HYDROLOGIST

United States
Department of
Agriculture

Forest
Service

Nez Perce National Forest Plan

Third Annual Monitoring and Evaluation Report

Fiscal Year 1990

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:

Salmon River Ranger District
Slate Creek Ranger Station
HC01 Box 70
White Bird, ID 83554
(208) 839-2211

Clearwater Ranger District
Route 2, Box 475
Grangeville, ID 83530
(208) 983-1963

Red River Ranger District
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Grangeville, ID 83530
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(208) 842-2245

Nez Perce National Forest Headquarters
Route 2, Box 475
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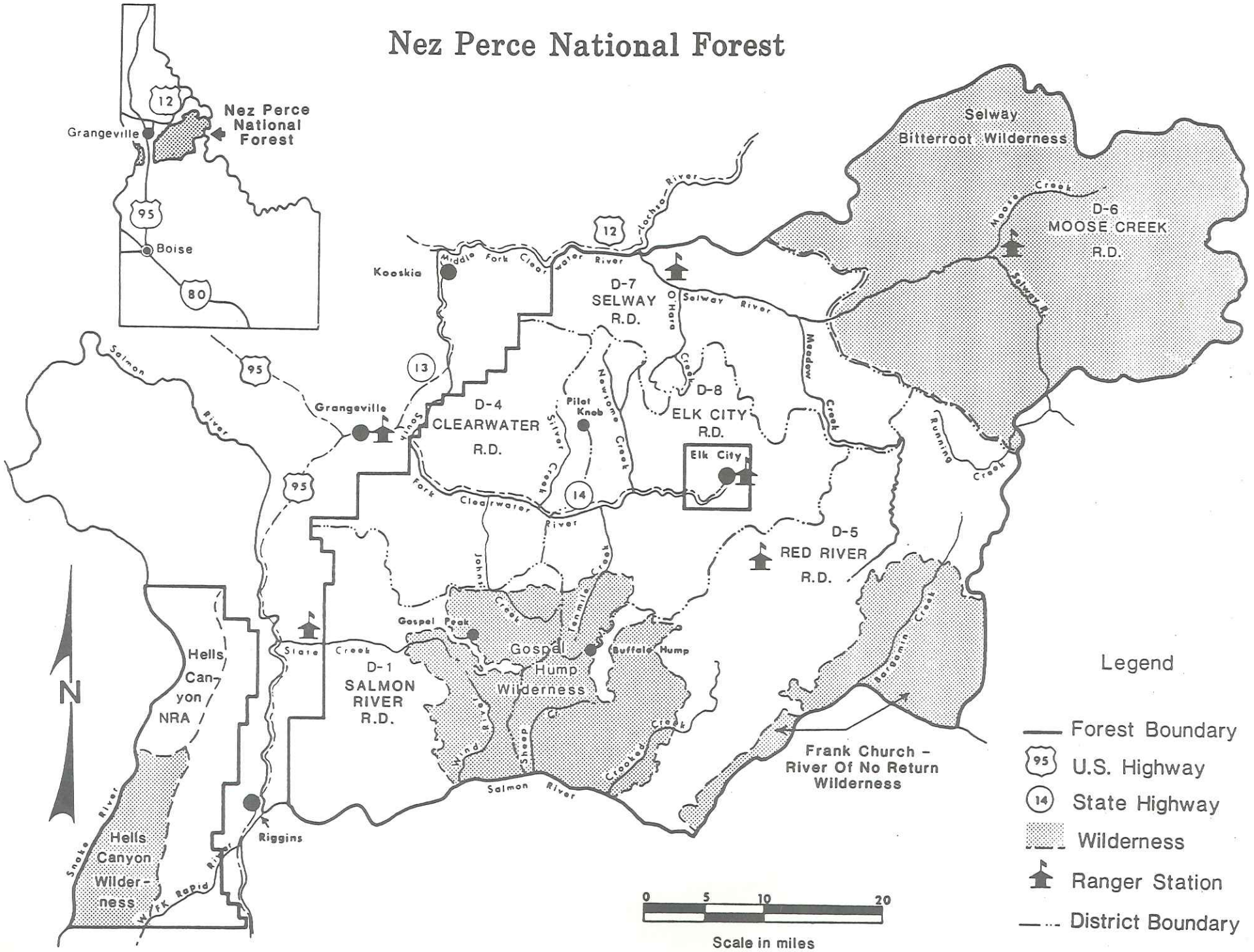
Nez Perce National Forest



March, 1991

Dear Reader:

The Nez Perce National Forest Plan, released in fiscal year 1988, 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, our pledge to continue to involve you as we strive to achieve a balance of multiple uses.

We invite you to review and comment on this, our third 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,

David E. Poncin

DAVID E. PONCIN
Acting Forest Supervisor

TABLE OF CONTENTS

FOREST PLAN MONITORING AND EVALUATION REPORT

NEZ PERCE NATIONAL FOREST

FISCAL YEAR 1990

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 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 decisionmaker 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 Planned Actions section.

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.

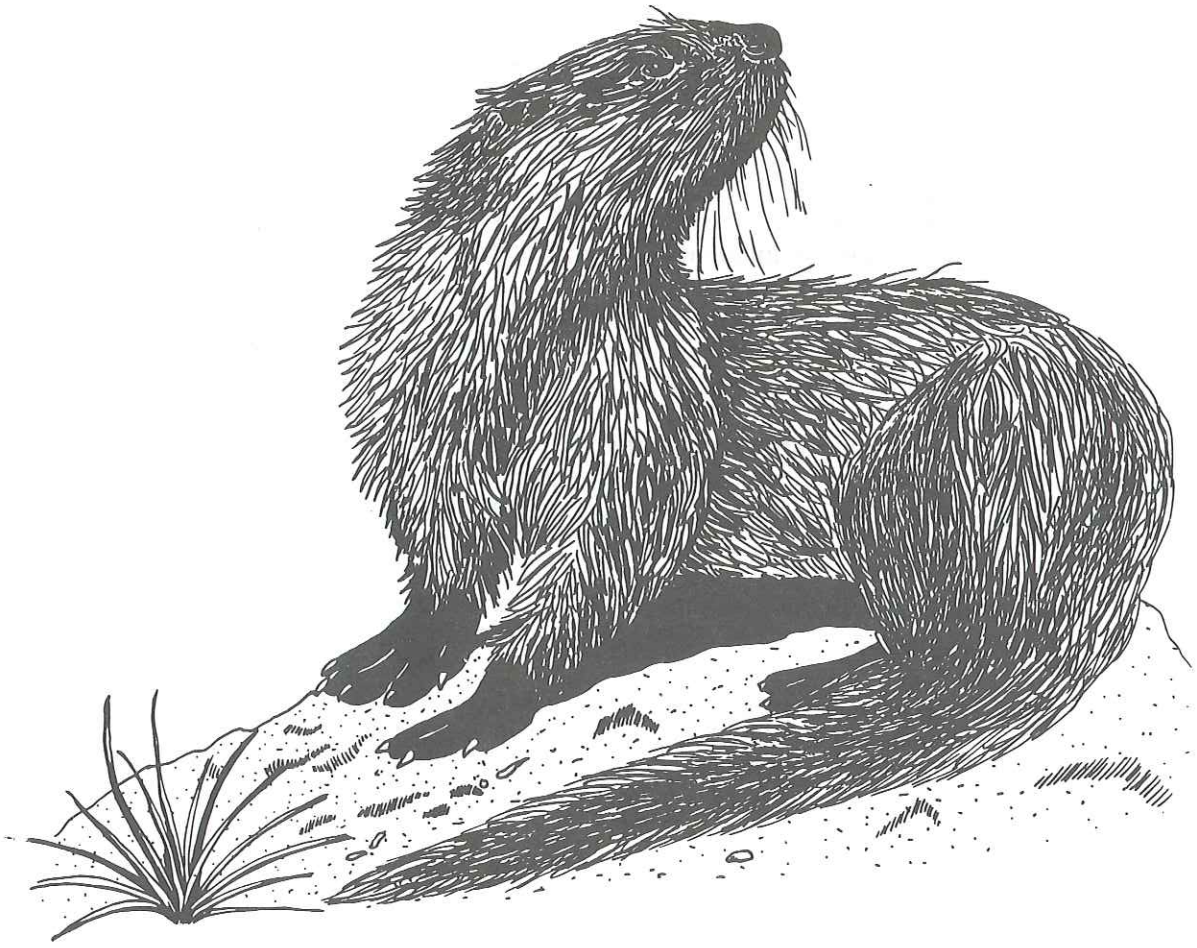
Forest Plan management activities were monitored and evaluated as outlined in the Forest Plan Monitoring Requirements section of the Forest Plan, pages 6 and 7, Table V-1, and Appendix O to determine how well objectives were met and how closely management standards were applied. Numerous informal field reviews were also conducted on a variety of projects during fiscal year 1990. 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 other projects.

This report summarizes results of Forest Plan monitoring and evaluation conducted from October 1, 1989, through September 30, 1990. This is the third year of Forest Plan implementation for the Nez Perce National Forest. Rationale is provided for the modifications, if necessary, that will be made in the Forest Plan in the form of amendments. 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 a communication link with 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.

[1] Implementation monitoring is assumed unless otherwise specified.



II. MONITORING AND EVALUATION RESULTS AND TRENDS

A. Were Outputs and Services Provided as Predicted

Outputs will vary annually due to changing market conditions, weather, and congressional budget appropriations.

Displayed in the Forest Plan (Page II-9, Table II-1) and updated on the following page as Table 1, are average annual projections for activities and outputs. During this past year we discovered that some activities and outputs were omitted or incorrectly displayed in the Forest Plan. These oversights have been corrected and are displayed in Table 1 for fiscal years 1988, 1989, and 1990.

Activity and output projections for the remainder of the Forest Plan period (FY 1991 - 1997) are displayed in Table 2. This table replaces Forest Plan Table II-1, Page II-9.

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.

In many instances, it is difficult with only one or two year's monitoring data to determine how well the Forest Plan objectives, 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 five year review (i.e. FY 1992) required under the National Forest Management Act's (NFMA) implementation regulations (CFR §219.10 (g)).

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

		Fiscal Year 1988			Fiscal Year 1989		
Outputs and Activities [1]	Units [2]	Forest Plan [4]	Targets [5]	Accomplishment [6]	Forest Plan [4]	Targets [5]	Accomplishment [6]
RECREATION							
T01 Developed/Dispersed Use	PAOT Days	323,570	324,000	349,000	783,000	510,000	510,000
Cultural Resource Inventory	Acres	8,000	4,000	3,753	4,000	4,000	2,600
WILDLIFE & FISH							
Wildlife Habitat Improvement							
Non-Structural							
Excess Timber Receipts	Acres	---	0	0	---	400	400
T03 Appropriated Funds	Acres	5,000	3,800	1,000	5,000	2,800	2,800
T26 KV Funds	Acres	100	0	2,040	100	5,358	5,765
Structural							
T29 Appropriated Funds	Structures	0	0	1	0	2	1
T32 KV Funds	Structures	10	0	3	10	23	16
Fish Habitat Improvement							
Non-Structural							
Challenge Cost Share Funds	Acres	---	0	4	---	15	15
Excess Timber Receipts	Acres	---	0	0	---	50	65
T04 Appropriated Funds	Acres	50	108	104	50	40	40
T27 KV Funds	Acres	10			10	12	2
Structural							
Challenge Cost Share Funds	Structures	---	0	0	---	50	50
T30 Appropriated Funds	Structures	350	54	44	350	300	322
T33 KV Funds	Structures	5	0	21	5	110	70
T&E Species Habitat Improvement							
Non-Structural							
T05 Appropriated Funds	Acres	64	0	0	64	0	0
T34 KV Funds	Acres	0	0	0	0	0	0
Structural							
T31 Appropriated Funds	Structures	2	1	1	2	2	1
T35 KV Funds	Structures	0	0	0	0	0	0
RANGE							
T06 Permitted Grazing Use	AUM	42,000	43,000	44,000	45,000	42,000	42,000
Range Improvement							
T07 Non-Structural	Acres	25	370	0	500	0	0
T07A Structural	Structures	0	10	8	7	15	16
T08 Allotment Management Plans	Plans	5	0	0	6	0	0
T09 Noxious Weed Control	Acres	85	160	124	250	160	159
SOIL & WATER							
Soil & Water Resource Improvement							
Excess Timber Receipts	Acres	---	0	0	---	45	144
T10A (Appropriated Funds)	Acres	320	49	47	200	200	131
T10B (KV Funds)	Acres	25	0	45	25	0	93
T10 Soil Inventory	Acres	0	0	0	0	0	0
MINERALS							
T12 Minerals Management	Actions [3]	600	453	318	530	477	464

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

		Fiscal Year 1988			Fiscal Year 1989		
Outputs and Activities [1]	Units [2]	Forest Plan [4]	Targets [5]	Accomplishment [6]	Forest Plan [4]	Targets [5]	Accomplishment [6]
TIMBER							
Acres Harvested							
Clearcut	Acres	1,710	---	1,440	1,710	---	1,583
Shelterwood/Seed Tree	Acres	2,705	---	1,332	2,705	---	961
Shelterwood/Seed Tree - Removal/Final Cut	Acres	130	---	283	130	---	1,063
Commercial Thin/Salvage/Sanitation	Acres	225	---	185	225	---	446
Acres Sold							
Clearcut	Acres	1,710	---	2,846	1,710	---	2,133
Shelterwood/Seed Tree	Acres	2,705	---	1,552	2,705	---	731
Shelterwood/Seed Tree - Removal/Final Cut	Acres	130	---	1,921	130	---	374
Commercial Thin/Salvage/Sanitation	Acres	225	---	241	225	---	23
T13 Volume Offered [7] (Total Volume)	MMBF	106	103	109	113	108	105
T14 Volume Offered (Salvage Volume)	MMBF	5	5	6.5	5	4	6
T14A Volume Offered (Non-Salvage)	MMBF	90	98	95	108	104	99
T28 Advanced Prep (NEPA)	MMBF	220	220	69	165	165	113
T15 Silvicultural Exams	Acres	120,000			109,000		
(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	860	975	931
T19 (KV Funds)	Acres	300	1,467	1,692	3,200	1,884	1,885
Site Prep - Natural							
T17 (Appropriated Funds)	Acres	200	0	0	80	100	132
T18 (KV Funds)	Acres	2,900	153	0	1,100	468	255
Timber Stand Improvement							
T20 (Appropriated Funds)	Acres	300	611	674	700	798	668
T21 (KV Funds)	Acres	700	222	273	300	217	365
PROTECTION							
T23 Fuels Management Activity and Natural Fuels	Acres	950	1,300	1,309	1,060	1529	1529
T44 Fuels Management-Brush Disposal	Acres	4,600	4,600	3,041	3,590	3590	4111
LANDS							
T11 Land Exchange	Acres	80	60	0	25	0	0
T11A Special Uses	Acres	121	121	121	121	133	133

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

Outputs and Activities [1]	Units [2]	Fiscal Year 1988			Fiscal Year 1989		
		Forest Plan [4]	Targets [5]	Accomplishment [6]	Forest Plan [4]	Targets [5]	Accomplishment [6]
FACILITIES							
T22 Landline Location	Miles	35	23	25	35	22	22
T83 Trail Construction/Reconstruction	Miles	12	25	30	34	27	27
Excess Timber Receipts	Miles					5	5
T84 Trail Maintenance Levels I - III	Miles	2,215			2,342		1,102
T81 Capital Investment Roads [8]	Miles	25	8	8	39	90	62
T82 Timber Purchaser Credit Roads [8]	Miles	36	92	92	63	130	127
T86 Road Maintenance							
Level I	Miles			1,084			1,937
Level 2	Miles			599			614
Level 3	Miles			618			618
Level 4	Miles			3			3
Level 5	Miles			30			30
Total	Miles	2,221		2,332	2,175		3,201
Road Construction							
Arterial	Miles	3	---	0	3	---	0
Collector	Miles	24	---	4	24	---	7
Local	Miles	26	---	49	26	---	30
TOTAL	Miles	53	---	53	53	---	37
Road Reconstruction							
Arterial	Miles	2	---	2	2	---	0
Collector	Miles	13	---	17	13	---	102
Local	Miles	15	---	30	15	---	50
TOTAL	Miles	30	---	49	30	---	152
Access Management							
Permanently Closed	Miles	33	---	77	33	---	31
Unrestricted	Miles	17	---	34	17	---	4
Restricted	Miles	33	---	32	33	---	40
TOTAL	Miles	83	---	143	83	---	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

		Fiscal Year 1990					
Outputs and Activities [1]	Units [2]	Forest Plan [4]	Targets [5]	Accomplishment [6]			
RECREATION							
T01 Developed/Dispersed Use	PAOT Days	783,000	545,000	545,000			
Cultural Resource Inventory	Acres	4,000	4,000	3,753			
WILDLIFE & FISH							
Wildlife Habitat Improvement							
Non-Structural							
T03 Appropriated Funds	Acres	5,000	3,500	6,898			
T26 KV Funds	Acres	100	0	705			
Structural							
T29 Appropriated Funds	Structures	0	0	10			
T32 KV Funds	Structures	10	0	104			
Wildlife Inventory							
Appropriated Funds	Acres	0	0	6,378			
KV Funds	Acres	0	0	0			
Fish Habitat Improvement (Inland & Anadromous)							
Non-Structural							
T04 Appropriated Funds	Acres	50	133	133			
T27 KV Funds	Acres	11	0	5			
Challenge Cost-Share	Acres	0	0	0			
Structural							
T30 Appropriated Funds	Structures	350	257	257			
T33 KV Funds	Structures	6	0	15			
Challenge Cost-Share	Structures	0	0	92			
Fish Inventory							
Appropriated Funds	Acres	0	0	25			
KV Funds	Acres	0		5			
Challenge Cost-Share	Acres	0	0	30			
T&E Species Habitat Improvement							
Non-Structural							
T05 Appropriated Funds	Acres	64	45	45			
T34 KV Funds	Acres	0	0	0			
Structural							
T31 Appropriated Funds	Structures	2	2	1			
T35 KV Funds	Structures	0	0	0			
T&E Species Inventory							
Appropriated Funds	Acres	0	0	11,600			
KV Funds	Acres	0	0	0			
RANGE							
T06 Permitted Grazing Use	AUM	43,000	43,000	41,000			
Range Improvement							
T07A Non-Structural	Acres	500	0	0			
T07 Structural	Structures	7	3	3			
T08 Allotment Management Plans	Plans	5	0	0			
T09 Noxious Weed Control	Acres	85	133	133			

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

		Fiscal Year 1990					
Outputs and Activities [1]	Units [2]	Forest Plan [4]	Targets [5]	Accomplishment [6]			
SOIL & WATER							
Soil & Water Resource Improvement							
Excess Timber Receipts	Acres	---	14	5			
T10A (Appropriated Funds)	Acres	200	150	159			
T10B (KV Funds)	Acres	25	37	36			
T10 Soil Inventory	Acres	40,000	110,000	129,604			
MINERALS							
T12 Minerals Management	Actions [3]	528	410	394			
TIMBER							
Acres Harvested							
Clearcut	Acres	1,710	---	1,675			
Shelterwood/Seed Tree	Acres	2,705	---	846			
Shelterwood/Seed Tree - Removal/Final Cut	Acres	130	---	103			
Commercial Thin/Salvage/Sanitation	Acres	225	---	505			
Acres Sold							
Clearcut	Acres	1,710	---	2,337			
Shelterwood/Seed Tree	Acres	2,705	---	1,059			
Shelterwood/Seed Tree - Removal/Final Cut	Acres	130	---	455			
Commercial Thin/Salvage/Sanitation	Acres	225	---	382			
T13 Volume Offered [7] (Total Volume)	MMBF	103	104	84.9			
T14 Volume Offered (Salvage Volume)	MMBF	32	24	31.7			
T14A Volume Offered (Non-Salvage)	MMBF	71	80	53.2			
T28 Advanced Prep (NEPA)	MMBF	168	163	34.2			
T15 Silvicultural Exams	Acres	109,000					
(Silvicultural Exam)	Acres	---	25,700	27,100			
(Compartment Field Exams)	Acres	---	28,300	13,900			
Reforestation							
Planting							
T16 (Appropriated Funds)	Acres	860	634	677			
T19 (KV Funds)	Acres	1100	1,612	1,685			
Site Prep - Natural							
T17 (Appropriated Funds)	Acres	80	0	0			
T18 (KV Funds)	Acres	3,200	267	0			
Timber Stand Improvement							
T20 (Appropriated Funds)	Acres	700	780	735			
T21 (KV Funds)	Acres	300	136	155			
PROTECTION							
T23 Fuels Management Activity and Natural Fuels	Acres	1,060	1,674	1,674			
T44 Fuels Management-Brush Disposal	Acres	3,590	2,784	2,784			
LANDS							
T11 Land Exchange	Acres	25	60	0			
T11A Special Uses	Acres	133	121	121			

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

		Fiscal Year 1990					
Outputs and Activities [1]	Units [2]	Forest Plan [4]	Targets [5]	Accomplishment [6]			
FACILITIES							
T22 Landline Location	Miles	35	0	25			
T83 Trail Construction/Reconstruction	Miles	12	24	24			
Excess Timber Receipts	Miles		0	6			
Contributed	Miles		0	1			
T84 Trail Maintenance Levels I - III[8]	Miles	2,705	957	1,088			
T81 Capital Investment Roads [9]	Miles	25	8	8			
T82 Timber Purchaser Credit Roads [9]	Miles	36	92	92			
T86 Road Maintenance							
Level I	Miles			857			
Level 2	Miles			409			
Level 3-5	Miles			649			
Total[10]	Miles	3,306	1,915	1,915			
Road Construction							
Arterial	Miles	3	---	0			
Collector	Miles	24	---	10			
Local	Miles	26	---	39			
TOTAL	Miles	53	---	49			
Road Reconstruction							
Arterial	Miles	2	---	5			
Collector	Miles	13	---	50			
Local	Miles	15	---	36			
TOTAL	Miles	30	---	91			
Access Management[11]							
Permanently Closed	Miles	33	---	0			
Unrestricted	Miles	17	---	0			
Restricted	Miles	33	---	33			
TOTAL	Miles	83	---	33			
Closure Devices[11]							
Gates	Numbers	---	---	13			
Concrete Barriers	Numbers	---	---	6			
Earth Berm Barriers	Numbers	---	---	0			

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] Includes administrative actions to process and administer operating plans, Notices of Intent, leases, and permits, as well as site-specific evaluations, hearings, and appeals.

[4] Forest Plan projection or estimates.

[5] Forest Target for this fiscal year.

[6] Actual units accomplished during this fiscal year.

[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.

[8] Includes 305 miles of snowmobile trail,

[9] FY 1989 includes proposed contract and contract award figures.

[10] Includes purchaser maintenance.

[11] TIS Report 11/16/90

TABLE 2 - FOREST PLAN OUTPUTS AND ACTIVITIES, FY 1991 - 1997

Target Item	Output or Activity	Unit of Measure		FY 1991 Forest Plan	FY 1992 Forest Plan	FY 1993 Forest Plan	FY 1994 Forest Plan	FY 1995 Forest Plan	FY 1996 Forest Plan	FY 1997 Forest Plan
RECREATION										
T01 (FI 09)	Developed/Dispersed Use	PAOT Days		783,000	783,000	783,000	783,000	783,000	783,000	783,000
WILDLIFE & FISH										
T03 (FI 10)	Wildlife Habitat Improvement (APP)	Acres		5,000	5,000	5,000	5,000	5,000	5,000	5,000
T26 (FI 28)	Wildlife Habitat Improvement (KV)	Acres		105	105	105	105	105	105	105
T29 (FI 10)	Wildlife Habitat Improvement (APP)	Structures		0	0	0	0	0	0	0
T32 (FI 28)	Wildlife Habitat Improvement (KV)	Structures		11	11	11	11	11	11	11
T04 (FI 10)	Fish Habitat Improvement (APP)	Acres		200	200	200	200	200	200	200
T27 (FI 28)	Fish Habitat Improvement (KV)	Acres		12	12	12	12	12	12	12
T30 (FI 10)	Fish Habitat Improvement (APP)	Structures		200	200	200	200	200	200	200
T33 (FI 28)	Fish Habitat Improvement (KV)	Structures		6	6	6	6	6	6	6
T05 (FI 10)	T&E Species Habitat Improvement (APP)	Acres		55	55	55	55	55	55	55
T34 (FI 10)	T&E Species Habitat Improvement (KV)	Acres		21	21	21	21	21	21	21
T31 (FI 10)	T&E Species Habitat Improvement (APP)	Structures		37	37	37	37	37	37	37
T35 (FI 10)	T&E Species Habitat Improvement (KV)	Structures		5	5	5	5	5	5	5
RANGE										
T06 (FI 06)	Permitted Grazing Use	MAUM		43	43	43	43	43	43	43
T07 (FI 32)	Range Improvement (Non-structural)	Acres		7	7	7	7	7	7	7
T07A (FI 32)	Range Improvement (Structural)	Structures		500	500	500	500	500	500	500
T08 (FI 06)	Allotment Management Plans	Plans		6	6	6	6	6	6	6
T09 (FI 07)	Noxious Weed Control	Acres		160	160	160	160	160	160	160
SOIL AND WATER										
T10 (FI 11)	Soil Inventory	Acres		80,000	80,000	80,000	80,000	80,000	80,000	80,000
T10A (FI 11)	Soil & Water Resource Improvement (APP)	Acres		200	200	200	200	200	200	200
T10B (FI 28)	Soil & Water Resource Improvement (KV)	Acres		25	25	25	25	25	25	25
LANDS										
T11 (FI 15)	Land Exchange	Acres		25	25	25	25	25	25	25
T11A (FI 13)	Special Uses	Acres		133	133	133	133	133	133	133
MINERALS										
T12 (FI 08)	Minerals Management	Actions		528	528	528	528	528	528	528
TIMBER										
T13 (FI 03,FI 30)	Allowable Sale Quantity (Total Volume)	MMBF		80	92	88	90	90	90	90
T14 (FI 30)	Allowable Sale Quantity (Salvage Volume)	MMBF		25	10	24	20	20	20	20
T14A (FI 03)	Allowable Sale Quantity (Non-Salvage)	MMBF		55	82	64	70	70	70	70
T28 (FI 03,FI 30)	Advanced Prep (NEPA)	MMBF		113	113	113	113	113	113	113
T15 (FI 05)	Silvicultural Exams	Acres		109,000	109,000	109,000	109,000	109,000	109,000	109,000
T16 (FI 20)	Reforestation - Planting (APP)	Acres		860	860	860	860	860	860	860
T17 (FI 20)	Reforestation - Site Prep (APP)	Acres		80	80	80	80	80	80	80
T18 (FI 26)	Reforestation - Planting (KV)	Acres		3,200	3,200	3,200	3,200	3,200	3,200	3,200
T19 (FI 26)	Reforestation - Site Prep (KV)	Acres		1,100	1,100	1,100	1,100	1,100	1,100	1,100
T20 (FI 21)	Timber Stand Improvement - (APP)	Acres		700	700	700	700	700	700	700
T21 (FI 27)	Timber Stand Improvement - (KV)	Acres		300	300	300	300	300	300	300
PROTECTION										
T23 (FI 02)	Fuels Management Activity and Natural Fuels	Acres		1,060	1,060	1,060	1,060	1,060	1,060	1,060
T44 (FI 31)	Fuels Management-Brush Disposal	Acres		3,590	3,590	3,590	3,590	3,590	3,590	3,590
FACILITIES										
T22 (FI 16)	Landline Location	Miles		35	20	20	20	20	20	20
T83 (FI 37)	Trail Construction/Reconstruction	Miles		20	20	20	20	20	20	20
T84 (FI 18)	Trail Maintenance Level 0[1]	Miles		2,342	2,705	2,705	2,705	2,705	2,705	2,705
T81 (FI 36)	Capital Investment Roads	Miles		28	28	28	28	28	28	28
T82 (FI 38,FI 24)	Timber Purchaser Credit Roads	Miles		55	55	55	55	55	55	55
T86 (FI 17)	Road Maintenance	Miles		2,175	3,316	3,316	3,316	3,316	3,316	3,316

[1] All available and usable system trails

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

Table 3 displays Forest Plan predicted average annual costs, budget allocations, and actual expenditures for fiscal years 1988, 1989 and 1990. Table 4 displays updated projected annual costs of implementation for fiscal years 1991-1997. This table updates Forest Plan Appendix K. Dollars have been adjusted to constant 1990 values.

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.

Throughout this report various types of funding are mentioned. Much of our funding is obtained directly through Congressional appropriations. Some funding sources include trust funds that include deposits made to the Forest Service by a timber purchaser 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 providing for the protection, management, and utilization of National Forest lands.

Range Betterment Funds

A range betterment program on National Forest lands is financed by appropriations from grazing fee receipts. Fifty percent of the grazing fee receipts are returned to the Forest to fund the installation of structural and nonstructural range improvements. These include 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. Oftentimes, the range permittee cooperates in these activites by supplying the labor needed to implement the improvements.

Permanent & Trust Funds

Brush Disposal (BD)
These are deposits collected from timber purchasers to dispose of brush and other debris resulting from cutting operations on timber sale areas in order to protect and maintain National Forest resources. Timber cutting usually increases the fire hazard because of the dry fuel that accumulates as logging slash. Slash may also impair reforestation, contribute to the buildup of insect populations, damage stream channels, look unsightly, and limit recreation access. BD funds are used to dispose of brush by crushing, chipping, burning or a combination of these methods. When disposal of brush and other debris from timber sale operations is necessary, timber sale contracts require treatment or deposit of funds for treatment of debris. When economical and expedient, the work is performed by the timber purchaser. The work can also be carried out by the Forest using deposits collected by the purchaser to cover costs of the 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 supervision of harvesting the timber. 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-Vandenburg (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 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 amounts to cover resource management costs. Occasionally revenues exceed the amount initially budgeted. Congress has then given this excess to the Forests to to accomplish additional resource management projects not accomplished with the initial appropriations. Excess timber sale receipts can be used for the following programs, 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 BETWEEN EXPENDITURES AND FOREST PLAN PROJECTIONS

	Fiscal Year 1988				Fiscal Year 1989			
Funding Description	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan
GENERAL ADMINISTRATION								
00 General Administration	2,056	1,779	1,809	88	2,056	1,420	1,649	80
RECREATION								
09 Recreation	721	579	579	80	948	624	694	73
WILDLIFE & FISH								
10 Wildlife and Fish	989	704	692	70	1,176	873	902	77
RANGE								
06 Range	256	226	236	92	300	198	247	82
07 Range (Noxious Weeds)	19	17	8	42	19	18	7	37
32 Range Improvement	21	20	27	129	21	20	23	110
SOIL & WATER								
11 Soil, Air, Water	567	330	296	52	561	400	366	65
MINERALS								
08 Minerals	360	272	276	77	363	249	307	85
TIMBER								
03 Timber Sale Prep/Administration	1,880	1,456	1,497	80	1,880	1,558	1,479	79
04 Timber Planning	127	227	287	226	126	147	173	137
05 Silvicultural Exams	368	374	334	91	368	441	458	125
20 Reforestation - Appropriated	600	700	713	119	600	646	508	85
21 Timber Stand Improvement - Appropriated	76	127	174	229	160	147	104	65
23 Tree Improvement	53	44	82	155	---	62	16	---
26 KV Reforestation	1,812	611	784	43	1,352	993	1,268	94
27 KV Timber Stand Improvement	174	47	125	71	71	53	59	83
28 KV - Other	117	203	295	252	486	244	248	51
29 Co-op Work, Forest Service, Other - Trust Fund	204	193	340	167	236	188	394	167
30 Timber Salvage Sales - Permanent Fund	97	116	99	102	112	138	185	165
PROTECTION								
01 Fire Protection	1,113	1,215	1,197	108	1,607	1,288	1,087	68
02 Fire Protection (Fuels)	46	99	85	185	68	47	44	65
19 Cooperative Law Enforcement	64	39	38	59	64	43	57	89
31 Brush Disposal (Perm. Fund)	482	508	371	77	559	444	440	79
LANDS								
13 Special Uses	96	50	60	63	92	47	39	42
15 Land Exchange/Ownership Status	70	41	41	59	65	30	61	94
16 Landline Location	175	126	133	76	175	116	90	51
43 Land Acquisition	12	39	23	192	8	15	618	7,725

Table 3 - COMPARISON BETWEEN EXPENDITURES AND FOREST PLAN PROJECTIONS, continued

Funding Description	Fiscal Year 1988				Fiscal Year 1989			
	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan
FACILITIES								
12 Facility Maintenance	232	188	194	84	232	151	150	65
17 Road Maintenance [1]	747	654	1,026	137	747	1,086	1,074	144
18 Trail Maintenance	369	498	464	126	584	444	421	72
33 Recreation Construction	78	69	62	80	146	154	129	88
34 Facility Construction - Forest Admin.,Other	155	8	48	31	154	7	1	1
35 Engineering Construction Support	2,010	1,390	1,403	70	2,022	1,534	1,580	78
36 Construction--Capital Investment Roads	2,888	529	529	18	2,886	4,163	1,110	39
37 Trail Construction/Reconstruction	233	345	344	148	398	327	277	70
38 Timber Purchaser Road Construction	2,082	3,579	2,664	128	2,618	2,995	2,641	101
TOTAL	21,349	17,405	17,329	81	23,260	21,310	18,906	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 BETWEEN EXPENDITURES AND FOREST PLAN PROJECTIONS, continued

	Fiscal Year 1990							
Funding Description	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan				
GENERAL ADMINISTRATION								
00 General Administration	2,029	1,295	1,282	63				
RECREATION								
09 Recreation	1,104	624	780	71				
WILDLIFE & FISH								
10 Wildlife and Fish	1,410	992	991	70				
RANGE								
06 Range	342	221	235	69				
07 Range (Noxious Weeds)	37	17	9	24				
32 Range Improvement	23	23	15	65				
SOIL & WATER								
11 Soil, Air, Water	720	573	564	78				
MINERALS								
08 Minerals	410	242	265	65				
TIMBER								
03 Timber Sale Prep/Administration	2,205	1,752	1,482	67				
04 Timber Planning	173	143	82	47				
05 Silvicultural Exams	580	446	401	69				
20 Reforestation - Appropriated	592	518	461	78				
21 Timber Stand Improvement - Appropriated	158	166	125	79				
23 Tree Improvement	51	108	57	112				
26 KV Reforestation	1,283	1,314	1,130	88				
27 KV Timber Stand Improvement	68	34	22	32				
28 KV - Other	507	414	409	81				
29 Co-op Work, Forest Service, Other - Trust Fund	219	177	203	93				
30 Timber Salvage Sales - Permanent Fund	315	659	660	210				
PROTECTION								
01 Fire Protection	1,870	1,008	1,036	55				
02 Fire Protection (Fuels)	95	116	82	86				
19 Cooperative Law Enforcement	63	56	53	84				
31 Brush Disposal (Perm. Fund)	530	491	493	93				
LANDS								
13 Special Uses	90	37	34	38				
15 Land Exchange/Ownership Status	70	32	59	84				
16 Landline Location	173	114	117	68				
43 Land Acquisition	24	20	14	58				

Table 3 - COMPARISON BETWEEN EXPENDITURES AND FOREST PLAN PROJECTIONS, continued

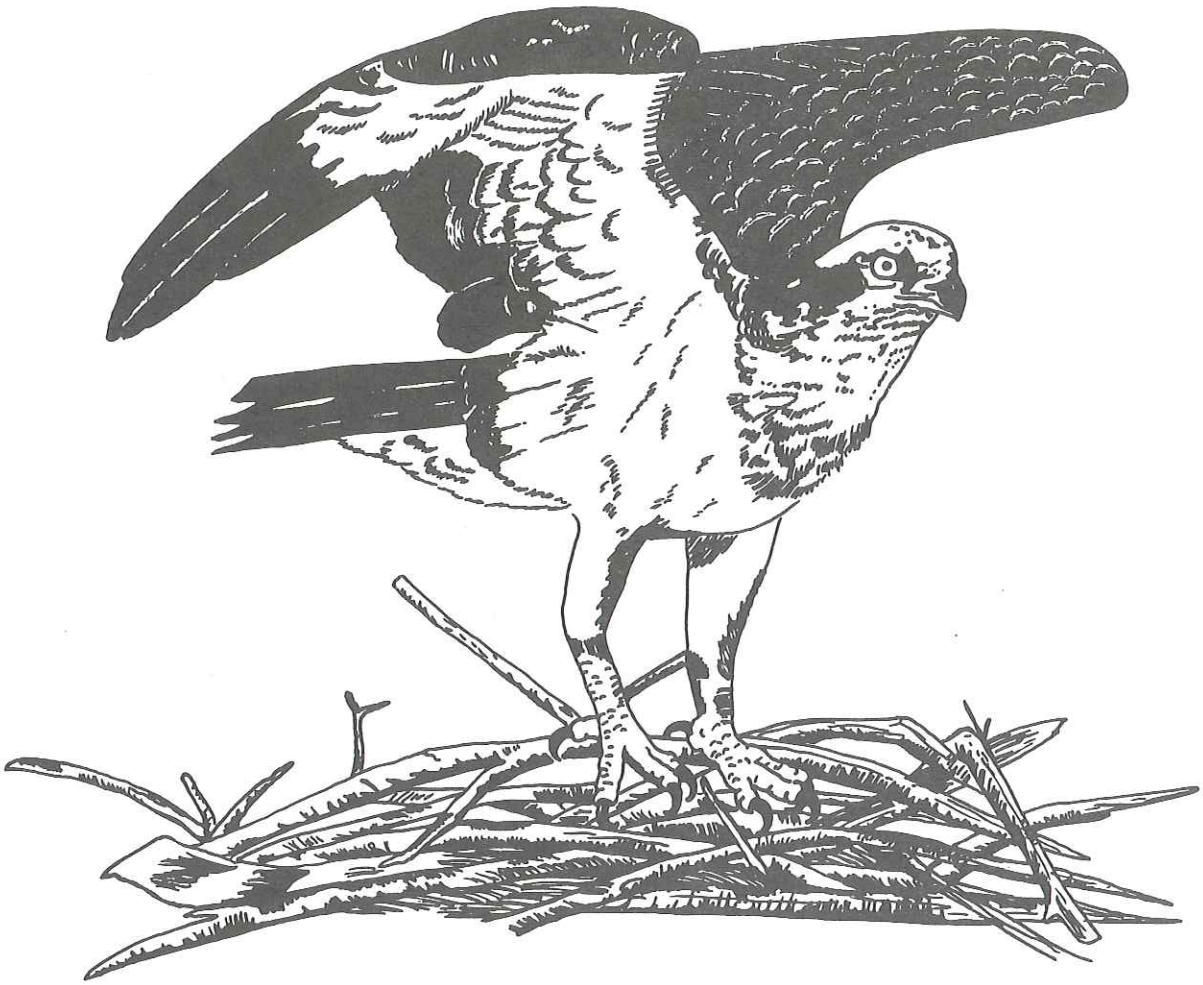
Funding Description	Fiscal Year 1990							
	Forest Plan (M 1990$)	Allocation (M 1990$)	Expenditures (M 1990$)	% of Forest Plan				
FACILITIES								
12 Facility Maintenance	229	139	119	52				
17 Road Maintenance	893	605	962	108				
18 Trail Maintenance	576	546	571	99				
33 Recreation Construction	139	10	20	14				
34 Facility Construction - Forest Admin.,Other	0	0	6	600				
35 Engineering Construction Support	1,791	1,383	1,321	74				
36 Construction--Capital Investment Roads	2,739	2,199	2,199	80				
37 Trail Construction/Reconstruction	630	281	208	33				
38 Timber Purchaser Road Construction	2,484	2,811	2,811	113				
TOTAL	24,622	19,566	19,278	78				

TABLE 4 - FOREST PLAN FUNDING NEEDS, FY 1991 - FY 1997

Funding Item	Description	FY 1991 Forest Plan (M 1990$)	FY 1992 Forest Plan (M 1990$)	FY 1993 Forest Plan (M 1990$)	FY 1994 - 1997 Forest Plan (M 1990$)	
GENERAL ADMINISTRATION						
00	General Administration	2,029	2,029	2,029	2,029	
RECREATION						
09 (T01)	Recreation	1,355	1,355	1,355	1,355	
WILDLIFE & FISH						
10 (T03,T04,T05,T29, T30,T31,T34,T35)	Wildlife and Fish	1,670	1,670	1,670	1,670	
RANGE						
06 (T06)	Range	372	372	372	372	
07 (T09)	Range (Noxious Weeds)	37	37	37	37	
32 (T07,T07A)	Range Improvement	23	23	23	23	
SOIL & WATER						
11 (T10,T10A)	Soil, Air, Water	771	771	771	771	
MINERALS						
08 (T12)	Minerals	418	418	418	418	
TIMBER						
03 (T13,T14A,T28)	Timber Sale Prep/Admin	2,153	2,205	2,310	2,310	
04	Timber Planning	173	173	173	173	
05 (T15)	Silvicultural Exams	485	485	485	485	
20 (T16,T17)	Reforestation-Appropriated	592	592	592	592	
21 (T20)	Timber Stand Improvement - Appropriated	158	158	158	158	
23	Tree Improvement	51	51	51	51	
26 (T18,T19)	KV Reforestation	1,283	1,283	1,283	1,283	
27 (T21)	KV Timber Stand Improvement	68	68	68	68	
28 (T26,T27,T32,T33)	KV - Other	507	507	507	507	
29	Co-op Work,Forest Service,Other	220	220	220	220	
30 (T13,T14,T28)	Timber Salvage Sales	800	800	800	800	
PROTECTION						
01	Fire Protection	1,600	1,600	1,600	1,600	
02 (T23)	Fire Protection (Fuels)	146	146	146	146	
19	Cooperative Law Enforcement	63	63	63	63	
31 (T44)	Brush Disposal (Perm. Fund)	531	531	531	531	
LANDS						
13 (T11A)	Special Uses	90	90	90	90	
15 (T11)	Land Exchange/Ownership Status	70	70	70	70	
16 (T22)	Landline Location	173	173	173	173	
43	Land Acquisition	24	24	24	24	
FACILITIES						
12	Facility Maintenance	229	229	229	229	
17 (T86)	Road Maintenance	893	893	893	893	
18 (T84)	Trail Maintenance	576	576	576	576	
33	Recreation Construction	139	139	139	139	
34	Facility Construction - Forest Admin.,Other	306	211	245	0	
35	Engineering Construction Support	1,900	1,941	1,941	1,941	
36 (T81)	Construction--Capital Investment Roads	2,739	2,739	2,739	2,739	
37 (T83)	Trail Construction/Reconstruction	730	780	830	830	
38 (T82)	Timber Purchaser Road Construction	2,484	2,484	2,484	2,484	
	TOTAL	25,858	25,906	26,095	25,850	

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).



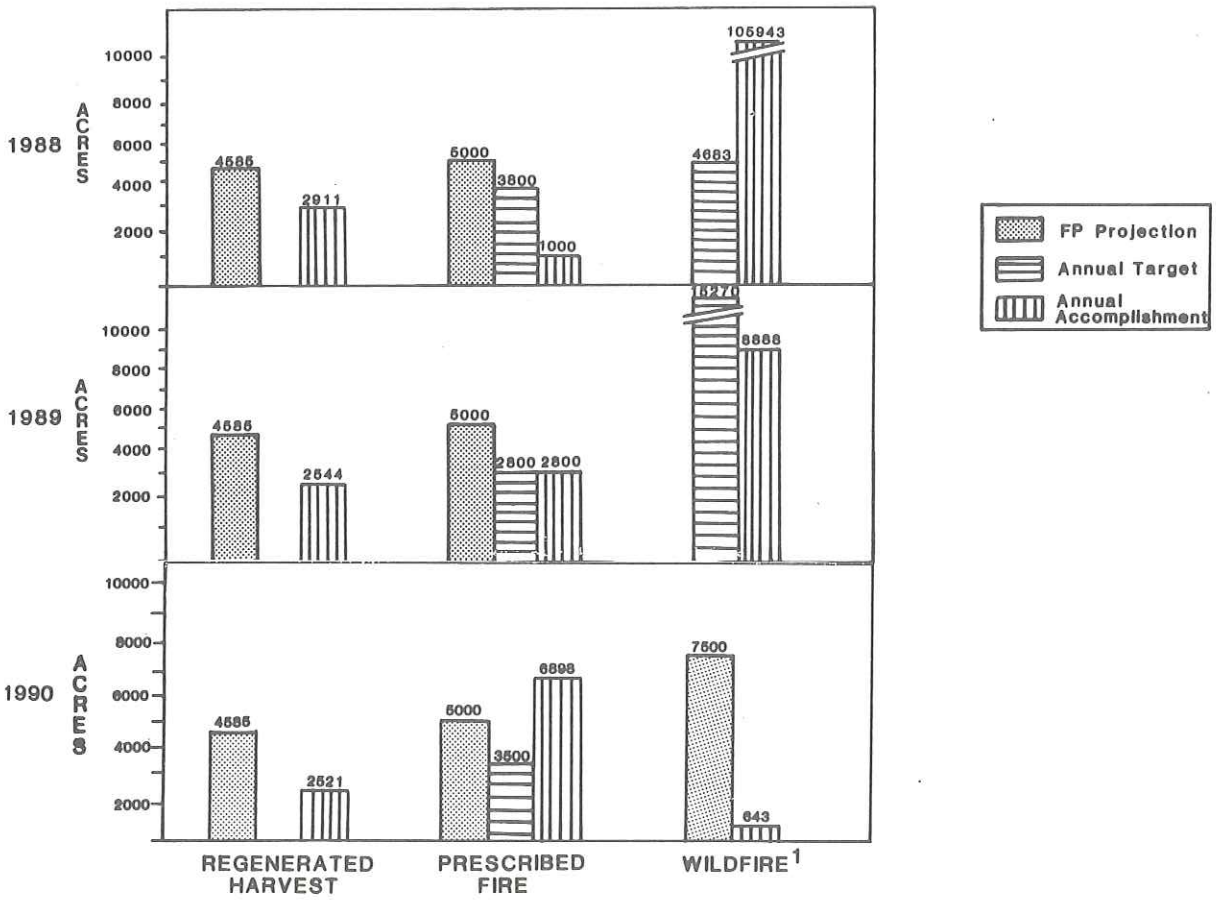
WILDLIFE

Item 1c:	Big-Game Habitat Carrying Capacity
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 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 90 target, and FY 90 accomplishments in the following graph. FY 88 and 89 projections, targets, and accomplishments are also shown for comparison.



[1]The values given for FY 88 and FY 89 wildfire targets are not really targets, given the unpredictable nature of wildfire, but reflect a 10-year average of wildfire acreage. This value is updated each year.

Evaluation of Monitoring Results:

A minimum of 5 years of data are necessary to evaluate the trend information. No trend analysis will be possible until 1992.

Summer Elk Habitat

Monitoring Results:

Implementation Monitoring: There were a total of nine FY 90 project activities Forestwide involving summer elk habitat areas. For all of the projects, "Guidelines for Evaluating and Managing Elk Habitat in Northern Idaho" was used as a tool to evaluate whether or not objectives were met. The guidelines were also used for evaluating some other projects, including mining activities. 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. Failure to follow the elk guidelines occurred generally in those projects begun before the guidelines were implemented.

Elk model runs for project decisions signed in FY 90 were made for each alternative during the planning and design phase of timber sales and other projects on summer range. Analysis rules for using the North Idaho Elk Guidelines limit the acreage size of a given analysis. Individual assessment evaluation areas are delineated and numbered for assessment and monitoring purposes. Results for each evaluation area are shown below.

RESULTS OF PROJECT EVALUATION AREAS

FY 90 Timber Project/Sale Name	Summer Elk Objective (%)								Preharvest Level of Elk Habitat Effectiveness (%)								Level of Elk Effectiveness Under Selected Alternative (%)							
	1/ Evaluation Area								Evaluation Area								Evaluation Area							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Chocolate Moose T.S.	50								50								47							
Soda Point Drain. Improv.	50	50	50						50	59	51						50	59	51					
SF Red River Fish Hab. Improv.	50	50	50	50					58	52	50	39					58	52	50	39				
Crystal Lake Divide Trail Proj.	50	50	50						50	59	51						50	59	51					
Cominco-Amer. Mineral Expl.	50	50							62	49							62	45						
Little Moose Mineral Expl.	75	75	50						64	72	58						64	72	58					
Addendum to SF Red River T.S.	75	50							66	52							66	52						
KO-DAN Mineral Expl.	50								49								45							
Silver-Cougar T.S.	75	75	50	50	25	25			86	94	87	56	53	36			87	91	67	67	66	44		

1/ Numbers one through eight correspond to an evaluation area.

Effectiveness Monitoring: Forest Service personnel randomly selected half of the Forest's land-disturbing activities for evaluation of elk habitat effectiveness to see if the elk habitat effectiveness outlined in the project environmental analysis is achieved.

The Schooner Face timber sale was the first sale to be randomly selected for evaluation of elk habitat effectiveness. Based on a field review by the Forest, in which a representative of the Nez Perce Tribe took part, the Schooner Face sale was found to be consistent with the projected habitat effectiveness in the EA.

Uniformity of application of the summer elk guidelines was evaluated October 25, 1990. Generally, application uniformity was rated good. Due to incorporation of access management with the guidelines, and employment of new biologists, periodic evaluations will be made in the future.

Evaluation of Monitoring Results:

Compliance with summer elk objectives has been good for those timber sale decisions signed during FY 90. There were seven instances when elk effectiveness rating under the preferred alternative was less than the summer elk objectives. Four of these instances involved administration of mineral activities. Mining claimants have a legal right to access their claims, which may result in violation of elk habitat standards. In the other cases, the Chocolate Moose timber sale resulted in only a 3 percent difference below the objective. Elk model variability can account for these three points. In the other two instances, no change was made to the pre-harvest or pre-activity level. The sites were below objective before consideration of actions. Action Item #4 on page 108 of this report provides additional insight on implementation of summer elk habitat objectives.

Moose Winter Range

Monitoring Results:

Decisions were signed for four timber sale activities in FY 90 that involved moose winter range. A total of 2,105 acres of moose winter habitat was identified and verified. Only 16 acres (<1%) were proposed for harvest.

Evaluation of Monitoring Results:

Forestwide, the 5-percent-per-decade guideline and other moose winter range management guidelines continue to be met for projects initiated under the Forest Plan. Some concern was expressed that the dependence of moose on Pacific yew for winter range may be overstated in the Forest Plan for some areas of the Forest. A common observation was that some areas of the Forest have no Pacific yew, but do have a notable moose population. Because moose use the same winter habitat used by elk in these areas, it is assumed that meeting the elk objectives will also meet the moose habitat needs.

A weakness in Forest Plan direction was identified. No clear, quantified definition for Management Area 21 sites currently exists. There is no direction for dealing with the demand for taxol from Pacific yew, given Management Area 21 standards. Management Area 21 standards are too prescriptive. A task force will address the issue.

Demand for taxol, a cancer research chemical found in Pacific yew bark, is an emerging issue. The Forest has begun to identify stands for bark-collecting opportunities.

Item 1d:	Nongame Habitat
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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

Monitoring Results:

A total of 8 project activities that were planned or initiated in FY 90 involved old-growth habitat. In all cases, there was no timber harvest scheduled in allocated old growth stands until decade 10 and/or in replacement stands until decade 16.

Evaluation of Monitoring Results:

Compliance with the old-growth standards continues to be very good. During monitoring, the question of how the Nez Perce NF should provide connection corridors between old-growth stands was raised.

Snag Habitats

Monitoring Results:

There were a total of 12 projects initiated in FY 90 where snag management standards were applicable. Non-merchantable snags were left in addition to replacement snags and snags needed to meet the snag management objectives in 22 ongoing projects. The quality, amount and distribution of snags within a project area boundary were inspected or verified for 12 projects during project planning.

Evaluation of Monitoring Results:

Monitoring results show that the amount of effort given to verification of quality, amount, and distribution of snags during project planning is still low. The effect of brushfield burning to benefit elk was questioned with respect to its impact on local snags. Broadcast burning of clearcuts is still resulting in loss of some existing snags within clearcut areas. Voluntary cooperation from contractors having sales that took place prior to the implementation of the guidelines has resulted in some retention of snags in these areas.

Threatened and Endangered Species Habitats

Monitoring Results:

The Forest's Threatened, Endangered, and Sensitive Plant program emphasis increased this year. In cooperation with the Idaho Natural Heritage Program, the Forest conducted two training sessions for field crews in the identification of sensitive plants known or suspected to occur on the Forest. Status surveys were also conducted through challenge cost-share agreements with the Idaho Natural Heritage Program, which included Payson's Milkvetch (Astragalus paysonii) and Candystick (Allotropa virgata). In addition, trained field personnel identified new locations of Bank Monkeyflower (Mimulus clivicola), Broadfruit Mariposa (Calacortus nitidus), Constance's Bittercress (Cardamine constancei), Clustered Lady Slipper (Cypripedium fasciculatum), Phantom Orchid (Eburophyton austiniae), Idaho Strawberry (Waldsteinia idahoensis), and Case's Corydalis (Corydalis caseana var. hastata).

Candystick (Allotropa virgata) was also identified in a proposed timber sale area by crew members on the Red River Ranger District. This location is one of the largest populations of this plant known in the northern Rockies. The District worked closely with Idaho Natural Heritage Program botanists, Regional botanists, and Forest personnel to protect this plant and complete the timber sale. Mitigation measures included leaving uncut areas surrounding these plants and establishing monitoring plots. Further status surveys and monitoring are planned in FY 91.

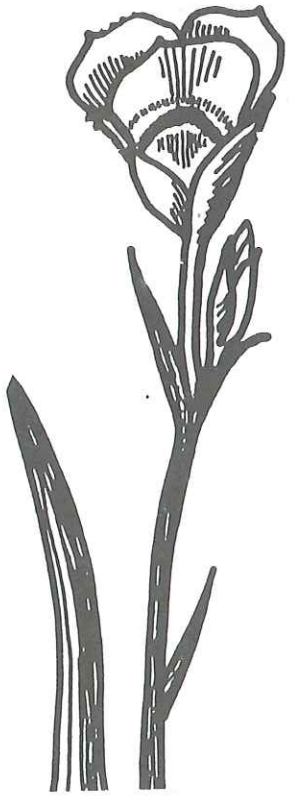
Pacific Dogwood (Cornus nuttallii), is a Pacific coastal disjunct species prominent along the Selway and Lochsa Rivers. This species has suffered extensive mortality for the last few years. In reaction to this continued mortality, the Forest in cooperation with the Idaho National Heritage Program and the Clearwater National Forest collected seed from this year's crop. Collection of the seed will help preserve this disjunct population and the genetic pool it represents. The seed is being stored at the Berry Botanical Garden in Portland, Oregon. Additional efforts to save this unique population are currently in the planning stages and further action will begin in the spring.

Approximately 25 Idaho Douglasia (Douglasia idahoensis) plants were transplanted during a road reconstruction project. Although this mitigation effort was unsuccessful, the loss of this small number of plants was not significant to survival of the population.

Evaluation of Monitoring Results:

Monitoring results show that no projects were approved in FY 90 which would result in deterioration of habitats for the gray wolf, grizzly bear, bald eagle, or peregrine falcon.

Monitoring results indicate the Forest needs to place more emphasis on inventorying sensitive plants and developing Biological Evaluations for projects involving sensitive plants.

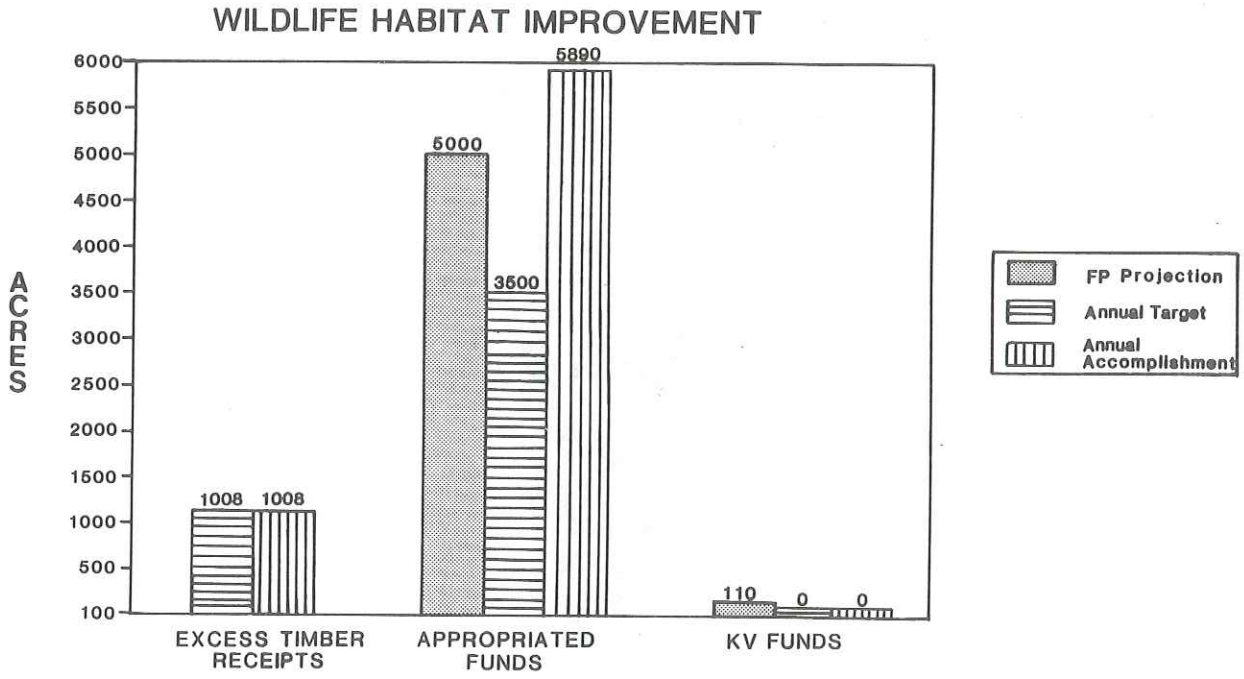


Item 1e:	Acres of Big-Game Habitat Improvement
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	More than one year of variability from planned improvement acreages, excepting variances due to extreme fire conditions.

Wildlife Habitat Improvement

Monitoring Results:

The number of acres burned with prescribed fires is shown below for each funding source.



Evaluation of Monitoring Results:

Fiscal year 1990 was a record-breaking year for accomplishment of elk winter range prescription burning. The 5600 acres treated on the Selway Face was the largest single treatment in Forest Service history. The combined Forest Plan projection for prescribed fire for FY 88, FY 89, and FY 90 is 15,000 acres. Given FY 90 results, the Forest is currently 4302 acres behind using appropriated funds. If the Forest falls more than 8000 acres behind on planned winter range burn acreage, then the process will explore, evaluate, and recommend alternative ways to achieve compensatory winter range forage improvement. If no satisfactory alternatives are found, the previous burn accomplishment records will be reviewed and the Forest Plan objective of 5000 acres/year will be amended proportionally downward.

Questions have been raised about the degree to which burning benefits elk on winter ranges and whether repeated summer burning may be harmful to soil and site productivity. A cost-share monitoring plan to examine these questions is being developed with the University of Idaho and the Idaho Department of Fish and Game, and will be co-funded by the Rocky Mountain Elk Foundation and U of I.

Item 10:	Population Trends of Indicator Species--Wildlife
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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:

Hunt Units 14, 15, and 16 were surveyed by Idaho Department of Fish and Game (IDFG) personnel, using the "Elk Sightability" method developed by the IDFG. Results are listed below:

Unit No.	Elk Population Estimated by Sightability
Unit 14	1,464 +/- 178
Unit 15	856 +/- 81
Unit 16	818 +/- 75

Evaluation of Monitoring Results:

Despite modest financial assistance from the Forest, insufficient funding prevents IDFG personnel from surveying the same hunting units every year. Therefore, it will require several years to obtain enough data to determine elk population trends in each hunting unit. Elk populations appear to be stable Forestwide, although some concerns have been expressed regarding the reduction of mature bulls in some herd units as a result of hunting pressure.

Moose

Monitoring Results:

Moose populations are surveyed by the Idaho Department of Fish and Game coincidentally with winter range counts of elk, deer, and other ungulates. Moose continue to be seen in areas where they were absent before. Thirteen, 15, and 18 moose were seen in Units 14, 15, and 16 respectively.

Evaluation of Monitoring Results:

Limited information suggests that moose populations may be growing slowly across the Forest.

Bighorn Sheep

Monitoring Results:

Bighorn sheep populations are surveyed by the Idaho Department of Fish and Game coincidentally with winter range counts of elk, deer, and other ungulates. No bighorns were seen in Units 14, 15, or 16. Two small bands of bighorns have been seen near the original sites of the January 1989 Selway-Bitterroot Wilderness transplant locations.

Evaluation of Monitoring Results:

Limited information suggests that bighorn sheep populations are remaining relatively stable across the Forest.

Gray Wolf

Monitoring Results:

Population monitoring is based on sighting, sign, and vocalization reports categorized as "probable". The Idaho Natural Heritage Program (INHP) data base listed 3 such reports for the Forest through January 1990. Two reports were of observations and one of howling. A volunteer wolf holwing clinic and survey was conducted on the Red River and Elk City Ranger Districts. The effort was conducted in three areas with frequent or probable reports. One group heard unidentifiable barks or "woofs", but the results were inconclusive.

A wolf habitat survey and wolf detection effort was conducted on the Moose Creek and Selway Ranger Districts. The University of Idaho cost-shared and completed the survey.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

Grizzly Bear

Monitoring Results:

In a cooperative Forest Service/Idaho Department of Fish and Game grizzly detection monitoring effort using infra-red triggered cameras in the Clearwater River area, numerous black bears were photographed, but no grizzly bears.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

Peregrine Falcon

Monitoring Results:

Five birds were successfully hacked from the Graves Point Lookout site on the Salmon River Ranger District. The proposed Pilot Knob area hack site was not used because of difficulty bringing birds into the country from Canada. Another attempt to establish a Pilot Knob area hack site will be made in FY 91. The successful Graves Point release for '90 marked the 20th peregrine falcon successfully hacked from the Graves Point site.

The Forest recorded its first natural nesting pair in the Shingle Creek drainage. The pair successfully fledged three young during the year. A female Graves Point-released peregrine paired with a Boise-released male and successfully nested near Nampa, Idaho. This pair produced two chicks. Late in FY 90, the female was discovered dead inside the sugar beet silo where she had nested earlier. It was presumed she met her accidental death chasing a pigeon into the silo.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

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 90 winter survey routes within or along the perimeter of the Forest yielded six mature and one immature birds. Transects sampled and the yearly counts from 1984 and 1986-1990 are shown below.

	YEAR	84	86	87	88	89	90
Salmon River: White Bird-Vinegar Cr.	Adult	1	2	1	2	2	5
	immature	0	0	0	1	0	0
S.F. Clearwater: Farrens Cr-Crooked R	Adult	3	0	1	2	0	0
	immature	1	0	0	0	0	0
M.F. Clearwater: Clear Cr-Selway	Adult	9	6	5	10	4	1
	immature	0	2	2	2	3	1
	Total	14	10	9	17	9	7

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 be relatively stable during the winter.

Pileated Woodpecker

Monitoring Results:

A total of 12 miles of survey route were sampled using five look/listen transects during FY 89. 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 woodpeckers and all other breeding birds were censused by contract. A summary of 3 years of data shows that nine pileated woodpeckers were counted in the 1988, nine in the 1989, and five in the 1990 surveys. Poor weather conditions (cold and rainy) are believed to complicate results leading to a lower count in '90. The most common species observed during the surveys were varied thrush, red-breasted nuthatch, MacGillivray's warbler, orange-crowned warbler, hairy woodpecker, and Oregon juncos. Ten different cavity-nesting species were documented. Early seral (brush, burns, harvested unit) users included warbling vireo, MacGillivray's warbler, orange-crowned warbler, chipping sparrow, lazuli bunting, and blue grouse. The Forest investigated a report that owl calls resembling those of the spotted owl had been heard along the Selway River. After further investigation, the calls were determined to be those of the barred owl, a species whose call is extremely similar. The spotted owl's range is not known to extend into Idaho.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

Pine Marten/Fisher

Monitoring Results:

Three track count survey routes for fishers and pine marten, totalling 84 miles, were surveyed during 1990. Twenty sets of tracks were counted on 84 miles of trail. Fisher and pine marten tracks are very difficult to differentiate in snow. For this reason, results are combined for fishers and pine martens. Thirteen sets were thought to be pine marten, five were fisher, and two were indistinguishable. A draft report of a cooperatively funded habitat study for fisher on the Forest is available through the Supervisor's headquarters.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

Goshawk

Monitoring Results:

No population monitoring data for active nest territories has been collected to date. This is due to a combination of factors, including difficulty in locating nests, lack of suitable habitat (old growth with open understories) in many areas of the forest, and a lack of adequate funding for monitoring this species. Three confirmed sightings of goshawks were made on the Red River Ranger District. The question of whether the Forest was adequately funded to conduct goshawk nest searches was raised.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**

Item 11:	**Validation of Resource Prediction Models: Wildlife**
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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:

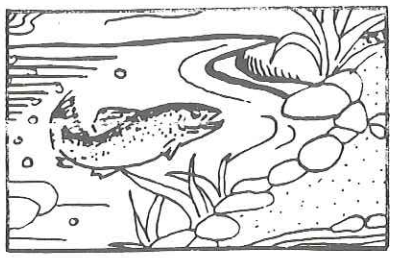
The Forest is participating in the development of a study plan to validate and, if needed, refine the North Idaho elk effectiveness model. The study plan will review applicable, ongoing elk research in northern Idaho. Model changes and refinements will be incorporated into the Nez Perce Forest version of the elk effectiveness model, and the amended version of the model will be used in future Forest planning. Biologists from the Clearwater NF are currently taking the lead in coordinating a study designed to validate the model. The Forest intends to become involved in this study to the extent that funding levels allow.

During FY 90 monitoring, several management concerns were stated concerning the summer elk model. The elk model does not recognize or acknowledge how proper livestock management in some habitats can benefit elk forage quality. The elk model needs to be validated locally.

The Idaho Department of Fish and Game has begun to raise an issue concerning bull elk vulnerability which is not addressed by the North Idaho summer elk model.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated prior to or in the Monitoring and Evaluation Report for Fiscal Year 1992.**



FISH

Item 1f:	Fish Habitat Improvements--Numbers of Acres and Structures
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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) to improve fish habitat by reducing bank or channel erosion (e.g., gabions and log deflectors), 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 FY 90, habitat improvement dollars allocated to the Forest were broken out for anadromous and inland fisheries; prior to 1990 these funds were combined. In addition, the Forest was given the option to use up to 25 percent of the appropriated dollars to fund fish surveys and inventories. For each mile of stream surveyed, one acre of accomplishment was reported.

During 1990, the Forest accomplished 356 acres and structures with appropriated dollars. This amounts to 89 percent of the Forest Plan projection for acres and structures (400 total). The reason for not meeting the Forest Plan projection was that the fisheries program was not funded at the full Forest Plan level in 1990. A summary of the acres and structures accomplished with appropriated dollars follows:

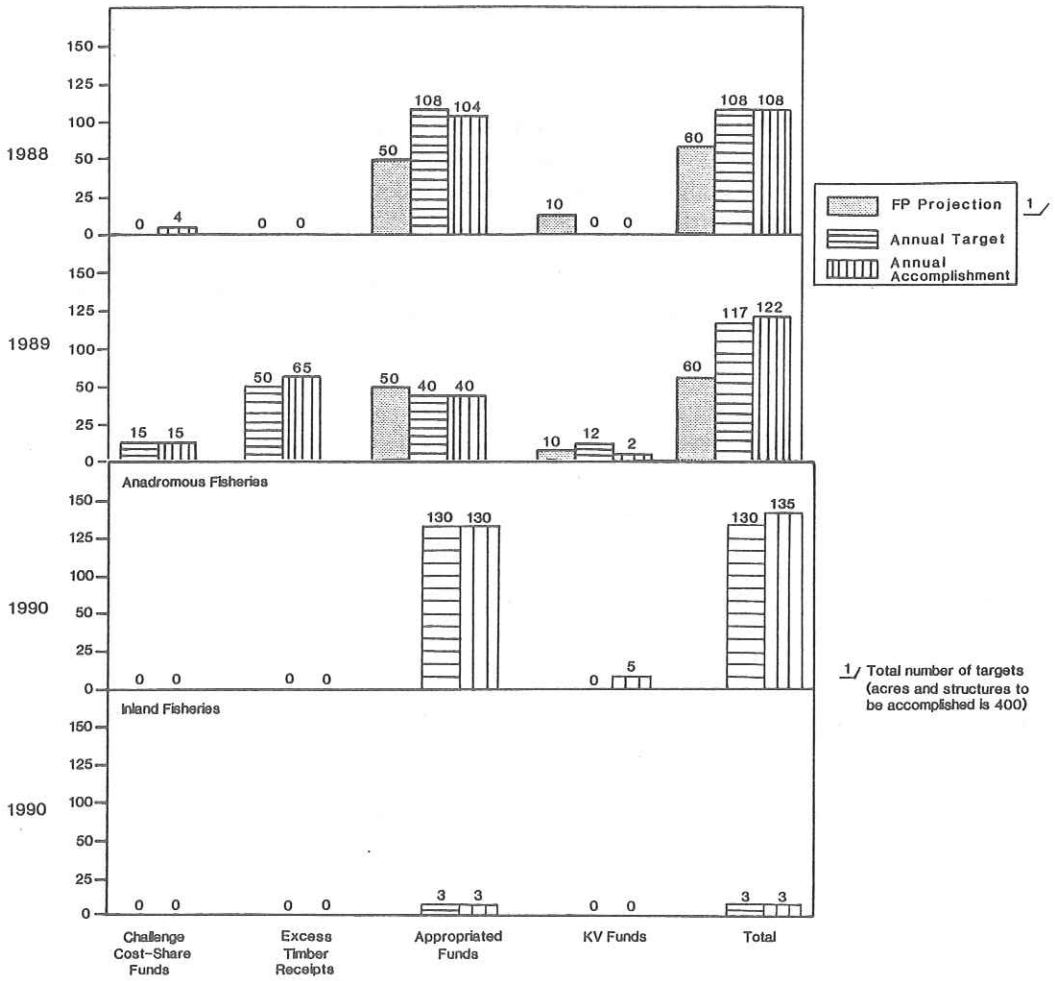
	Inland Funding	Anadromous Funding
Acres	3	130
Structures	11	182
Inventories	5	25
Total	19	337

Fish habitat improvements were also accomplished using challenge cost-share and Knutson-Vandenberg (KV) funds.[1] A total of 5 acres (anadromous funding) and 107 structures (92 anadromous and 15 inland funding) were achieved using these two funding sources. The following is a summary of all fish habitat improvements completed using all funding sources in 1990:

	Acres	Structures	Total
Anadromous Funding	135	289	424
Inland Funding	3	11	14
Total	138	300	438

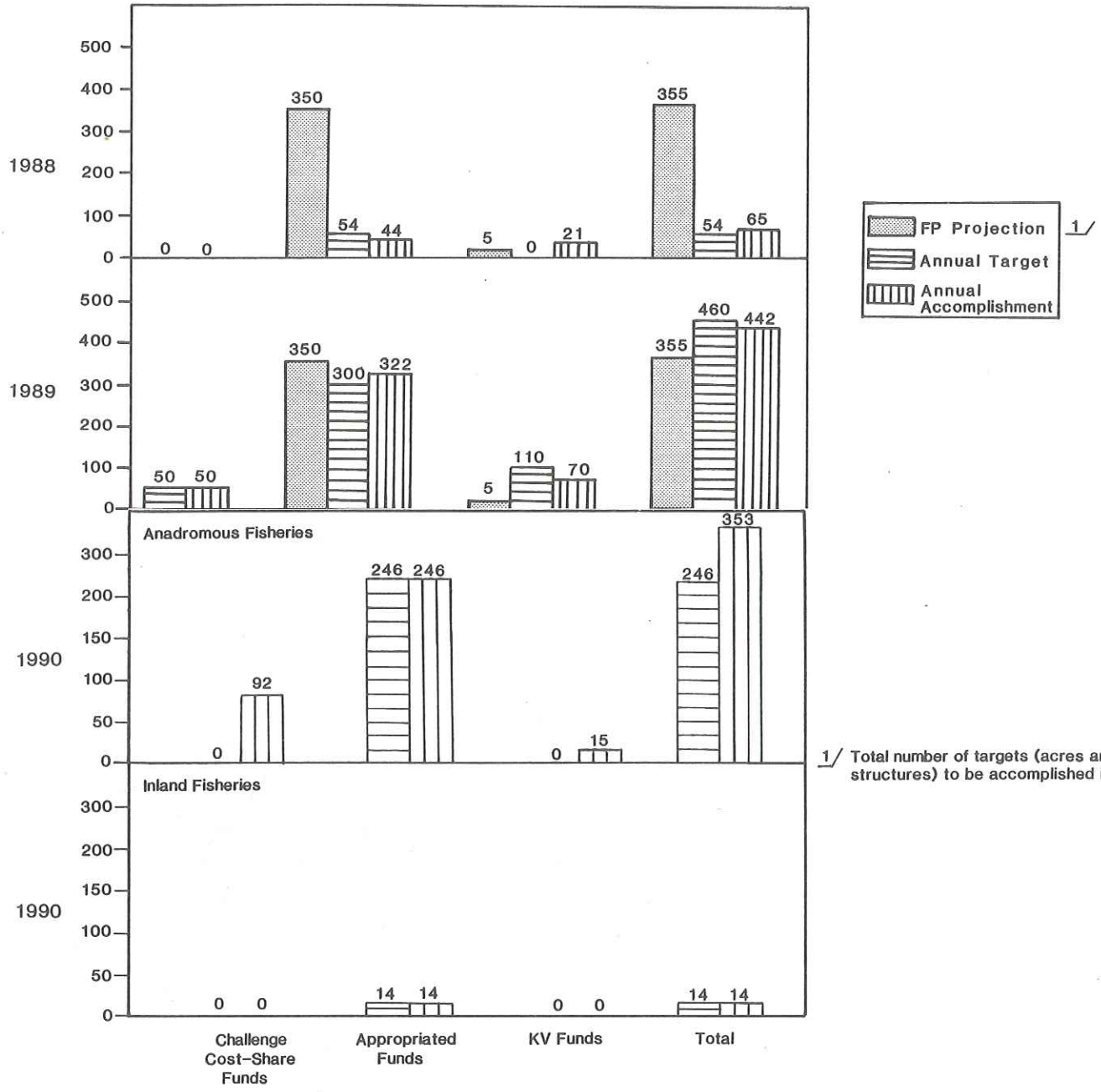
A breakdown of the number of structures, acres, and miles of inventory accomplished by funding source for fiscal years 1988, 1989, and 1990 is shown in the following graphs (inventory information is available for 1990 only).

Number of Acres of Fish/Habitat Improvements



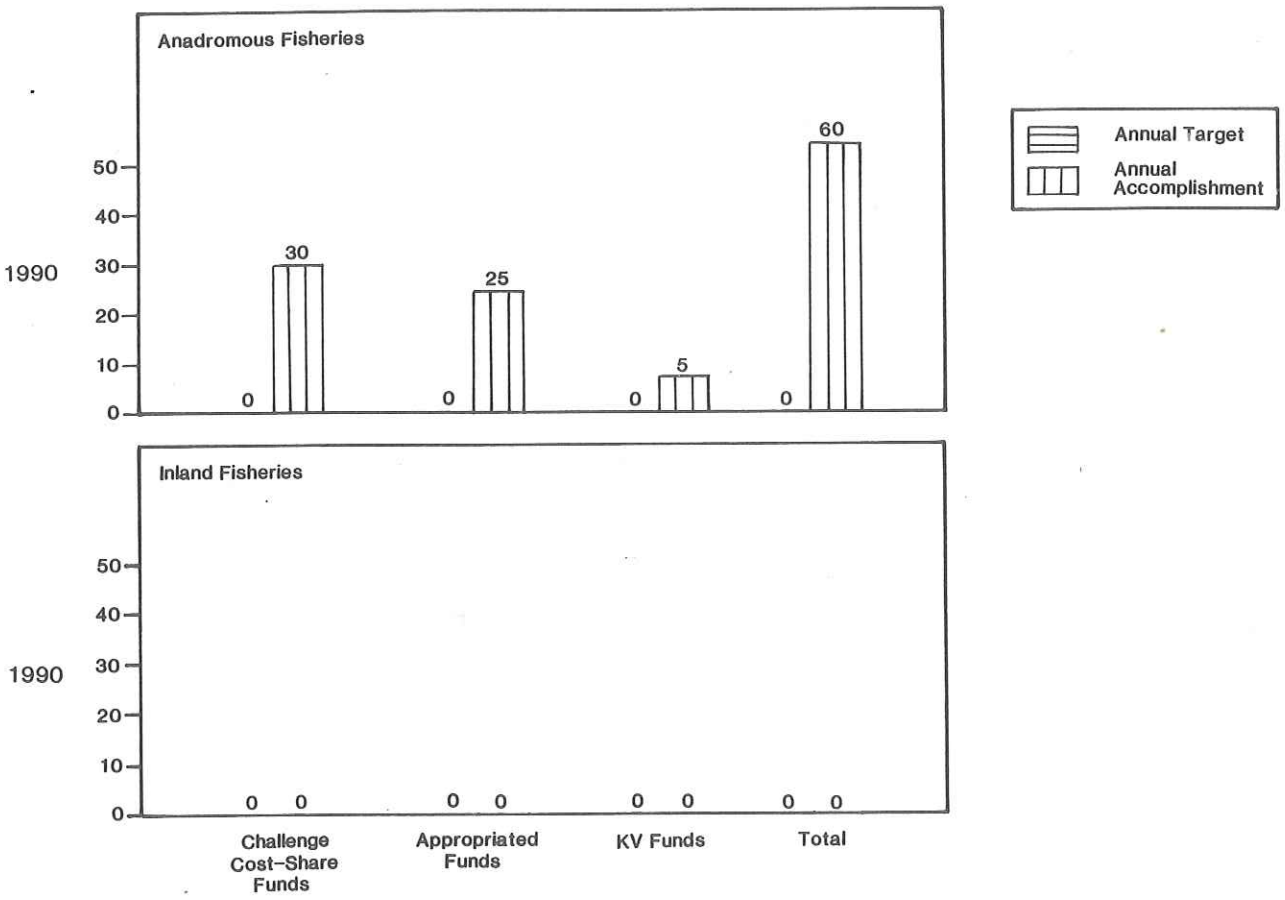
[1] Challenge cost-share funds: This program involves cost-sharing (in dollars, equipment, labor, etc.) with interested individuals, organizations, and agencies.
Knutson-Vandenberg Act funds: This is the authority for requiring purchasers of National Forest timber to make deposits to finance sale area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

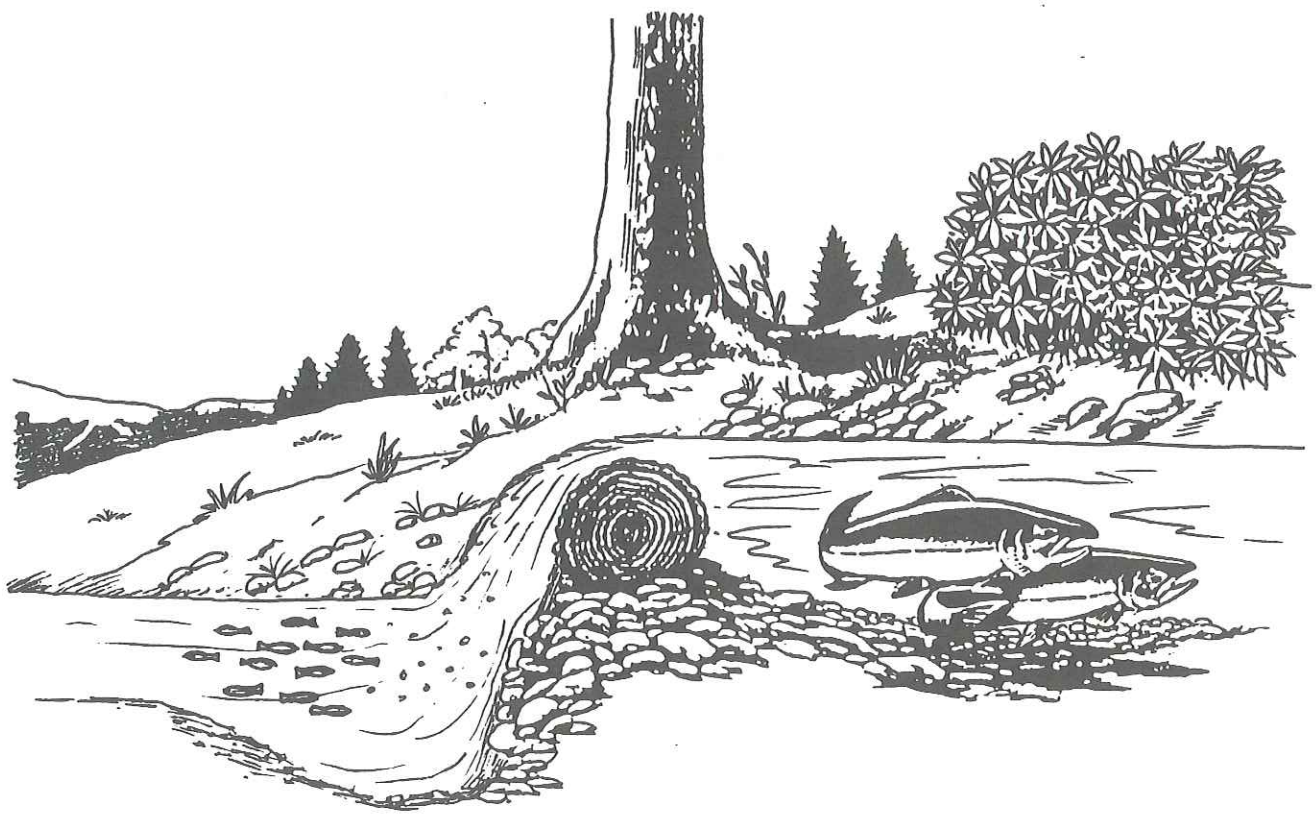
Number of Fish Habitat Improvement Structures



1/ Total number of targets (acres and structures) to be accomplished is 400

Number of Miles of Inventory Accomplished





Evaluation of Monitoring Results:

The 1989 Monitoring Report (p. 28) states that "beginning in 1990, Districts will be requested to show the costs of habitat improvements for both structures and acres of stream improvement for each project." The purpose is to enable the Forest to better track the costs associated with habitat improvement projects. 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, experience of the survey crew, information to be collected, whether the survey is done by Forest Service crews or contracted out, etc.

Range of the cost per acre:	$200 to $550
Range of the cost per structure:	$175 to $550
Range of the cost per mile of inventory:	$500 to $1500

The 1989 report also stated that the response of fish populations to habitat improvement structures was being evaluated in Crooked River and that the results of this study would be reported in the 1990 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., pocket water, 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 management of fish habitat on the Nez Perce Forest:

- 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.
- It appears that large, deep pools are 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.

This information is contained in the Master Thesis by Katherine Thompson entitled, "Utilization of Instream Habitat Improvement Structures for Summer Rearing by Juvenile Hatchery and Wild Steelhead Trout in an Idaho Stream," April 1990.

Item 2e:	Fish Habitat Trends by Drainage
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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. The following table summarizes the type of information collected to date at each monitoring station.

Permanent Monitoring Station Name	Site Surveyed in FY 90?	Years Having Habitat Survey Data	Years Having Fish Density Estimates	Habitat Map of Site Available?
N.Fk.White Bird Creek*	Yes	1988,1989,1990	1988,1989,1990	Yes
S.Fk.White Bird Creek	Yes	1988,1989,1990	1988,1989,1990	Yes
N.Fk.Slate Creek*	Yes	1988,1989,1990	1988,1989,1990	Yes
Little Slate Creek	Yes	1988,1989,1990	1988,1989,1990	Yes
Johns Creek*	Yes	1987,1988,1989,1990	1987,1988,1989,1990	Yes
North Meadow Creek	No	1988,1989	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[2]	Yes	1988,1989,1990		Yes
Upper Big Mallard Cr.[3]	Yes	1987,1989,1990	1989,1990	Yes
Running Creek*	Yes	1988,1989,1990	1988,1989,1990	Yes
Bear Creek*	Yes	1988,1989,1990	1988,1989,1990	Yes
O'Hara Creek	Yes	1988,1989,1990	1988,1989,1990	Yes
Gedney Creek	Yes	1989,1990	1989,1990	Yes
Meadow Creek Lower[4]*	Yes	1988,1989,1990	1988,1989,1990	Yes
Meadow Creek Middle[5]*	Yes	1990	82-83,87-88,1990	Yes
Sable Creek	Yes	1987,1988,1990	1983,1987,1988,1990	Yes
Butte Creek	Yes	1987,1988,1990	1987,1988,1990	Yes
Tenmile Creek*	Yes	1988,1990	1988,1990	Yes
Lower Crooked River*	Yes	1988,1990	1988,1990	Yes
Lower Newsome Creek*	Yes	1988,1990	1988,1990	Yes
Upper Newsome Creek*	Yes	1988,1990	1988,1990	Yes

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

[1] Anticipated activities and coordination with IDFG did not materialize, station not needed at this time. Forest Plan will be amended to delete this station.

[2] 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.

[3] 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.

[4] Station location moved upstream 100m in 1989 to a location with a better diversity of habitat.

[5] Fish only station.

Information regarding whether or not a fisheries survey was completed prior to the signing of a decision notice is shown below for 1988, 1989, and 1990:

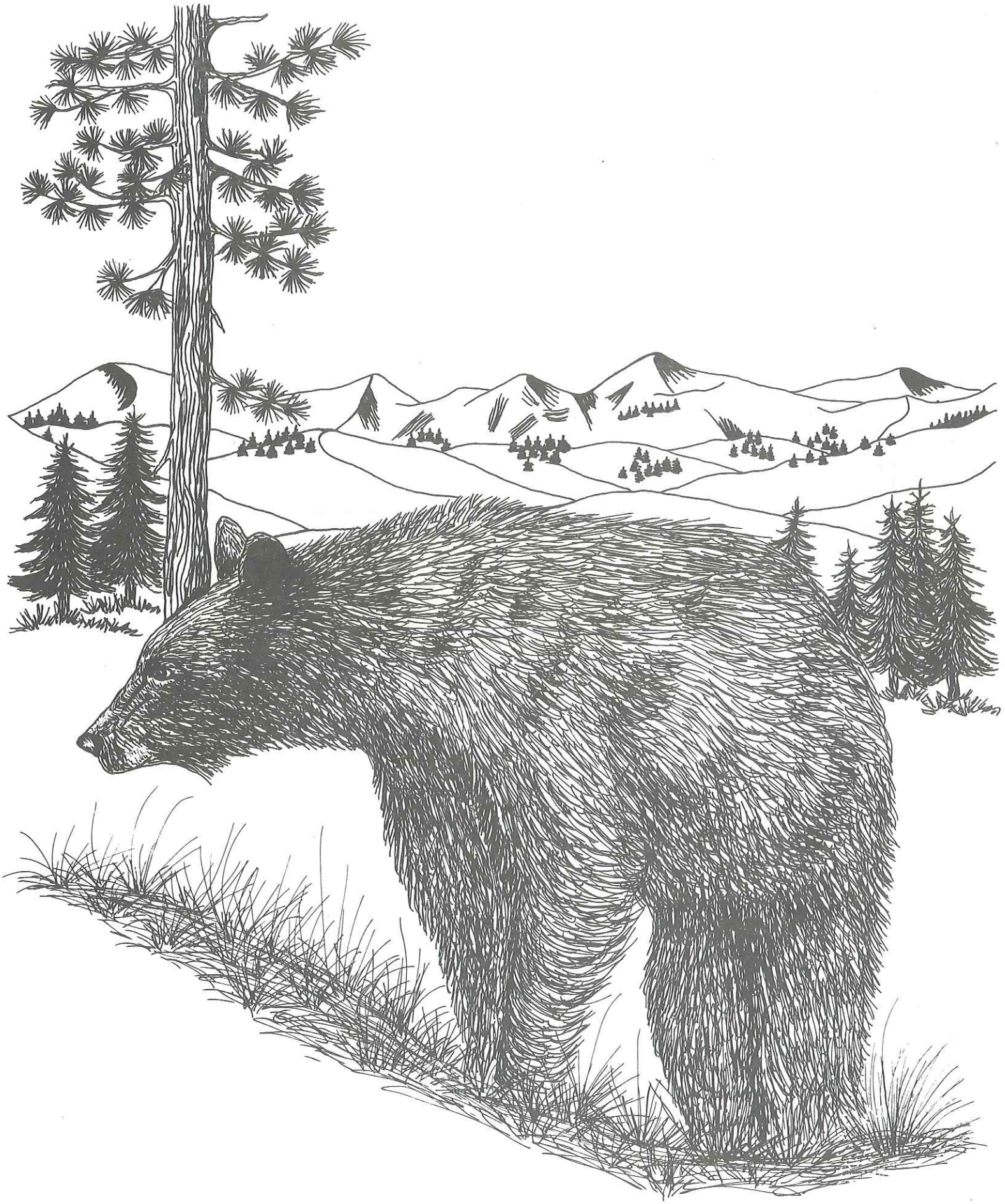
Environmental Analysis	Fish Habitat Surveys Completed prior to Signing of Document
FY 1988	
Spike Ridge[1]	No
Shooting Star[2]	NA
Lower Crooked River[3]	No
Boyer [4]	No
FY 1989	
Baboon Gulch[5]	No
Flint Cr. & E.F. American[6]	Yes
South Fork	Yes
North Fork Red River[7]	Yes
Clear Creek	Yes
Rimrock[8]	Yes
Wing Creek-Twentymile	Yes
FY 1990	
Cove	Yes
Mallard	Yes
Silver Cougar	Yes
Chocolate Moose	Yes

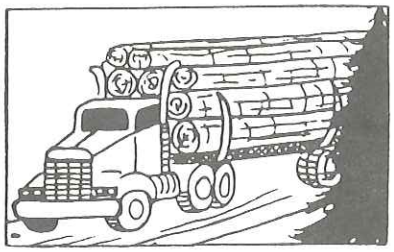
[1]Sale did not sell but will be readvertised this year with revisions. There are no plans to survey streams at this time.
[2] No streams occur in the analysis area.
[3] The only stream in the analysis area, Deadwood Creek, was surveyed in 1989.
[4] Siegal Creek was surveyed in 1987. There are no plans to survey French Gulch.
[5] Surveys are planned for FY 90.
[6] Based on data collected in 1978, streams resurveyed in 1989.
[7] Based on data collected during last 10 years.
[8] Only Fish Creek contains (resident) fish. It was surveyed in 1982.

Evaluation of Monitoring Results:

A total of 21 out of 23 permanent monitoring sites were measured in 1990. No trends can be established until additional data is collected. The results of monitoring were scheduled to be fully evaluated in the Monitoring and Evaluation Reports for fiscal years 1990 to 1992, but the majority of streams will not have sufficient data until 1991 or 1992.

Baseline fisheries habitat surveys were conducted and the data analyzed for streams in all four of the timber sales that had decisions signed in FY 90. This is an improvement over 1988 (no baseline fisheries surveys conducted) and 1989 (six out of seven sales had fisheries surveys conducted).





TIMBER

Item 1h:	Allowable Sale Quantity (ASQ) By Components
Frequency of Measurement:	Annual (October 1, 1989 - September 30, 1990)
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 using 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 on unsuitable lands, and volume 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.

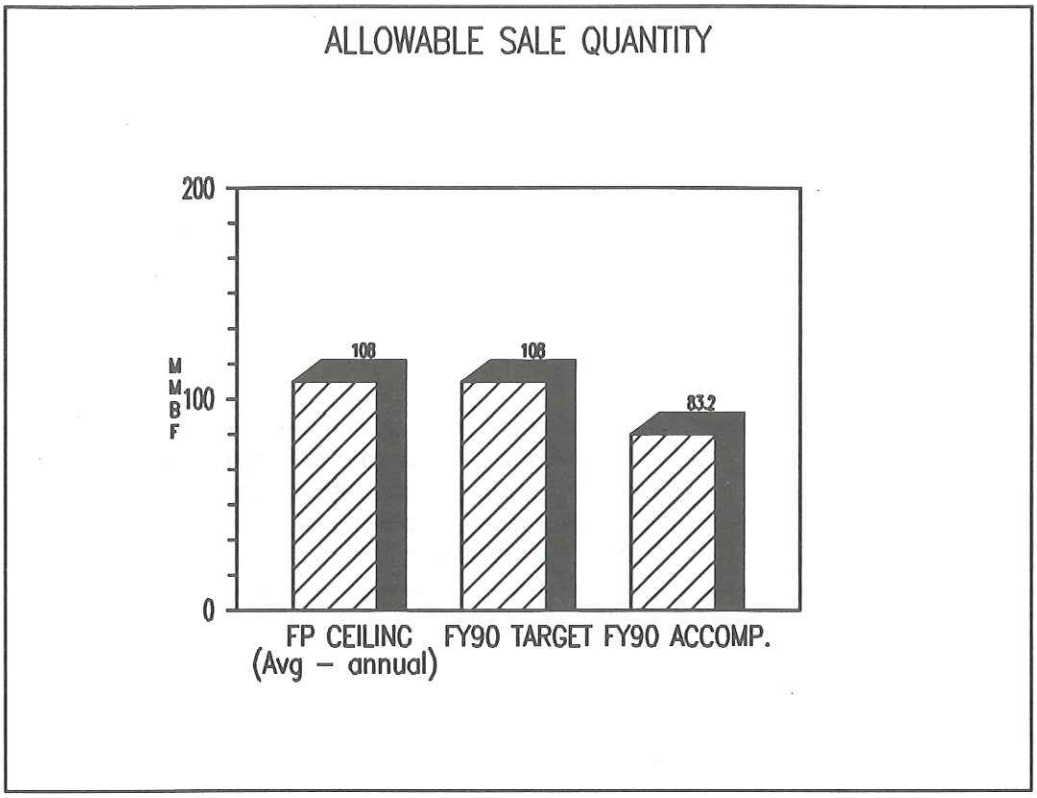
Although this item is monitored on an annual basis, actual ASQ achievement will be based on the decade total. Yearly figures may be above or below the Forest plan ASQ ceiling of 108 MMBF (103 MMBF regular and 5 MMBF noninterchangeable).

Monitoring Results:

CHARGEABLE VOLUME SOLD IN FY 1990[1]

Components	Volume (MMBF)
Regular	70.2
Noninterchangeable (NIC)	
Pulp	10.3
Cedar Products	2.7
Total FY 1990 ASQ	83.2

[1] The ASQ breakdown was based on the Nez Perce Periodic Timber Sale Accomplishment Report accumulated as of September 30, 1990 (fiscal year summary).



In addition, there was 3.0 MMBF chargeable volume offered for sale in fiscal year 1990, that received no bids.

In fiscal year 1990, the Forest sold 2.8 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 of a size that is too small to meet utilization standards.

Avg. Annual ASQ Ceiling	1990 Chargeable Volume Sold	Total Chargeable Volume Sold to Date*	% of Avg. Annual ASQ Sold for 3 Years
108.0 MM/year	83.2 MM	268.9 MM	83

* In fiscal years 1988-1990, which are the first 3 years of the decade covered under the Forest Plan.

Evaluation of Monitoring Results

It is not possible to make a definitive decision concerning the "achievability" of the decadal ASQ ceiling based on only 3 years worth of data. Certainly, the 83 percent ASQ achievement for first 3 years of decade means that to meet the decadal ASQ, the 108 average must be exceeded in 1 or more years in the future.

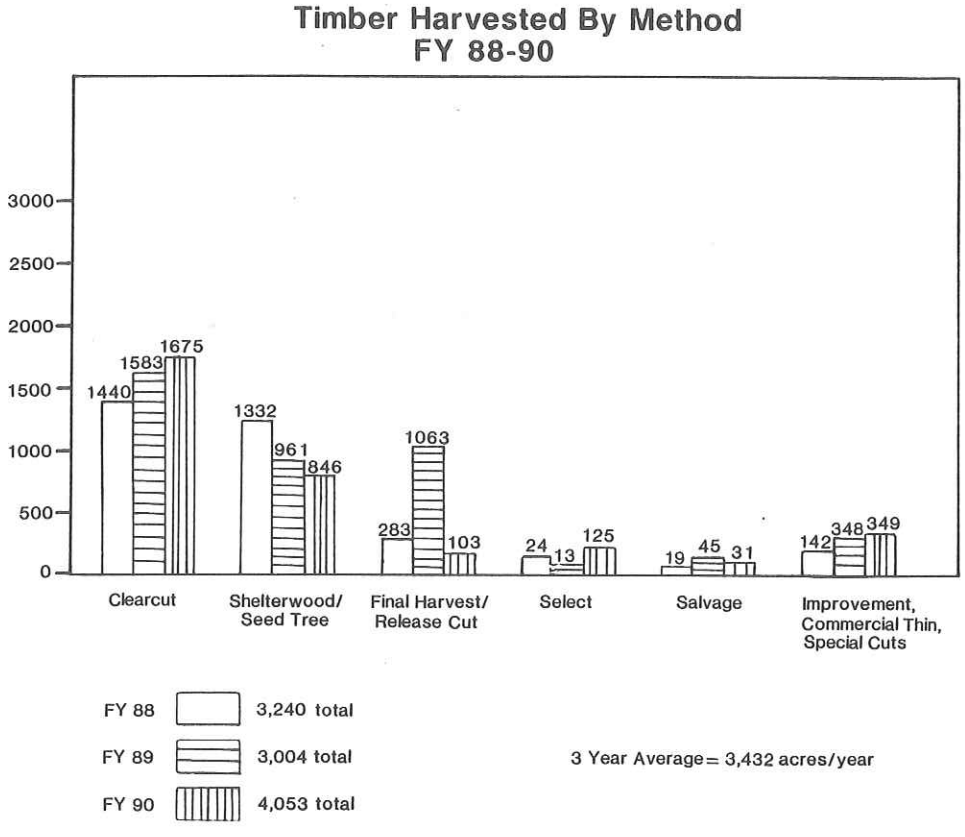
During the first 3 years of the decade, the Forest sold 98 percent of the Forest Plan average annual scheduled timber sold acreage (see Table 11-c), yet undersold the average annual ASQ ceiling by 17 percent.

Although selling the full decadal ASQ ceiling is a possibility, preliminary outyear volume/acre and silvicultural prescription predictions indicate it is not likely.

Item 1i:	Acres Timber Harvested by Method (Includes Precommercial Thinning)
Frequency of Measurement:	Annual (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary review.

Monitoring Results:

Precommercial thinning occurred on 890 acres which is approximately 89 percent of planned accomplishments. Harvesting took place on 3,004 acres (56 percent clearcut, 28 percent seed cut from shelterwood and seed tree, and 16 percent from other cutting methods).



CC = Clearcut
SW/ST = Shelterwood and seedtree prep or seed cut
FH/RC = Shelterwood and seed tree removal or final harvest cut
Select = Selection cuts (uneven aged management)
Salv = Salvage/sanitation cuts
Inter = Commercial thin, improvement, liberation, special cuts, and other

Evaluation of Monitoring Results:

Harvested acres are primarily from sales sold before Forest Plan implementation and are reflective of market conditions.

Item 2f:	**Vegetative Response to Treatments**
Frequency of Measurement:	Annual (October 1, 1989 - September 30, 1990)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Data and analysis which would indicate that projected yields are in error.

Discussion:

Permanent plots are continuing to be established and remeasured after treatment, but the number of growth remeasurements is insufficient to compare with predicted results. Current plot installment and remeasurements for evaluating treatments are as follows:

	New Plots	Remeasured
1988	1	3
1989	6	7
1990	3	3

Seventy permanent plots have been established and 25 remeasured in total on the Forest.

The results of monitoring are **scheduled to be fully evaluated in the FY 1992 Monitoring and Evaluation Report.**

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, 1989 - September 30, 1990)
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:

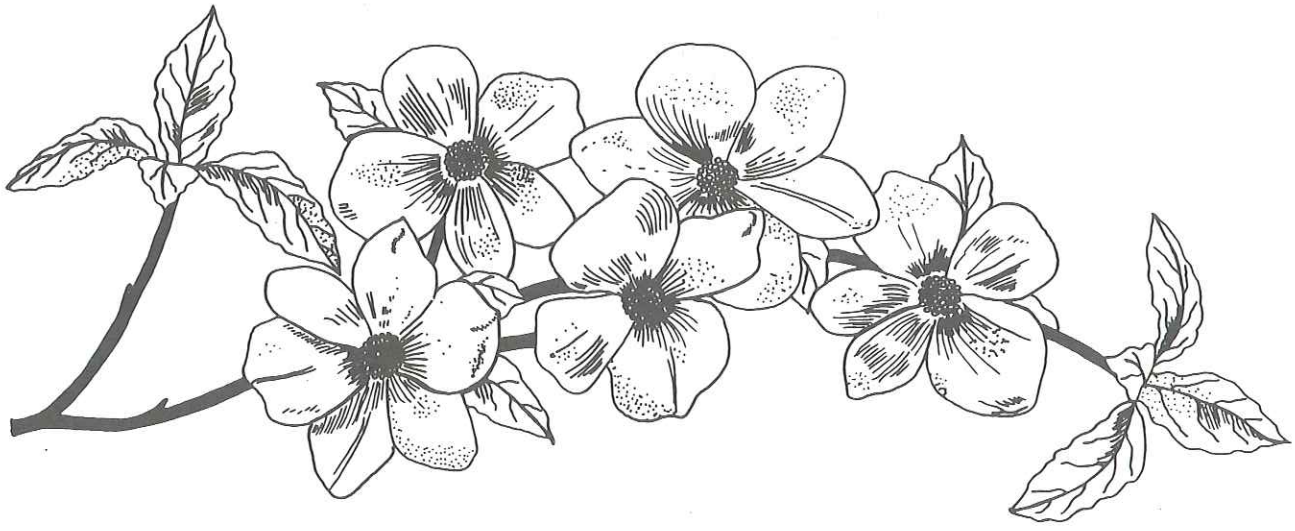
Data for this item comes from the Timber Stand Management Record System and summarized with the reforestation history (11/7/90), reforestation index (12/5/90) report, and reforestation status (12/3/90) report. Inventory results for FY 1990 will not be available until March 1991.

Monitoring Results:

First, third, and fifth year exams were conducted on 11,617 acres of plantation. Ninety-two percent of these acres are progressing towards satisfactory stocking. Replants are scheduled on acres needing additional stocking. Natural regeneration is certified or progressing on 87 percent of stands harvested since 1976.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated in the FY 1992 Monitoring and Evaluation Report.**



Item 5:	Unsuited Timber Lands Examined to Determine Suitability
Frequency of Measurement:	Annual (October 1, 1989 - September 30, 1990)
Reporting Period:	10 years (FY 1997)
Variability Which Would Initiate Further Evaluation:	Significant changes in suitable acres.

Discussion:

Unsuitable lands are currently being inventoried as part of the Forest's standard examination process. The inventory will be completed in 1992. Suitability is currently being evaluated in a systematic manner by management area in Environmental Assessments for proposed projects. An evaluation and summary of changes will be provided at the 5-year review (end of FY 93).

The results of monitoring 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:	Annual (October 1, 1989 - September 30, 1990)
Reporting Period:	Annual
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary team review.

Monitoring Result:

Of the 146 stands harvested in fiscal year 1990, two exceeded the 40-acre size-of-opening criteria. One is a 41-acre shelterwood. The other is a 75-acre seed tree located in a stand of lodgepole pine with heavy mountain pine beetle mortality. One timber sale sold in FY 90 had one unit that exceeded 40 acres; it was reviewed by an interdisciplinary team and found to be acceptable in meeting resource objectives. This unit was a 41-acre shelterwood.

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 88-90)
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 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 88-90 data taken from sold sales during this period. Sales contained in the actual FY 88-90 sold data include all sales having an appraisal (supervisor and ranger authority timber sales). Offered sales that did not sell are not included.

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

Silvicultural System	Forest Plan Estimated Volume/Acre	FY 88 Vol/Acre	FY 89 Vol/Acre	FY 90 Vol/Acre	Weighted Avg* FY 88 - 90 Volume/Acre
Clearcut (Units)	32.5 MBF	24.5 MBF	24.1 MBF	19.7 MBF	22.8 MBF
Clearcut (Rd ROW)	32.5 MBF	29.4 MBF	16.4 MBF	17.8 MBF	22.3 MBF
SW Prep Cut [1]	none planned	19.3 MBF	none sold	5.3 MBF	6.0 MBF
SW/ST Seed Cut [2]	18.3 MBF	15.5 MBF	15.4 MBF	15.9 MBF	15.6 MBF
SW/ST Final Cut [3]	5.0 MBF	5.6 MBF	8.4 MBF	7.3 MBF	6.7 MBF
Sanitation/Salvage	none planned	8.9 MBF	11.1 MBF	2.5 MBF	3.8 MBF
Commercial Thin	5.9 MBF	none sold	none sold	2.5 MBF	2.5 MBF
Selection Cut [4]	12.6 MBF	4.6 MBF	none sold	12.8 MBF	5.7 MBF
Weighted Average	22.6 MBF	16.3 MBF	20.6 MBF	15.7 MBF	17.1 MBF

*Weighted by acres sold

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

Silvicultural System	Forest Plan Scheduled Distri.%	FY 88 Distri.%	FY 89 Distri.%	FY 90 Distri.%	Weighted Avg* FY 88 - 90 Distri.%
Clearcut (Units)	36	40	61	51	48
Clearcut (Rd ROW)	inc above	3	4	5	4
SW Prep Cut [1]	none planned	<1	none sold	2	<1
SW/ST Seed Cut [2]	56	24	22	23	24
SW/ST Final Cut [3]	3	29	6	10	20
Sanitation/Salvage	none planned	1	1	7	3
Commercial Thin	2	none sold	none sold	1	<1
Selection Cut [4]	3	3	none sold	1	1
Totals	100.0	100.0	100.0	100.0	100.0

*Weighted by acres sold

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	Average FY 88 - 90 Acres/Year
Clearcut (Units)	1,710	2,607	1,989	2,146	2,248
Clearcut (Rd ROW)	inc.above	239	144	191	191
SW Prep Cut [1]	none planned	3	none sold	69	24
SW/ST Seed Cut [2]	2,705	1,549	731	990	1,090
SW/ST Final Cut [3]	130	1,921	374	455	917
Sanitation/Salvage	none planned	52	23	317	131
Commercial Thin	100	none sold	none sold	34	11
Selection Cut [4]	125	189	none sold	31	73
Totals	4,770	6,560	3,261	4,233	4,685

[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	Average FY 88 - 90 Acres/Year
10	Riparian	180		139	103	81
12	Timber	1,543	5,083	2,374	3,305	3,587
13	Aggreg(12/17)	75				
14	Aggreg(12/16/17)	60				
15	Aggreg(12/16)	702				
16	Elk/deer WR	500	1,245	509	150	635
17	Visual/Scenic	388	71	173	647	297
18	Aggreg(16/17)	197				
20	Old Growth	none planned	35	22	--	19
21	Moose WR	110	126	44	28	66
23	Municipal Watersheds	15				
	TOTALS	4,770	6,560	3,261	4,233	4,685

Note: WR = winter range. Management Areas 13, 14, 15 and 18 are aggregates of other MAs. These aggregate MAs were included because the distribution and size of the included MAs was such that they could not be accurately mapped. During the site-specific project analysis, these aggregate MAs will be displayed on a smaller scale showing only the "pure" MAs (i.e., 10/12/16/17/18/20/21/23).

Evaluation of Monitoring Results:

From the actual data for sold sales in FY 88, FY 89, and and FY 90, the following trends can be identified:

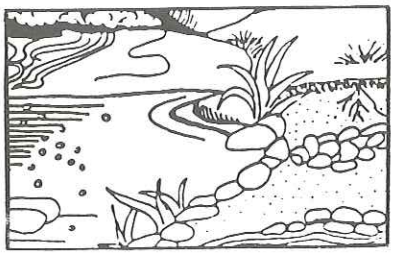
- Actual net cruised volume/acre (all silviculture systems) on sold sales continues to be less (24 percent) than that estimated in the Forest Plan (see Table 11-a). In looking at individual silviculture systems, the largest volume/acre difference between Forest Plan and actual FY88-90 figures continues to be in clearcutting (30 percent less) followed by SW/ST seed cuts (15 percent less). The SW/ST final harvest units yielded 34 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 88-90 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 88-90 sold acres are slightly less than the average yearly sold acres estimated in the Forest Plan (2 percent).

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 88-90 trends can be expected to continue.



SOIL AND WATER

Item 1j:	Soil and Water Rehabilitation and Improvements
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If the Forest did not achieve its assigned target for the fiscal year.

Monitoring Results:

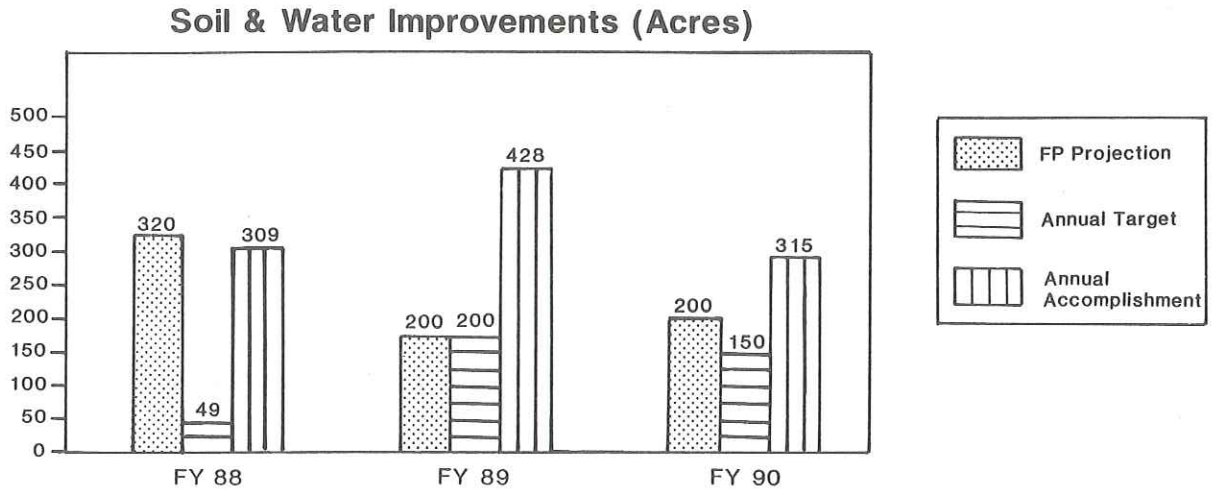
The Regionally assigned target for soil and water improvements using appropriated funds in fiscal year 1990 was 150 acres. The Forest Plan goal is 200 acres per year.

SOIL AND WATER IMPROVEMENTS ACCOMPLISHED IN FISCAL YEARS 1988-1990

	Acres Improved		
Funding Source	1988	1989	1990
Appropriated Soil and Water	74	131	159
Knutson-Vandenberg Act (KV)	52	93	82
Bonneville Power Administration (BPA)	70	3	0
Excess Timber Sale Receipts	0	144	3
Road Maintenance	113	57	76
TOTAL	309	428	320

Evaluation of Monitoring Results:

Although funding was inadequate to accomplish the Forest Plan level of improvement targets intended for appropriated soil and water funds, the Forest Plan goals were exceeded by accomplishing work through other funding sources.



Item 2g:	Impacts of Management Activities on Soils
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 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: Soil implementation monitoring was conducted on two watersheds. Additional monitoring was conducted during the course of project administration and district field reviews.

Most environmental analyses completed in 1990 used soil information to describe soil limitations and opportunities within assessment areas. This information was used to assist in project design and specific mitigation measures. Examples include prescribing low impact site preparation measures on sites with thin surface soils, and special silvicultural prescriptions for areas of high soil moisture and plant competition. 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 consistently used to predict sediment production. Predicted sediment was used to help select number, location, and scheduling of activity areas.

Funding or staffing of district programs is sometimes not adequate to provide for implementation of needed soil protection measures. Campground restoration and erosion control and reclamation work on rock pit and mining operations were instances identified.

Effectiveness Monitoring: Quantitative soil effectiveness monitoring was conducted on one timber sale. Additional qualitative monitoring was conducted during the course of district and multilevel field reviews of active timber sales, mining operations, and one wilderness wildfire.

One harvest unit had been tractor logged, and was sampled before slash disposal. Average slope gradient was 19 percent; most slopes were 10 to 25 percent. Soil conditions had been dry during harvest. Total area of the unit that exceeded Forest Plan standards for soil compaction and displacement was 16.6 percent; this was generally confined to skid trails and landings. This suggests that impacts due to ground-based equipment operating on gentle slopes and well drained soils can be held within the Forest Plan standard of 20 percent maximum area detrimentally impacted. Sale administration that controlled tractor operation was important in minimizing impacts.

Two harvest units that had been tractor logged and subjected to different slash disposal treatments were compared. A track-mounted excavator was used on one unit to pile slash. Slope gradients averaged 26 percent. The machine had to maneuver to avoid yew trees left in the stand. Even with this additional required movement, average percent of area detrimentally impacted was 17.6 percent, which does not exceed the Forest Plan threshold of 20 percent. The percent of area visually categorized as compacted or disturbed was similar to the dozer piled unit, but he actual severity of soil damage in these categories was less. Using the excavator to pile slash means that total soil impacts were only slightly more than those due to timber harvest alone. Abundant planting sites were available, but litter and surface soil layers were intact over much more of the area. Consequently, the site will be less susceptible to invasion by weedy forbs and grasses that attract gophers and cattle.

The unit treated with a conventional crawler tractor and brush blade was on similar soils and slopes averaged 28 percent. Average percent of area detrimentally impacted was 33.8 percent, and this significantly exceeds the Forest Plan threshold of 20 percent. Dozer piling approximately doubled the area detrimentally impacted. In addition, increased exposure of mineral soil and uprooting of forest understory plants had created sites favorable to colonization by plants attractive to gophers and cattle.

Vegetation recovery was monitored for the second year following wildfire within the Selway-Bitterroot Wilderness. Both severely and lightly burned riparian areas supported good vegetation cover and erosion was minimal. Harsher sites on steep slopes were being colonized by ceanothus and pinegrass, but sheet and rill erosion continued to occur at slight levels. Significant channel scour had moved sediment from the tributary streams to the major drainage. This is discussed under Item 2h.

Impacts of cattle grazing on road cut and fill revegetation was recognized during watershed reviews as a possible factor in reducing effectiveness of road erosion control measures.

Validation Monitoring: Three validation monitoring projects were in progress on the Forest in 1990.

The grand fir/wild ginger project was completed and information on successional relationships and management guidelines has been provided to district silviculturists. Response was found to vary with disturbance type and intensity, as well as the ecological site type that can be identified using soil characteristics and indicator plants. The research need for this project was identified in the Forest Plan (II-12: Timber Nos. 1 and 2).

An administrative study to examine differences in soil moisture retention in mixed and intact volcanic ash-influenced surface soils was begun in 1985. Data analysis is nearly complete. This project responds to the identified research needs to determine the value of this material and to describe effects of soil displacement on soil productivity (Forest Plan II-12: Soils No. 1 and II-13: Timber No. 3).

Validation of soil survey mapping in the Meadow Creek Roadless Area responds to the need identified in the Forest Plan (III-34, VI-23) and Record of Decision (page 24) to determine suitability of East Meadow Creek for timber production and sensitivity of soil and water to degradation. Concurrent soil and vegetation inventories are being carried out to provide better information for integrated resource analysis.

Evaluation of Monitoring Results:

Improved use of soil information in project analysis and design, and better understanding and mitigation of soil impacts associated with logging and site preparation were two needs identified in the Forest monitoring Report of 1989.

Use of soil information in integrated resource analysis and project design has improved significantly on most districts. Silvicultural prescriptions now typically address the need to maintain large organic debris on the site, and to protect surface soils through controlling timing, type or area of machine operation. Most districts are experimenting with machines that pick up and place slash, rather than push slash (and soil) into burn piles. This offers means to avoid compaction and displacement, retain nutrients, achieve well distributed scarification and distribution of large organic debris, and provide protected planting sites.

District assistance in soil monitoring projects has improved awareness of soil impacts associated with timber harvest. The 1990 monitoring described above helps characterize some of these impacts for local soils and harvest methods. Now are needed some means to include costs to soil productivity in evaluating proposed harvest and slash disposal systems. Proposed research on long-term soil productivity at the national level may provide some of this information.

A monitoring plan will be developed for 1991 to describe relationships between soil properties, cattle and big game impact, and roadside revegetation success.

Item 2h:	Impacts of Management Activities on Water Quality
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 River, Little Slate Creek, Johns Creek, Upper Red River, South Fork Red River, Trapper Creek, Wall Creek, South Fork Clearwater River, Selway River, Main Horse Creek, and East Fork Horse Creek). Variables measured varied among stations, but included discharge, suspended sediment, bedload sediment, water temperature, and conductivity.

The Forest maintained seven precipitation storage gages and five precipitation recording gages.

A report entitled "Hydrologic Data Summary - Water Year 1989" was issued. This report summarizes streamflow and climatic data collected on the Forest during the year.

Evaluation of Monitoring Results:

Analysis of data from the fixed water quality monitoring stations is ongoing. In 1990, the Forest was unable to complete a planned report evaluating all streamflow and water quality data collected since 1975. Inadequate staffing has prevented completion of this report, but efforts are continuing.

Results of 1988-1990 Suspended Sediment Monitoring on Selway, Lochsa, and South Fork Clearwater Rivers

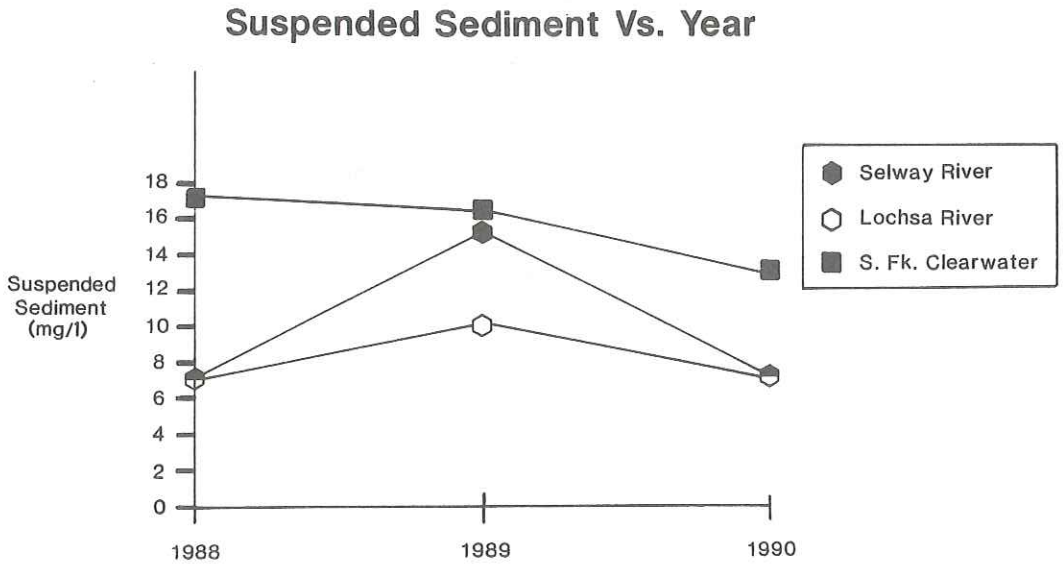
The Forest analyzed the results of 3 years of suspended sediment and turbidity sampling on the Selway, Lochsa, and South Fork Clearwater Rivers. This project was initiated cooperatively with the Clearwater National Forest in 1988. The objectives of this study were to determine if differences in suspended sediment and turbidity were detectable among the three rivers and to presample for a possible long-term trend study. The data summarized below will be used to determine whether this monitoring effort will be continued.

A total of 33 samples were collected at each of the rivers with sampling conducted from March through July, but most intensively during April, May, and June. The Selway was sampled about 7 miles above Lowell at the O'Hara Creek Bridge, the Lochsa was sampled at its mouth near Lowell, and the South Fork Clearwater was sampled near the Forest boundary at the Mt. Idaho Bridge. Daily river discharge was obtained from the US Geological Survey gaging stations on each stream. The sediment samples were analyzed by Clearwater National Forest personnel using standard laboratory methods.

The sampling showed that suspended sediment concentrations and turbidity were essentially the same in the Selway and Lochsa over the 3-year period. Mean concentrations and turbidity were slightly lower in the Lochsa, but this difference was not statistically significant. The South Fork Clearwater showed statistically higher suspended sediment concentrations and turbidity when compared to both the Selway and Lochsa. Suspended sediment was about twice and turbidity about three times higher in the South Fork Clearwater.

There were insufficient samples to conduct trend analysis over the 3-year period, but the data do suggest that 1989 showed higher concentrations of sediment in the Selway and Lochsa than either 1988 or 1990. The

Selway data in particular suggest a higher sediment concentration in 1989. The South Fork Clearwater data suggest a slight decline in sediment concentration during the 3-year period. These results are plotted below. Due to the low number of samples, it is difficult to interpret the annual results. Annual water yield was below average in all three rivers during the sampling period. This was most pronounced in 1988 in all three streams. The South Fork Clearwater was also relatively lower than the Selway and Lochsa in 1989 and 1990. This could have influenced sediment concentrations and turbidity. It is also possible that effects from the 1988 wildfires in the Selway drainage were detected during the spring, 1989 sampling.



Item 2i:	Water Quality: Project Level Administrative Reviews and Field Studies
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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.

DESCRIPTION AND RESULTS:

Implementation Monitoring: In 1990, implementation monitoring focused on projects located in Slate Creek, Clear Creek, and Upper Red River.

During the Slate Creek review, it was noted that overall water quality conditions in the watershed are good. Problem areas specifically reviewed included sediment entering the stream from a limestone quarry operation and stream channel damage associated with grazing in a meadow ecosystem. Another grazed meadow system showed a stream channel in good condition.

In Clear Creek, it was noted that the Coordinated Resource Management Plan (CRMP) effort was resulting in better interagency cooperation and implementation of projects on the private land designed to improve water quality conditions. The timber sale units reviewed showed stream protection provisions which were in

excess of the requirements of the Idaho Forest Practices Act Rules. Coordination of monitoring and scheduling of activities between the two ranger districts involved in the watershed were identified as problems.

The review in upper Red River showed that a wide range of watershed improvement projects had been implemented. It was also noted that more such work remained to be done. Some problem areas including an active mine, off-road vehicle use, and a special use site were identified. In keeping with Forest Plan direction, minimal timber activity is planned in this watershed in the immediate future.

An additional timber sale and road review was conducted in upper Peasley Creek. It showed that the Forest is highly committed to erosion control in its system road construction and reconstruction projects. It also pointed to some erosion problems related to storms occurring during the construction season and noncompliance with certain erosion control contract provisions. Also discussed was the need for control of cattle grazing intensity along roadsides.

Numerous informal field reviews were conducted on a variety of projects during 1990. These are documented in various ways, including daily diaries, file notes, and memos. These reviews are often conducted as routine inspections of timber sales, road contracts, mining operations, or other projects.

Effectiveness Monitoring:

Footstool Fire Monitoring - A Wilderness Fire Monitoring Plan was developed for the Selway-Bitterroot Wilderness in 1987. The Footstool Fire of 1988 was the first to be monitored for effects on watershed conditions under this Plan. The lightning caused fire burned 13,900 acres, with 45 percent estimated to be high intensity burn.

Cobble embeddedness as measured in East Moose Creek just downstream of the main fire area was 38 percent in 1988, 35 percent in 1989, and 43 percent in 1990. Surface particle size distribution at measured transects in 1990 was 59 percent sand within the fire area and 4 percent sand just downstream of the main fire area. Active channel cross section increased up to 108 percent from 1988 to 1990 in one first order tributary. Debris torrents occurred in 1990 in several unmeasured tributaries. Fire effects on channel conditions were dramatic within the fire area, but far less significant immediately below the main fire area.

Efforts to measure hillslope sheet and rill erosion on the Footstool Fire using metal stakes were not successful. Exposed rock and gravel increased over the first year, indicating that sheet and minor rill erosion had removed some soil. By the end of the second year, litter and moss were about one fourth of their pre-burn levels, and rate of soil loss had declined. Ceanothus velutinus and Carex rossii were important colonizers of intensely burned upland sites. Calamagrostis rubescens increased over pre-burn levels on upland sites and Calamagrostis canadensis increased similarly in riparian areas.

Clear Creek Temperature Monitoring - Water temperature monitoring was conducted on Clear Creek from 1988 through 1990 in conjunction with a Coordinated Resource Management Plan. This is a joint project with significant involvement by the Idaho Division of Environmental Quality, US Fish and Wildlife Service, Soil Conservation Service, Nez Perce Tribe, and Forest Service. A primary point of concern in the watershed is the Kooskia National Fish Hatchery located about 7 miles below the Forest boundary. Production of chinook salmon at the hatchery is partially limited by warm water temperatures typically experienced from June through September.

Over the course of the study monitoring has been conducted in several tributaries and at several points along the main stem of Clear Creek. The following table displays the number of days on which temperature exceeded 20°C (68°F) and also the maximum instantaneous temperature for the month indicated. The 20°C temperature criterion was selected since it is a commonly accepted level of concern for salmonids which are dependent on cool water.

CLEAR CREEK WATER TEMPERATURE MONITORING RESULTS 1988-1990
(# Days With Temp >20°C and Maximum Instantaneous Temp)

Station	July	August	September
1988			
Clear Creek @ Forest Boundary	0/19°C	0/18°C	0/16°C
Clear Creek @ Hatchery	27/28°	28/27°	14/25°
1989			
S Fk Clear Creek (start 8/14)	-	0/17°	0/15°
W Fk Clear Creek (start 8/14)	-	0/15°	0/13°
Clear 2mi below NPNF (start 7/11)	12/22°	7/21°	0/17°
Clear Cr @ Hatchery (start 7/11)	17/26°	26/26°	5/22°
1990			
S Fk Clear Creek	1/20°	2/20°	0/17°
W Fk Clear Creek	0/17°	0/18°	0/16°
Hoodoo Creek (start 7/10)	0/16°	0/15°	0/13°
Clear Creek @ Forest Boundary	0/18°	0/18°	0/16°
Clear Creek @ Hatchery	27/27°	24/28°	16/25°

Evaluation of Monitoring Results:

Evaluation of the Clear Creek water temperature data suggests that much of the temperature increase noted at the fish hatchery is occuring below the Forest boundary. Due to the extremely high temperatures found at the hatchery, the Forest should remain firmly committed to minimizing any temperature increases in this watershed.

Field reviews and project-level studies conducted during 1990 suggest that the Forest is strongly committed to management of water quality. Awareness of the agency's role in implementing the Clean Water Act through the Idaho Water Quality Standards and the Idaho Forest Practices Act is increasing. Additional work needs to be done to ensure a consistent Forestwide approach to many elements of the watershed management program, i.e., improved coordination of riparian area management, use of predictive models, and monitoring efforts.

Item 2j:	**Impacts of Management Activities on Riparian Areas**
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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.

Riparian implementation monitoring was conducted on three watersheds. Additional monitoring was carried out through work of district personnel in project design and implementation.

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 three watersheds, that included mining, range, timber, engineering and recreation projects with potential to impact riparian systems.

Quantitative monitoring was done on one wildfire. See this discussion under monitoring item 2h.

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 1990, with emphasis in locations where basin-wide 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 (Management Area 10) are calculated from these delineations during the management area validation process. Some small riparian areas may be missed in this process, with the result that site-specific management prescriptions are not developed for them.

During development of the Forest Plan, acres of riparian area were estimated considering only lands along third order and larger streams and large valley bottoms easily mapped at a small scale. For some recent environmental analyses, acres of riparian area estimated by the Forest Plan and actual acres identified during the validation process are shown in the table below.

NEPA Document	Forest Plan Acres	Percent of Total	Actual Acres	Percent of Total	Total Acres
Wing Twenty	159	.3	1,163	2.2	52,003
Flint Creek	60	.5	578	4.5	12.830
South Fork	327	1.0	1,876	5.9	32,040
Chocolate	46	.7	527	7.9	6,660
Moose Cove-Mallard	1,474	1.9	9.948	12.8	77.484
Silver-Cougar	490	1.2	3,490	8.7	40,001
Total	2,556	1.2	17.582	8.0	221,008

Forestwide, the Plan estimated about 2 percent riparian acres over the nonwilderness part of the Forest. Management area validation so far indicates that at least 8 percent of nonwilderness areas is Management Area 10.

Many timber sale contracts were developed prior to current provisions of the Idaho Forest Practices Act and our present understanding of best management practices. Districts are working successfully to adapt existing contracts to achieve current riparian protection objectives.

Current timber sale contracts and administration comply with Idaho Forest Practices Act rules as a minimum, and usually exceed them in terms of retention of streamside tree cover and soil integrity.

Effectiveness Monitoring: Interdisciplinary review indicated that on the monitored watersheds, riparian areas typically were in good health, with adequate vegetation for shade, structural diversity, and provision of large woody debris to streams. Exceptions occurred in areas of traditionally heavy cattle use in meadow systems and in riparian areas in old burns where debris had been cleared from the stream. Vegetation and streambank condition showed an upward trend, but recovery could be accelerated in degraded systems with strengthened grazing and vegetation management.

There were identified needs to consider cumulative effects of management on riparian systems throughout a drainage, and to analyze how grazing impacts change following creation of openings adjacent to streams.

Better understanding of riparian site potential and the habitat requirements of dependent species was identified as a basic requirement to implement current riparian management direction. Use of riparian areas as connecting corridors for old growth could be better understood if we knew what species used them and what are key attributes to preserve this function. Ways to describe existing condition with respect to Forest Plan objectives and site potential are also needed. Management direction that is presently general and vague could be more easily interpreted with this information.

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

Validation Monitoring: The riparian classification project continued in 1990. Its objective is to describe the stream systems, soils and vegetation of these areas, their site potential, and response to disturbance, including management activities. 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.

Evaluation of Monitoring Results:

Delineation of riparian areas (Management Area 10) is being done consistently and will provide good information on the extent of this management area on the Forest.

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

Tools for better evaluation are being developed. Stream surveys to describe watershed and fisheries condition are being used more extensively and with greater sophistication to describe riparian systems and their management requirements. Means to identify site potential are being developed by the riparian classification project and the related fisheries stream classification project. These efforts need to be coordinated to ensure that an integrated basis for riparian management is developed.

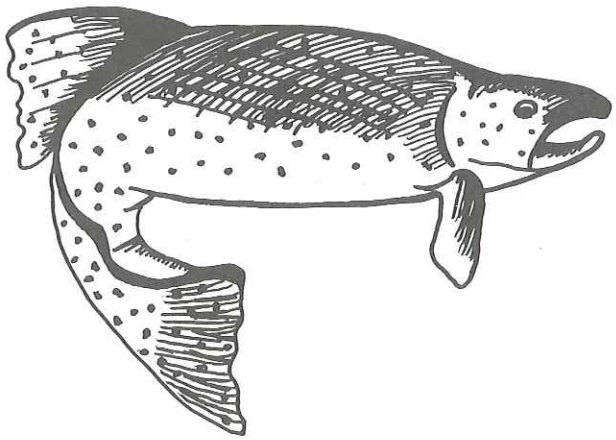
Proposals for range allotment updates have recognized the need for interdisciplinary analysis of riparian rangelands. The classification system and response models need to be made available quickly to assist in this process.

The Regional Ecology Group is working on developing standardized methods for monitoring riparian condition. These will not be available for at least one year.

The "Guide to Timber Management in Riparian Areas" needs to be brought up to date and formally adopted after interdisciplinary review.

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. This is a need best addressed at the Research Station level.

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 11:	Validation of Resource Prediction Models: Water Quality and Fish:
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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.

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 will be 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.

The Intermountain Research Station completed collection of sediment yield data in Horse Creek during 1988. It is planned that these data will be summarized and compared against predicted sediment yield data during 1991. Preliminary analysis suggests that the Forest's sediment yield model may tend to overestimate peak year sediment yields, but underestimate subsequent years.

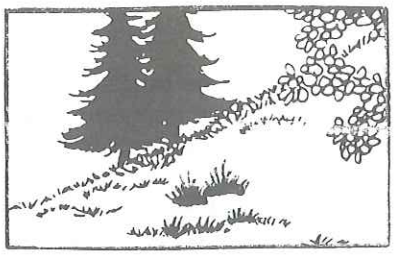
Validation of the Fish Response Model is not yet complete. Data analysis begun in FY90 may lead to revision of this model in the future.

Evaluation of Monitoring Results:

Managers should consider the effects of water yield increase on small drainages. Instantaneous peak flows may be more relevant than monthly or annual flow increases in determining effects of timber harvest.

Preliminary analysis suggests that the Forest's sediment yield model may tend to overestimate peak year sediment yields, but underestimate subsequent years.

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. Additionally, the Northern and Intermountain Region (R-1/R-4) technical task force should reconvene to revise the 1981 sediment yield guidelines to incorporate new information.



RANGE

Item 1g:	Animal Unit Months Grazing Permits
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Forest Plan Estimate

Monitoring Results:

The Forest permitted 41,000 animal unit months (AUMs) this year. Spot counting of livestock indicated 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, page 4 of this Report, comparing outputs and activities in the Annual Monitoring and Evaluation Report with those projected in the Forest Plan.

Item 1l:	Range Analysis and Allotment Management Plan Updates
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Forest Plan Estimate

Discussion:

This year the program included gathering data for allotment management plan (AMP) updates, monitoring riparian zones, conducting allotment inspections, providing information for integrated resource analysis, working with livestock permittees to harvest available forage with livestock and spot counting livestock as they entered the Forest.

Monitoring Results:

Monitoring teams again indicated that allotment management plans (AMP) need to be updated to insure vegetation management is occurring in compliance with the Forest Plan. However, no allotment management plans were updated this year. An action item in last year's monitoring report dealt with how the Forest intends to bring AMPs into compliance with the Forest Plan. In response, the Forest developed an allotment priority schedule for updating AMPs. Each allotment management plan was compared to the Forest Plan standards and guidelines. The following table displays the Forest Plan status, the year each allotment is scheduled for AMP updating, and the key resource values that may affect management of each allotment.

Allotment Name[1]	Forest Plan Status	Schedule	Key Resource Values
American River	Does Not Meet	1991	Riparian
Christie Creek	Does Not Meet	1991	Riparian
Race Creek	Does Not Meet	1991	
Blacktail	Meets	1991	
Hungry Ridge	Meets	1992	Riparian/Wildlife
Elk Creek-Lick Creek	Does Not Meet	1992	Riparian
Hanover	Does Not Meet	1992	Wilderness/Riparian
Butte Gospel	Does Not Meet	1992	Wilderness/Riparian
Big Creek	Does Not Meet	1992	Riparian
Glover Ridge	Does Not Meet	1992	Big Game
Peter Ready	Does Not Meet	1992	Timber/Veg.Succession
Anchor Meadows	Does Not Meet	1993	Wilderness/Riparian
Bull Creek	Does Not Meet	1993	Wilderness/Riparian
Dome Hill	Does Not Meet	1993	Wilderness/Riparian
Red River	Meets	1993	Riparian
East Fork	Does Not Meet	1993	Riparian
Corral Hill	Does Not Meet	1993	Timber Management
Whitebird Creek	Does Not Meet	1994	Vegetative Succession
Big Cove	Does Not Meet	1994	Timber Management
Cow Creek	Does Not Meet	1994	Wilderness/Timber Mgmt.
Tahoe-Clear Creek	Meets	1994	
Mallard Creek	Does Not Meet	1994	Riparian
Elk Summit	Meets	1994	
Allison Berg	Does Not Meet	1994	Timber Management
Meadow Creek	Does Not Meet	1995	Big Game
Cannonball	Does Not Meet	1995	Wilderness/Recreation
Siegel Creek	Meets	1995	
Newsome Creek	Does Not Meet	1995	Timber Management
Papoose	Does Not Meet	1995	Riparian
Earthquake	Meets	1996	
Florence	Does Not Meet	1996	Riparian
Slate Point	Does Not Meet	1996	
Green Mountain	Does Not Meet	1996	
Hamby	Meets	1996	Timber Management
Kirks Fork	Meets	1996	
Fiddle Creek	Does Not Meet	1997	Timber Management
Riverview	Does Not Meet	1997	
Deadwood	Meets	1997	
Sherwin Creek	Does Not Meet	1997	Timber/Riparian
Moose Butte	Vacant	1998	

[1]See Nez Perce Forest allotment map on page 61.

Inspection of selected allotments indicated that annual operating plans were followed in most cases. However, 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.

Evaluation of Monitoring Results:

Available information indicates approximately 75 percent of the allotments are not meeting Forest Plan standards and guidelines. Although most annual operating plans are being followed, many are based on AMPs that have not been updated to incorporate Forest Plan standards. On one monitored allotment, livestock are used to improve the quality of spring and fall elk forage. However, on another allotment livestock are adversely affecting the quality and quantity of spring, summer and fall elk forage. In a few meadow ecosystems, livestock are adversely impacting stream banks, meadow vegetation composition and water quality. Our monitoring is indicating that updating AMPs to address riparian, wilderness, timber management, big game and recreation values will ensure the Forest Plan standards are met.

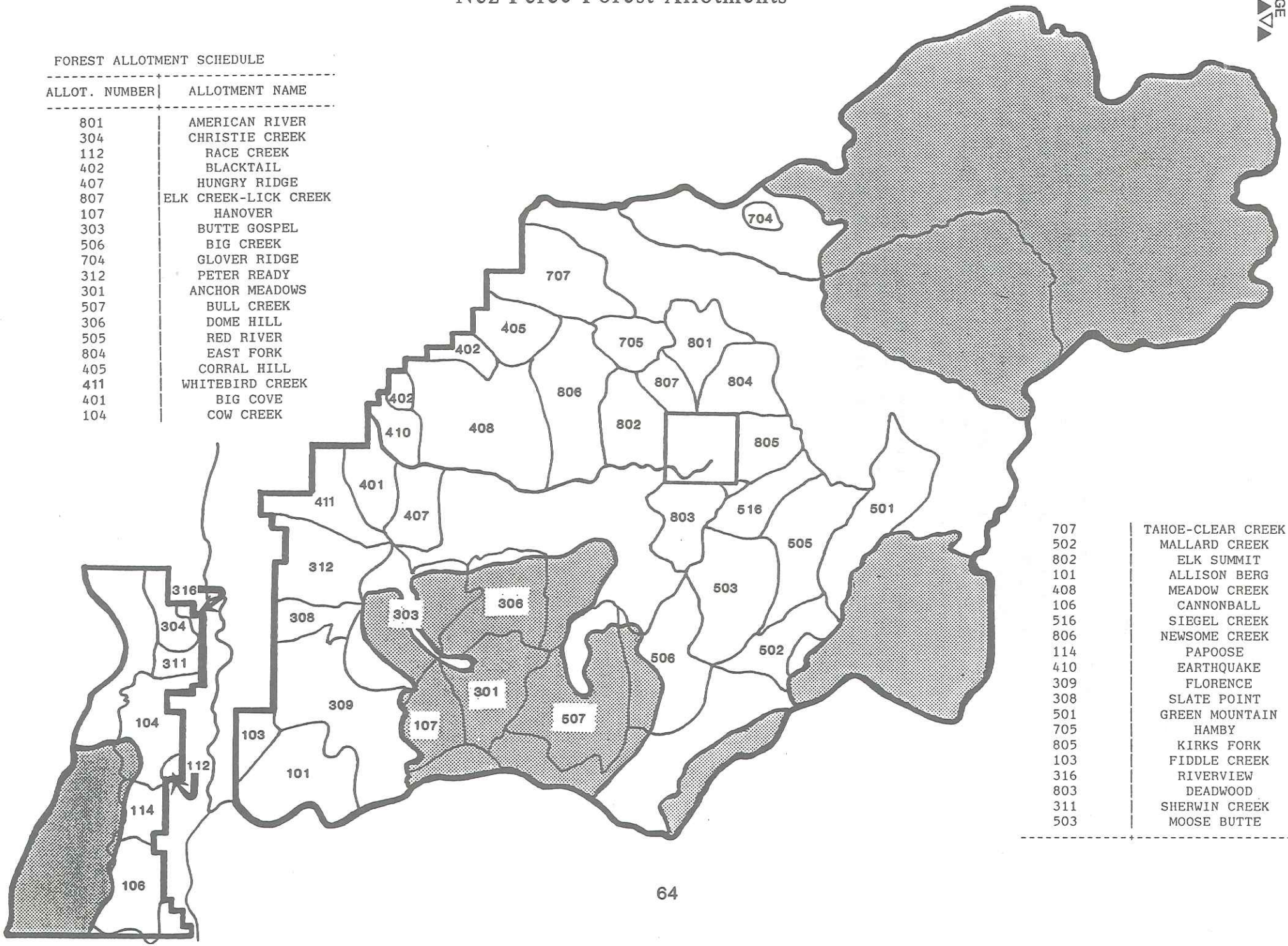
The Forest intends to bring all allotments into compliance with Forest Plan standards and guidelines based on the priorities outlined in this schedule. However, full Forest Plan funding is needed to accomplish AMP updates as scheduled. The information contained in the schedule reflects the best information available at this time and the schedule will be updated annually to reflect changes in resource information and funding levels.

Nez Perce Forest Allotments

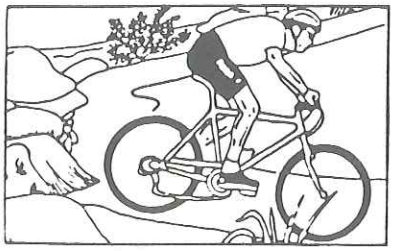
RANGE

FOREST ALLOTMENT SCHEDULE

ALLOT. NUMBER	ALLOTMENT NAME
801	AMERICAN RIVER
304	CHRISTIE CREEK
112	RACE CREEK
402	BLACKTAIL
407	HUNGRY RIDGE
807	ELK CREEK-LICK CREEK
107	HANOVER
303	BUTTE GOSPEL
506	BIG CREEK
704	GLOVER RIDGE
312	PETER READY
301	ANCHOR MEADOWS
507	BULL CREEK
306	DOME HILL
505	RED RIVER
804	EAST FORK
405	CORRAL HILL
411	WHITEBIRD CREEK
401	BIG COVE
104	COW CREEK



707	TAHOE-CLEAR CREEK
502	MALLARD CREEK
802	ELK SUMMIT
101	ALLISON BERG
408	MEADOW CREEK
106	CANNONBALL
516	SIEGEL CREEK
806	NEWSOME CREEK
114	PAPOOSE
410	EARTHQUAKE
309	FLORENCE
308	SLATE POINT
501	GREEN MOUNTAIN
705	HAMBY
805	KIRKS FORK
103	FIDDLE CREEK
316	RIVERVIEW
803	DEADWOOD
311	SHERWIN CREEK
503	MOOSE BUTTE



RECREATION

Item 1a:	Recreation Visitor Days
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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.

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 1990

Activity Category	Recreation Use (MRVD) [1]
Camping, Picnicking, and Swimming	241.9
Mechanized Travel and Viewing Scenery	193.2
Hiking, Horseback Travel, and Water Travel	76.6
Winter Sports	10.4
Resorts, Cabins, and Organizational Camps	11.5
Hunting	91.4
Fishing	33.7
Non-Consumptive Fish and Wildlife Use	3.2
Other Recreational Activities	59.6
Total	722.5
Wilderness Use (included above)	
Gospel-Hump	21.5
Frank Church-River of No Return	10.0
Selway-Bitterroot	51.6
Total (included above)	83.1

[1]Thousand recreation visitor days

Evaluation of Monitoring Results:

The results of monitoring recreation use are 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 1990. 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. The Selway District assisted in testing a prototype system in 1990.

Item 1b:	Acres of Recreation Opportunity Spectrum (ROS) Category
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 man 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.

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 after a 5-year period 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 1990, 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 being used more and more as a tool to assess the projects.

Evaluation of Monitoring Results:

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. More needs to be done. What is needed is a review and revision of ROS maps Forestwide, incorporation of ROS into all environmen-

tal 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.

The results of monitoring are scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report.

Item 2a:	**Off-Road Vehicle Impacts**
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 has been replaced with a new 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.

The most prevalent ORV impact 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. Each year, gates are broken or circumvented, with resultant impacts. Off-road vehicle uses are damaging to soil, water, and vegetation. This is particularly true where trail systems with a 24-inch tread are used by vehicles with 42 to 52-inch tread. Other damage by ORVs occurs off roads and trails through hill climbs and in ORV play areas.

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.

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. Funding sources for access management and ORV management need to be identified. Funds currently being used are from a variety of resource project accounts, are often not enough to do the job, and leave the project accounts short. The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report.**

Item 2b:	Adequacy of Cultural Resource Protection, Impacts on Cultural Resources
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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:

Implementation Monitoring: During fiscal year 1990, 35 projects were field inventoried for compliance with Section 106 of the National Historic Preservation Act as specified in the Forest Plan. This resulted in 3137 acres being inventoried for cultural resources and 37 new archaeological sites recorded. Of these, 27 were determined eligible to the National Register of Historic Places and seven were deemed not eligible. The determinations were made in consultation with the State Historic Preservation Office.

In addition to the new sites recorded, seven previously recorded sites were monitored and their documentation updated. Of the seven inspected during 1990, three were determined not eligible to the National Register and four were found eligble.

Documentation to nominate the Southern Nez Perce Trail to the National Register has been started. In addition to starting the nomination process for the trail, approximately 25 miles of the Southern Nez Perce Trail were marked with 6" x 6" trail markers, using a challenge cost-share partnership with Grangeville Boy Scouts and others. There is now a total of 45 miles of the trail marked and the marking will continue next year.

An agreement with the Nez Perce Tribe has been reached to pursue a joint effort to nominate the Pilot Knob Religious Area to the National Register.

Moose Creek and Fenn Ranger Stations were formally placed on the National Register of Historic Places.

Four National Register properties were inspected for natural deterioration and vandalism. Of these, it was recommended that stabilization of one structure be provided to deter futher degeneration of the structure. A new shake roof was installed on this structure.

In conjuction with the State Historic Preservation Office and the Trust For Public Lands, an assessment of Campbells Ferry has been made and plans for stabilization and interpretation of the property are progressing.

Cultural resource interpretation efforts included the Florence Boom Town Site, Elk City Wagon Road, Elk City and Red River mining sites tour, Slate Creek Museum, and oral interviews at Fenn Ranger Station.

All projects having cultural resource stipulations were monitored for compliance. No cultural resources were located in the previously surveyed areas that were visited.

One project which was monitored by the Forest Interdisciplinary Team was impacting the cultural resources of the area.

Effectiveness Monitoring: None of the archaeological sites that were inspected in fiscal year 1990 had any indication of recent vandalism.

Evaluation of Monitoring Results:

The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring Evaluation Report.**

Item 2c:	**Limits of Acceptable Change in Wilderness**
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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.

Monitoring Results:

Detailed summaries were prepared in 1989 describing management of the Selway-Bitterroot, Gospel-Hump, and Frank Church River of No Return Wildernesses. These reports to Congress provide good monitoring information on the Nez Perce National Forest's wilderness.

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 Management Direction approved by Regional Forester 6/25/82. This document is incorporated by reference in the Forest Plan for the Nez Perce National Forest.

Limits of Acceptable Change planning is currently being undertaken for recreation, trails, and airfield management in the Selway-Bitterroot. When completed in 1991, the changes resulting from the LAC effort will revise the management direction for the Selway-Bitterroot. Current plans call for these changes being in the form of an amendment to the Forest Plan.

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.

Further assessment using LAC has not begun and is not currently scheduled.

Frank Church - River of No Return:

Currently operating under a management plan tied to Forest Plan. LAC process for validating management direction is tentatively scheduled to begin after the Selway-Bitterroot effort is finished.

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

Selway-Bitterroot:

The fire management plan, suspended since 1988, was revised and in effect during the 1990 fire season.

Gospel-Hump:

The fire management plan, suspended since 1988, will probably not be revised and implemented until the 1991 fire season.

Frank Church - River of No Return:

The fire management plan, suspended since 1988, was revised and in effect during the 1990 fire season.

Evaluation of Monitoring Results:

A great deal of effort is currently being put into completion of the Selway-Bitterroot Limits of Acceptable Change (LAC) planning process. 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.

The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report.**

Item 2d	Achievement of Visual Quality
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 of reviewing these original VRM objectives and updating, or adopting 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 resources 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. This documentation will be reviewed during the 5-year assessment of achievement of visual quality objectives.

Evaluation of Monitoring Results:

On most Districts, some progress is being made in understanding and achieving VQOs. Our 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. Paraprofessional training in visual resources management was offered to Forest employees in 1990, and sensitivity to and knowledge of visual resource management is increasing.

The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report.**

Item 2n:	Management of Designated or Eligible Wild, Scenic, or Recreational River Segments
Frequency of Measurement:	Annually (October 1, 1989 to September 30, 1990)
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 & 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 o 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. The management plan for the corridor is currently being revised.

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. One drowning occurred during FY 1990.

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 -- No activities; grazing allotment in non-use status; in compliance with Forest Plan direction for this eligible wild and recreation river.

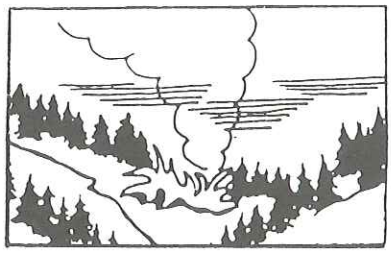
South Fork Clearwater River (Recreation) -- Modification of a clearcut unit on the Shooting Star Timber Sale occurred in FY 1990 because it can be seen from the South Fork Highway (M.P. 37). Minor aspects of the harvesting became visible prior to modification. Idaho Highway Department waste dump sites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

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.


L. Smith



PROTECTION

Item 1k:	Acres and Numbers of Wild and Prescribed Fires
Frequency of Measurement:	Annually (October 1, 1989 to September 30, 1990)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Unusual amount of person-caused fires over the 10-year average indicating a trend of a specific cause(s). Unusual amount of acres burned if unexplainable, such as unusually severe fire danger based on the burning index and the energy release component.

Discussion:

Prescribed natural fire was reintroduced on the Nez Perce Forest in 1990. The revised Selway-Bitterroot Wilderness Plan was approved on May 31. The Frank Church-River of No Return Wilderness revision was approved in March. Both plans meet the standards and requirements contained in Forest Service Manual 5140.

Monitoring Results:

ACRES AND NUMBER OF WILDFIRES

	Number of Fires				Acres Burned			
Types of Fires	1988	1989	1990	10-Yr. Avg.	1988	1989	1990	10-Yr. Avg.
Lightning Fires	122	310	178	131	102,236	8,850	95	14,179
Lightning Fires with Control Strategy	106	310	155	124	59,426	8,850	83	7,720
Lightning Fires with Contain/Confine Strategy	16	0	23	7	42,810	0	12	6,459
Person-Caused/Misc. Fires	21	16	24	14	3,707	38	548	1,947
Total Fires	143	326	202	145	105,943	8,888	643	16,126

NATURAL PRESCRIBED FIRES (WILDERNESS)

	1988	1989	1990	10-Year Avg.
Number of Fires	2	0	2	13
Acres Burned	520	0	0	1,789

Individual fire reports were completed on all 1990 fires.

The Nez Perce Forest joined other Federal, State, and private agencies in the newly formed North Idaho Airshed Group. The objectives of this Group are to minimize or prevent the accumulation of smoke in Idaho to such degree as is necessary to meet State and Federal ambient air quality standards when prescribing burning is necessary for the conduction of accepted forest practices such as hazard reduction, regeneration, and wildlife habitat improvement.

Acres of natural and activity fuels burned in FY90 under Fuels Management (Forest Fire Protection) totaled 1,664 acres. This equalled the Forest's projection.

Activity acres burned in FY90 amounted to 2,610 acres. Unfavorable burning conditions (weather) did not allow the Forest to attain its projection of 4,237 acres.

The Forest fire management program was not funded at the most cost-efficient level as described in the National Fire Management Analysis System.

Cost-effective fuel treatment/prescribed fire alternatives are being used to accomplish land management objectives.

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

Evaluation of Monitoring Results:

The Forest did not meet the Forest Plan and Regional projections for treatment of activity fuels. It did meet its treatment projections for natural fuels.

The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring and Evaluation Report.**

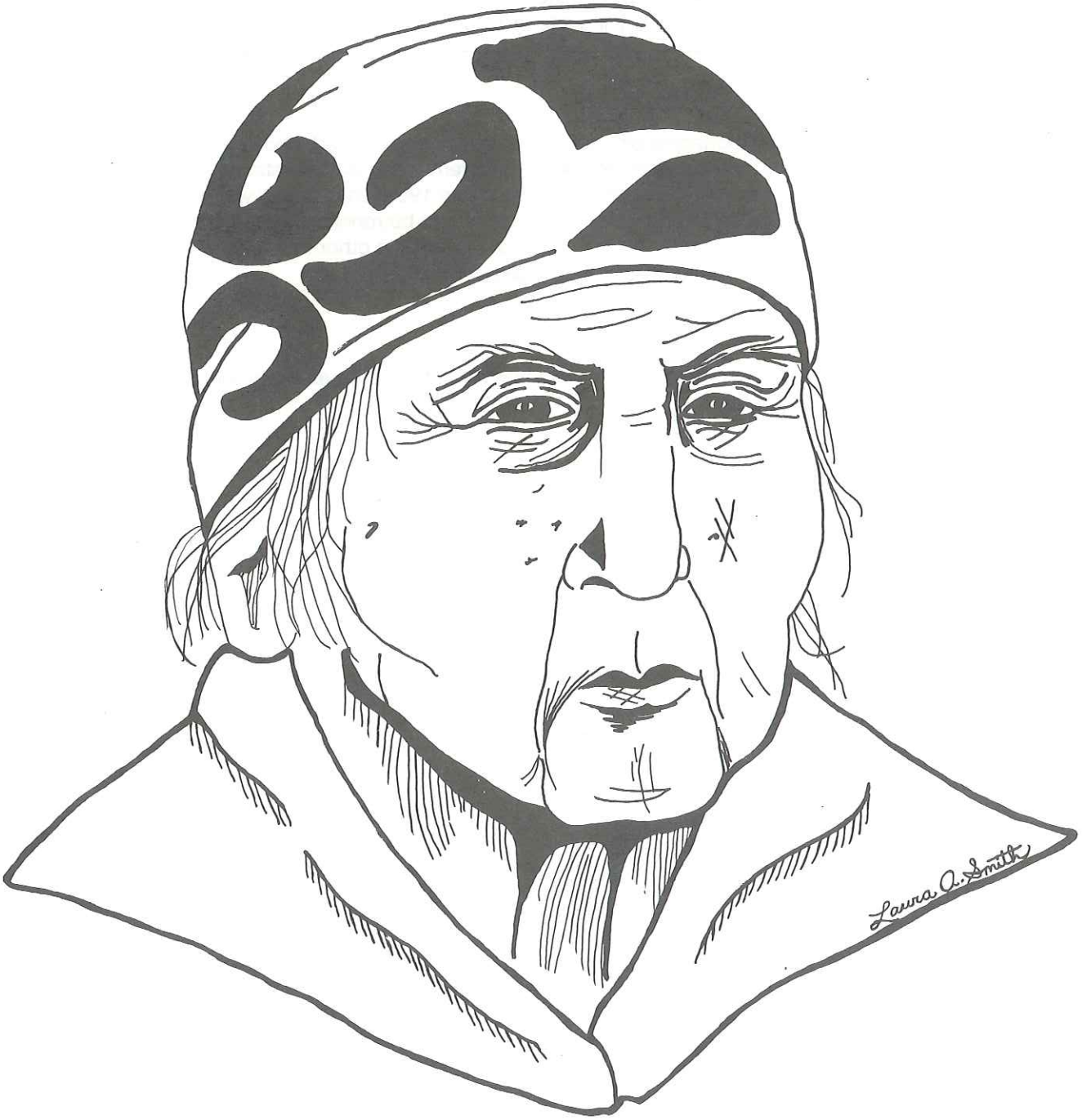
Item 7:	Insect and Disease Activity
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Significant increases in population or damage levels of insects or diseases

Monitoring Results:

Mountain pine beetle-infested lodgepole pine and ponderosa pine were reduced from 1989. Mountain pine beetle infestations, along with numerous other minor pests, remained relatively stable. Western pine beetle, fir engraver, and western budworm infestations declined from 1989. The balsam wooly adelgid appeared in subalpine and grand firs in 1989. Populations will continue to be monitored. 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:

General insect and disease conditions don't warrant any control activities but will require monitoring in future years to determine trends.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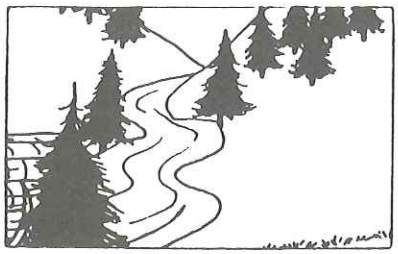


FACILITIES

Item 2k:	**Mitigation Measures Used for and Impacts of Transportation Facilities on Resources**
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 monitoring is conducted during project planning, implementation, and throughout the duration of the facilities' 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.

Facilities 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 1990 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 project.

Table 2k-1 MITIGATION MEASURES SPECIFIED ON PROJECTS IN FY 1990

Project	Planned Sedi-ment Mitiga-tion (%)	Windrow Slash	Rock Surfac-ing	Rock Ditches	Grass Seeding Fertiliza-tion	Straw Bales	SPS 204	Layer Place Fills	Critical Logging Controls (designed into Package)	Tempo-rary Water-bars	Gates Traffic Control	Total project cost $M **
PUBLIC WORKS												
Blue Ridge***	80	X	X	X	X	X	X	X	X	X	X	998
Lytle Elk***	80	X	X	X	X	X	X	X	X	X		168
Elkard	80	X	X	X	X	X	X	X		X	X	227
Burpee Crushing	80		X		X							360
Soda Point***	80*		X	X	X	X	X	X				124
Upper/Lower Cougar***	80*	X	X	X	X	X	X	X				440
Forest Bridge Rails	80				X	X	X	X				170
TIMBER SALES												
Baboon Gulch***	80	X	X		X	X	X	X		X	X	272
Boyer***	80	X	X		X	X	X	X		X	X	111
Burnt Backbone***	80	X	X	X	X	X	X	X	X	X	X	526
Chocolate Moose ***	80	X	X	X	X	X	X	X	X	X	X	426
Cole Porter ***	80	X	X	X	X	X	X	X		X	X	704
High Trapper	80	X	X	X	X	X	X	X		X	X	67
Kay Cedar	80	X	X	X	X	X	X	X	X	X		68
N.Fk.Salvage***	80	X	X		X	X				X		7
Rimrock***	80		X		X	X	X	X		X		10
Slaughter Gulch***	60-80	X			X	X	X	X		X	X	109
Upper West Fork***	80	X	X	X	X	X	X	X		X	X	421
West Fk.O'Hara	80	X	X	X	X	X	X	X	X	X	X	63
Shingle Fork***	80	X	X	X	X	X	X	X		X	X	916

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

**Cost of the mitigation measures is only a portion of the total project cost.

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

Table 2k-2 ADDITIONAL MITIGATION ON PRIOR YEAR PROJECTS UNDER CONSTRUCTION

Project	Description
1166	Repaired washout and reinstalled corrugated metal pipe.
1172	Placed ditchrock and installed 18 culverts to reduce ditch erosion.

Table 2k-3 MITIGATION ON MAINTENANCE PROJECTS

ROAD NO.	DESCRIPTION*	COST
221	Installed gabions to prevent fill failure.	$5000
279	Cleaned up slide that was blocking drainage; installed 2 culverts, 2 ditchouts, and water bars.	$4000
309	Removed slides blocking drainage and installed two drop inlets.	$2788
311	Reinstalled plugged pipe and installed drop inlet.	$1500
319	Installed retaining wall and repaired slide.	$7,530
319	Installed 12 new open tops to alleviate erosion problems.	$11,080
398	Stabilized and repaired mining road.	$260
443	Installed 3 new open tops, replaced 13 open tops.	$6870
464	Cleaned plugged pipe and installed drop inlet.	$2120
487/517 Jct.	Moved cattleguard and installed cross drain.	$4790
492/522	Installed 9 flared culvert inlets. Reinstalled 5 washed out culverts.	$600
522	Reseeded sections of cut and fill.	$4000
648	Reinstalled undercut cross drain.	$850
649	Cleaned sediment trap twice.	$500
651	Reconstructed south approach fill to bridge to prevent backfill failure.	$350
1188	Installed rock ford of Crooked Creek and installed waterbars on 1/2 mile of nonsystem road.	$1750
2022	Installed 4 culverts to alleviate drainage problem that caused slumping.	$5000
2025	Installed cattleguard at Forest boundary. Installed 3 culverts to alleviate drainage problems	$5600
9562	Reinstalled washed out culvert.	$250
9700	Installed 8 drop inlets	$3300

* All disturbed ground seeded.

ROAD MILES MAINTAINED*

Maintenance Level	To Standard (Mi.)	Not To Standard (Mi.)
1	857	1170
2	409	215
3-5	649	6

*Includes purchaser maintenance.

Miles Brushing	(Roadside)	95
MUTCD Signing*	New	100 each
	Maintenance	200 each

*Manual of Uniform Traffic Control Devices

TRAIL MILES MAINTAINED

Maintenance Level	Total Miles Maintained
Level I	939
Level II	117
Level III	32
Less than Level I	350
Total	1438

Table 2k-5 MITIGATION ON REHABILITATION PROJECTS THROUGH FRP FUNDING

NAME	UNIT	AMOUNT	DESCRIPTION	COST $M
Forestwide Materials			Purchase seed, straw, and filter cloth for erosion control	12
Grouse Slide	Ea.	1	Drainage of 479 and waterbars on old 479 Rd.	7.3
Rd. 468 Slump	Ea.	1		2
Rd. 451 Slump	Ea.	1		2.5
221M Approach	Ea.	1		2
Twin Cabin Crushing	Tons	52,000	Crushed and stockpiled rock for replacement and new placement.	100

Interdisciplinary field reviews were performed on Upper West Fork. In general, the review teams found that mitigation measures specified in the planning documents were incorporated into the project actions. The complete reports for these reviews are on file in the planning records at the Forest Headquarters in Grangeville.

Implementation monitoring also 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.

In addition, the Forest Engineer and District Rangers reviewed the above project and a majority of large sales, capital investment roads and maintenance for compliance of mitigation measures, and found overall that measures were being implemented as required.

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 90 has been attained and will be met in FY 91.

Full evaluation of the effects of facilities on resources and mitigation measure effectiveness will not be performed until 1992 when the comprehensive evaluation scheduled by the Forest Plan is to be completed. However, some preliminary results are available.

No evaluations were made of the effectiveness of travel management mitigations.

Evaluation of Monitoring Results:

The measures and practices being used to reduce sedimentation are effective. Continual attention and sensitivity to the watershed resource, however, are 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.

The measures associated with access management need more time to obtain a meaningful evaluation. See Item 2l of this report.

The results of monitoring are **scheduled to be fully evaluated in the Fiscal Year 1992 Monitoring and Evaluation Report.**

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, sources of monitoring information come from a variety of sources: facility maintenance records, environmental analysis 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:

The following table shows principal maintenance/rehabilitation projects undertaken in 1990 to meet user needs.

Table 2l-1 Maintenance/Rehabilitation Projects Through Forest Road Program Funding - Public Safety/User Needs

Project	Unit	Amount	Purpose/Description	Cost
Fish Creek Meadows	Ea.	1	Rehabilitated campground, gravelled parking spaces, built picnic shelter and handicap vault toilets. Cost-share project.	$20,000

In 1984, the Forest instituted a traffic surveillance program, using current state-of-the-art inductive loop equipment. The program initially started with 15 sites and has grown to 31 sites. Future monitoring and evaluation will involve moving surveillance sites throughout the Forest as warranted by changes in user trends.

Presently, we have 6 years of data collected from 13 surveillance sites, anywhere from 2 to 5 years on 18 surveillance sites, and two new surveillance sites with less than 1 year of data. Analysis from sites with 4 or 5 years of data shows very little fluctuation in annual use volume. The volume fluctuation that we are experiencing is due to commercial (logging) use and fire traffic on a particular road. There does not seem to be any noticeable increase or decrease attributed to recreational use. From our data, it is obvious that the highest recreational use on monitored roads is during hunting season.

The Forest has undergone 2 years of implementation of the Access Management Guide. The Guide is planned for updating in 1991.

Field reviews of signing and traffic control devices were conducted prior to the start of the fall hunting season. These reviews showed that, while signing and consistency in the management of facilities is

improving, there is still room for improvement in the areas of gate maintenance and the posting of Supervisor's orders and travel management signing.

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. The recommendation is to continue with the current Nez Perce Access Management Program.

The results of monitoring are **scheduled to be fully evaluated in the fiscal year 1992 Monitoring and evaluation Report.**

MINERALS

Item 2m:	Adequacy of Mining Operating Plans and Reclamation Bonds
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 53 active Plans of Operation, five need modification or updating to more accurately describe existing surface disturbance and/or changes in the operation. In four 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 five need to be increased or decreased to more accurately reflect reclamation costs. Four reclamation bonds, associated with Plans of Operation which are no longer active, need to be released. The following table displays this data:

Ranger District	Active Plans of Operation[1]	Plans Needing Modification	Bonds Needing Revision	Bonds Needing Release
Salmon River	9	1	0	0
Clearwater	0[2]	0	0	0
Red River	15	1	1	0
Moose Creek	0	0	0	0
Selway	0	0	0	0
Elk City	29	3	4	4
TOTAL	53	5	5	4

[1]Does not include Notices of Intent

[2]Although the Clearwater District did not have any active operations this year, there are two inactive operations which still need to be reclaimed.

The Forest also conducted an interdisciplinary field review of two mining operations on the Salmon River and Red River Districts.

The operation monitored on the Salmon River District was a limestone quarry in the Slate Creek drainage. The operation was in compliance with the approved Plan of Operations. However, some erosion was occurring on-site which was contributing sediment to Slate Creek. The Interdisciplinary Team recommended that the Plan of Operations be modified to include measures to mitigate these impacts. The level of bonding for the operation was adequate to reclaim the site.

The operation monitored on the Red River District was a small open pit mine in the Red River drainage. The operation was not in compliance with the approved Plan of Operations. Severe erosion was occurring on-site but no sediment had yet reached the creek. Activities had taken place which were not approved by the Forest Service. Facilities had not been constructed to specifications in the Plan of Operations. Bonding was inadequate to cover reclamation of existing surface disturbance. The District Ranger had informed the operator on several occasions that he was in noncompliance with his approved plan, but the operator had refused to cooperate in rectifying the items of noncompliance. The Forest is currently seeking legal advice on more stringent enforcement measures. However, legal remedies are time-consuming and it is unlikely that the operation will be brought into compliance in the near future. District personnel noted that this lack of cooperation and the resulting problems are not typical of other mining operations in the area.

In both of the cases discussed above, the Interdisciplinary Team determined that the Districts did not have enough funding or staffing in minerals to adequately deal with the problem areas.

Evaluation of Monitoring Results:

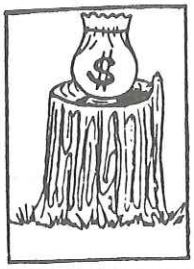
These monitoring results indicate that the Forest is carrying out its minerals management responsibilities in conformance with Forest Plan direction in most, but not all, instances. The above data indicate that nine percent of all active operations on the Forest are not fully in compliance with their approved Plan of Operations or need to have their Plans modified to better protect surface resources. Another nine 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, but eight percent of operations still need to have their bonds returned.

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

A field review of two active operations by the Forest Interdisciplinary Team found that some unnecessary disturbance to surface resources was occurring at both sites. The major obstacles to achieving full Forest Plan implementation appeared 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.



ECONOMICS

Item 3:	Cost of Implementing Resource Management Prescriptions
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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 effected 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 1, found in the beginning of this report, displays predicted average annual costs, budget allocations, and actual expenditures for the fiscal years 1988, 1989 and 1990. Dollars have been adjusted to constant 1990 values.

Table 4 displays projected annual costs of full implementation for the outyears FY 1991 - 1997. This table replaces Appendix K in the Forest Plan. Corresponding activities and outputs for the Forest Plan period are displayed in Table 2 and replaces Table II-1 in the Forest Plan.

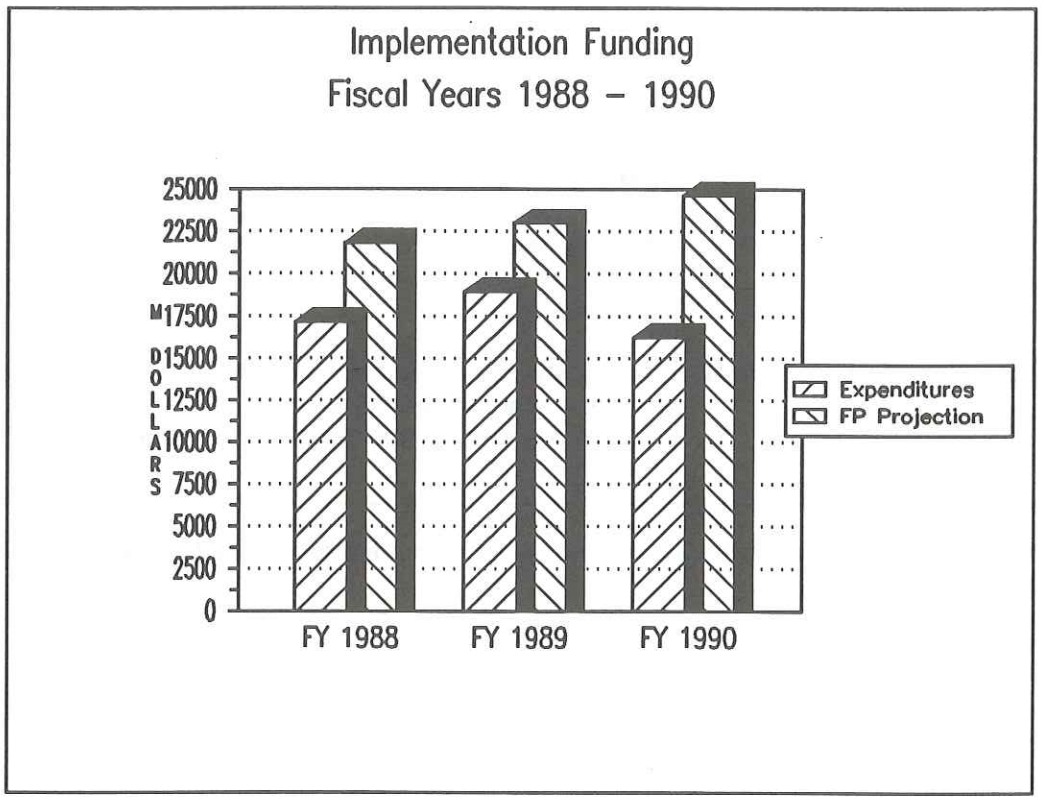
Funding for fiscal years 1988 and 1989 was 81 percent of what is needed to fully implement the Forest Plan. Funding for FY 1990 was 78 percent of full Forest Plan implementation needs.

Evaluation of Monitoring Results

While decreased budgets at this time are not expected to change the long-term goals and objectives of the Forest Plan; the projected activity and output levels of some resources may not be attained.

As displayed in Tables 1 and 3 of this report, targets have been reduced to reflect budget shortfalls.

A detailed evaluation of costs and their effects on the Forest Plan's long-term goals and objectives will be conducted during the five year review scheduled for fiscal year 1992.



The above chart reflects funding levels lower than predicted in the Forest Plan. This reduced funding level does not appear to be constraining Forest Plan implementation since long-term goals and objectives are being attained.

Item 3a:	Forest Resource-Derived Revenues
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
Reporting Period:	5 Years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Any change in resource-derived revenues altering the implementation 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

Revenues	Forest Plan Revenues (FY 90$)	FY 1988 Revenues (FY 90$)	FY 1989 Revenues (FY 90$)	FY 1990 Revenues (FY 90$)
Timber	$13,915,528	$4,935,821	$7,633,201	$6,837,251
Range	$63,631	$37,371	$40,029[1]	$41,704

[1] Range revenues in last year's monitoring report omitted collections amounting to $827.

Timber Revenues

The differences illustrated in the above timber revenues are due to two factors. First, we are not experiencing stumpage values as high as predicted in the Forest Plan. Second, timber harvest in fiscal years 1988 and 1989 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.

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 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 1989	FY 1990
Gain/Loss before Payments to States	$317,215	$1,490,426	$676,572
Payments to States	$1,040,162	$1,263,251	$1,238,807
Gain/Loss after Payments to States	$-722,947	$227,175	$-562,235

Range Revenues

Differences in range revenues can be attributed to changes in grazing fees and a change in how revenues are calculated.

Revenues displayed in the Forest Plan Final EIS were incorrectly calculated. The Forest modeled animal unit months (AUMs) which are determined by the amount of forage needed for a thousand pound animal for one month. Range revenues are based on authorized use which is a function of the actual number of grazing animals. The unit of measure for authorized use is a head month which is a grazing animal six months or older. The range revenues in the Forest Plan were incorrectly calculated by applying the 1986/1987 grazing fee against the number of AUMs instead of the amount of projected authorized use.

The 1986/1987 grazing fee used in the development of the Forest Plan was $1.35 per head month for cattle and horses and $0.27 per head month for sheep.

Fiscal year 1990 grazing fees are calculated at $1.81 per head month for cattle and horses and $0.36 per head month for sheep.

While the Forest provided forage for 41,000 AUMs, only 20,591 cattle and horse head months and 12,316 sheep head months for a total of 32,907 head months were billed in fiscal year 1990.

Evaluation of Monitoring Results

At this time the difference in revenues received and expected are not expected to change the Forest Plan's long-term goals and objectives. A detailed evaluation of revenues their effect on the Forest Plan's long-term goals and objectives will be conducted during the five year review scheduled for fiscal year 1992.

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, 1989 - September 30, 1990)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable effects determined by the Forest Interdisciplinary Team.

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.

Although 3 years of management under the Forest Plan is insufficient to identify firm trends developing from implementation of Forest Plan direction, concerns have been expressed.

Monitoring Results:

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 land owner.

Slate Creek Limestone Rock Quarry: People in the Slate Creek area have expressed concern regarding increased truck traffic on the road up Slate Creek. Local residents are also concerned about how the quarry will affect the visual quality of the Slate Creek area. The quarry is providing new jobs for people in the area.

Private Landowners: Grazing permittees and other adjacent landowners are concerned with the increasing numbers of elk that are using their land.

Wilderness Management: Greater enjoyment of wilderness by users can be achieved by making more funds available for wilderness management.

The upgrading of the Gospel Hump Wilderness portal road has been viewed in a positive light by the public.

Clear Creek Coordinated Resource Management Plan (CRMP): The CRMP process helps the public and other government agencies to be involved in land management planning where mixed ownership lands occur.

Travel Management: Certain segments of the public have strong feelings regarding travel management. In our area, retired citizens have a keen interest in how we manage all-terrain-vehicle use (ATV). Each District is working independently to meet its own community ATV desires. This may not be the most efficient way of managing ATV use.

The public appears confused regarding the practice of graveling Forest roads, then closing them. Some local residents are not in favor of paving road #234.

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).

Soil and Water Improvement Projects: Local residents have expressed concern that excessive sedimentation is created when improvement projects are under construction.

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.

Wall Creek Municipal Watershed Planning: The Clearwater Ranger District is working with the community of Clearwater to develop improved watershed management in the Wall Creek Municipal Watershed. In part this involves working through the State of Idaho's Adopt-a-Stream program to encourage local community participation.

Evaluation of Monitoring Results:

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.

The Forest needs to continue to monitor the effect on the local public of the Slate Creek Limestone Quarry.

The Forest needs to submit a pilot program for enhancing wilderness funding.

The Coordinated Resource Management Plan (CRMP) process and its successes need to be highlighted. Agencies, groups, and people need to be recognized for their CRMP work. The Forest needs to explore increasing an awareness of the CRMP process.

The Forest's District and Headquarters recreation technical staffs need to coordinate Forest travel management activities. The Headquarters needs to assume leadership to see that this coordination happens and that "state-of-the-art" management is implemented.

Representatives of timber industry feel that in making decisons regarding management of riparian areas, we should take into consideration the value of the timber resource in these areas.

The Forest needs to develop direction on how the demand for Pacific Yew bark for cancer research will be handled.

The Forest needs to develop a handbook that addresses how to minimize water quality impacts from water quality and fish habitat improvement projects.

Item 9:	Effects of Other Government Agencies' Activities on the National Forest
Frequency of Measurement:	Annually (October 1, 1989 - September 30, 1990)
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. 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 1990.

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 has been of benefit to the Forest in fighting Forest fires.

The Forest participated in two Local Working Committees under the Idaho Antidegradation program. This process resulted in adoption of site-specific Best Management Practices to provide additional protection for water quality in eight designated Stream Segments of Concern.

Idaho Department of Health and Welfare: This agency administers the Idaho Water Quality Standards. The Forest is bound to follow these standards through the Clean Water Act. During 1990, personnel from this Department participated on the Antidegradation Local Working Committees and were involved in numerous other projects on the Forest.

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 collection 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 process for outfitters and guides providing public services on National Forest System lands.

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.

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.

The Nez Perce Tribe provided personnel for the Nez Perce Forest Monitoring Team that monitored implementation of the Forest Plan in the Upper Red River and Slate Creek drainages. The Tribe's participation strengthened the Forest/Tribe working-together relationship and provided 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.

Idaho Department of Fish and Game: Big game winter surveys conducted by the Idaho Department of Fish and Game provided data for monitoring these populations. Department coordination efforts and involvement in grizzly bear detection monitoring provided a much needed update on grizzly bear status in the Bitterroot Evaluation Area.

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.

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 between the BLM and the Elk City Ranger District. Activities coordinated include timber, range, mining, recreation, and water monitoring.

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.

U.S. Fish and Wildlife Service: Consultation with the U.S. Fish and Wildlife Service was required in resolving the Shingle Creek peregine nest timber sale conflict. U.S. Fish and Wildlife Service consultation time delayed this timber sale only 2 months. Protection for the nest and future pairs using the site was confirmed through consultation efforts.

The Forest conducted a wolf howling survey with the U.S. Fish and Wildlife Service.

Idaho National Guard: The Idaho National Guard improved the Fish Creek recreation area by building a pole fence, trenching and burying electrical conduit for the picnic shelter, and widening and lengthening campground spurs. The Idaho National Guard also hauled approximately $10,000 worth of rock for current and future fisheries projects.

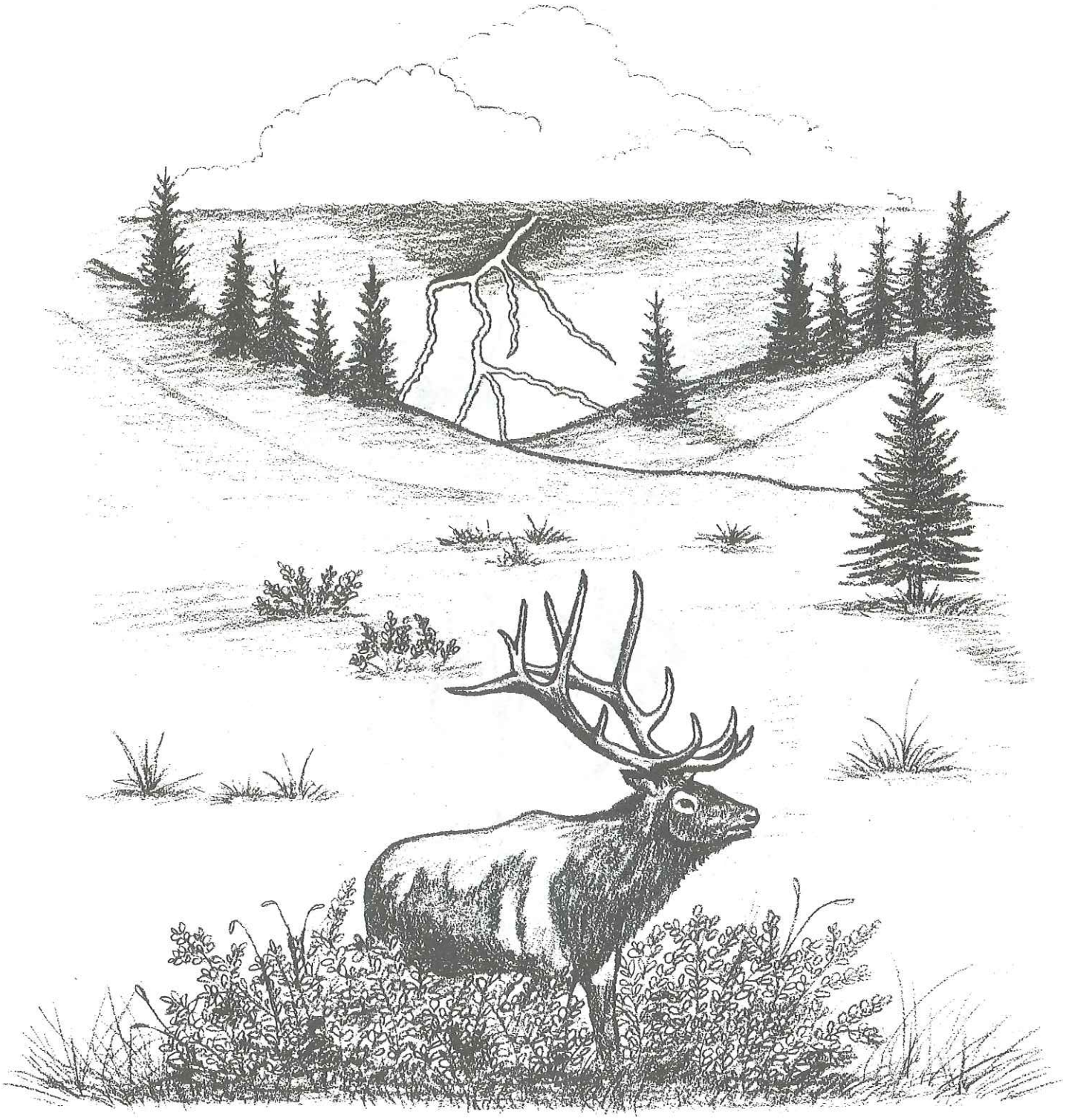
Idaho State Board of Aeronautics: The Board periodically inspects Moose Creek and Shearer Airfields.

Bonneville Power Administration (BPA) (Fisheries): In FY 1990, the Bonneville Power Administration continued to fund stream improvement/fish habitat structures on the Crooked River, Elk City, and Red River Ranger Districts. This is the 8th year of this funding.

University of Idaho: The College of Forestry, Wildlife, and Range Sciences completed a gray wolf survey on the Moose Creek and Selway Ranger Districts through a challenge cost-share project.

Evaluation of Monitoring Results:

As in previous years, in fiscal year 1990 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.



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 Foret 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. There is a need to develop and evaluate methods to monitor effects of timber management on riparian areas.

3. 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?

4. The consequences of repeated burning, and of maintenance of forest ecosystems in prolonged seral brush stages need to be evaluated.

5. Determine the relative effectiveness of fertilization compared to burning for improving wildlife habitat.

6. Determine and define corridor attributes needed to link old-growth stands.

7. Determine which type of riparian conditions to manage.

8. 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.

IV. PROPOSED AMENDMENTS

Following are proposals to amend the Forest Plan.

Management Area 11 Amendment

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 amend 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 this amendment proposal.

> 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."

Management Area 10 Amendment

As a result of Forest Plan monitoring reviews conducted this past summer, the Forest Interdisciplinary Team identified the need to amend MA 10 to incorporate direction on riparian management from the Record of Decision for the Forest Plan and the Plan itself into MA standards.

Management Area 21 Amendment

As a result of Forest Plan monitoring reviews conducted this past summer, the Forest Interdisciplinary Team identified the need to amend MA 21 to clarify goals for moose winter range and Pacific yew and redefine prescription standards. Refer to the Clear Creek Monitoring Report and the Clear Creek Action 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.

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. Eleven 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.

> "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.

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 chamicals.

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 1990. 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
	Spike Thompson *	Range
	Roger Ward *	Silviculture
	Liz Mathews *	Minerals
	Bill Fowler*	Facilities
	Kevin Elliott *	Implementation Analysis, Amendments, and Economics
	Brian Vachowski *	Recreation
	Donna Turnipseed	Cultural Resources
	Ollie Goldammer	Fire
	Pat Green *	Soils
	Gary Kellogg *	Land Management Planning Specialist and Forest Interdisciplinary Monitoring Team Leader
	Steve Blair	Wildlife
	Kathy Anderson	Fisheries
	Susan Kelly*	Engineering
	Laura Smith	Non-computerized Graphics
	Gayle Hauger	Technical Support
Salmon River Ranger District	Jerry Thompson*	Salmon River District Monitoring Coordinator
	Mike McGee*	
Clearwater Ranger District	Sue Paradiso *	Clearwater District Monitoring Coordinator
	Tim Belton	Wildlife
	Bud Tomlinson	Recreation, Fire Silviculture
	Mark Peterson	Timber
Red River Ranger District	Jeff Adams *	Red River District Monitoring Coordinator
Selway Ranger District	Jerry Bird *	Selway District Monitoring Coordinator
	Dennis Talbert	Wildlife and Fisheries
	Bill Wilkinson	Timber, Fire, Recreation, Trails
	Steve Bateman	Silviculture
Elk City Ranger District	George Regas *	Elk City District Monitoring Coordinator

In addition, the report was reviewed by the following individuals:

David E. Poncin	Acting Forest Supervisor
Dick Artley	Acting Timber, Range, and Minerals Staff Officer
Mike Cook	Forest Engineer, Contracting, Purchasing, and Communications Staff Officer
Joe Bednorz	Planning, Budget, and Information Systems Staff Officer
Steve Williams	Acting Recreation, Wilderness, Fire, and Lands Staff Officer
Phil Jahn	Fisheries, Wildlife, Watershed, and Soils Staff Officer
Bob Abbott	District Ranger, Salmon River Ranger District
Bud Tomlinson	Acting District Ranger, Clearwater Ranger District
Larry Lunde	Acting 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

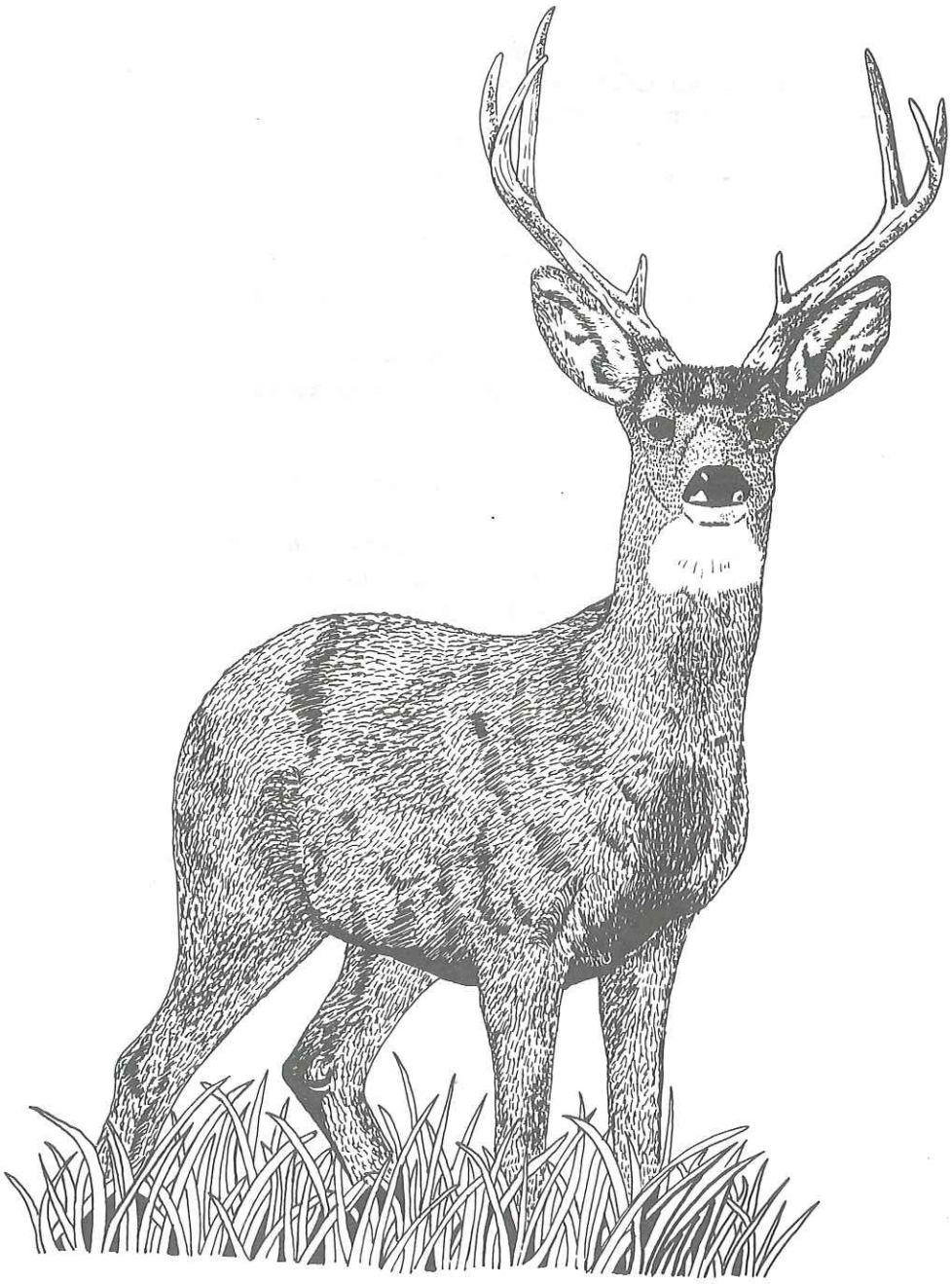
I have reviewed the annual Forest Plan Monitoring and Evaluation Report for fiscal year 1990 for the Nez Perce National Forest that was prepared by the Forest Interdisciplinary Team. I am satisfied that the Monitoring and Evaluation effort meets the intent of both the Forest Plan (Chapter V) and 36 CFR §219. I have also considered the recommendations of the Interdisciplinary and Management Teams on proposed changes to the Forest Plan and will process the necessary Amendments after appropriate notification.

This report is approved:

DAVID E. PONCIN
Acting Forest Supervisor

3/21/91
Date

APPENDIX



ACTION ITEMS

Action items are concerns that were identified during fiscal year 1990 monitoring that need to be acted upon. Action to resolve these concerns will be taken in 1991.

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.

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.

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.

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 "Guide to Timber Management in Riparian Areas" needs to be brought up to date and, after interdisciplinary review, formally adopted.

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.

- Determine what kind of Pacific yew stands and stand structure is important as moose habitat.

- Amend MA 21 and clarify objectives.

Item 6: The Forest should continue its comprehensive inventory of the Pacific yew stands/ structures that are determined to be important as moose habitat.

Item 7: Travel management needs to be better coordinated Forestwide.

Item 8: We need to improve our efforts to give verification of quality, amount, and distribution of snags during project planning.

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.

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.

Item 12: The Forest needs to improve its control of water quality impacts from water quality and fish habitat improvement projects.

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.

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.

Item 15: The Forest needs to place more emphasis on inventorying sensitive plants and biological evaluations.

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.

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 direction is in effect on the Forest.
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.	A field review was conducted on a recently reconstructed road in Spring 1990. This resulted in some modifications to sediment prediction done for this road as well as some changes in direction for how to model certain types of reconstruction. The Forest Hydrologist has been working with Districts on a case-by-case basis to provide consistency in modeling reconstruction during 1990. Documentation in a Forestwide Guide is in progress.

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 Forestwide. 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. Documentation in a Forestwide Guide is in progress.
Item 6: How do we modify the Timber Stand Management Record System (TSMRS) to track small inclusions of management areas such as riparian areas?	To date, the Northern Regional Office has been reluctant to modify TSMRS to facilitate monitoring inclusions, dual management area direction, or other methods to help with complex situations. The Forest needs to continue efforts for data base changes and solicit support from other Forests in the Region.

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?	No Forestwide direction has been provided to date. This task was not considered a high enough priority in FY 90 to warrant the time needed to adequately research the topic and prepare guidelines.
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 water quality guidelines have been applied to minerals projects on a case-by-case basis since release of the Plan. The writing of Forestwide direction is in progress.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1991—593-326/41,900 REGION NO. 10