellogg *	Land Management Planning and Forest Interdisciplinary Monitoring Team Leader
	Steve Blair*	Wildlife
	Scott Russell*	Fisheries
	Kathy Moynan	Fisheries
	Susan Kelly*	Engineering
	Laura Smith	Graphics Illustrator
	Gayle Hauger	Technical Support
	Pete Parsell	Technical Support
Salmon River Ranger District	Mike McGee*	Salmon River District Monitoring Coordinator
Clearwater Ranger District	Sue Paradiso *	Clearwater District Monitoring Coordinator
Red River Ranger District	Rondi Fischer*	Red River District Monitoring Coordinator
	Dave Gloss	District Hydrologist
	Shane Jones	Fisheries
Moose Creek Ranger District	Mark Woods *	Moose Creek District Monitoring Coordinator
Selway Ranger District	Jerry Bird *	Selway District Monitoring Coordinator

Elk City Ranger District	Paula Guenther*	Elk City District Monitoring Coordinator
	Meg Kenny	District Hydrologist

In addition, the report was reviewed by the following individuals:

Michael King	Forest Supervisor
Ihor Mereszczak	Timber, Range, and Minerals Staff Officer
Michael Cook	Forest Engineer, Contracting, Purchasing, and Communications Staff Officer
Joe Bednorz	Planning, Budget, and Information Systems Staff Officer
David Poncin	Recreation, Wilderness, Fire, and Lands Staff Officer
Phil Jahn	Fisheries, Wildlife, Watershed, and Soils Staff Officer
Bob Abbott	District Ranger, Salmon River Ranger District
Barb S. Beck	District Ranger, Clearwater Ranger District
Ed Wood	District Ranger, Red River Ranger District
Dennis Dailey	District Ranger, Moose Creek Ranger District
Cynthia Lane	District Ranger, Selway Ranger District
Jim Wiebush	District Ranger, Elk City Ranger District

VII. APPROVAL

I have reviewed the annual Forest Plan Monitoring and Evaluation Report for Fiscal Year 1992 for the Nez Perce National Forest that was prepared by the Forest Interdisciplinary Team. I am satisfied that the Monitoring and Evaluation effort meets the intent of both the Forest Plan (Chapter V) and 36 CFR §219. I have also considered the recommendations of the Interdisciplinary and Leadership Teams on proposed changes to the Forest Plan and will process the necessary Amendments after appropriate notification.

This report is approved:

Michael King

MICHAEL KING
Forest Supervisor

4/15/93
Date

APPENDIX

ACTION ITEMS

Action items are concerns that were identified during Fiscal Year 1992 monitoring that need to be acted upon. Action to resolve these concerns will be taken in 1993.

Item 1: The Nez Perce Tribe and Forest need to work together on exploring, evaluating, and recommending alternative ways (if any) of achieving big game winter range improvement.

Item 2: Soil impacts due to repeated prescribe burning need to be evaluated against the natural range of variability of soil properties operating in natural fire regimes.

Item 3: Consistently determined suitability assignments need to be recorded in the timber stand data base, to provide better information for the 5 year review, to get a better estimate of acres available for treatment and timber yields.

Item 4: Timber stand inventory systems need to be adapted to the linear nature of riparian forest stands.

Item 5: We need to develop a local extension to the TMSTAND data base to allow the recording of small areas of Management Area 10 (riparian areas).

STATUS OF ACTION ITEMS IDENTIFIED IN FY 1991 MONITORING & EVALUATION REPORT

The following action items were identified during FY 1991 monitoring. Following is the status of action taken on these items.

Action Item	Status or Action Taken
Item 1: Continue to work on action items that have been identified in previous Forest Annual Monitoring and Evaluation Reports that have not been resolved.	Forest Plan changes are being considered to address the need to update the fish/water quality objectives (Appendix A) to reflect current knowledge for watersheds.
Item 2: Develop a recordkeeping system to track the percent of riparian acres, both suitable and unsuitable, by stand.	A database has been designed and is being tested to track the amount and type of riparian area occurring within each stand.
Item 3: Emphasize the need to adapt existing contracts to achieve current riparian objectives.	During 1992, over 400 projects that are under contract, permit, or being implemented, were evaluated to determine their effects on chinook salmon recovery.
Item 4: Re-establish a concentrated effort to update the R1/R4 Guide (sediment yield monitoring).	The Northern Region released the WATSED model, which includes minor enhancements to the R1/R4 Guide. Intermountain Research Station is continuing data collection and analysis efforts which will be helpful in future revisions of the Guide. The Forest anticipates implementing WATSED within 1 to 2 years.
Item 5: Validate the sediment, fishery, and elk models.	Wildlife: The Venture 20 project has assigned a technical team to standardize the model use and define input values for the model. The model will also be evaluated to determine if changes or modifications need to be made to update its use. Fishery: Kathi Moynan has been hired to incorporate fisheries management into ecosystem management. Sediment: The Forest completed a preliminary test of NEZSED, comparing measured versus modeled sediment yields in December 1991. Results of this study were reported in the FY 1991 Monitoring Report and, in more detail, in the Hydrological Data Summary and Monitoring Results Analysis for Water Year 1991. Further validation of NEZSED utilizing the remaining Forest data is planned pending approval of a University of Idaho Master's Thesis project.

Action Item	Status or Action Taken
Item 6: Develop criteria for evaluating impacts of off-highway vehicle (OHV) use. Determine what is unacceptable change on a transportation system or land base as the result of these uses and user types. "ORV" or "OHV" describe vehicle types such as motorcycles, minibikes, trailbikes, snowmobiles, dunebuggies, all terrain vehicles (ATV) and 4-wheel drive, high clearance vehicles.	No action was taken on this item in FY 1992.
Item 7: Develop a Management Area to address management goals, resource potentials, and limitations for "grand fir mosaic" areas.	The Forest Interdisciplinary Monitoring Team, after further review of this issue, recommended that Management Areas not change unless such changes are unavoidable. The whole subject should be re-opened at the scheduled revision.
Item 8: In regard to Pacific yew management, the Forest needs to: - Amend the Plan with a new definition of MA 21 and new management direction for MA 21 which reflects current knowledge about the winter habitat needs of moose. - Complete a Forest yew inventory that will be adequate to identify the suitability of inventoried areas for moose winter range and the need of moose for those areas as winter range. - Identify the 52,798 acres of MA 21 allocated by the Forest Plan using the completed inventory and the distribution needs of moose. - Amend the Plan to incorporate the National Yew Conservation Guidelines.	 Amending the Forest Plan with a new definition and management direction for MA 21 was not accomplished in FY 92. The 5-year review of the Plan will lead to a determination on whether or not this will be done. Inventory 75 percent complete (100,000 acres of 136,000 acres). Review of the yew inventory is ongoing. Biologists will use the inventory to help assign the allocated acreages. National EIS will accomplish needed NEPA action this spring.
Item 9: Look into the possibility of providing information on our firewood permits to help retain wildlife snags.	No action has been taken to date.
Item 10: Review the appropriateness of adding a monitoring element to the Forest Plan addressing the Forest situation regarding commodity vs. non-commodity vegetation.	The review of the appropriateness of adding this monitoring item to the Forest Plan has not yet occurred.

STATUS OF ACTION ITEMS IDENTIFIED IN FY 1990 MONITORING & EVALUATION REPORT

The following action items were identified during FY 1990 monitoring. Following is the status of action taken on these items.

Action Item	Status or Action Taken
Item 1: The Coordinated Resource Management Plan (CRMP) process and its successes need to be highlighted. CRMP is a planning process administered by the Soil Conservation Service. It facilitates communication and cooperation between agencies and landowners. Agencies, groups, and people need to be recognized for their CRMP work. The Forest needs to explore increasing awareness and use of the CRMP process.	The CRM process has been recommended for two additional watersheds on the Forest. The Elk City Antidegradation Local Working Committee endorsed CRM as a way to consider comprehensive watershed management needs in the American River basin. To date, no formal action has been taken to form a CRM committee. The Red River Ranger District is exploring formation of a CRM committee in the Red River basin to address watershed management needs. The Clear Creek CRM group has remained active and reached out to the local community through efforts with the Idaho Wildlife Council and the Valley Elementary School in Kooskia.
Item 2: Fishery/water quality objectives for the South Fork of Clear Creek should be consistent with objectives for similar Chinook habitat on the Forest. Also, one-half mile of stream in the Clear Creek drainage does not have an assigned fishery/water quality objective.	No action has been taken to amend the Forest Plan to reflect these changes. This amendment is planned to be submitted by the Clearwater Ranger District in 1992.
Item 3: The Forest Service and the Idaho Department of Fish and Game should attempt to cooperatively develop a joint strategy to address the emerging bull elk vulnerability issue.	The Nez Perce Forest Access Management program provides opportunities to address the bull elk vulnerability program. Access decisions are the Forest's primary contribution toward resolving bull vulnerability issues. In concert with the Forest's efforts, the Idaho Department of Fish and Game is making adjustments in hunting season dates, seasons, and is currently working to develop a bull vulnerability model to assess impacts.

Action Item	Status or Action Taken
Item 4: Riparian area action that needs to be addressed: - Amend the Forest Plan and incorporate into Management Area 10 all the riparian area direction that occurs throughout the Forest Plan. Included in that direction should be the consideration of MA 10 as connecting corridors between old-growth stands. Also included would be appropriate portions of the "Guide to Timber Management in Riparian Areas."	
- The Forest needs to complete a preliminary version of the riparian classification system and see how it corresponds to the "Guide to Timber Management in Riparian Areas."	The Forest accomplished additional sampling in 1991, but data are not yet adequate to draft a version that would address all Forest stream types. A draft write-up is planned for FY 92 that would include preliminary descriptions of those types that have been sampled.
-- The "Guide to Timber Management in Riparian Areas" needs to be brought up to date and, after interdisciplinary review, formally adopted.	The Forest has decided to not complete the "Guide to Timber Management in Riparian Areas" in its present format. Interdisciplinary review has indicated the need for an intermediate, more concise statement that clarifies Forest Plan intent with respect to implementing riparian area standards and guidelines. A draft policy statement has been developed that defines riparian areas, reiterates Forest Plan standards, and proposes a process of inventory, analysis, and environmental documentation necessary before management activities in riparian areas may be undertaken. This draft document is currently undergoing Forestwide review. Parts of the "Guide to Timber Management" may be used as interim guidance, and later as appropriate to meet the requirements of the proposed policy statement. A new group will be formed in 1992 to address the question of guidance for management of riparian areas.
Item 5: The Forest needs to develop direction on Pacific yew. Specifically, the following areas need to be addressed: - How should increasing requests for bark collection permits be handled.	The Forest yew program was actively coordinated with the national effort. National policies and standards for eprmitting, utilization, transporting, and accountability were implemented.year.

Action Item	Status or Action Taken
- Determine what kind of Pacific yew stands and stand structure is important as moose habitat.	Two meetings were held (4/4/91, 10/31/91) with invitees from Idaho Department of Fish and Game, Nez Perce Tribe, and the University of Idaho, as well as biologists, foresters, and silviculturists from the Forest in an attempt to identify this information considering the rising demand for yew bark. Some basic recommendations were gathered from the participants on sites and methods to employ in the harvest; however, lack of additional scientific information and monitoring of post-treatment sites was very limited. In 1992, an Environmental Analysis was completed for the harvest of Pacific yew on three Districts of the Forest. Moose use within harvest areas will be monitored.
- Amend MA 21 and clarify objectives.	The Forest Wildlife Biologist completed a comprehensive summary of the existing research along with feedback gathered from the 4/91 and 10/91 meetings. A proposed definition and revised objectives were developed, which will undergo review by interested groups and other resource specialists. Deferred in 1992 while the yew inventory was being completed. This will become a part of the 5-year review.
Item 6: The Forest should continue its comprehensive inventory of the Pacific yew stands/structures that are determined to be important as moose habitat.	Draft guidelines for stratifying the relative value of MA21 stands based on available information and professional judgment were provided to the Pacific yew coordinator for the planned yew inventory contract in FY 92. 135,000 acres of yew lands were identified as having high potential for suitability for either MA21 or Pacific yew bark harvest. A Pacific yew inventory was designed, and field work completed on 99,000 acres. A computer database to store the information was established. Data was used to model harvest alternatives for the Draft Pacific Yew EIS. Data is available for future use in the EIS, MA21, bark harvest, or other analyses.
Item 7: Travel management needs to be better coordinated Forestwide.	In 1991, the Nez Perce combined visitor/travel map was revised in a totally new format. Displays of access management information, including legends, were simplified and formatted to be more user friendly and understandable. A companion document listing all roads on the Forest and their regulations was started, but not completed. It should be completed in 1992. The mapping exercise and road listing, along with implementation of the Access Management Guide, are a start toward Forestwide consistency in access management, but there is still considerable variability among Ranger Districts in access management implementation.

Action Item	Status or Action Taken
Item 8: We need to improve our efforts to give verification of quality, amount, and distribution of snags during project planning.	Efforts to increase Forest employees' awareness of and emphasis upon verification of snag qualities, amounts, and distribution include distribution to all District Wildlife Biologists, "How to Determine Snag Density" by E.L. Bull, R.S. Holthausen, and D.B. Marx. In 1989, a Forestwide Snag Workshop was held to identify barriers to retaining and managing for adequate snag numbers and practical solutions to the problem. Forestwide recognition of the issue and efforts to improve performance have since included proposals to create snags with K-V funding where existing densities are insufficient to meet standards.
Item 9: Timber stand inventory systems need to be adapted to the linear nature of riparian forest stands. The record keeping system should be adapted to allow grouping plots between stands into riparian substands, as well as keeping track of riparian acres within a stand.	
Item 10: Through further development and implementation of the Access Management Plan, the Forest needs to develop a systematic method to monitor off-road vehicle use and impacts.	No systematic method of monitoring off-road vehicle use and impacts was developed.
Item 11: The Forest needs a review and revision of Recreation Opportunity Spectrum (ROS) maps Forestwide, incorporation of ROS into all environmental analyses, and a mechanism for updating ROS acreage changes in a data base. All of these will be necessary in order to adequately monitor ROS after a 5-year period.	ROS considerations were incorporated into most environmental analyses. The Forestwide review, revision, and mechanism for updating ROS acreage changes were not done.
Item 12: The Forest needs to improve its control of water quality impacts from water quality and fish habitat improvement projects.	No definitive action was taken on this item. Forest personnel have been encouraged to minimize the temporary impacts of fish habitat improvement projects on sediment production through application of mitigation measures.
Item 13: The Forest will encourage the Region to reconvene the Northern and Intermountain Region (R-1/R-4) technical task force to revise the 1981 Sediment Yield Guidelines, incorporating new information.	The Forest continues to lobby for reconvening of the task force to update the R1/R4 Guide. Some efforts have been undertaken through implementation of the Region's WATSED computer program.
Item 14: The Forest has several years of sediment yield data from six gaged monitoring stations. These data should be evaluated to assist in validation of the sediment yield model.	Partial analysis was completed on five of eight gaged stations on the Forest, comparing measured and modeled sediment yields. The results of this analysis will be presented at the Idaho Nonpoint Source Monitoring Results Workshop in January 1992.

Action Item	Status or Action Taken
Item 15: The Forest needs to place more emphasis on inventorying sensitive plants and biological evaluations.	In FY 91, additional energies were focused on plant identification training for field-going crews and cooperative assistance from botanists of the Idaho Conservation Data Center were implemented. Increased awareness and completion of biological evaluations resulted in newly discovered locations of candystick, Payson's milkvetch, broad-fruit mariposa lily, Idaho douglasia, and evergreen kittentail. Planned harvesting on one timber sale was revised to reflect appropriate protections for candystick.
Item 16: The Forest Plan identifies a segment of White Bird Creek as an eligible waterway for the Wild and Scenic River system. None of this eligible waterway is on Forest Service land. We need to review whether the Forest Service or some other agency should take the lead in conducting a suitability study of the eligible segment of White Bird Creek.	Staff work has been completed on this action item. The Forest will be proposing that the State of Idaho or the National Park Service take the lead role in conducting the study. The Forest Service has no authority to conduct a Wild & Scenic River suitability study on lands where the eligible waterway is entirely outside the Forest boundary.

STATUS OF ACTION ITEMS IDENTIFIED IN FY 1989 MONITORING & EVALUATION REPORT

The following action items were identified during FY 1989 monitoring. Following is the status of action taken on these items.

Action Item	Status or Action Taken
Item 1: For practices that don't meet the Idaho Forest Practices Act, how do we ensure that we get a variance?	The Regional Forester provided direction to Idaho Forests on variance procedures in the Idaho Forest Practices Act in March 1990. This was done in FY 1991.
Item 2: What constitutes an opening for vegetative management purposes?	Clarification on definition of opening was sent to the Districts. This clarification referenced the "Northern Regional Guide"'s ROD of June 10, 1983, Sections 2-5A through 2-6A. The bottom line said that the definition of an opening is dependent on the management area objectives in the Forest Plans. An opening in areas with emphasis on big game summer range may have different vegetative characteristics than areas with visual emphasis or strictly timber emphasis. High emphasis MA-16 might require big game hiding cover before it is considered a "non-opening," while certified regeneration may constitute a non-opening where big game summer range is not a strong consideration.
Item 3: Application of the sediment model as it relates to reconstruction and future reduction of sediment yield needs to be clarified.	The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."

Action Item	Status or Action Taken
Item 4: Re-examine assignments of elk summer habitat objectives (see FP, page II-18, item 6) to ensure manageable habitat units are delineated that can be coordinated with timber harvest, access management, and livestock use. Current assignments in some areas are fragmented and effects of proposed activities cannot be modeled using the "Guidelines for Evaluating & Managing Summer Elk Habitat in North Idaho." Establish procedures for examining manageability during project planning and involvement of the Idaho Department of Fish and Game, the Nez Perce Tribe, and other affected parties.	Forest Biologists Steve Blair and Kim Mitchell made a presentation at the February Leadership Team meeting, discussing the need to make adjustments in the EAU boundaries and to analyze the existing condition Forest-wide. On June 27, the Forest Supervisor sent a letter to the District Rangers requesting that each District estimate the funding needed to complete the work. Enclosed with the letter was a "stepwise approach" developed by Steve Blair, outlining how best to proceed with the work. On August 14, a meeting with the Nez Perce Tribe and the Idaho Department of Fish and Game was held to discuss the need and recommended process for re-delineation of the Forest's elk objective boundaries. This meeting resulted in agreement on a general process that would be followed by each District, and is documented in an August 20 letter to District Rangers from the Forest Supervisor. Based on this finalized process, each District was asked to update their estimate of time and costs necessary in FY 91 to complete the task. The work is ongoing by the Forest and District biologists.
Item 5: The Forest Plan decade for modeling sediment yield and entry frequencies began in FY 88 (10/87). Project analyses will consider activities in the decade prior to the Forest Plan to determine the effect of past actions/activities on proposed projects.	This is Forest direction. The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."
Item 6: How do we modify the Timber Stand Management Record System (TSMRS) to track small inclusions of management areas such as riparian areas?	This item is still on the agenda. Forest planning personnel will be developing a table in 1992 that will track percent of riparian acres, suitable and unsuitable, by stand.

Action Item	Status or Action Taken
Item 7: Concern that monitoring cost will continue to increase as public concern over the accuracy of the Forest Plan outputs increase. As monitoring costs rise, the burden of funding the cost from District project funds will become more difficult. Recommend that Forest management codes be created and that all monitoring activities be charged as worked.	No Forestwide direction has been provided to date. Forest units have the ability to create project management codes for tracking these costs.
Item 8: How should managers consider the effect of water yield increases in small drainages?	Guidance for this concern is provided on a case-by-case basis. No Forestwide guidelines have been issued.
Item 9: How is the Forest going to accomplish range management plan updates?	A schedule based upon priorities has been developed for accomplishing range management plan updates.
Item 10: How can the Forest develop a systematic method for monitoring ORV use?	The Forest did not develop a systematic method for monitoring ORV use in 1990. We will continue to work on this in 1991.
Item 11: How to apply the water quality guidelines in Appendix A of the Forest Plan to mineral activities?	The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."

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The Nez Perce National Forest Headquarters can be contacted in regard to locating copies of the following cited material referred to in this report:

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