SO WATERSHED

United States
Department of
Agriculture

Forest Service

Nez Perce National Forest Plan

FOURTH ANNUAL MONITORING AND EVALUATION REPORT

Fiscal Year 1991

INFORMATION REQUESTS/COMMENTS

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

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White Bird, ID 83554
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Nez Perce National Forest Headquarters
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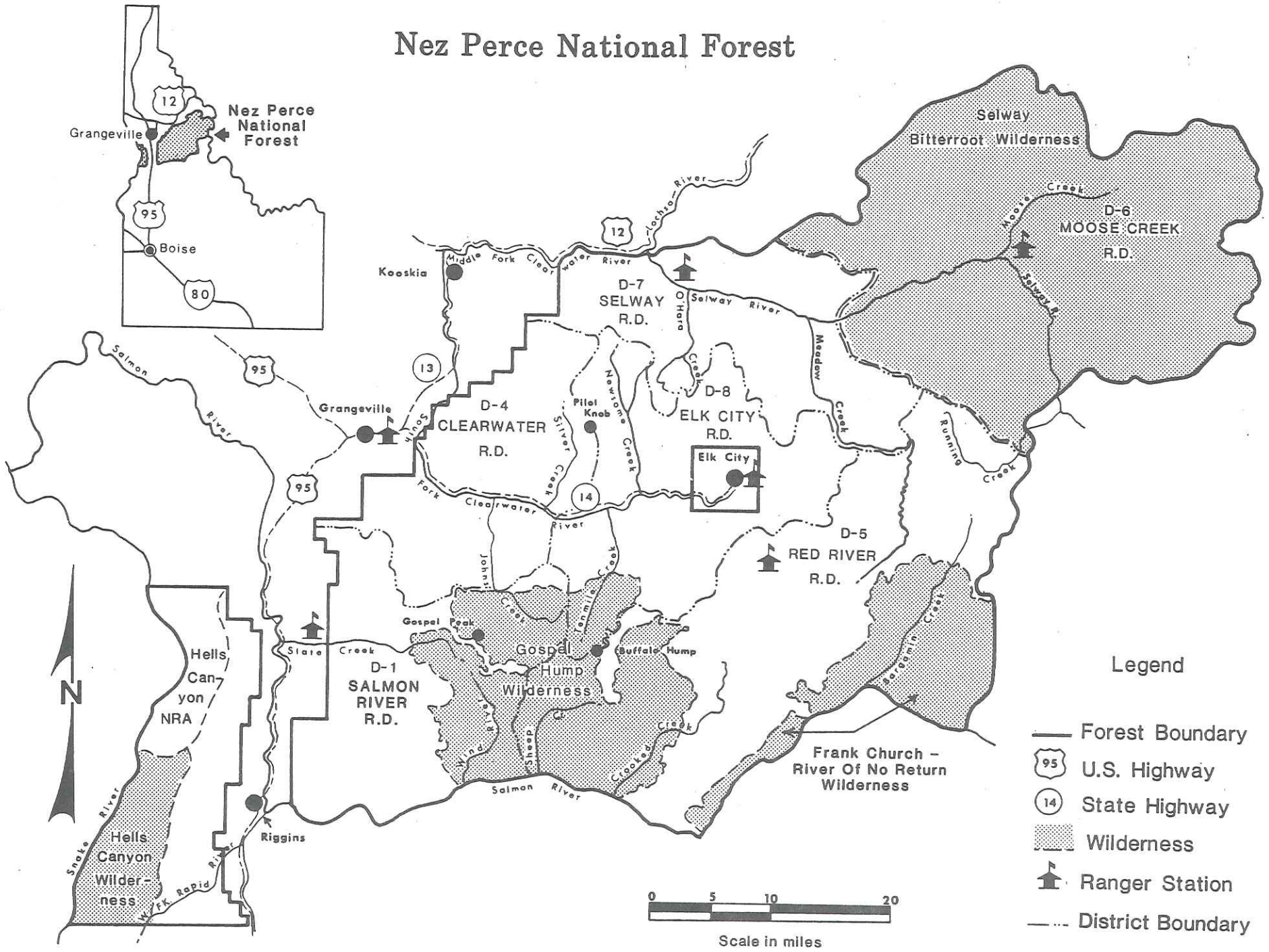
Nez Perce National Forest



April 1992

Dear Reader:

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

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

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

Sincerely,

Michael King

MICHAEL KING
Forest Supervisor

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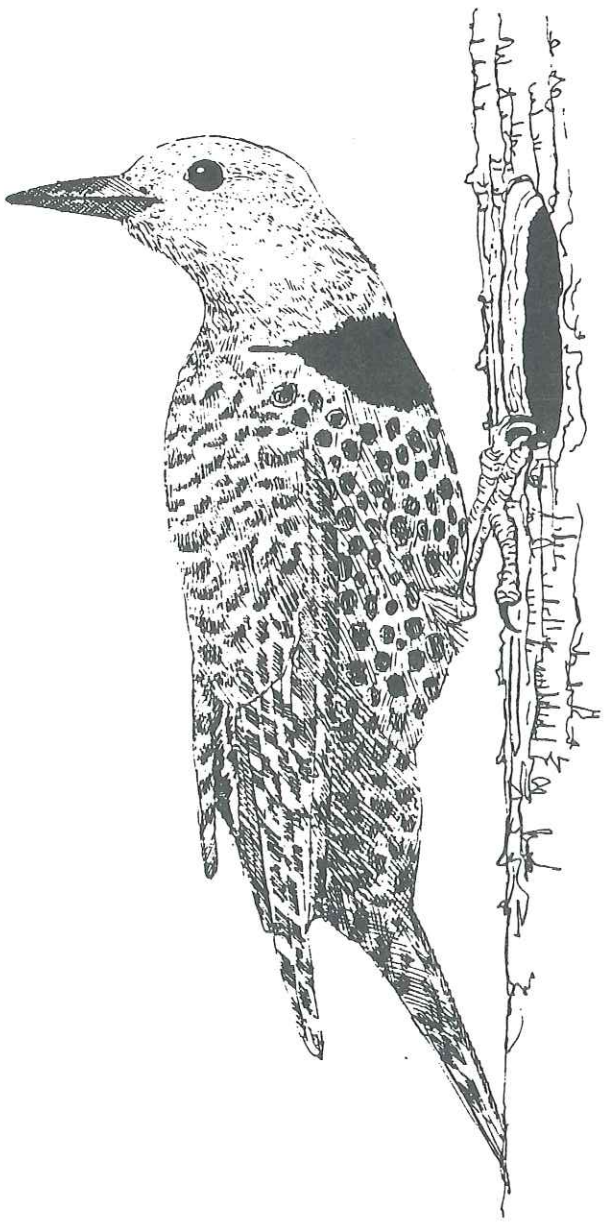


FOREST PLAN MONITORING AND EVALUATION REPORT

NEZ PERCE NATIONAL FOREST

FISCAL YEAR 1991

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 Proposed Amendments and Action Items sections.

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

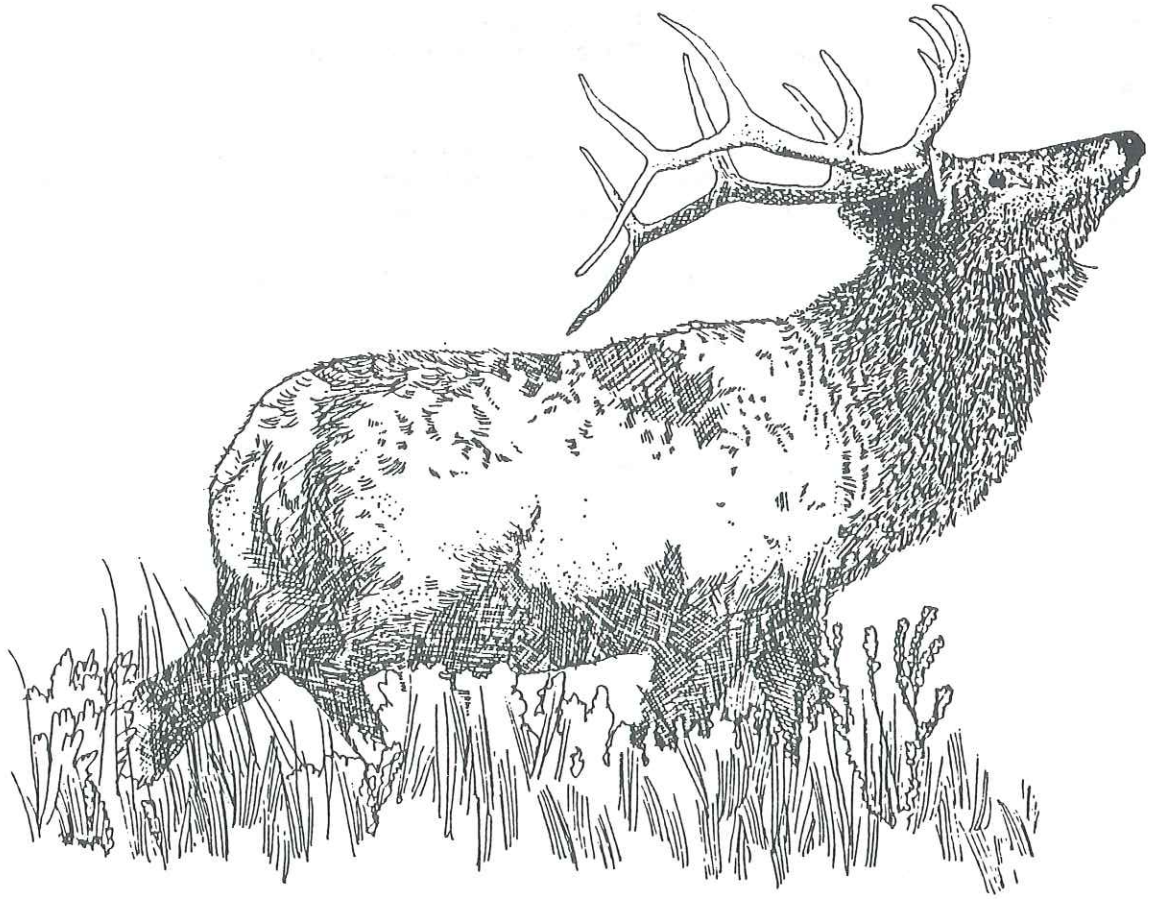
- items on which implementation may have a potentially significant effect;
- items where achievement of a relevant goal or objective is going to be difficult;
- items where projected effects may or may not occur as predicted;
- items where accomplishment of an objective or meeting of a standard determines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

Forest Plan management activities were monitored and evaluated as outlined in the Forest Plan Monitoring Requirements section of the Forest Plan, pages 6 and 7, Table V-1, and Appendix O to determine how well objectives were met and how closely management standards were applied. Numerous informal field reviews were also conducted on a variety of projects during fiscal year 1991. 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, 1990, through September 30, 1991. This is the fourth 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

Table 1 compares amounts of activities and outputs projected in the Forest Plan (Page II-9, Table II-1) with more recent projected schedules of work, with assigned targets for these schedules of work, and with actual accomplishments for these activities and outputs for fiscal years 1988-1991.

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

The columns labeled "Program Level 5" and "Program Level 2" show the most recent projected schedule of work for the various activities and outputs at two funding levels. These projections come from the Forest's Outyear Program which is completed each fall for the next two fiscal years by the Forest's Resource Specialists. Program Level 5 estimates the activities and outputs that could be accomplished at approximately Forest Plan funding levels. Program Level 2 estimates the activities that could be accomplished at a funding level similar to those actually received in past years.

Targets shown in Table 1 do not match projected activities and outputs because funding levels received by the forest have been less than full Forest Plan levels and because the cumulative effect of work completed in past years at these lower funding levels affects the amount of work that can be completed in the current year. Targets are assigned by the Regional Forester. Targets are based on the Outyear Program which was completed two years prior to the assignment of targets. They are adjusted to reflect the funding level actually received by the Forest.

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

Activity and output projections for the next three fiscal years (FY 1992 - 1994) are displayed in Table 2. This is the best estimate of the work that could be completed and outputs produced given full Forest Plan funding (Program Level 5) or funding at levels similar to that received in recent years (Program Level 2) from this point forward. The activities and outputs originally published in the Forest Plan are shown in the column labeled "Forest Plan."

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 a few years' 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 required under the National Forest Management Act's (NFMA) implementation regulations (CFR §219.10 (g)). During the five year review, the monitoring results for the first five years of monitoring will be evaluated. Recommendations will be made about how to change our operations to better implement the Forest Plan, about whether or not the projections of outputs made in the Forest Plan are still reasonable and the factors affecting the difference between the projections and the outputs actually achieved, and whether or not new issues and changed conditions warrant changing the Forest Plan.

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1988				Fiscal Year 1989			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
RECREATION										
T01 Developed/Dispersed Use	PAOT Days	323,570	323,570	328,000	324,000	349,000	783,000	628,000	510,000	510,000
Cultural Resource Inventory	Acres	8,000	8,000	---	---	3,753	8,000	---	---	2,600
WILDLIFE & FISH										
Wildlife Habitat Improvement										
Non-Structural										
Excess Timber Receipts	Acres	---	---	---	---	0	---	---	400	400
T03 Appropriated Funds	Acres	5,000	5,000	1,736	3,800	1,000	5,000	3,800	2,800	2,800
T26 KV Funds	Acres	---	100	---	---	2,040	100	100	5,358	5,765
Structural										
T29 Appropriated Funds	Structures	---	---	---	---	1	---	---	2	1
T32 KV Funds	Structures	---	10	---	---	3	10	5	23	16
Fish Habitat Improvement										
Non-Structural										
Challenge Cost Share Funds	Acres	---	---	---	---	4	---	---	15	15
Excess Timber Receipts	Acres	---	---	---	---	0	---	---	50	65
T04 Appropriated Funds	Acres	50	50	39	108	104	50	40	40	40
T27 KV Funds	Acres	---	10	---	---	0	10	50	12	2
Structural										
Challenge Cost Share Funds	Structures	---	---	---	---	0	---	---	50	50
T30 Appropriated Funds	Structures	350	350	274	54	44	350	300	300	322
T33 KV Funds	Structures	---	5	---	---	21	5	10	110	70
T&E Species Habitat Improvement										
Non-Structural										
T05 Appropriated Funds	Acres	64	64	---	---	0	64	32	---	0
T34 KV Funds	Acres	---	---	---	---	0	---	---	---	0
Structural										
T31 Appropriated Funds	Structures	---	2	1	1	1	2	1	2	1
T35 KV Funds	Structures	---	---	---	---	0	---	---	---	0
RANGE										
T06 Permitted Grazing Use[7]	AUM	43,000	42,000	42,000	43,000	32,801	43,000	43,000	43,000	25,022
Range Improvement										
T07 Non-Structural	Acres	500	---	---	370	0	500	0	0	0
T07A Structural	Structures	---	25	19	10	8	7	3	15	16
T08 Allotment Management Plans	Plans	---	5	3	---	0	6	4	---	0
T09 Noxious Weed Control	Acres	250	85	70	160	124	250	70	160	159
SOIL & WATER										
Soil & Water Resource Improvement										
Excess Timber Receipts	Acres	---	---	---	---	0	---	---	45	144
T10A (Appropriated Funds)	Acres	320	320	77	49	47	200	165	200	131
T10B (KV Funds)	Acres	---	25	---	---	45	25	25	---	93
T10 Soil Inventory	Acres	---	---	---	---	0	---	---	---	0

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1988				Fiscal Year 1989			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
MINERALS										
T12 Minerals Management	Actions [6]	500	600	410	453	318	530	410	477	464
TIMBER										
Acres Harvested										
Clearcut	Acres	---	---	---	---	1,440	---	---	---	1,583
Shelterwood/Seed Tree	Acres	---	---	---	---	1,332	---	---	---	961
Shelterwood/Seed Tree-Removal/Final Cut	Acres	---	---	---	---	283	---	---	---	1,063
Commercial Thin	Acres	---	---	---	---	142	---	---	---	446
Selection	Acres	---	---	---	---	24	---	---	---	13
Other	Acres	---	---	---	---	19	---	---	---	45
Acres Sold										
Clearcut	Acres	1,710	1,710	---	---	2,846	1,710	---	---	2,133
Shelterwood/Seed Tree	Acres	2,705	2,705	---	---	1,549	2,705	---	---	731
Shelterwood/Seed Tree-Removal/Final Cut	Acres	130	130	---	---	1,921	130	---	---	374
Commercial Thin	Acres	100	100	---	---	0	100	---	---	0
Selection	Acres	125	125	---	---	189	125	---	---	0
Other	Acres	---	---	---	---	55	---	---	---	23
T13 Volume Offered [9] (Total Volume)	MMBF	108	106	95	103	105	113	84	108	105
T14 Volume Offered (Salvage Volume)	MMBF	---	5	5	5	7	5	5	4	6
T14A Volume Offered (Non-Salvage)	MMBF	---	90	90	98	98	108	79	104	99
T28 Advanced Prep (NEPA)	MMBF	---	220	---	178	27	165	84	109	102
T15 Silvicultural Exams	Acres	120,000	120,000	35,000			109,000	62,000		
(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	1,610	1,270	1,227	1,180	860	530	975	931
T19 (KV Funds)	Acres	2,900	2,900	2,900	1,467	1,692	3,200	3,000	1,884	1,885
Site Prep - Natural										
T17 (Appropriated Funds)	Acres	200	200	100	---	0	80	60	100	132
T18 (KV Funds)	Acres	300	300	300	153	0	1,100	500	468	255
Timber Stand Improvement										
T20 (Appropriated Funds)	Acres	300	300	211	611	674	700	255	798	668
T21 (KV Funds)	Acres	700	700	500	222	273	300	300	217	365
PROTECTION										
T23 Fuels Management Activity and Natural Fuels	Acres	4,560	950	736	1,300	1,309	1,060	1,060	1,529	1,529
T44 Fuels Management-Brush Disposal	Acres	---	4,600	4,600	4,600	3,041	3,590	3,590	3,590	4,111

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1988				Fiscal Year 1989			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
LANDS										
T11 Land Exchange	Acres	25	80	59	60	0	25	20	0	0
T11A Special Uses	Cases	---	121	---	121	121	121	121	133	133
FACILITIES										
T22 Landline Location	Miles	---	35	27	23	25	35	23	22	22
T83 Trail Construction/Reconstruction	Miles	20	12	10	25	17	34	65	27	27
Excess Timber Receipts	Miles	---	---	---	---	0	---	---	5	5
T84 Trail Maintenance Levels I - III[10]	Miles	---	2,215	1,803	---	1,064	2,342	2,342	---	1,102
T81 Capital Investment Roads [11]	Miles	---	25	25	8	8	39	39	90	62
T82 Timber Purchaser Credit Roads [11]	Miles	---	36		92	92	63	63	130	127
T86 Road Maintenance										
Level 1	Miles	---	---	---	---	1,084	---	---	---	1,937
Level 2	Miles	---	---	---	---	599	---	---	---	614
Level 3-5	Miles	---	---	---	---	651	---	---	---	651
Total	Miles	2,221	2,221	---	---	2,334	2,175	2,175	---	3,202
Road Construction										
Arterial	Miles	3	3	---	---	0	3	---	---	0
Collector	Miles	24	24	---	---	4	24	---	---	7
Local	Miles	26	26	---	---	49	26	---	---	30
TOTAL	Miles	53	53	---	---	53	53	---	---	37
Road Reconstruction										
Arterial	Miles	2	2	---	---	2	2	---	---	0
Collector	Miles	13	13	---	---	17	13	---	---	102
Local	Miles	15	15	---	---	30	15	---	---	50
TOTAL	Miles	30	30	---	---	49	30	---	---	152
Access Management										
Permanently Closed	Miles	33	33	---	---	77	33	---	---	31
Unrestricted	Miles	17	17	---	---	34	17	---	---	4
Restricted	Miles	33	33	---	---	32	33	---	---	40
TOTAL	Miles	83	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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1990				Fiscal Year 1991			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
RECREATION										
T01 Developed/Dispersed Use	PAOT Days	783,000	783,000	597,648	545,000	545,000	783,000	571,590	638,000	637,980
Cultural Resource Inventory	Acres	8,000	4,000		---	3,753	4,000	---	---	4,286
WILDLIFE & FISH										
Wildlife Habitat Improvement										
Non-Structural										
T03 Appropriated Funds	Acres	5,000	5,000	3,500	3,500	6,898	5,000	3,120	3,000	1,903
T26 KV Funds	Acres	---	100	100	---	705	105	1,060	---	732
Challenge Cost Share	Acres	---	---	---	---	0	---	---	---	600
Structural										
T29 Appropriated Funds	Structures	---	---	---	---	10	---	---	---	71
T32 KV Funds	Structures	---	10	10	---	104	11	10	---	0
Wildlife Inventory										
Appropriated Funds	Acres	---	---	---	---	6,378	---	---	---	136,520
KV Funds	Acres	---	---	---	---	0	---	---	---	0
Challenge Cost Share	Acres	---	---	---	---	0	---	---	---	5,000
Fish Habitat Improvement (Inland & Anadromous)										
Non-Structural										
T04 Appropriated Funds	Acres	50	50	38	133	133	200	30	80	79
T27 KV Funds	Acres	---	11	10	---	5	12	11	---	0
Challenge Cost-Share	Acres	---	---	---	---	0	---	---	---	5
Structural										
T30 Appropriated Funds	Structures	350	350	266	257	257	200	212	127	119
T33 KV Funds	Structures	---	6	5	---	15	6	6	---	56
Challenge Cost-Share	Structures	---	---	---	---	92	---	---	---	5
Fish Inventory (Inland & Anadromous)										
Appropriated Funds	Acres	---	---	---	---	25	---	---	---	8
KV Funds	Acres	---	---	---	---	5	---	---	---	0
Challenge Cost-Share	Acres	---	---	---	---	30	---	---	---	0
T&E Species Habitat Improvement										
Non-Structural										
T05 Appropriated Funds	Acres	64	64	45	45	45	55	37	30	30
T34 KV Funds	Acres	---	---	---	---	0	21	20	---	0
Structural										
T31 Appropriated Funds	Structures	---	2	2	2	1	37	2	2	2
T35 KV Funds	Structures	---	---	---	---	0	5	5	2	2
Challenge Cost Share	Structures	---	---	---	---	0	---	---	---	15
T&E Species Inventory										
Appropriated Funds	Acres	---	---	---	---	11,600	---	---	---	1,375
KV Funds	Acres	---	---	---	---	43,000	---	---	100	100

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1990				Fiscal Year 1991			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
RANGE										
T06 Permitted Grazing Use[7]	AUM	43,000	43,000	43,000	43,000	32,907	43,000	41,000	43,000	23,602
Range Improvement										
T07A Non-Structural	Acres	500	500	---	0	0	500	0	0	0
T07 Structural	Structures	---	7	4	3	3	5	7	10	12
T08 Allotment Management Plans	Plans	---	5	2	---	0	6	3	2	0
T09 Noxious Weed Control	Acres	250	85	100	133	133	160	120	230	226
SOIL & WATER										
Soil & Water Resource Improvement										
Excess Timber Receipts	Acres	---	---	---	---	14	5	---	---	---	0
T10A (Appropriated Funds)	Acres	320	200	92	150	159	200	139	105	165
T10B (KV Funds)	Acres	---	25	25	37	36	25	25	0	85
T10 Soil Inventory	Acres	---	40,000	---	110,000	129,604	80,000	25,000	45,000	51,787
MINERALS										
T12 Minerals Management	Actions [8]	500	528	403	410	394	528	405	375	372

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1990				Fiscal Year 1991			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
TIMBER										
Acres Harvested										
Clearcut	Acres	---	---	---	---	1,675	---	---	---	1,995
Shelterwood/Seed Tree Seed Cut	Acres	---	---	---	---	846	---	---	---	936
Shelterwood/Seed Tree-Removal/Final Cut	Acres	---	---	---	---	103	---	---	---	116
Commercial Thin	Acres	---	---	---	---	349	---	---	---	98
Selection	Acres	---	---	---	---	0	---	---	---	127
Other	Acres	---	---	---	---	31	---	---	---	170
Acres Sold										
Clearcut	Acres	1,710	1,710	---	---	2,337	1,710	---	---	2,426
Shelterwood/Seed Tree	Acres	2,705	2,705	---	---	990	2,705	---	---	2,029
Shelterwood/Seed Tree-Removal/Final Cut	Acres	130	130	---	---	455	130	---	---	602
Commercial Thin	Acres	100	100	---	---	34	100	---	---	67
Selection	Acres	125	225	---	---	31	125	---	---	0
Other	Acres	---	---	---	386	---	---	---	---	386
T13 Volume Offered [9] (Total Volume)	MMBF	108	103	84	104	85	80	76	100	87
T14 Volume Offered (Salvage Volume)	MMBF	---	32	4	24	25	---	17	34	38
T14A Volume Offered (Non-Salvage)	MMBF	---	71	80	80	53	55	59	66	49
T28 Advanced Prep (NEPA)	MMBF	---	168	---	155	42	113	88	37	89
T15 Silvicultural Exams	Acres	109,000		83,000			109,000	32,000		
(Silvicultural Exam)	Acres	---	---	---	25,700	27,100	---	---	35,358	38,386
(Compartment Field Exams)	Acres	---	---	---	28,300	13,900	---	---	12,250	9,962
Reforestation										
Planting										
T16 (Appropriated Funds)	Acres	860	860	656	634	677	860	430	1,134	1,079
T18 (KV Funds)	Acres	3,200	3,200	3,200	1,612	1,685	3,200	3,200	1,639	1,769
Site Prep - Natural										
T17 (Appropriated Funds)	Acres	80	80	61	0	0	80	61	0	0
T19 (KV Funds)	Acres	1,100	1,100	1,100	267	0	1,100	1,100	46	0
Timber Stand Improvement										
T20 (Appropriated Funds)	Acres	700	700	532	780	735	700	469	566	594
T21 (KV Funds)	Acres	300	300	300	136	155	300	300	212	112
Excess Timber Receipts	Acres	---	---	---	---	0	---	---	279	305

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

Outputs and Activities [1]	Units [2]	Forest Plan [3]	Fiscal Year 1990				Fiscal Year 1991			
			Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]	Program Level 5 [4]	Program Level 2 [4]	Targets [5]	Accomplishment [6]
PROTECTION										
T23 Fuels Management Activity and Natural Fuels	Acres	1,060	1,060	806	1,674	1,674	1,060	750	1,470	1,596
T44 Fuels Management-Brush Disposal	Acres	3,590	3,590	3,590	2,784	2,784	3,590	3,590	4,860	3,619
LANDS										
T11 Land Exchange	Acres	25	25	19	60	0	25	41	40	728
T11A Special Uses	Cases	---	133	121	121	121	133	133	121	121
FACILITIES										
T22 Landline Location	Miles	---	35	25	25	25	35	20	23	23
T83 Trail Construction/Reconstruction	Miles	20	12	15	24	24	20	11	27	27
Excess Timber Receipts	Miles	---	---	---	---	6	---	---	---	0
Contributed	Miles	---	---	---	---	1	---	---	---	0
T84 Trail Maintenance Levels I - III[10]	Miles	---	2,705	1,788	957	1,088	2,342	2,553	1,100	1,261
T81 Capital Investment Roads	Miles	---	25	39	8	8	28	28	51	54
T82 Timber Purchaser Credit Roads	Miles	---	36	63	92	92	92	101	150	173
T86 Road Maintenance										
Level I	Miles	---	---	---	---	857	---	---	---	1,407
Level 2	Miles	---	---	---	---	409	---	---	---	490
Level 3-5	Miles	---	---	---	---	649	---	---	---	650
Total[12]	Miles	---	3,306	1,690	1,915	1,915	2,175	3,201	2,581	2,547
Road Construction										
Arterial	Miles	3	3	---	---	0	3	---	---	0
Collector	Miles	24	24	---	---	10	24	---	---	37
Local	Miles	26	26	---	---	39	26	---	---	47
TOTAL	Miles	53	53	---	---	49	53	---	---	84
Road Reconstruction										
Arterial	Miles	2	2	---	---	5	5	---	---	5
Collector	Miles	13	13	---	---	50	50	---	---	45
Local	Miles	15	15	---	---	36	36	---	---	84
TOTAL	Miles	30	30	---	---	91	91	---	---	144
Access Management[13]										
Permanently Closed	Miles	33	33	---	---	0	33	---	---	0
Unrestricted	Miles	17	17	---	---	0	17	---	---	2
Restricted	Miles	33	33	---	---	33	33	---	---	49
TOTAL	Miles	83	83	---	---	33	83	---	---	51
Closure Devices[13]										
Gates[14]	Numbers	---	---	---	---	13	---	---	---	3
Concrete Barriers	Numbers	---	---	---	---	6	---	---	---	4
Earth Berm Barriers	Numbers	---	---	---	---	0	---	---	---	1

Footnotes for Table 1

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

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

[3] Projections originally published in the Forest Plan.
[4] Projected schedule of work from the most recent Outyear Program, completed two years before the fiscal year displayed. Program Level 5 is approximately full Forest Plan funding. Program Level 2 is similar to the funding level received in recent years.
[5] Forest Target for this fiscal year.
[6] Actual units accomplished during this fiscal year.
[7] Accomplishments reported for grazing use are actual use. Targets shown are the same as permitted capacity. Actual use may be less than capacity for the convenience of the permittee.
[8] Includes administrative actions to process and administer operating plans, Notices of Intent, leases, and permits, as well as site-specific evaluations, hearings, and appeals.
[9] 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.
[10] Includes 305 miles of snowmobile trail,
[11] FY 1989 includes proposed contract and contract award figures.
[12] Includes purchaser maintenance.
[13] Transportation Inventory System (TIS) Report 11/16/90
[14] Most construction and reconstruction in FY91 was accomplished behind existing closure devices.

TABLE 2 - PROJECTED OUTPUTS AND ACTIVITIES AT TWO PROPOSED FUNDING LEVELS, FY 1992-1994

Target Item	Output or Activity	Unit of Measure	Forest Plan	FY 1992 Program Level 5	FY 1992 Program Level 2	FY 1993 Program Level 5	FY 1993 Program Level 2	FY 1994 Program Level 5	FY 1994 Program Level 2
RECREATION									
T01 (FI 09)	Developed/Dispersed Use	PAOT Days	---	783,000	563,760	783,000	783,000	783,000	783,000
	Cultural Resource Inventory	Acres	8,000	4,000	---	4,000	---	4,000	---
WILDLIFE & FISH									
T03 (FI 10)	Wildlife Habitat Improvement (APP)	Acres	5,000	5,000	3,500	3,300	700	3,300	550
T26 (FI 28)	Wildlife Habitat Improvement (KV)	Acres	---	105	105	870	580	870	580
T29 (FI 10)	Wildlife Habitat Improvement (APP)	Structures	---	0	0	2	0	2	0
T32 (FI 28)	Wildlife Habitat Improvement (KV)	Structures	---	11	11	7	5	7	5
T04 (FI 10)	Fish Habitat Improvement (APP)	Acres	400	200	146	210	160	210	113
T27 (FI 28)	Fish Habitat Improvement (KV)	Acres	---	12	12	14	10	14	10
T30 (FI 10)	Fish Habitat Improvement (APP)	Structures	---	200	165	150	110	150	115
T33 (FI 28)	Fish Habitat Improvement (KV)	Structures	---	6	6	14	10	14	10
T05 (FI 10)	T&E Species Habitat Improvement (APP)	Acres	64	55	45	64	22	64	22
T34 (FI 10)	T&E Species Habitat Improvement (KV)	Acres	---	21	21	4	3	4	3
T31 (FI 10)	T&E Species Habitat Improvement (APP)	Structures	---	37	5	2	2	2	2
T35 (FI 10)	T&E Species Habitat Improvement (KV)	Structures	---	5	2	25	5	25	5
RANGE									
T06 (FI 06)	Permitted Grazing Use	MAUM	43	43	41	42	42	42	42
T07 (FI 32)	Range Improvement (Structural)	Structures	---	7	7	10	10	10	10
T07A (FI 32)	Range Improvement (Non-Structural)	Acres	500	500	0	25	15	25	25
T08 (FI 06)	Allotment Management Plans	Plans	---	6	3	7	---	7	---
T09 (FI 07)	Noxious Weed Control	Acres	250	160	120	186	101	186	101
SOIL AND WATER									
T10 (FI 11)	Soil Inventory	Acres	---	80,000	55,000	80,000	40,000	80,000	42,000
T10A (FI 11)	Soil & Water Resource Improvement (APP)	Acres	320	200	130	200	86	200	100
T10B (FI 28)	Soil & Water Resource Improvement (KV)	Acres	---	25	25	63	63	63	63
LANDS									
T11 (FI 15)	Land Exchange	Acres	25	25	3	25	25	25	25
T11A (FI 13)	Special Uses	Acres	---	133	133	120	120	120	120
MINERALS									
T12 (FI 08)	Minerals Management	Actions	500	528	405	528	405	528	417
TIMBER									
T13 (FI 03,FI 30)	Program Volume (Total Volume)	MMBF	108	92	77	95	65	95	50
T14 (FI 30)	Program Volume (Salvage Volume)	MMBF	---	10	32	7	30	7	35
T14A (FI 03)	Program Volume (Non-Salvage)	MMBF	---	82	45	88	35	88	15
T28 (FI 03,FI 30)	Advanced Prep (NEPA)	MMBF	---	113	92	65	45	65	33
T15 (FI 05)	Silvicultural Exams	Acres	---	109,000	32,000	109,000	28,000	109,000	29,000
T16 (FI 20)	Reforestation - Planting (APP)	Acres	940	860	360	860	360	860	360
T17 (FI 20)	Reforestation - Site Prep (APP)	Aces	---	80	40	80	40	80	40
T18 (FI 26)	Reforestation - Planting (KV)	Acres	4,300	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
T20 (FI 21)	Timber Stand Improvement - (APP)	Acres	700	700	469	1,064	580	1,064	620
T21 (FI 27)	Timber Stand Improvement - (KV)	Acres	300	300	300	200	200	200	200
PROTECTION									
T23 (FI 02)	Fuels Management Activity and Natural Fuels	Acres	4,540	1,060	750	1,400	1,400	1,400	1,400
T44 (FI 31)	Fuels Management-Brush Disposal	Acres	---	3,590	3,590	3,500	3,500	3,500	3,500
FACILITIES									
T22 (FI 16)	Landline Location	Miles	20	20	15	15	15	15	15
T83 (FI 37)	Trail Construction/Reconstruction	Miles	---	20	16	20	16	20	16
T84 (FI 18)	Trail Maintenance Level 0 [1]	Miles	---	2,705	1,500	2,705	1,500	2,705	1,500
T81 (FI 36)	Capital Investment Roads	Miles	---	28	22	28	22	28	22
T82 (FI 38,FI 24)	Timber Purchaser Credit Roads	Miles	---	55	48	55	48	55	48
T86 (FI 17)	Road Maintenance	Miles	---	3,316	2,150	3,316	2,150	3,316	2,150

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

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

Table 3 compares predicted average annual costs at two program levels with budget allocations and actual expenditures for fiscal years 1988, 1989, 1990, and 1991. Program Level 5 is approximately full Forest Plan funding while Program Level 2 is similar to the funding levels received in recent years.

Table 4 displays updated projected annual costs for fiscal years 1992 - 1994 at the same program levels shown in Table 3.

Dollars have been adjusted to constant 1991 values for Tables 3 and 4.

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

Throughout this report various types of funding are mentioned. Much of our funding is obtained directly through Congressional appropriations. Some funding sources include trust funds that include deposits made to the Forest Service by timber purchasers 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 a portion of 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. Often, 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-Vandenberg (KV) Funds
These are funds deposited by timber purchasers used primarily for reforestation, timber stand improvement, and other resource activities to improve the future productivity of the renewable resources on timber sale areas.

Cooperative Work, Other (CWFS Other) Funds
CWFS Other funds are deposits received from cooperators for protecting and improving resources as authorized by trust agreements. These deposits are used for the construction, reconstruction, and maintenance of roads, trails, and other improvements, and for 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 accomplish additional resource management projects not accomplished with the initial appropriations. Excess timber sale receipts can be used for trail maintenance, trail construction, wildlife and fish habitat management, soil, water, and air management, cultural resource management, wilderness management, reforestation, and timber sale administration and management.

Challenge Cost Share Dollars

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

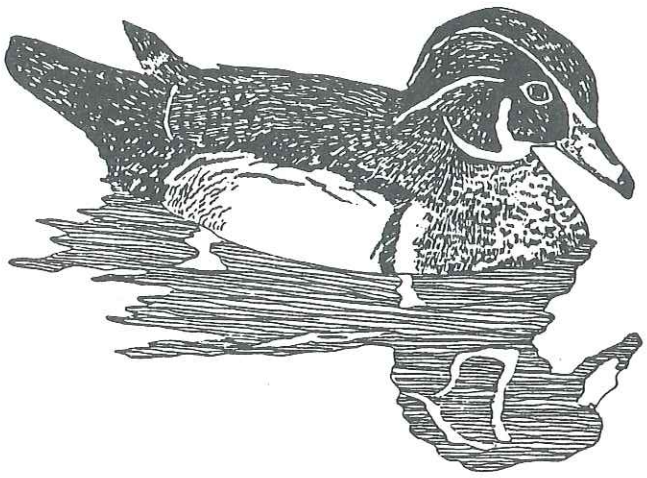


Table 3 - COMPARISON OF PROJECTED FUNDING LEVELS, ALLOCATIONS, AND EXPENDITURES

Funding Description	Fiscal Year 1988					Fiscal Year 1989				
	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend. as % of Level 5	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5
GENERAL ADMINISTRATION										
00 General Administration	2,138	1,617	1,850	1,881	88	2,138	1,612	1,477	1,715	80
RECREATION										
09 Recreation	750	568	602	602	80	985	742	649	722	73
WILDLIFE & FISH										
10 Wildlife and Fish	1,029	657	732	720	70	1,223	776	908	938	77
RANGE										
06 Range	266	239	235	245	92	312	233	206	257	82
07 Range (Noxious Weeds)	20	7	18	8	42	20	15	19	7	37
32 Range Improvement	22	17	21	28	129	22	16	21	24	110
SOIL & WATER										
11 Soil, Air, Water	590	444	343	308	52	583	390	416	381	65
MINERALS										
08 Minerals	374	299	283	287	77	378	285	259	319	85
TIMBER										
03 Timber Sale Prep/Administration	1,955	1,598	1,514	1,557	80	1,955	1,472	1,620	1,538	79
04 Timber Planning	132	99	236	298	226	131	99	153	180	137
05 Silvicultural Exams	383	289	389	347	91	383	289	459	476	125
20 Reforestation - Appropriated	624	454	728	741	119	624	469	672	528	85
21 Timber Stand Improvement - Appropriated	79	54	132	181	229	166	60	153	108	65
23 Tree Improvement	55	41	46	85	155	---	41	64	17	---
26 KV Reforestation	1,884	1,859	636	815	43	1,406	1,343	1,033	1,319	94
27 KV Timber Stand Improvement	181	178	49	130	71	74	88	55	61	83
28 KV - Other	122	120	211	307	252	506	449	254	258	51
29 Co-op Work, Forest Service, Other - Trust Fund	212	209	201	353	167	245	209	195	410	167
30 Timber Salvage Sales - Permanent Fund	101	120	121	103	102	117	99	143	192	165
PROTECTION										
01 Fire Protection	1,158	995	1,264	1,245	108	1,671	1,514	1,339	1,130	68
02 Fire Protection (Fuels)	48	37	103	88	185	71	53	49	46	65
19 Cooperative Law Enforcement	67	18	41	39	59	67	39	44	59	89
31 Brush Disposal (Perm. Fund)	501	493	528	386	77	581	494	462	458	79
LANDS										
13 Special Uses	100	62	52	62	63	96	72	49	41	42
15 Land Exchange/Ownership Status	73	32	43	42	59	68	51	31	63	94
16 Landline Location	182	138	131	138	76	182	113	121	94	51
43 Land Acquisition	12	5	41	24	192	8	6	16	643	7,725

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

Funding Description	Fiscal Year 1988					Fiscal Year 1989				
	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5
FACILITIES										
12 Facility Maintenance	241	219	196	202	84	241	160	157	156	65
17 Road Maintenance [1]	777	587	680	1,067	137	777	585	1,129	1,117	144
18 Trail Maintenance	384	289	518	482	126	607	457	462	438	72
33 Recreation Construction	81	74	72	64	80	152	116	160	134	88
34 Facility Construction - Forest Admin.,Other	161	159	8	50	31	160	159	7	1	1
35 Engineering Construction Support	2,090	1,580	1,446	1,459	70	2,103	1,561	1,595	1,643	78
36 Construction--Capital Investment Roads	3,004	2,960	550	550	18	3,001	6,646	4,330	1,154	39
37 Trail Construction/Reconstruction	242	183	359	358	148	414	183	340	288	70
38 Timber Purchaser Road Construction	2,165	4515	3,722	2,770	128	2,723	2,684	3,115	2,747	101
TOTAL	22,203	21,215	18,101	18,022	81	24,190	23,580	22,162	19,662	81

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

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

	Fiscal Year 1990					Fiscal Year 1991				
Funding Description	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5
GENERAL ADMINISTRATION										
00 General Administration	2,110	1,626	1,346	1,333	63	2,110	1,699	1,375	1,573	75
RECREATION										
09 Recreation	1,148	703	649	811	71	1,409	833	717	862	61
WILDLIFE & FISH										
10 Wildlife and Fish	1,466	984	1,031	1,031	70	1,737	1,117	1,005	1,051	61
RANGE										
06 Range	356	260	230	244	69	387	281	235	273	71
07 Range (Noxious Weeds)	36	29	18	9	24	38	22	19	10	26
32 Range Improvement	24	18	24	16	65	24	27	23	17	71
SOIL & WATER										
11 Soil, Air, Water	749	447	596	587	78	802	509	529	557	69
MINERALS										
08 Minerals	426		252	276	65	435	325	222	239	55
TIMBER										
03 Timber Sale Prep/Administration	2,293	1,580	1,822	1,541	67	2,239	1,661	1,837	1,302	58
04 Timber Planning	180	99	149	85	47	180	119	58	102	57
05 Silvicultural Exams	603	289	464	417	69	504	379	470	507	101
20 Reforestation - Appropriated	616	471	539	479	78	616	465	709	591	96
21 Timber Stand Improvement - Appropriated	164	125	173	130	79	164	108	101	107	65
23 Tree Improvement	53	42	112	59	112	53	54	111	450	849
26 KV Reforestation	1,334	1,339	1,367	1,175	88	1,334	1,322	1,175	1,044	78
27 KV Timber Stand Improvement	71	71	35	23	32	71	70	53	88	124
28 KV - Other	527	504	431	426	81	527	523	487	280	53
29 Co-op Work, Forest Service, Other - Trust Fund	228	234	184	211	93	229	226	206	306	134
30 Timber Salvage Sales - Permanent Fund	328	112	685	687	210	832	325	653	964	116
PROTECTION										
01 Fire Protection	1,945	1,393	1,048	1,078	55	1,664	1,710	1,277	1,242	75
02 Fire Protection (Fuels)	99	53	121	85	86	152	49	45	77	51
19 Cooperative Law Enforcement	66	50	58	55	84	66	49	57	56	85
31 Brush Disposal (Perm. Fund)	551	553	511	512	93	552	546	497	737	134
LANDS										
13 Special Uses	94	56	39	35	38	94	65	49	31	33
15 Land Exchange/Ownership Status	73	45	33	61	84	73	65	43	112	153
16 Landline Location	180	128	119	122	68	180	130	119	125	69
43 Land Acquisition	25	11	21	15	58	25	27	5	10	40

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

Funding Description	Fiscal Year 1990					Fiscal Year 1991				
	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5	Program Level 5 (M 1991$)	Program Level 2 (M 1991$)	Allocation (M 1991$)	Expenditures (M 1991$)	Expend as % of Level 5
FACILITIES										
12 Facility Maintenance[2]	238	116	145	124	52	238	179	154	160	67
17 Road Maintenance	929	607	629	1000	108	929	671	620	628	68
18 Trail Maintenance[3]	599	460	568	594	99	599	503	700	646	108
33 Recreation Construction	145	144	10	21	14	145	143	51	89	61
34 Facility Construction - Forest Admin.,Other	0	153	0	6	600	318	315	0	0	0
35 Engineering Construction Support	1,863	1,590	1,438	1,374	74	1,976	1,569	1,450	1,350	68
36 Construction--Capital Investment Roads	2,849	2,858	2,287	2,287	80	2,848	2,823	2,411	2,411	85
37 Trail Construction/Reconstruction	655	331	292	216	33	759	352	365	480	63
38 Timber Purchaser Road Construction	2,584	2,592	2,923	2,924	113	2,583	2,560	1,450	1,275	49
TOTAL	25,607	20,408	20,349	20,049	78	26,892	21,821	19,278	19,752	73

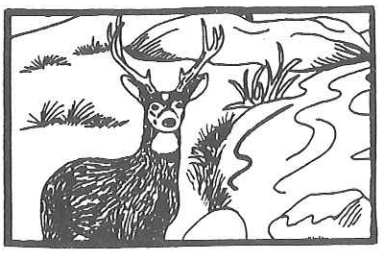
[2]Carryover included, FY 1991
[3]Includes Frank Church, FY 1991

TABLE 4 - FOREST PLAN FUNDING NEEDS, FY 1992 - FY 1994

Funding Item	Description	FY 1992 Program Level 5 (M 1991$)	FY 1992 Program Level 2 (M 1991$)	FY 1993 Program Level 5 (M 1991$)	FY 1993 Program Level 2 (M 1991$)	FY 1994 Program Level 5 (M 1991$)	FY 1994 Program Level 2 (M 1991$)
GENERAL ADMINISTRATION							
00	General Administration	2,110	1,672	2,245	1,538	2,245	1,566
RECREATION							
09 (T01)	Recreation	1,409	991	1,499	976	1,499	1,057
WILDLIFE & FISH							
10 (T03,T04,T05,T29, T30,T31,T34,T35)	Wildlife and Fish	1,737	1,073	1,848	1,013	1,848	1,057
RANGE							
06 (T06)	Range	387	270	411	288	411	288
07 (T09)	Range (Noxious Weeds)	38	21	41	19	41	19
32 (T07,T07A)	Range Improvement	24	16	64	23	64	23
SOIL & WATER							
11 (T10,T10A)	Soil, Air, Water	802	489	853	465	853	480
MINERALS							
08 (T12)	Minerals	435	312	462	250	462	288
TIMBER							
03 (T13,T14A,T28)	Timber Sale Prep/Admin	2,293	1,560	2,472	1,389	2,472	1,470
04	Timber Planning	180	114	276	175	276	186
05 (T15)	Silvicultural Exams	504	364	536	336	536	346
20 (T16,T17)	Reforestation-Appropriated	616	364	655	336	655	336
21 (T20)	Timber Stand Improvement - Appropriated	164	104	175	96	175	102
23	Tree Improvement	53	52	58	48	58	51
26 (T18,T19)	KV Reforestation	1,334	1,334	1,096	1,096	1,096	1,096
27 (T21)	KV Timber Stand Improvement	71	71	481	481	481	481
28 (T26,T27,T32,T33)	KV - Other	527	527	747	747	747	747
29	Co-op Work,Forest Service,Other	229	229	278	278	278	278
30 (T13,T14,T28)	Timber Salvage Sales	832	832	481	481	481	481
PROTECTION							
01	Fire Protection	1,664	1,674	1,832	1,832	1,832	1,832
02 (T23)	Fire Protection (Fuels)	152	47	93	93	93	93
19	Cooperative Law Enforcement	65	47	70	58	70	58
31 (T44)	Brush Disposal (Perm. Fund)	552	552	478	478	478	478
LANDS							
13 (T11A)	Special Uses	94	57	100	58	100	58
15 (T11)	Land Exchange/Ownership Status	73	73	78	62	78	67
16 (T22)	Landline Location	180	125	192	115	192	115
43	Land Acquisition	25	26	27	10	27	24
FACILITIES							
12	Facility Maintenance	238	161	253	149	253	154
17 (T86)	Road Maintenance	929	686	988	634	988	673
18 (T84)	Trail Maintenance	599	615	925	689	925	661
33	Recreation Construction	145	145	139	139	139	139
34	Facility Construction - Forest Admin.,Other	219	219	245	245	245	245
35	Engineering Construction Support	2,019	1,416	1,941	1,355	1,941	1,355
36 (T81)	Construction--Capital Investment Roads	2,849	2,713	2,739	2,739	2,739	2,739
37 (T83)	Trail Construction/Reconstruction	811	325	830	830	830	830
38 (T82)	Timber Purchaser Road Construction	2,583	2,461	2,484	2,484	2,484	2,484
	TOTAL	26,942	21,787	28,092	22,005	28,092	22,357

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

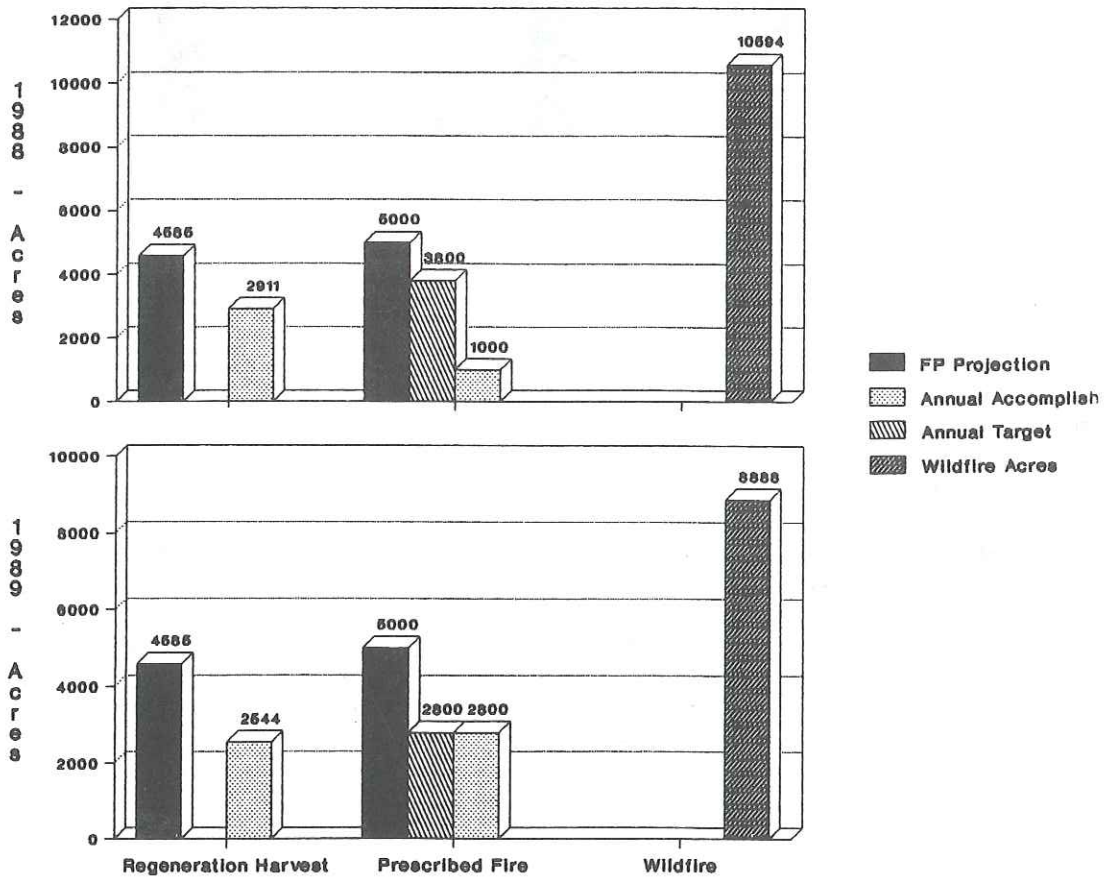
Item 1c:	Big-Game Habitat Carrying Capacity
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Significant trend deviations (evaluated at 5-year intervals) from planned or expected forage-generating activities or events (timber harvest, prescribed fire, and wildfire).

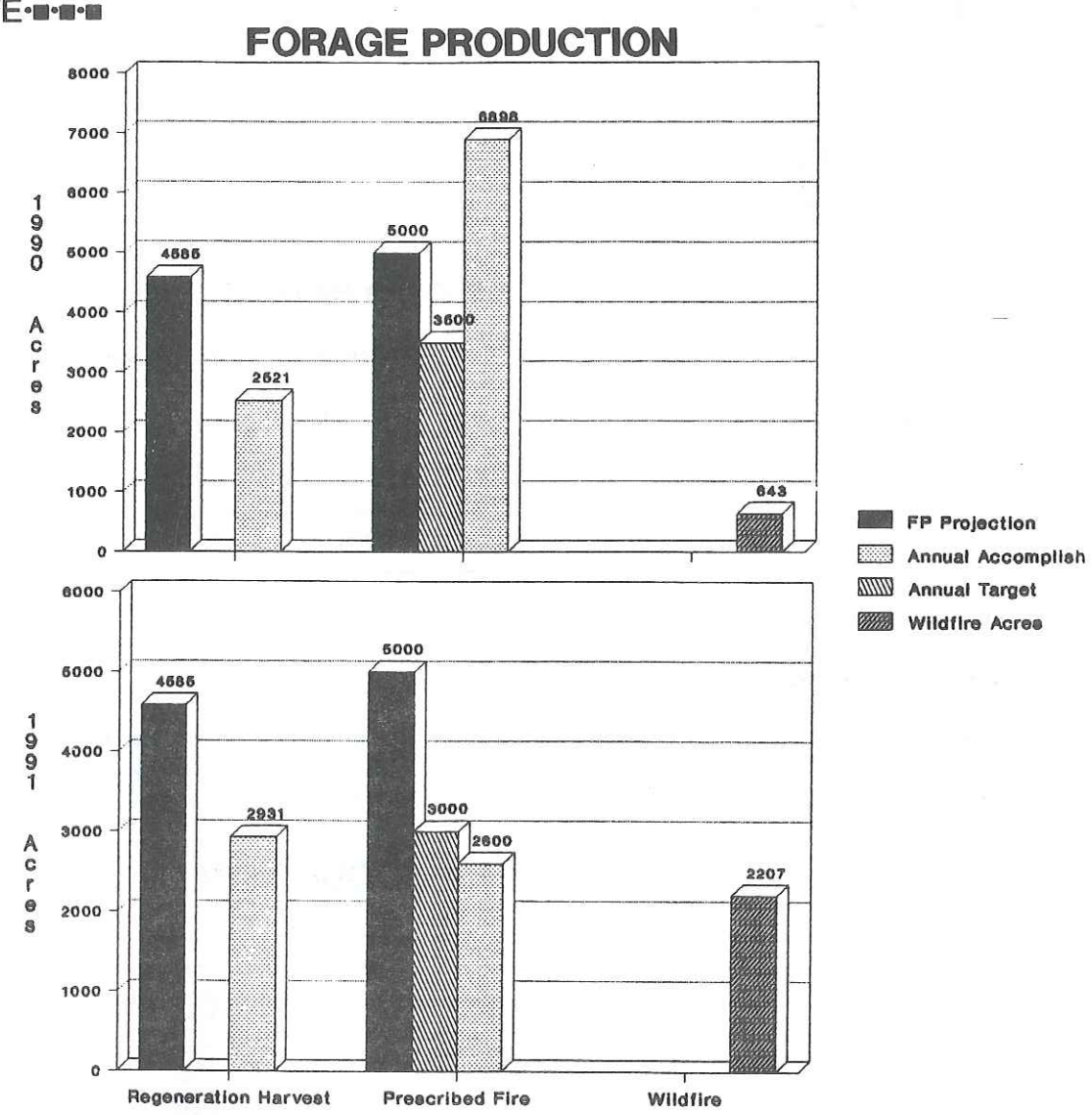
Forage Production

Monitoring Results:

Acres of timber harvest, acres burned by prescribed fire, and acres burned by wildfire are used as indices of forage production. Each of these variables is given for the Forest Plan projection, the FY 91 target, and FY 91 accomplishments in the following graph. FY 88-90 projections, targets, and accomplishments are also shown for comparison.

FORAGE PRODUCTION





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: 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 one land exchange. 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.

Analysis and Forestwide evaluation of attainment of current summer elk habitat condition relative to existing Forest Plan objectives continues. A significant number of the objectives established during Forest Planning are proving to be difficult or impossible to meet in the short term and, together with a variety of other factors, are complicating the attainment of other Forest outputs such as timber.

All analyses are not yet complete, but based on analyses completed to date, about 50 percent of the Selway, 30 percent of the Red River, 17 percent of the Elk City, and 22 percent of analyzed areas of the Salmon River Ranger District are currently below the objectives originally assigned by the Forest Plan.

RESULTS OF PROJECT EVALUATION AREAS

FY 91 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
Swiftwater T.S.	50	75							52	82							51	81						

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 assessment (EA) is achieved.

The Bad Medicine timber sale (Clearwater Ranger District) was randomly selected in '91 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 Bad Medicine sale was found to be consistent with the projected habitat effectiveness in the EA. Due to application of prescribed access management actions, elk had begun to use portions of the area before the sale was closed. The District was commended for on-the-ground adjustments that improved habitat effectiveness.

Evaluation of Monitoring Results:

Compliance with summer elk objectives relative to land-disturbing decisions and activities implemented in FY 91 has been very good. Based on interim results of a Forestwide effort to assess current summer habitat conditions relative to Forest Plan objectives, some problems have been encountered: (1) some objective areas are too small in acreage to be evaluated with the model; (2) some objectives are not being met; and (3) land management adjustments necessary to meet existing objectives in some areas will constrain recreation access more than anticipated and may limit some future harvest opportunities. Since elk summer objectives are viewed as management standards, timber harvest opportunities that rely on new roading are to some degree dependent on the Forest meeting or exceeding these objectives before further harvest can occur.

Compliance with Summer Elk Effectiveness Objectives

	FY 1988	FY 1989	FY 1990	FY 1991
Number of elk evaluation areas monitored	8	30	25	11
Number of elk evaluation areas below effectiveness objectives	2	7	7	2
Percent of monitored areas at or above elk effectiveness objectives	75	77	72	82

Moose Winter Range

Monitoring Results:

In FY 91, six project activities involved areas with moose winter habitats. During FY 91, some 146 acres of MA 21 were harvested. Excavator piling was used on 48 of these acres to protect remaining yew from fire. Though two decisions were signed in FY 91 that potentially involved moose winter habitats, no acres of moose winter habitat were planned for timber harvest in the future by these decisions.

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. The Forest will continue working with the Idaho Department of Fish and Game as well as the Nez Perce Tribe to better define what conditions and how much of these conditions are necessary for moose populations.

Demand for taxol, from the bark of yew wood, continues to rise. Forest managers continue to seek ways to meet the demand for taxol extraction, while meeting the needs of moose. A clear, well-defined definition of MA21 will help resolve future uncertainties.

Item 1d:	Nongame Habitat
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 seven project activities that were planned or initiated in FY 91 involved old-growth standards. 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.

Snag Habitats

Monitoring Results:

There were a total of nine projects initiated in FY 91 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 nine ongoing projects. The quality, amount and distribution of snags within a project area boundary were inspected or verified for 22 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 improving. 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. Concerns are being raised about the loss of snags to fuelwood cutters in some areas, despite efforts to retain them during timber sale administration. Efforts to emphasize the value of snags to wildlife may need to be improved and perhaps related to in firewood permits. Review of the Bad Medicine sale by the Nez Perce Tribe raised the suggestion that nonmerchantable slash be decked outside sale areas for fuelwood cutters to reduce pressure on snags and discourage public travel inside sale areas.

Threatened and Endangered Species Habitats

Monitoring Results:

Bitterroot Evaluation Area

Results of habitat evaluation for the grizzly bear yielded a "will support viable populations" conclusion by the U.S. Fish and Wildlife Service grizzly bear technical team in October. In January 1992, the Interagency Grizzly Bear Committee agreed to pursue grizzly recovery in the Bitterroot mountains. They will appoint a local interagency working group to develop a plan addressing recovery, including a public involvement

process. The specific "how-to's and time lines" for managing for recovery will be recommended by this working group.

Management and protection of threatened, endangered, and sensitive species habitats were evaluated in NEPA documents and through the biological evaluation process. In FY 91, no cases of "formal consultation" were required.

Evaluation of Monitoring Results:

Monitoring results show that no projects were approved in FY 91 which would result in deterioration of habitats for the gray wolf, grizzly bear, bald eagle, or peregrine falcon.

Forest Service Sensitive Species

Monitoring Results:

The Forest accomplished cost-shared inventories and status surveys for the Townsend's big-eared bat, candystick (plant), and Pacific dogwood. A species management guide was developed for the broad-fruit mariposa lily. In addition, numerous other project clearances were done for other sensitive plants Forest-wide.

Sightings of the wolverine, mountain quail, and black-backed woodpecker were documented. New locations of candystick, Payson's milkvetch, broad-fuit mariposa lily, Idaho douglasia, and evergreen kittentail were found.

Evaluation of Monitoring Results:

Habitat management of sensitive species continues to ensure their population viability.

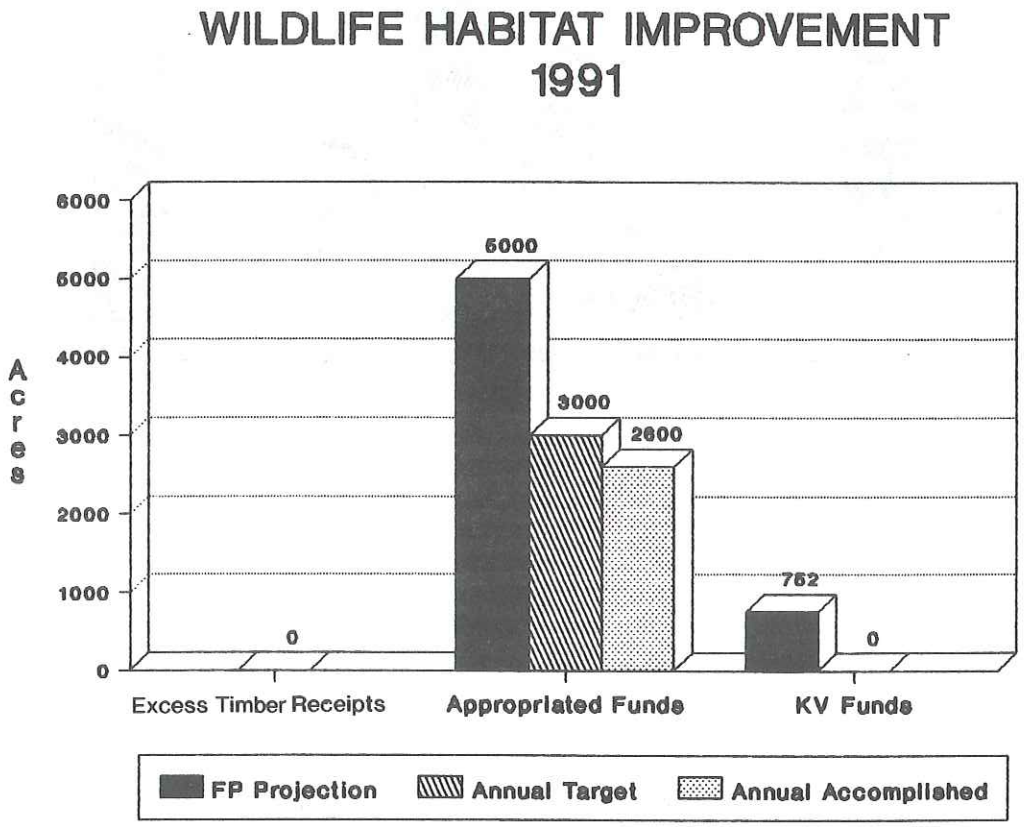
Since inception of the Forest Plan, the detailed consultations and analysis process, coupled with increased numbers of sensitive species (10 animals, 4 fishes, 31 plants) has increased workloads and may extend biological coordination lead times for all land-disturbing activities.

Item 1e:	Acres of Big-Game Habitat Improvement
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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.

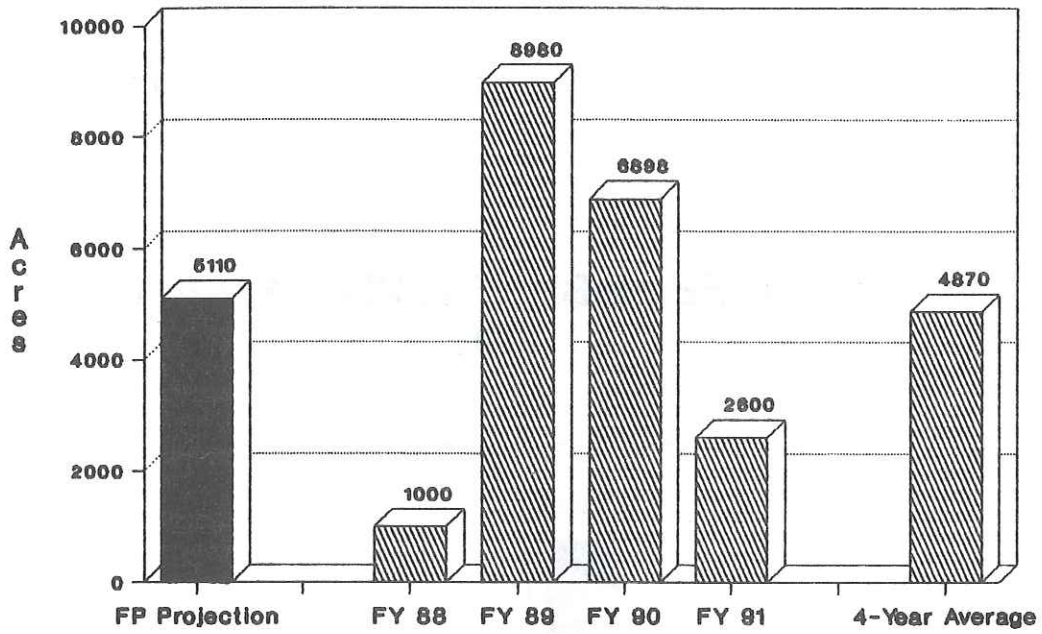
Wildlife Habitat Improvement

Monitoring Results:

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



WILDLIFE HABITAT IMPROVEMENT CUMULATIVE 1988 - 1991



Evaluation of Monitoring Results:

Despite a target of 3000 acres of big game winter range burning, only 2600 acres were accomplished in FY 91. Planned spring burns on the Red River Ranger District were prevented by a cold, wet spring. Three hundred acres were treated on the Clearwater Ranger District. The Selway burn accomplished its objective and more. Most of the additional acreage burned will be counted toward FY 92 objectives because the fire burned well into October. This fire eventually became a "wildfire" and consumed some 4500 acres in all. Given the Forest Plan objective of treating 5000 acres per year (average), the FY 91 attainment shortfall brings the cumulative 4-year shortfall to 6702 acres using appropriated funds.

A cooperative monitoring effort with the University of Idaho and co-funded by the Rocky Mountain Elk Foundation was initiated in FY 91. Benefits of the burns to elk, evaluated from pellet group data, indicated that the most recent burn sites received significantly higher use than older burn sites. Summer-fall burns have produced habitat which receives preferential use over older vegetation. Southfacing slopes received the greatest elk use, particularly between 3,000 and 4,500-foot elevations. Elk preferred burned sites as much as six times more than unburned areas. Higher quality and quantity of forage on burned sites was considered responsible for increased use by elk. Data on shrub use and soil impacts is currently being analyzed. A copy of the pellet group data analysis is available at the Nez Perce Forest headquarters and Selway Ranger District office.

A preview of future winter range burn acreages reveals that few of the larger, low-cost brushfields remain. Future treatments will require greater risk of wildfires, much higher unit costs, and in some cases may require tools other than fire to accomplish winter range objectives. Assuming that habitat improvement budgets remain constant, treatment acreages may begin to fall in future years.

Item 10:	Population Trends of Indicator Species--Wildlife
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 16A and 17 were surveyed by Idaho Department of Fish and Game (IDFG) personnel, using the "Elk Sightability" method developed by the IDFG. Results are listed below:

	Elk Population Estimated by Sightability*		Bull:Cow Ratios (Bulls per 100 Cows)	
IDFG Big Game Hunt Units	1988	1991	1988	1991
Unit 16A	1028 +/- 261	961 +/- 201	35.4 +/- 14.3	23.3 +/- 8
Unit 17	4506 +/- 535	3783 +/- 279	---	---

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

Evaluation of Monitoring Results:

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

Unit 16A - No significant differences were found between 1988 and 1991 estimates for either total population or calf:cow ratios. Bull:cow ratios for FY 91 were significantly less than results from 1988 surveys.

Unit 17 - Total population estimates for 1991 were significantly less than 1988 estimates. No significant differences in bull:cow ratios occurred relative to 1988 estimates. Significant differences may be attributed to weather conditions, the model, or real population differences.

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. In Units 16A and 17, 8 and 20 moose were seen, respectively. Moose continue to be seen in areas where they were formerly thought absent.

Evaluation of Monitoring Results:

Limited information suggests that moose populations are stable or 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. Forty-eight sheep were counted in Unit 17, but none were seen in 16A during elk surveys. None were seen along the lower Selway near the 1989 release sites.

Evaluation of Monitoring Results:

Available 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 by the U.S. Fish & Wildlife Service (USFWS) as "probable." Due to inadequate funding, the USFWS has discontinued the scoring of wolf reports since January 1990. Reports taken in FY 91 by Forest personnel included 11 sightings and five reports of howling or sign. Of the 11 sightings, at least six are thought to be of the Selway animal which was captured in July and later confirmed as a wolf/dog hybrid. One other sighting report also yielded two photos (from Big Mallard Creek) which were enlarged and examined by Steve Fritts (USFWS wolf expert). The quality of the photos was insufficient to make a reliable determination.

A volunteer wolf howling survey was conducted in and adjacent to the Cove and Mallard areas. Subsequent surveys along Noble Creek and Rhett Creek, Pilot Knob, Buffalo Gulch, and between Sawyer Ridge and Buck Meadows were done, but yielded no wolf responses. Coyotes and several owl species responded fairly commonly.

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 an ongoing 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, as were coyotes, elk, deer, and other animals, but no grizzlies were photographed.

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:

Four birds were successfully hacked in 1991 from the Graves Point Lookout site. "Hacking" involves the fostered release of captive young birds to a natural environment. One additional bird fledged during bad weather and was assumed lost. The proposed Pilot Knob area hack site was not used because of difficulty in obtaining birds. In addition, two subadult peregraines were seen at the hack site. Another attempt to establish a Pilot Knob area hack site will be made in FY 92. The successful Graves Point release for FY 91 marked the 24th peregrine falcon successfully hacked from the Graves Point site.

The first natural peregrine nest in north Idaho (Shingle nest) produced and fledged two young in FY 91 which, when added to the three fledged last year and the other 24 hacked since 1988, totals 29 birds successfully reintroduced to the local environment since inception of the Forest Plan. Two subadults were seen visiting the Graves Point site during the FY 91 hack efforts.

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 91 winter survey routes within or along the perimeter of the Forest yielded eight mature and five immature birds. Transects sampled and the yearly counts from 1984 and 1986-1991 are shown below.

Survey Routes	Year	84	86	87	88	89	90	91
Salmon River: White Bird-Vinegar Cr.	Adult	1	2	1	2	2	5	3
	immature	0	0	0	1	0	0	0
S.F. Clearwater: Farrens Cr-Crooked R	Adult	3	0	1	2	0	0	1
	immature	1	0	0	0	0	0	1
M.F. Clearwater: Clear Cr-Selway	Adult	9	6	5	10	4	1	4
	immature	0	2	2	2	3	1	4
Total		14	10	9	17	9	7	13

Survey efforts are a part of the National Wildlife Federation's Annual Bald Eagle Winter Survey, in which District biologists take part.

Evaluation of Monitoring Results:

Bald eagle populations appear to remain relatively stable based on winter counts.

Pileated Woodpecker, Snag Dependents, and Other Forest Birds

Monitoring Results:

Five permanent survey routes totalling 12 miles were sampled using look/listen transects during FY 91. 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 4 years of data is displayed below for pilated woodpeckers. The most common species observed during the '91 surveys were Townsend's warbler, Oregon junco, Audubon's warbler, and red-breasted migrants, including western tanager, varied thrush, Townsend's warbler, and Hammond's flycatcher.

Pileated Woodpecker Relative Index of Abundance

Year	1988	1989	1990	1991[1]
Totals	9	9	6	13

[1]Initial review and interim feedback from current methods suggest that sample sizes and sampling replications may need to be increased to improve data reliability.

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:

Four track count survey routes for fishers and pine marten, totalling 100 miles, were surveyed during 1991. Twenty sets of tracks were counted on 100 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. Two sets were thought to be pine marten, two were fisher, and 16 were indistinguishable. In addition, three sets of fisher tracks were documented outside the survey routes on the Clearwater Ranger District. One sighting of a fisher was made in the upper end of Siegel Creek.

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:

Only two sightings of goshawks (Red River and Moose Creek Ranger Districts) were recorded in FY 91. Collection of active nest territory data has not begun because no nest locations have been identified 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. Since inception of the Forest Plan, biologist have begun to realize that the time, money, and personnel resources to adequately monitor this species will be far greater than originally anticipated.

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, 1990 - September 30, 1991)
Reporting Period:	2 to 5 years (FY 1989 to 1992)
Variability Which Would Initiate Further Evaluation:	Major or significant refinements to wildlife models will be determined through coordination with other agencies including the Nez Perce Tribe and should be supported by research findings. Local biologist judgment and experience is currently being used to supplement and temper the elk guidelines model in specific management situations as recommended in the guidelines.

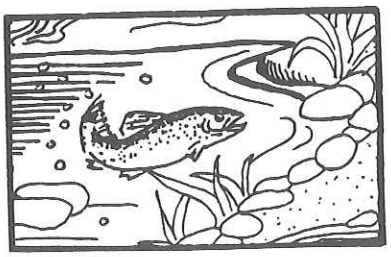
Discussion:

Efforts to develop a method of validating the North Idaho elk effectiveness model have discovered that the task will require significantly more dollars and personnel time than was originally anticipated. Due to inadequate funding and personnel resources, long-term pellet transects were not established in FY 91. The Idaho Department of Fish & Game (IDFG) has recognized that bull:cow ratios and bull age class objectives

are not being met in all areas. Road-related factors affecting bull elk vulnerability issues are not addressed by the current elk model. The IDFG is developing a vulnerability model.

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, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	+/- 10% of Plan targets within a decade.

Monitoring Results:

Fish habitat improvements are reported as the number of structures and acres of improvements accomplished. Fish habitat structures include structures used to provide fish cover, feeding, and rearing habitat (e.g., log check dams, rock v-berms, boulder clusters, stumps, side channel improvements), to improve fish habitat by reducing bank or channel erosion (e.g., gabions, log deflectors, rock riprap), and to provide or improve fish passage (e.g., fish ladders). Acres of habitat improvement refers to nonstructural habitat improvements that benefit fish. This includes the improvement or establishment of spawning and rearing habitat through gravel placement or cleaning, stream bank stabilization, riparian vegetation restoration, and the number of acres of fish habitat made available to fish by removal of barriers to fish movement.

Beginning in fiscal year 1990, habitat improvement dollars allocated to the Forest were broken out for anadromous and inland fisheries; prior to 1990 these funds were combined. In 1991, the Forest was again 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.

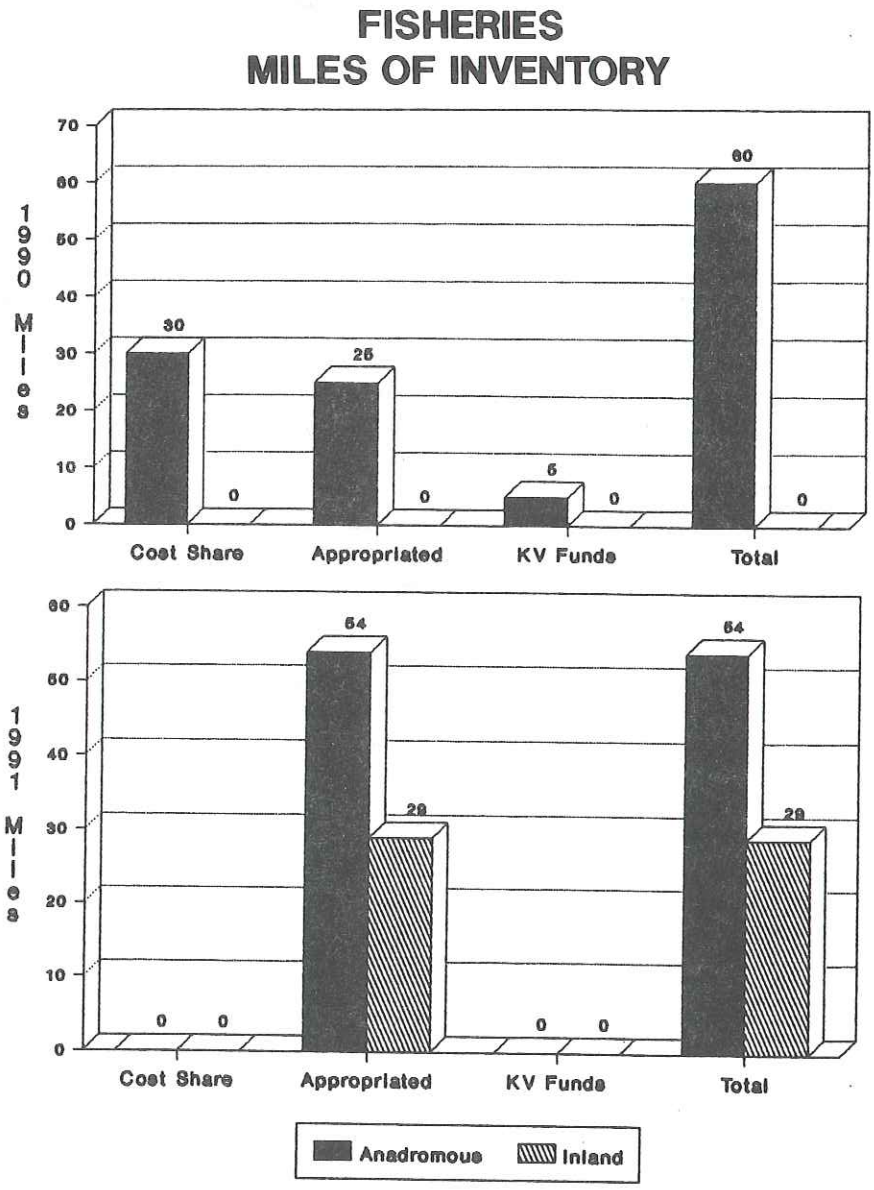
During 1991 the Forest accomplished 87 acres, 119 structures, and 83 miles of stream inventoried with appropriated dollars for a total of 289. This amounts to 72 percent of the Forest Plan projection for fish habitat improvements (400 total target). Funding at full Forest Plan level would be necessary to achieve the habitat improvement targets projected in the Forest Plan.

Fish habitat improvements were also accomplished using Challenge Cost Share and Knutson-Vandenberg (KV) funds [1]. When the 66 improvements that were accomplished by using contributed and KV dollars were added in, the total number of improvements made on the Forest came to 355. A summary of the acres, structures, and miles of stream inventoried accomplished with appropriated, contributed, or KV dollars is shown in the following table.

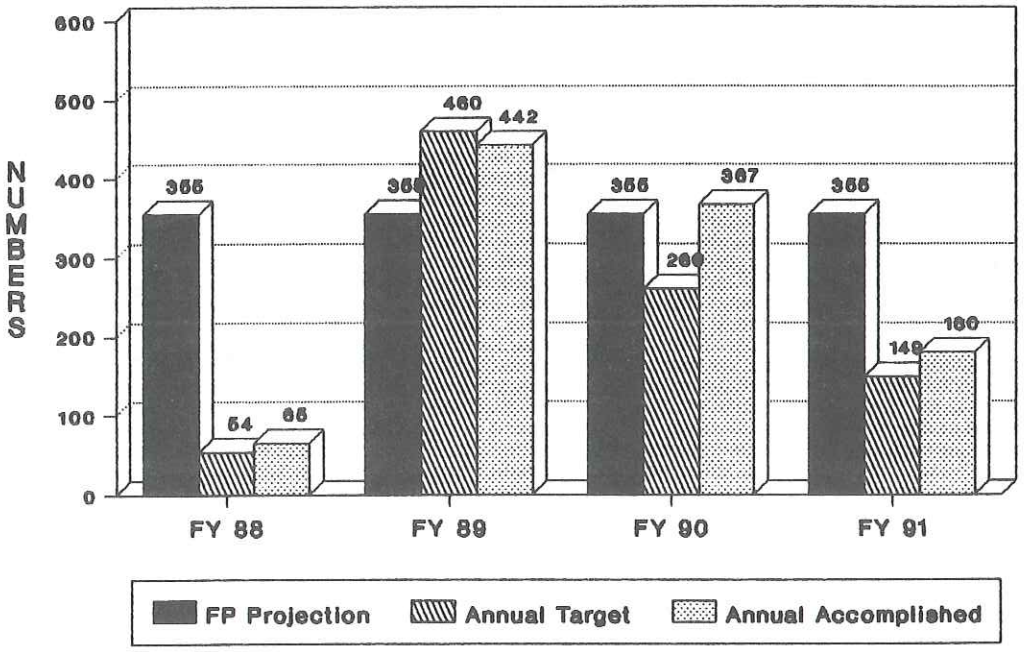
[1]Challenge Cost Share Funds - This program involves cost-sharing (in dollars, equipment, labor, etc.) with interested individuals, organizations, and agencies.
Knutson-Vandenberg Act funds - This is the authority for requiring purchasers of National Forest timber to make deposits to finance sale area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

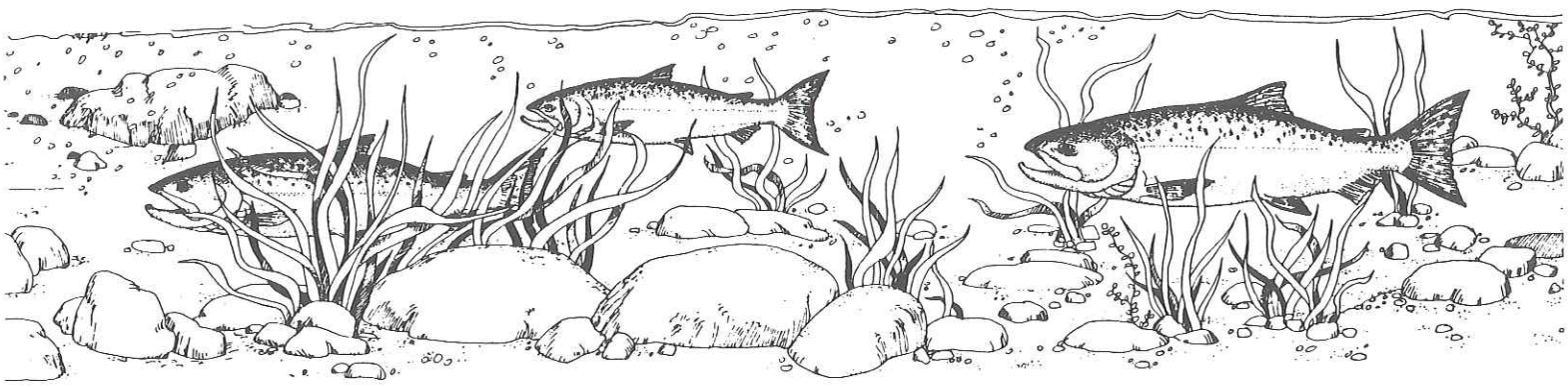
Fish Category	Funding Source	Acres Accomplished	Structures Completed	Miles of Inventory	Total
Inland	Appropriated	15	21	29	65
Anadromous	Appropriated	72	98	54	224
Inland	Contributed	0	0	0	0
Anadromous	Contributed	5	5	0	10
Inland	KV	0	0	0	0
Anadromous	KV	0	56	0	56
Totals	All Sources	92	180	83	355

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



FISH HABITAT IMPROVEMENT STRUCTURES

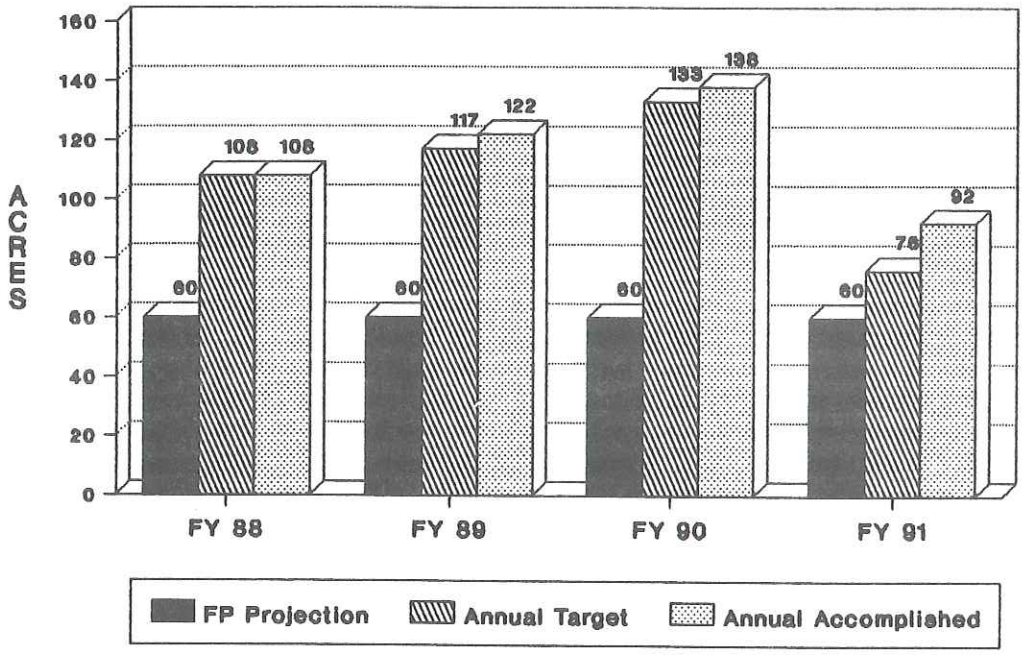




FISH HABITAT IMPROVEMENTS, FISCAL YEARS 1988-1991 (STRUCTURES)

Funding Source	Forest Plan	1988 Target	1988 Accomp	1989 Target	1989 Accomp
Anadromous and Inland					
Challenge Cost Share	0	0	0	50	50
Appropriated Funds	350	54	44	300	322
KV Funds	5	0	21	110	70
Total	355	54	65	460	442
		1990		1991	
Anadromous Only					
Challenge Cost Share		0	92	5	5
Appropriated Funds		246	246	86	98
KV Funds		0	15	56	56
Total		246	353	147	159
Inland Only					
Challenge Cost Share		0	0	0	0
Appropriated Funds		14	14	2	21
KV Funds		0	0	0	0
Total		14	14	2	21

FISH HABITAT IMPROVEMENTS NONSTRUCTURAL



FISH HABITAT IMPROVEMENTS, FISCAL YEARS 1988-1991 (ACRES)

		1988		1989	
Funding Source	Forest Plan	Target	Accomp	Target	Accomp
Anadromous and Inland					
Challenge Cost Share	0	0	4	15	15
Excess Timber Receipts	0	0	0	50	65
Appropriated Funds	50	108	104	40	40
KV Funds	10	0	0	12	2
Total	60	108	108	117	122
		1990		1991	
Anadromous Only					
Challenge Cost Share		0	4	17	5
Excess Timber Receipts		0	0	0	0
Appropriated Funds		130	130	53	72
KV Funds		0	0	0	2
Total		130	130	70	77
Inland Only					
Challenge Cost Share		0	0	0	0
Excess Timber Receipts		0	0	0	0
Appropriated Funds		3	3	6	15
KV Funds		0	0	0	0
Total		3	3	6	15

Evaluation of Monitoring Results:

The 1989 Monitoring Report stated 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." Improvement costs were again followed in 1991. The purpose is to enable the Forest to better track the costs associated with habitat improvement projects for 1990 and 1991. Following is the range of costs for structures, acres, and inventories. It should be noted that these costs (per acre and structure) vary from site to site depending on the objective of the work to be done, site conditions, location, etc. In terms of the cost per mile of inventory, costs vary as to the location and area accessibility, experience of the survey crew, amount and type of information to be collected, whether the survey is done by Forest Service crews or contracted out, etc. In general, costs for habitat improvement have gradually increased.

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

Because of limited funding levels, time constraints, and other work priorities, limited field monitoring has been done to confirm that habitat improvements actually improved stream habitat conditions or that fish densities increased. Concerns were also expressed in the 1989 monitoring report that the Forest needs

to evaluate whether increasing fishing pressure occurs at habitat improvement structures, and if so, the impacts to fish populations.

The best Forest evaluation concerning the response of fish populations to habitat improvement structures was evaluated in Crooked River. These results were also included in the 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., pocketwater, riffles, alcoves). Habitat selection by wild fish may have been related to the size of the fish.

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

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

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

Item 2e:	Fish Habitat Trends by Drainage
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 91?	Years Having Habitat Survey Data	Years Having Fish Density Estimates	Habitat Map of Site Available?
N.Fk.White Bird Creek*	No	1988,1989,1990	1988,1989,1990	Yes
S.Fk.White Bird Creek	No	1988,1989,1990	1988,1989,1990	Yes
N.Fk.Slate Creek*	No	1988,1989,1990	1988,1989,1990	Yes
Little Slate Creek	No	1988,1989,1990	1988,1989,1990,1991	Yes
Johns Creek*	Yes	1987,1988,1989,1990,1991	1987,1988,1989,1990,1991	Yes
North Meadow Creek	Yes	1988,1989,1991	1988,1989	Yes
N.Fk.Red River Upper*	No	1988,1989,1990	1989,1990	Yes
N.Fk.Red River Lower*	No	1989,1990	1989,1990	Yes
Trapper*	No	1988,1989	1989	Yes
S.Fk./W.F.Red River[1]	No	1988,1989,1990		Yes
Upper Big Mallard Cr.[2]	Yes	1987,1989,1990,1991	1989,1990,1991	Yes
Running Creek*	No	1988,1989,1990	1988,1989,1990	Yes
Bear Creek*	No	1988,1989,1990	1988,1989,1990	Yes
O'Hara Creek	Yes	1988,1989,1990,1991	1988,1989,1990,1991	Yes
Gedney Creek	Yes	1989,1990,1991	1989,1990,1991	Yes
Meadow Creek Lower[3]*	Yes	1988,1989,1990,1991	1988,1989,1990,1991	Yes
Meadow Creek Middle[4]*	No	1990	82-83,87-88,1990	Yes
Sable Creek	No	1987,1988,1990	1983,1987,1988,1990	Yes
Butte Creek	No	1987,1988,1990	1987,1988,1990	Yes
Tenmile Creek*	No	1988,1990	1988,1990	Yes
Lower Crooked River*	No	1988,1990	1988,1990	Yes
Lower Newsome Creek*	No	1988,1990	1988,1990	Yes
Upper Newsome Creek*	No	1988,1990	1988,1990	Yes

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

[1] These stations were dropped from Forest Plan (amended in FY 88), but a channel and substrate survey was conducted in cooperation with Intermountain Research Station personnel.

[2] This station is incorrectly called "Slide Creek" in the Forest Plan, after the Slide Creek Sale. Actual site is on Big Mallard Creek. It is being used to monitor a road crossing. The Forest Plan will be amended to reflect this name change.

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

[4] Only fish populations are sampled at this station.

Information regarding whether or not a fisheries survey was completed prior to the signing of a decision notice is shown below for 1988, 1989, 1990, and 1991:

Environmental Analysis	Fish Habitat Surveys Completed
FY 1988	
Sibling Salvage (formerly Spike Ridge)	No
Shooting Star[1]	NA
Lower Crooked River[2]	No
Boyer[3]	No
FY 1989	
Baboon Gulch[4]	No
Flint Creek & E.F. American[5]	Yes
South Fork	Yes
North Fork Red River[6]	Yes
Clear Creek	Yes
Rimrock[7]	Yes
Wing Creek-Twentymile	Yes
FY 1990	
Cove	Yes
Mallard	Yes
Silver Cougar	Yes
Chocolate Moose	Yes
FY1991[8]	
Kirks Fork	Yes
Hungry-Mill	Yes
Middlefork	Yes
Stillman	Yes
Big Nut	Yes
McComas Land Exchange	Yes

[1] No streams occur in the analysis area.
[2] The only stream in the analysis area, Deadwood Creek, was surveyed in 1989.
[3] Siegal Creek was surveyed in 1987. There are no plans to survey French Gulch.
[4] Surveys are planned for FY 90.
[5] Based on data collected in 1978, streams resurveyed in 1989.
[6] Based on data collected during last 10 years
[7] Only Fish Creek contains (resident) fish. It was surveyed in 1982.
[8] Fish Habitat Surveys were conducted for five future timber sale areas.

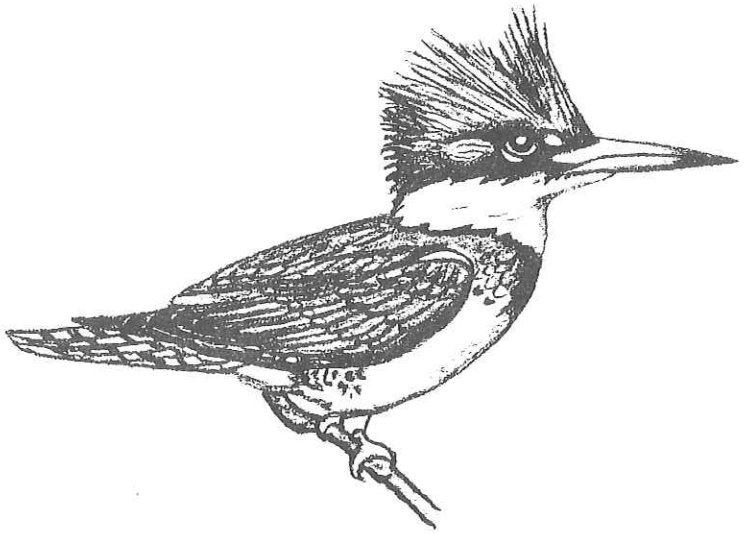
Evaluation of Monitoring Results:

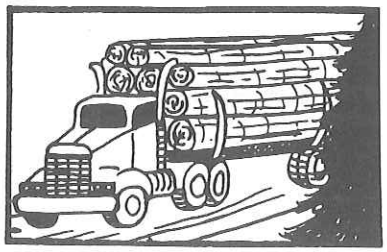
Only six out of 23 permanent monitoring sites were measured in 1991. This compares with 19 of the permanent sites being monitored in 1990. This lower number of monitoring sites being completed reflects increased workloads for fisheries surveys in future timber sale analysis areas.

Only one monitoring station (Johns Creek) has had a full five years data collected; analysis of the data for this station will be completed for inclusion in the 1992 report. No trends for the other monitoring stations

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 1992 or beyond.

Fish habitat surveys using the Basinwide Stream Survey technique were conducted for five analysis areas for future sales. The policy of using stream/fisheries surveys for timber sale areas reflects the increasing awareness for the need of this information in all National Environmental Policy Act (NEPA) documents. 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 was an improvement over 1989 when six out of seven sales had fisheries surveys conducted and for 1988 when no baseline fisheries surveys were conducted on the three timber sales where streams were present in the analysis area.





TIMBER

Item 1h:	Allowable Sale Quantity (ASQ) By Components
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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).

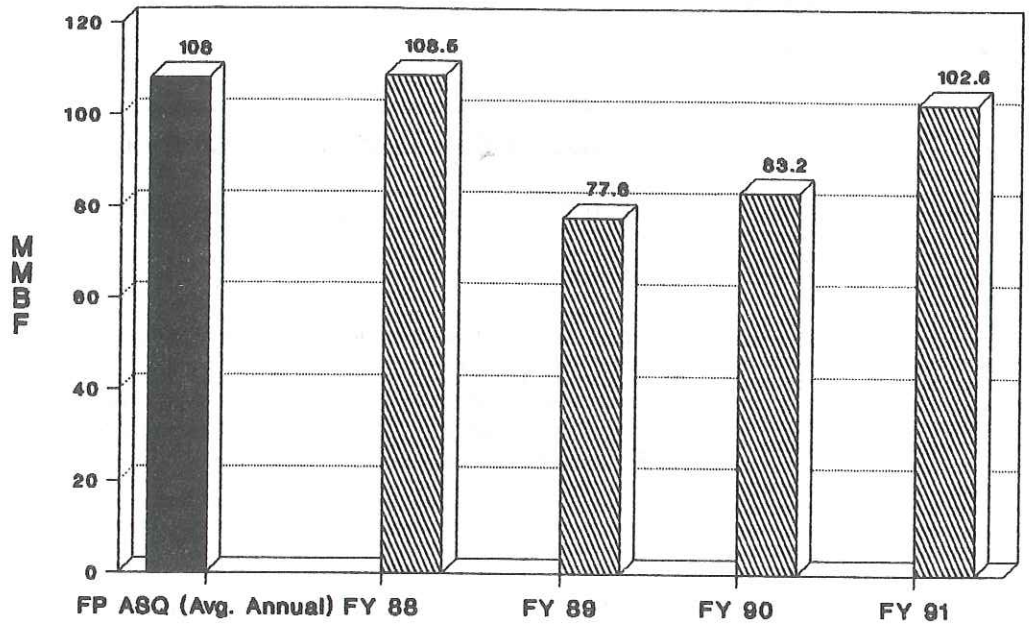
Monitoring Results:

CHARGEABLE VOLUME SOLD IN FY 1988-1991[1]

(Volume Credited Toward ASQ on an Annual Basis) Components	Volume (MMBF)			
	FY 88	FY 89	FY 90	FY 91
Regular	104.8	68.9	70.2	94.3
Noninterchangeable (NIC)				
Pulp	1.3	7.6	10.3	4.8
Cedar Products	2.4	1.1	2.7	3.5
Total	108.5	77.6	83.2	102.6

[1] The ASQ accomplishment breakdown was based on the Nez Perce Periodic Timber Sale Accomplishment Report accumulated as of September 30, 1991 (fiscal year summary).

CHARGEABLE VOLUME SOLD BY YEAR (FY 1988–1991)



The scheduled 5-year review of the Forest Plan will begin in fiscal year 1993. Four years of sold sale monitoring have shown that the Nez Perce has sold 103 percent of the scheduled acres, which contained only 86 percent of the average annual ASQ volume. There are very strong indications that the timber yield estimates (volume/acre) contained in the Forest Plan were overestimated **(see Table 11-a)**. This issue will be addressed in the Forest Plan review.

The split between the regular green and non-interchangeable (NIC) ASQ components reveals the Forest has sold 82 percent of the sawlog component and 168 percent of the NIC component (pulp and cedar products). At this rate, the decadal NIC ceiling of 50 MMBF will be met 6 years into the decade by the end of FY93. This issue will also be addressed in the Forest Plan review.

In fiscal year 1991, the Forest sold 2.5 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	1991 Chargeable Volume Sold	Total Chargeable Volume Sold to Date*	% of Avg. Annual ASQ Sold for 4 Years
108.0 MM/year	102.6 MM	371.5 MM	86

* In fiscal years 1988-1991, which are the first 4 years of the decade covered under the Forest Plan.

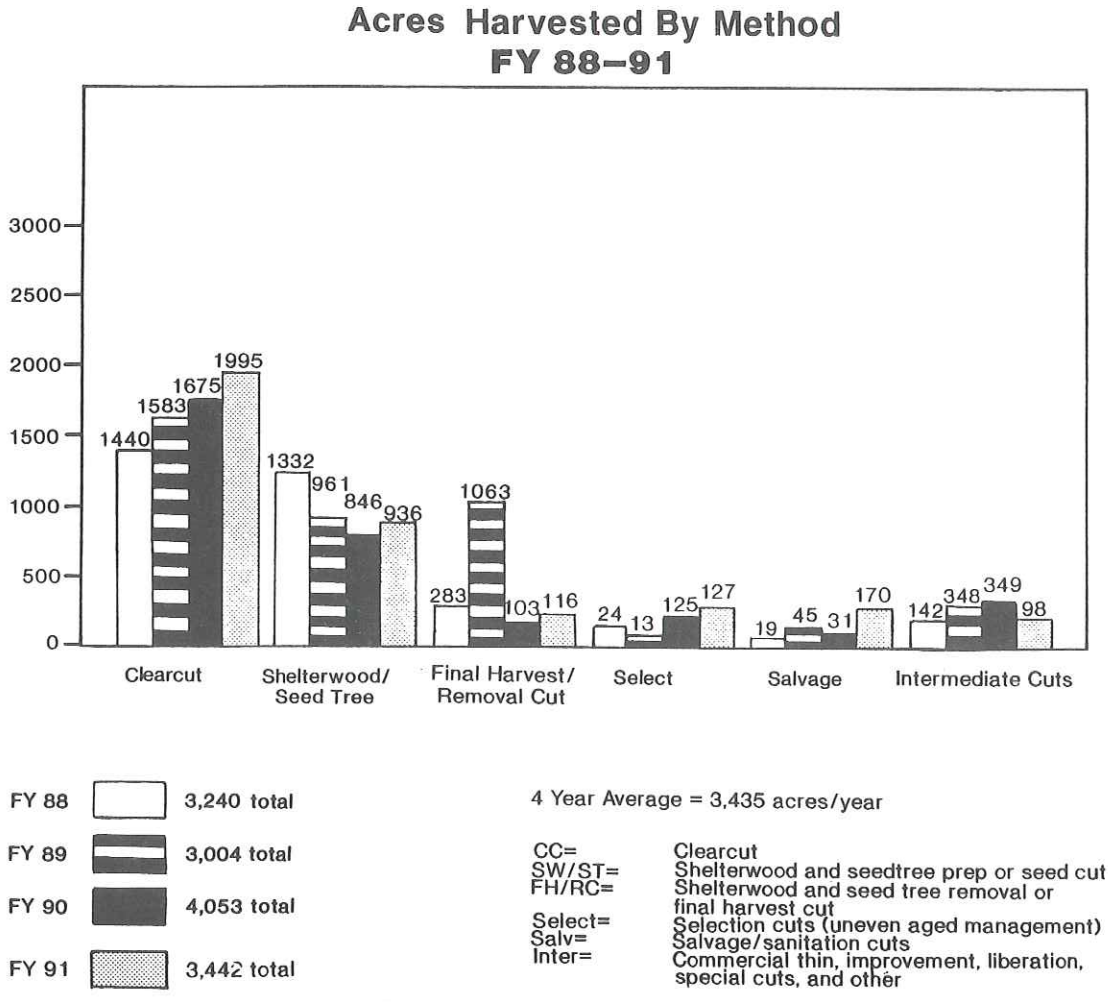
Evaluation of Monitoring Results

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:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary review.

Monitoring Results:

Precommercial thinning occurred on 1,011 acres which is approximately 101 percent of planned accomplishments. Harvesting took place on 3,442 acres (58 percent clearcut, 27 percent seed cut from shelterwood and seed tree, and 15 percent from other cutting methods). It should be noted that harvest acres represent the acres actually harvested in FY 91, and do not necessarily correspond to acres sold. Most sales have a contract life of from 2-6 years. It is likely that some of the harvested acres may have come from sales sold as early as 1985.



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:	Annually (October 1, 1990 - September 30, 1991)
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
1991	1	5

Seventy-one permanent plots have been established and 30 remeasured in total on the Forest.

Evaluation of Monitoring Results:

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, 1990 - September 30, 1991)
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:

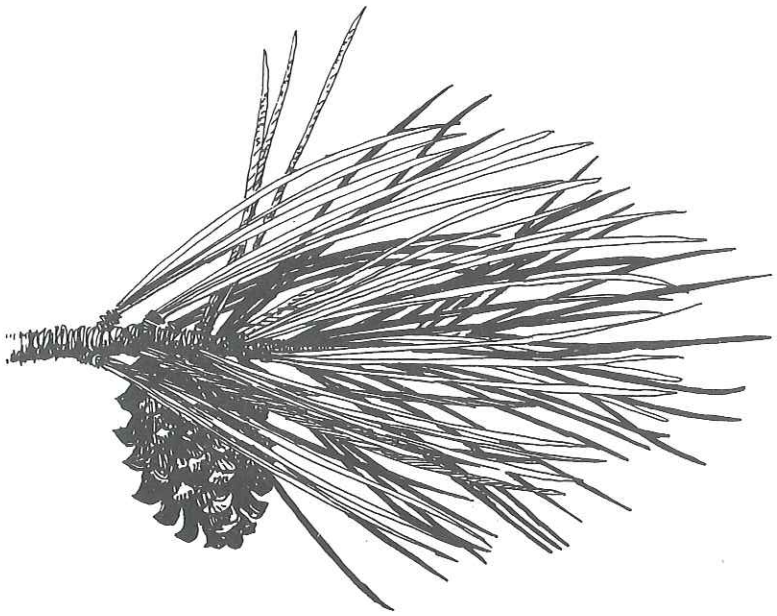
Data for this item comes from the Timber Stand Management Record System and summarized with the reforestation history (11/7/90), reforestation index (12/5/90) report, and reforestation status (12/3/90) report. Inventory results for FY 1991 will not be available until March 1992.

Monitoring Results:

Eighty-nine percent of the stands planted in the past 5 years are progressing toward satisfactory stocking (are stocked). Replants are scheduled on acres (11 percent) needing additional stocking. Natural regeneration is certified or progressing on 88 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:	Annually (October 1, 1990 - September 30, 1991)
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 1993. 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).

Evaluation of Monitoring Results:

Preliminary information is showing that past assessments of land suitability are optimistic in predicting land available for timber harvest.

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:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annual
Variability Which Would Initiate Further Evaluation:	Unacceptable results of an interdisciplinary team review.

Discussion:

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

Monitoring Results:

Stands exceeding 40 acres in size, and sold during prior years but harvested in 1991, are as follows:

- 38-acre clearcut located adjacent to a 10-acre natural opening. The prescription was written in 1981 and the total 48-acre opening size was not addressed.

The following units were all located in areas of heavy mountain pine beetle mortality and opening size was addressed in the appropriate National Environmental Policy Act (NEPA) document:

- 42-acre clearcut with reserves
- 83-acre clearcut with reserves
- 41-acre shelterwood
- 41-acre clearcut
- 59-acre clearcut

Stands sold during 1991 that exceeded 40 acres are as follows:

- 44-acre clearcut designed to take advantage of natural features and location of roads to facilitate skyline yarding;
- 46-acre shelterwood to facilitate logging systems;
- 48-acre (17-acre seed tree and 31-acre clearcut) to best meet site preparation and logging system needs;
- 42-acre shelterwood to blend visual management objectives and encompass a root disease center to facilitate regeneration;
- 45-acre seed tree (38-acre unit was enlarged to include a 7-acre patch of blowdown) for appropriate site preparation and reforestation.

Stands sold during 1991 which exceeded 40 acres in opening size were addressed in appropriate NEPA documents and were incorporated into the interdisciplinary team review.

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 88-91)
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	2 to 5 years (FY 1988 to 1992)
Variability Which Would Initiate Further Evaluation:	If validation efforts show a need for changes to existing resource predictions.

Monitoring Results:

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

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

The following four tables display the Forest Plan estimates as well as actual FY 88-91 data taken from sold sales during this period. Sales contained in the actual FY 88-91 sold data include all sales having an appraisal (Forest Supervisor and District Ranger authority timber sales). Offered sales that did not sell are not included.

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

Silvicultural System	Forest Plan Estimated Volume/Acre (MBF)	FY88 Vol/Acre (MBF)	FY89 Vol/Acre (MBF)	FY 90 Vol/Acre (MBF)	FY 91 Vol/Acre (MBF)	Weighted "Avg.* FY 88-91 (MBF)
Clearcut (Units)	32.5	24.5	24.1	19.7	24.9	23.4
Clearcut (Rd ROW)	32.5	29.4	16.4	17.8	19.0	20.8
SW Prep Cut [1]	none planned	19.3	none sold	5.3	none sold	5.9
SW/ST Seed Cut [2]	18.3	15.5	15.4	15.9	15.6	15.6
SW/ST Final Cut [3]	5.0	5.6	8.4	7.3	5.9	6.6
Sanitation/Salvage	none planned	8.9	11.1	2.5	4.1	3.9
Commercial Thin	5.9	none sold	none sold	2.5	12.2	10.7
Selection Cut [4]	12.6	4.6	none sold	12.8	none sold	5.7
Weighted Average	22.6	16.3	20.6	15.7	17.3	17.2

*Weighted by acres sold

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

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

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

Silvicultural System	Forest Plan Scheduled Acres/Year	FY88 Acres Sold	FY89 Acres Sold	FY 90 Acres Sold	FY Acres Sold	Average FY88-91 Acres/Year
Clearcut (Units)	1,710	2,607	1,989	2,146	1,923	2,166
Clearcut (Rd ROW)	inc.above	239	144	191	503	269
SW Prep Cut [1]	none planned	3	none sold	69	none sold	18
SW/ST Seed Cut [2]	2,705	1,549	731	990	2,029	1,325
SW/ST Final Cut [3]	130	1,921	374	455	602	892
Sanitation/Salvage	none planned	52	23	317	396	131
Commercial Thin	100	none sold	none sold	34	67	25
Selection Cut [4]	125	189	none sold	31	none sold	55
Totals	4,770	6,560	3,261	4,233	5,510	4,891

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

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

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

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

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

MA Code	Management Emphasis	Forest Plan Scheduled Acres/Year	FY 88 Ac.Sold	FY 89 Ac.Sold	FY 90 Ac.Sold	FY 91 Ac.Sold	Average FY88-91 Acres/Year
10	Riparian	180		139	103	176	105
12	Timber	2,543	5,083	2,374	3,305	3,501	3,566
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	1,424	832
17	Visual/Scenic	388	71	173	647	409	325
18	Aggreg(16/17)	197					
20	Old Growth	none planned	35	22	--	--	14
21	Moose WR	110	126	44	28	--	50
23	Municipal Watersheds	15					
	TOTALS	4,770	6,560	3,261	4,233	5,510	4,891

Note: WR = winter range.

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

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

	Before Project Analysis		After Project Analysis
MA-10	500 acres		500 acres
MA-12	2000 acres	500 ac →	2500 acres
MA-13	1000 acres		0 acres
MA-17	1000 acres	500 ac →	1500 acres
MA-20	500 acres		500 acres
Total:	5000 acres		5000 acres

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

Roadless Volume and Acres Sold

The following acres and timber volume sold on the Nez Perce NF were within inventoried roadless areas. During the first 4 years of Forest Plan implementation, the Forest sold less volume in inventoried roadless areas than the decadal Forest Plan projection. It is expected that roadless volume sold during the second half of the decade will exceed the 30 percent decadal projection, thus the final decadal average will be close to the projection.

Roadless Volume and Acres Sold by Fiscal Year

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

Roadless Volume and Acres as a Percentage of Total Sold

Total Chargeable Volume Sold MMBF (FY88-91)	Roadless Percent-age	Total Sold Acres Included in Cutting Unit Road Right-of-Way, FY88-91	Roadless Percent-age	Forest Plan Decadal Roadless Sell Estimate (%)
371.5	13	19,564	12	30

Roadless Acres Sold by Roadless Area

Number	Name	District	Sold Acres	Percent of Total Sold Acres
1921	Gospel Hump (Jersey-Jack)	Red River	833	35
1851	Little Slate Creek	Salmon River	667	29
1235	Dixie Summit - Nut Hill	Red River	402	18
1855	Salmon Face	Salmon River	174	8
1844	Clear Creek	Clearwater	150	7
1852	John Day	Salmon River	66	3
		Total	2,202	100

Evaluation of Monitoring Results:

From the actual data for sold sales in FY 88-91, 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 FY88-91 figures continues to be in clearcutting (28 percent less) followed by SW/ST seed cuts (15 percent less). The SW/ST final harvest units yielded 32 percent more net volume than the Forest Plan estimate. Other systems also varied, but the sample size is too small to be significant.

- Actual FY 88-91 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, although the percentage is increasing.

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

- The combined FY 88-91 sold acres are slightly more than the average yearly sold acres estimated in the Forest Plan (3 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 88-91 trends can be expected to continue.

SOIL AND WATER

Item 1j:	Soil and Water Rehabilitation and Improvements
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 assigned targets for soil and water improvements using appropriated funds in Fiscal Year 1991 were 105 acres using appropriated funds and 85 acres for Knutson-Vandenberg Act funds. The Forest Plan goal is 200 acres per year.

SOIL AND WATER IMPROVEMENTS ACCOMPLISHED IN FISCAL YEARS 1988-1991

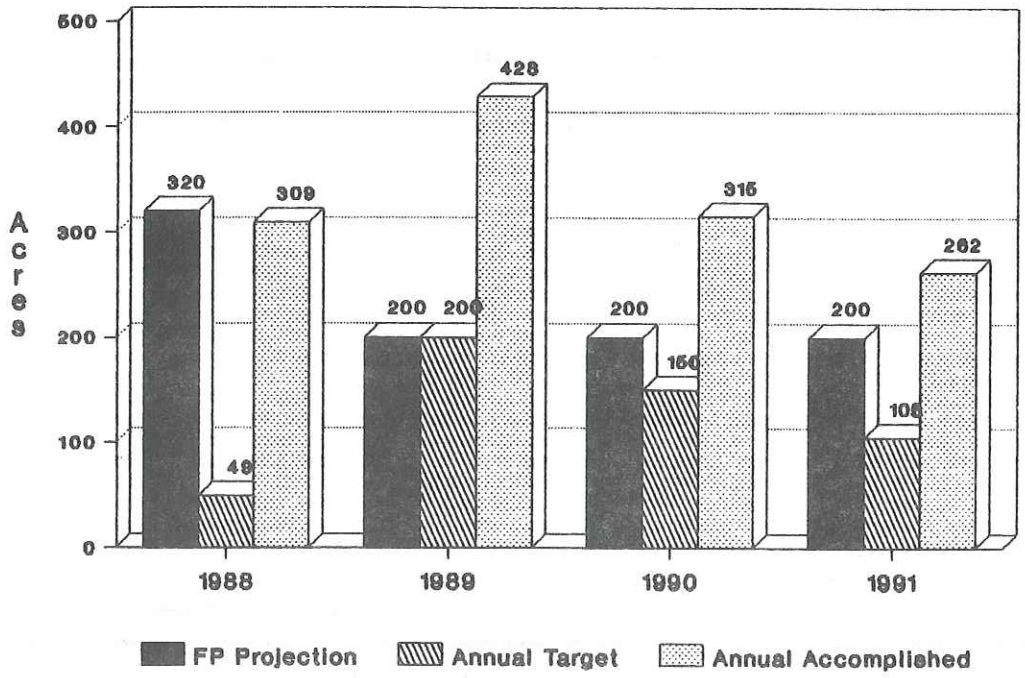
	Acres Improved			
Funding Source	1988	1989	1990	1991
Appropriated Soil and Water	74	131	159	120
Knutson-Vandenberg Act (KV)	52	93	82	85
Road Maintenance	113	57	76	25
Other Funding Sources	70	147	3	32
TOTAL	309	428	320	262

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 such as KV, road maintenance, Bonneville Power Administration, and challenge cost-share.

Among the highlights of FY91 was reconstruction of a section of Red River on a private parcel owned by Edith Mullins. This cooperative venture is expected to result in long-term improvement in chinook salmon habitat and stream channel stability.

SOIL AND WATER IMPROVEMENTS



Item 2g:	Impacts of Management Activities on Soils
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	If more than 20 percent of an activity area has sustained significant or permanent impairment of the productivity of the land.

Discussion:

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

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

Effectiveness Monitoring determines if the implemented practices were adequate to (1) maintain 80 percent of an activity area in a productive condition, without detrimental compaction, displacement of surface soil, or

puddling (loss of soil structure), and (2) minimize erosion and sloughing on road cuts and erosion on other activity areas.

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

Monitoring Results:

Implementation Monitoring: Little formal implementation monitoring was conducted in 1991 by Forest soil specialists. Some monitoring was conducted during the course of project administration and District field reviews. Field reviews were used to develop better understanding of soil and site characteristics that affect productivity and tentative suitability.

Most environmental analyses completed in 1991 used soil information to describe soil limitations and opportunities within assessment areas. This information was used to assist in project design and development of specific mitigation measures. 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.

A process for validation of tentative suitability using soil as well as other site features was proposed in 1991 and is being used by some Districts during the integrated resource analysis process. Land suitability can be recorded for each timber stand in the timber stand data base.

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 some District programs is sometimes not adequate to provide for assessment and implementation of needed soil protection measures. Instances of unmet needs include field evaluation of tentative suitability, slope stability issues, and riparian protection measures, watershed condition inventory, and costly improvements such as slide stabilization.

Effectiveness Monitoring: Quantitative soil effectiveness monitoring was conducted on roadside revegetation measures for erosion control. Concerns have been raised that livestock grazing and trampling of soils on road cuts and fills is significantly reducing the effectiveness of this measure as an erosion control and sediment mitigation tool (1990 Annual Monitoring Report, page 52). Wildlife impacts may be significant also.

Sixty-four plots described soil, vegetation, and animal disturbances on road cuts. Sampling was stratified by landform, soil parent material groups, aspect, and habitat type group of adjacent hillslopes. Data have been entered into the ECODATA data base, but have not yet been analyzed.

Results of this monitoring may also be used to (1) assess what plant species, seeding rates, or fertilizer treatments are most successful by site type, including landtype, elevation, aspect, climatic zone, and soil texture; and (2) to improve estimates of sediment mitigation effectiveness for seeding and planting in relation to soil type or landtype delineation. Data would be compared to Horse Creek research data to help adjust sediment mitigation predictions by landtype, and improve revegetation prescriptions for greater mitigation effectiveness.

Effects on soil productivity of repeated summer burning on elk winter range were monitored as part of a cost-shared program with the University of Idaho with financial support from the Rocky Mountain Elk Foundation (see 1990 Annual Monitoring Report, page 26). On 64 plots stratified by aspect, elevation, and year of burn, replicate samples of organic matter and surface mineral soil were taken for analysis of organic matter and total nitrogen. Plant species composition and wildlife utilization of the available forage were also described. Laboratory and statistical analysis will be completed in 1992. Preliminary analysis of the pellet count data are discussed under item 1e of this report.

Informal qualitative monitoring evaluated effectiveness of two techniques to restore or maintain productivity on timber sale units. A shovel piler was used to yard logs and pile slash on steep cable logged terrain. This machine picks up and places slash down or up slope in successive passes. It can pull slash away from reserve trees and concentrate or disperse fuel loadings to protect soil and vegetation. Soil displacement appeared minimal. Soil compaction was not evident, but will be monitored in spring 1992.

Obliteration of excavated skid trails, temporary roads and landings has been implemented extensively on at least one District. Excavated soil and organic material is pulled back into the excavated area to replace topsoil and organic matter. Very compacted areas may be tilled to restore hydraulic conductivity. This appears to offer significant improvements in productivity, aesthetics, and erosion control, compared to the raw, compacted subsoil left after construction and use of these areas.

Validation Monitoring: One validation monitoring project was in progress on the Forest in 1991.

An administrative study to examine differences in soil moisture retention in mixed and intact volcanic ash-influenced surface soils was begun in 1987. Data analysis is complete, but the final report has not been written. 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).

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, and continue to merit increased emphasis.

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.

Soil monitoring in 1992 will focus on completing projects initiated in prior years, and in monitoring effects of new equipment available for harvest, slash disposal, and site preparation.

Item 2h:	Impacts of Management Activities on Water Quality
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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's Soil, Air and Water Program also maintained seven precipitation storage gages, five precipitation recording gages, five hygrothermographs, and two snow courses. Additional weather monitoring is conducted by fire personnel.

A report entitled "Hydrologic Data Summary - Water Year 1990" was issued. This report summarizes streamflow and climatic data collected on the Forest during Water Year 1990. It also povided a more detailed analysis of water quality and related monitoring results than the annual Forest Plan monitoring report. A similar report is under preparation for Water Year 1991.

A cooperative monitoring study was initiated by the Idaho Department of Health and Welfare, Division of Environmental Quality (DEQ), on Big and Little Elk Creeks. These are Stream Segments of Concern under the Idaho Antidegradation Policy. The key objectives are to evaluate effectiveness of Best Management Practices and to determine beneficial use status. The primary activities being assessed are the proposed Rumpus/Lightning Timber Sales, but other activities are also ongoing in the watersheds. The study will be headed by the DEQ, with cooperation by the Forest and the Cottonwood Area Office of the Bureau of Land Management. The study will be a first local application of DEQ's Statewide monitoring protocols. Key parameters to be measured include cobble embeddedness, percent surface fines, interstitial space index, fish populations, macroinvertebrates, vegetation indicators, pool-riffle ratio channel profiles, and thalweg profile. The pretreatment measurements were completed in 1991.

Evaluation of Monitoring Results:

Analysis of data from the fixed water quality monitoring stations is ongoing. In 1991, 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.

A summary of measured and modeled sediment yield from five monitoring stations is found under Item 11, Validation of Resource Prediction Models.

Selway, Lochsa, and South Fork Clearwater River Monitoring:

The Forest analyzed the results of 4 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. Water temperature data were added at four sites in 1991.

Samples were collected at each of the rivers 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 4-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.

More specific results of monitoring in these three rivers will be reported in the Water Year 1991 Hydrologic Data Summary and Monitoring Analysis, which is under preparation.

Item 2i:	**Water Quality: Project Level Administrative Reviews and Field Studies**
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 1991, implementation monitoring focused on projects located in Little Slate Creek, American River, and Crooked River.

Little Slate Creek Review: Timber harvest units were evaluated on two timber sales, Huckleberry Heaven and Little Boulder. On Huckleberry Heaven, a checklist procedure was used to test compliance with Idaho Forest Practices Act Rules on two harvest units and associated roads. There were 65 specific rules checked during the review. Of these, satisfactory compliance was found with 60 rules, partial compliance with three rules, and unsatisfactory compliance with two rules. Unsatisfactory compliance resulted from slash and waste which were placed in a Class II stream during machine fireline construction. One harvest unit on the Little Boulder Timber Sale was evaluated for compliance with those rules pertaining to stream protection. In this instance, the activity was judged to be in compliance along both Class I and II streams.

The review also evaluated streams and riparian conditions resulting from grazing of the Florence Allotment along selected reaches of Little Slate Creek. The review team was unable to quantitatively assess conditions with respect to the Forest Plan fish/water quality objective of 90 percent potential. However, it was obvious that existing condition is significantly below this objective along most of the section reviewed. Particular problems identified include high cobble embeddedness, unstable streambanks, and loss of riparian vegetation.

American/Crooked Rivers Review: This interdisciplinary review did not attempt to specifically assess water quality conditions with respect to particular activities. Findings related to water quality suggested the following:

- Grazing in American River is one of the impacts resulting in a below objective condition. The District needs to determine what portion of water quality problems are due to grazing conflicts.

- The District is beginning to recognize that obtaining Forest Plan fisheries habitat objectives in watersheds impacted by historic mining activities may not be possible under even optimal funding.

- The District needs to determine whether additional standards and guidelines for managing Big and Elk Creeks (within the Elk City municipal watershed) are necessary.

Other Field Reviews: Numerous informal field reviews were conducted on a variety of projects during 1991. 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. Three interdisciplinary timber sale reviews are summarized below.

An Interdisciplinary Team consisting of foresters, fire spsecialsits, biologists, and hydrologists visited the Bear Gulch Timber Sale in June 1991. Four harvest units on this sale were reviewed for riparian management of headwater streams. It was found that all the units were in compliance with Idaho Forest Practices Act Rules. The group agreed that more leave trees should be left along certain of the Class II streams to better protect riparian dependent resources and fully implement Forest Plan riparian management direction.

An Interdisciplinary Team of foresters, a hydrologist, and a biologist reviewed the Mirror Timber Sale in July 1991. Two harvest units were reviewed to determine appropriateness of the logging systems. It was agreed by the group that some of the slopes harvested were too steep for tractor logging. The resultant excavated skid trails on 45 to 47-percent slopes caused excessive ground disturbance. The appropriate logging system would have been a cable or skyline system, combined with less tractor harvesting.

Two harvest units and associated temporary roads were reviewed on the Bad Medicine Timber Sale. Logging systems were again found to be a concern on portions of these units, with tractor skidding occurring on slopes up to 65 percent, resulting in excavated skid trails. Temporary roads were waterbarred, but some erosion was evident on the erodible, granitic soils.

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, 43 percent in 1990, and 33 percent in 1991. These differences were not shown to be statistically significant. 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. This increase was partially attributable to debris torrents which occurred in 1990 in several tributaries. In 1991, fines averaged 8 percent in the upstream areas and 9 percent downstream. This suggests extremely efficient flushing during the spring runoff in 1991 of sediment deposited during the previous summer.

Clear Creek Temperature Monitoring - Water temperature monitoring was conducted on Clear Creek from 1988 through 1991 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 results of Clear Creek water temperature monitoring will be reported in the Water Year 1991 Hydrologic Data Summary and Monitoring Analysis, which is under preparation.

Evaluation of Monitoring Results:

Field reviews and project-level studies conducted during 1991 suggest that the Forest is strongly committed to management of water quality, but that much on-the-ground improvement is possible. Awareness of the Forest's role in implementing the Clean Water Act through the Idaho Water Quality Standards, the Idaho Forest Practices Act, and the Idaho Antidegradation Agreement is increasing. Additional work needs to be done to ensure a consistent Forestwide approach to many elements of the watershed management program.

Evaluation of the Footstool Fire monitoring data suggests that sediment scouring and deposition impacts were most dramatic in 1989 and 1990 in close proximity to the intensively burned areas, both in the main stem of East Moose Creek and certain tributaries. Little additional impact to the channels was noted in 1991. Also, significant recovery occurred through sediment flushing in the previously impacted areas. Conditions in the main stem of East Moose Creek several miles below the most intensive fire area have not changed measurably since the fire.

Evaluation of the Clear Creek water temperature data suggests that much of the temperature increase noted at the fish hatchery is occurring below the Forest boundary. Due to the extremely high temperatures found at the hatchery, the Forest should remain firmly committed to not increasing water temperatures in this watershed.

Item 2j:	**Impacts of Management Activities on Riparian Areas**
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Activity areas found in significant violation of Forest Plan standards.

Discussion:

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

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

Forestwide riparian implementation monitoring was conducted on one watershed. Additional monitoring was carried out through work of District personnel in District field reviews, 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 one watershed, that included range and timber projects with potential to impact riparian systems.

Validation Monitoring is used to describe riparian-dependent resources and their values, and to predict effects of management (Forest Plan II-12). The riparian classification project initiated in 1989 continued in 1991, with emphasis in locations where basinwide stream surveys had also been collected, for later cross correlation, and on headwaters streams where fisheries surveys are not done.

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.

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

Current timber sale contracts and administration usually comply with Idaho Forest Practices Act Rules as a minimum, and often exceed them in terms of retention of streamside tree cover and soil integrity. A Nez Perce Tribal fisheries representative identified areas of concern in at least one active timber sale, where large amounts of slash were left in a Class II stream, and inadequate vegetation was left for shade provision.

National Environmental Policy Act (NEPA) documents use fisheries and watershed survey data to characterize riparian area-dependent resources and existing conditions. There is an increasing awareness that additional inventory and analysis of riparian resources, particularly in headwaters streams, may be necessary to provide an adequate basis for deciding what, if any, management activity would be appropriate.

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 timbered riparian areas, where old contracts are now being implemented that do not meet current interpretations of riparian area standards.

There is also a growing awareness that Idaho Best Management Practices for vegetation management, along Class II streams in particular, do not meet the intent of Forest Plan standards for riparian area-dependent resources in these areas.

Better understanding of riparian site potential and the habitat requirements of dependent species will be emphasized as a basic requirement to implement current riparian management direction. Ways to describe existing condition, distance from potential, and desired future condition 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 1991. Its objective is to describe the stream systems, soils and vegetation of these areas, their site potential, and response to disturbance, including management activities. Coordination with fisheries survey objectives and methods requires continued emphasis. Channel types, vegetation complexes, and riparian landforms are being found to be predictable based on landform association, valley bottom type and gradient, geology, and bioclimatic zone. This responds to the research need to predict cumulative effects of management on watershed and fishery values (Forest Plan II-12: Fish/Water No. 8) and to the need for a classification system with which to delineate and evaluate riparian areas (Forest Plan II-22: Forestwide Management Direction for Riparian Areas), as well as the needs 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 usually consistently applied. Training for Forest Service personnel new to the State will be a continuing need. The minimal best management practices required for Class II streams are recognized as a particular area of concern where improved inventory and interdisciplinary analysis are needed.

An interdisciplinary task force is working on a policy statement that will clarify the level of inventory, analysis and environmental dcoumentation required before proposing activities affecting riparian areas.

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.

Range management has impacted localized riparian areas, and proposals for range allotment updates have recognized the need for interdisciplinary analysis of riparian rangelands. This needs particular emphasis in below-objective watersheds. The classification system and response models need to be made available quickly to assist in this process.

An action item identified in 1990 still needs attention. Timber stand inventory systems need to be adapted to the linear nature of riparian forest stands. The record keeping system should be adapted to allow grouping plots between stands into riparian substands. Additionally, Forest and project level planning requires information on the acres of riparian areas within stands, because special management practices and/or reduced timber outputs are linked to these areas. A proposed action item for 1991 is to develop a recordkeeping system to track the percent of riparian acres, both suitable and unsuitable, by stand.

Item 11:	Validation of Resource Prediction Models: Water Quality and Fish:
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	2 to 5 years (FY 1989 to 1992)
Variability Which Would Initiate Further Evaluation:	If validation efforts show a need for changes to existing predictive models.

Monitoring Results:

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

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

Sediment Yield Model Tests: Sediment yield modeling on forested lands in Idaho is commonly done using various adaptations of the 1981 "Guide for Predicting Sediment Yields from Forested Watersheds," commonly known as the R1R4 Guide. NEZSED, a sediment yield model derived from the R1R4 Guide has been used on the Nez Perce National Forest since 1986. The following compares measured annual sediment yield against modeled yields on five streams.

The Horse Creek Watershed Study has been a cooperative effort with the Intermountain Research Station. It is a paired watershed study with the East Fork as a control and the Main Fork as the treated watershed. The watersheds are 5.6 and 6.5 square miles in area, respectively. The pretreatment calibration period was from 1966 through 1978. Road construction and timber harvest activities commenced in the Main Fork in 1978. The sediment yields reported here were measured using sediment detention dams at the mouths of the two watersheds.

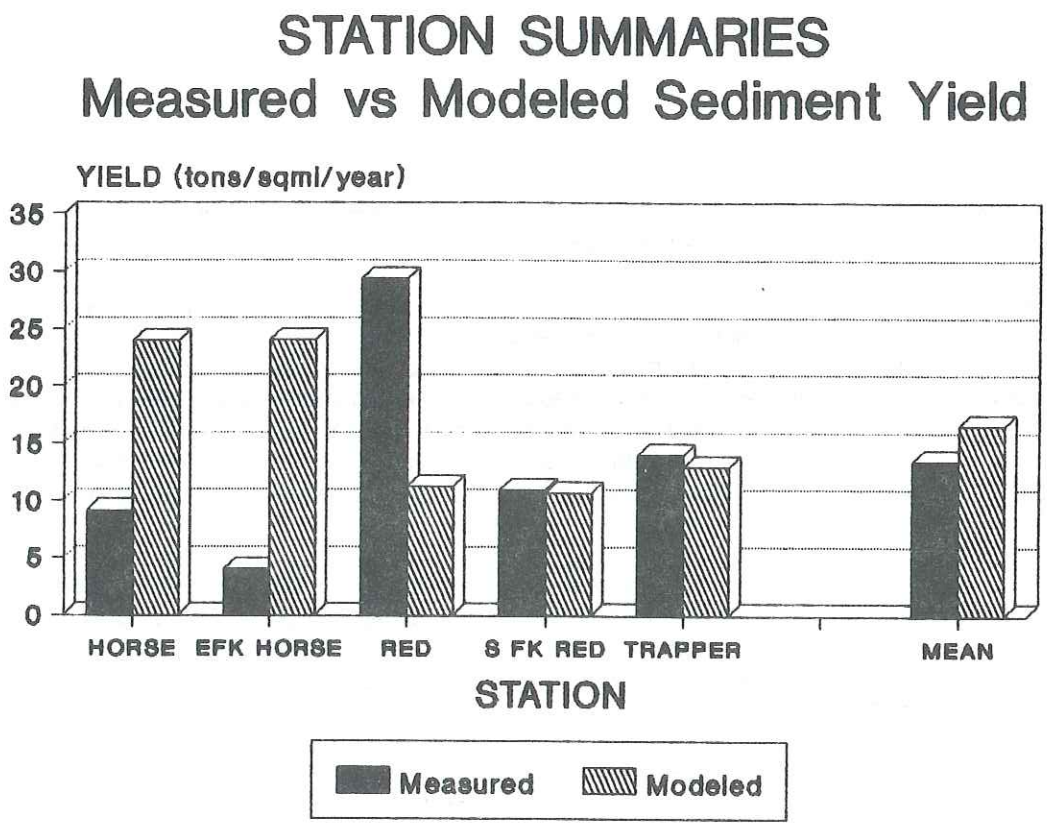
From 1979 through 1988, measured post-treatment sediment yields in the Main Fork averaged 59.4 tons/year (58 percent over measured base) and NEZSED modeled yields averaged 155.9 tons/year (25 percent over modeled base). The data suggest that baseline and activity sediment yields expressed in tons/year were overestimated by NEZSED, but that activity yields expressed as percent over base were underestimated by NEZSED over the 10-year period.

The Forest also conducted sediment sampling on Upper Main Red River, South Fork Red River, and Trapper Creek. These watersheds are 50.0, 37.8, and 8.0 square miles in area, respectively. Stream discharge was measured using water level recorders from April through September each year and estimated during the remainder of the year. Suspended sediment was sampled using ISCO automated samplers during spring runoff and periodic depth-integrated sampling. Bedload was periodically sampled using a Helley-Smith sampler. Annual sediment yield was calculated using mean daily sediment concentration when available, and from sediment/discharge rating curves during the remainder of the year.

From 1986 through 1990, in Upper Red River, measured sediment yield averaged 1,476 tons/year and NEZSED sediment yield averaged 560 tons/year. In South Fork Red River, the measured averaged 412

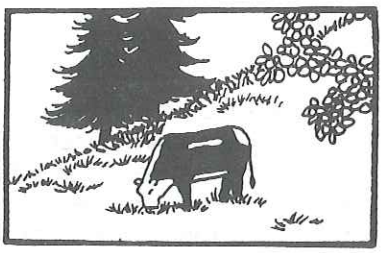
tons/year and the modeled averaged 404 tons/year. In Trapper Creek, the measured averaged 112 tons/year and the modeled averaged 104 tons/year.

Mean unit area sediment yields for all five streams were measured at 13.6 tons/square mile/year and modeled at 16.6 tons/square mile/year.



These model tests suggest that NEZSED and the R1R4 Guide are valid working tools, but also have significant limitations. In some cases, the model overpredicted; in others it underpredicted. Much refinement is possible, particularly in the areas of sediment routing, channel erosion, effects of water yield changes, and the link to fish habitat condition. It is recommended that a concerted effort be reestablished to update the R1R4 Guide and incorporate missing elements into a comprehensive cumulative watershed effects model. There are also opportunities for use of improved monitoring techniques for annual sediment yield. Some of the variations noted in these data may be the result of the sampling and analysis technique.

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



RANGE

Item 1g:	Animal Unit Months Grazing Permits
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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, 1990 - September 30, 1991)
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 ensure vegetation management is occurring in compliance with the Forest Plan. The 1989 Annual Monitoring Report addressed the need to bring allotments into compliance with the Forest Plan. National direction emphasized that all Forests were to prioritize allotments based on resource conditions. No AMPs have been completed since implementation of the Forest Plan, however, Forest Plan standards were incorporated into Part 3 of all grazing permits reissued in the past year. Forest Plan standards will be enforced on these allotments until AMPs can be completed. This effort will continue as permits are reissued.

Allotment Management Plan Update Schedule

Allotment Name[1]	Forest Plan Status	Schedule	Key Resource Values
Christie Creek	Does Not Meet	1992	Riparian
Race Creek	Meets	1992	Riparian
Blacktail	Does Not Meet	1992	Big Game
Hungry Ridge	Does Not Meet	1992	Riparian/Wildlife
Glover Ridge	Does Not Meet	1992	Big Game
Sherwin Creek	Does Not Meet	1993	Timber/Riparian
American River	Does Not Meet	1993	Riparian
Hanover	Does Not Meet	1993	Wilderness/Riparian
Butte Gospel	Does Not Meet	1993	Wilderness/Riparian
Peter Ready	Does Not Meet	1993	Timber/Veg.Succession
Whitebird Creek	Does Not Meet	1993	Vegetative Succession
Big Cove	Does Not Meet	1993	Timber Management
Big Creek	Does Not Meet	1994	Riparian
Elk Creek-Lick Creek	Does Not Meet	1994	Riparian
Anchor Meadows	Does Not Meet	1994	Wilderness/Riparian
Bull Creek	Does Not Meet	1994	Wilderness/Riparian
Dome Hill	Does Not Meet	1994	Wilderness/Riparian
Red River	Meets	1994	Riparian
Tahoe-Clear Creek	Meets	1994	Riparian/Timber Mgmt.
Mallard Creek	Does Not Meet	1994	Riparian
Allison Berg	Does Not Meet	1994	Timber Management
Florence	Does Not Meet	1994	Riparian
Corral Hill	Does Not Meet	1995	Vegetative Succession
East Fork	Does Not Meet	1995	Riparian
Cow Creek	Does Not Meet	1995	Wilderness/Timber Mgmt.
Meadow Creek	Does Not Meet	1995	Big Game
Cannonball	Does Not Meet	1995	Wilderness/Recreation
Siegel Creek	Meets	1995	Riparian/TbrMgt/Big Game
Elk Summit	Meets	1996	Timber Management
Papoose	Does Not Meet	1996	Riparian
Earthquake	Meets	1996	Riparian/Big Game
Slate Point	Does Not Meet	1996	Riparian
Green Mountain	Does Not Meet	1996	Riparian/Big Game/T&E
Hamby	Meets	1996	Timber Management
Fiddle Creek	Does Not Meet	1996	Timber Management
Newsome Creek	Does Not Meet	1997	Timber Management
Riverview	Does Not Meet	1997	Riparian
Kirks Fork	Meets	1998	Riparian
Moose Butte	Vacant	1998	Riparian/TbrMgt/Big Game
Deadwood	Meets	1999	Riparian

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

The preceding Nez Perce Allotment Update Priority Schedule is the most recent version of the Forest schedule. It displays the Forest Plan status, the year each allotment is scheduled for updating, and the key resource values that may affect management of each allotment. In addition, the Forest has a proposal on line to track progress in updating allotment management plans (range gate).

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.

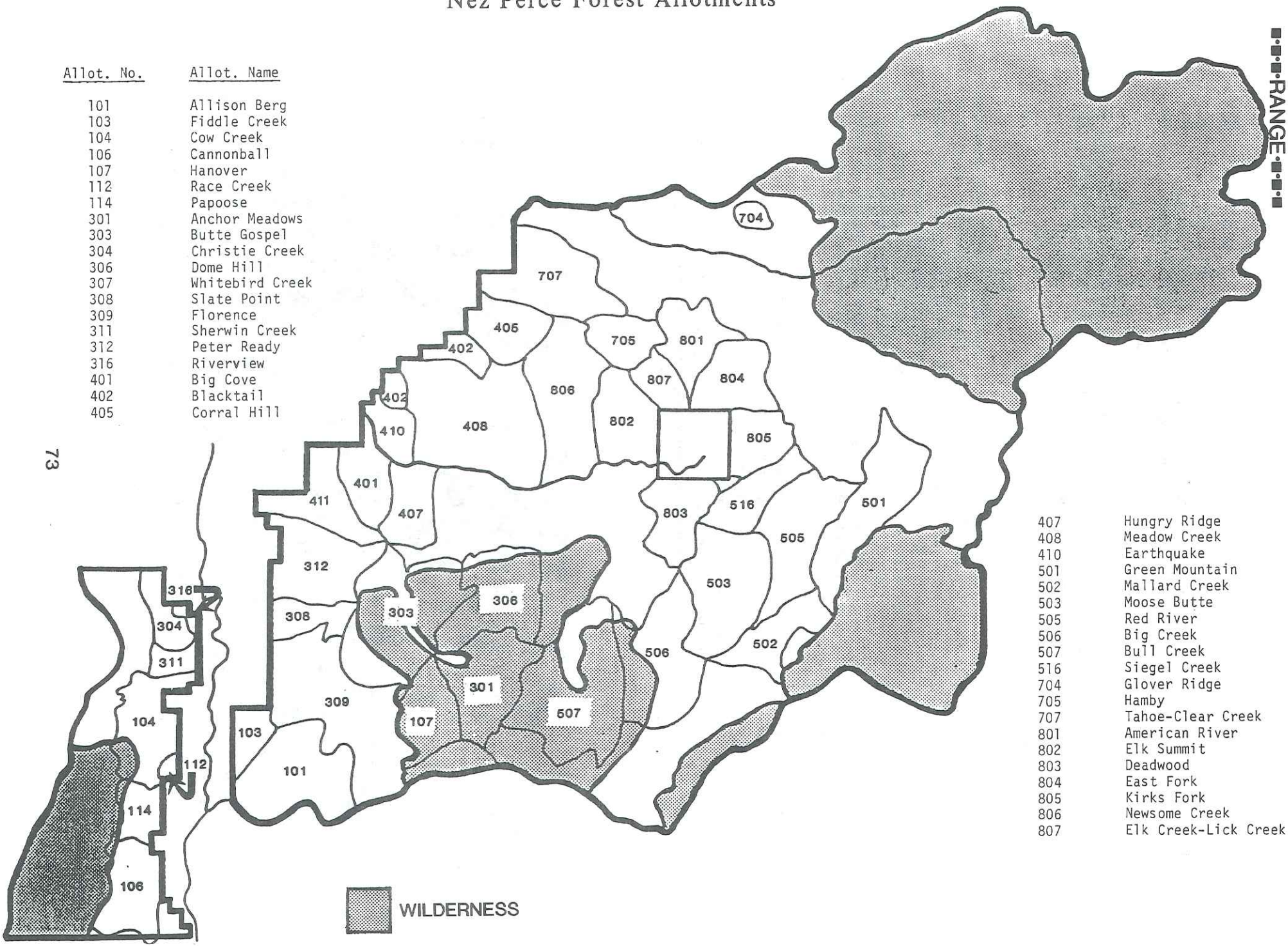
Evaluation of Monitoring Results:

Available information from monitoring reviews and range analysis on four allotments 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 several riparian 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.

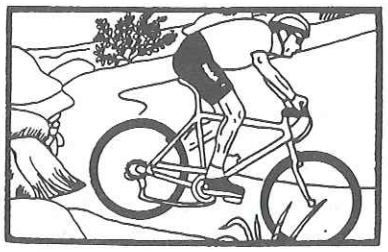
The Forest intends to bring all allotments into compliance with Forest Plan standards and guidelines based on the priorities outlined in this schedule. However, full Forest Plan funding is needed to accomplish AMP updates as scheduled. The information contained in the schedule reflects the best information available at this time and the schedule will be updated annually to reflect changes in resource information and funding levels. The American River and Blacktail Allotments were scheduled to have their allotment management plans updated in FY 1991. The Blacktail Allotment was not updated because there was a complete turnover in permittees and the American River Allotment was not updated due to lack of funding.

Nez Perce Forest Allotments

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



407	Hungry Ridge
408	Meadow Creek
410	Earthquake
501	Green Mountain
502	Mallard Creek
503	Moose Butte
505	Red River
506	Big Creek
507	Bull Creek
516	Siegel Creek
704	Glover Ridge
705	Hamby
707	Tahoe-Clear Creek
801	American River
802	Elk Summit
803	Deadwood
804	East Fork
805	Kirks Fork
806	Newsome Creek
807	Elk Creek-Lick Creek



RECREATION

Item 1a:	Recreation Visitor Days
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 1988-1991

	Recreation Use (MRVD)[1]			
Activity Category	FY 88	FY 89	FY 90	FY 91
Camping, Picnicking, and Swimming	207.0	241.9	241.9	241.9
Mechanized Travel and Viewing Scenery	173.6	193.2	193.2	201.5
Hiking, Horseback Travel, and Water Travel	75.3	76.6	76.6	84.0
Winter Sports	10.0	10.4	10.4	13.3
Resorts, Cabins, and Organizational Camps	10.0	11.5	11.5	7.6
Hunting	88.9	91.4	91.4	91.4
Fishing	31.5	33.7	33.7	33.7
Non-Consumptive Fish and Wildlife Use	2.0	3.2	3.2	3.2
Other Recreational Activities	57.5	59.6	59.6	60.6
Total	655.8	722.5	722.5	737.2
Wilderness Use (included above)				
Gospel-Hump	21.5	21.5	21.5	21.5
Frank Church-River of No Return	10.0	10.0	10.0	10.0
Selway-Bitterroot	51.6	51.6	51.6	51.6
Total (included above)	83.1	83.1	83.1	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 1991. Accuracy of RIM use estimates will improve only when gathering such information is given a priority. The lack of a National system also needs to be remedied. The Regional Office is taking steps to assist in improving our visitor use data by developing a Regionwide format for reporting visitor use.

Item 1b:	**Acres of Recreation Opportunity Spectrum (ROS) Category**
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 1991, several projects on the Nez Perce National Forest were chosen at random for interdisciplinary team monitoring. Most of the interdisciplinary teams included a District employee with responsibilities in recreation. Documentation of these reviews indicated that recreation was often considered in environmental analyses and ROS was usually being used as a tool to assess the projects.

Evaluation of Monitoring Results:

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

In 1990, the three north Idaho Forests sponsored an ROS training session which was well attended. This has helped in the understanding and application of ROS to the Nez Perce NF. With changes in personnel and with heightened awareness of recreation, more needs to be done. What is needed is a review and revision of ROS maps Forestwide, incorporation of ROS into all environmental analyses, and a mechanism for updating ROS acreage changes in a data base. 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, 1990 - September 30, 1991)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Unacceptable impacts caused by off-road vehicle use.

Monitoring Results:

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

ORV use on the Forest has been increasing in popularity and variety. Snowmobiles, three- and four-wheel all-terrain vehicles, and traditional four-wheel drive vehicles all contribute to this use.

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

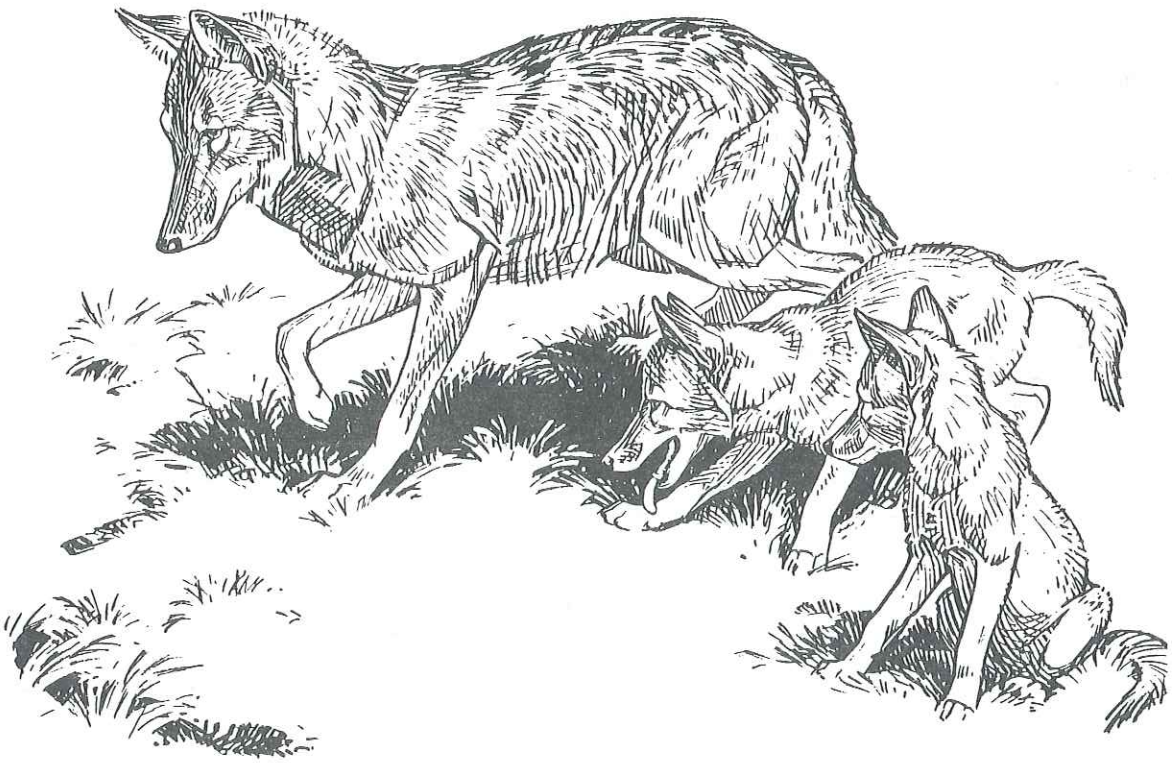
Each year, gates are broken or circumvented, with resultant impacts. Efforts to reduce these impacts include posting of up-to-date orders at each gate, explanatory signs describing reasons for the closures, increased enforcement actions, publicity of successful prosecutions, and weekend hunter patrols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

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

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

Evaluation of Monitoring Results:

Through further development and implementation of the Access Management Plan, the Forest needs to develop a systematic method to monitor ORV use and impacts. Some of the methodology is documented in the Access Management Guidelines, but not enough to satisfy the requirements of the Forest Monitoring Plan. Additional funding sources for access management and ORV management need to be identified. Funds currently being used are from a variety of resource project accounts which benefit from good access management, but 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, 1990 - September 30, 1991)
Reporting Period:	5 years (FY 1993)
Variability Which Would Initiate Further Evaluation:	A change in Section 106 of the National Historic Preservation Act of 1966 or other pertinent cultural resource laws and regulations could necessitate altering the cultural resource monitoring procedure to comply with the changes.

Monitoring Results:

During fiscal year 1991, 33 projects were inventoried for compliance with Section 106 of the National Historic Preservation Act as specified in the Forest Plan. The total number of projects inventoried was limited due to budget constraints. As a result, 4,286 acres were inventoried for cultural resources and 29 new archaeological sites were recorded.

Cultural Resource Inventory Results

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

In addition to the new sites recorded, 42 previously recorded sites were re-visited and their documentation updated. Of the 42 sites monitored, three were determined as not eligible to the National Register of Historic Places (NRHP). For the remaining 39 sites, specific recommendations were made for data recovery or mitigation in order to protect the NRHP eligible cultural resources. The Nez Perce Tribe was involved during development of recommendations concerning mitigation measures for eight of the monitored sites.

Adequacy of Cultural Resource Protection

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

The Florence Cemetery is being made accessible to the handicapped with the start of construction of a handicap access trail. This trail will be completed in fiscal year 1992.

Through a cooperative effort with Trust for Public Lands and the Forest Service, restoration and stabilization efforts continued at Campbell's Ferry. This year the Zaunmiller Cabin was restored and plans are being made to open the cabin to the public in the future.

Restoration efforts continued on the Jim Moore Place. The barn was roofed with the help of the Friends of Jim Moore group and the Casey Family Program volunteers.

An Architectural Preservation Guide was developed for the Fenn Ranger Station.

An intensive one week cultural resource orientation and training for the river managers on Salmon River and Red River Ranger Districts allowed the opportunity for monitoring (although non-systematic) of historic and prehistoric sites located along the Salmon River. In the future, more systematic procedures will be developed for monitoring of cultural resources on the Salmon River.

Evaluation of Monitoring Results:

Of the 42 monitored sites, two displayed evidence of vandalism as recent graffiti and carvings were observed. Monitoring revealed that the recommended protection measures were effective for all but the two sites that had received vandalism.

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

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

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

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, 1990 - September 30, 1991)
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 1991 describing management of the Selway-Bitterroot and Frank Church-River of No Return Wildernesses. One will also be prepared for the Gospel-Hump Wilderness in early 1992. These reports to Congress provide good monitoring information on the Nez Perce National Forest's wilderness. Reports for the Selway-Bitterroot and Frank Church-River of No Return Wildernesses are particularly detailed, and review copies are available upon request.

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

Selway-Bitterroot:

Currently operating under Selway-Bitterroot Management Direction approved by the Regional Forester June 25, 1982. This document is incorporated by reference in the Forest Plan for the Nez Perce National Forest.

Limits of Acceptable Change planning has been completed for recreation, trails, and airfield management in the Selway-Bitterroot. A Forest Plan amendment has been signed, providing updated general management direction for recreation, trails, and airfields. In addition, LAC planning is currently being undertaken for wildlife and vegetation management in the Selway-Bitterroot Wilderness.

Gospel-Hump:

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

Further assessment using LAC has 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 scheduled to begin in 1992 in a coordinated four-Forest effort. Campsite condition inventories are completed annually, as funding allows, to establish baseline information for the LAC process.

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

Selway-Bitterroot:

The fire management plan, suspended in 1988, was revised in May of 1990, and was in effect during the 1991 fire season. For further information, see the Fire section of the Selway-Bitterroot Wilderness "State of the Wilderness Report."

Gospel-Hump:

The fire management plan, suspended since 1988, is currently undergoing revision and should be in effect for the 1992 fire season.

Frank Church - River of No Return:

The fire management plan, suspended since 1988, was revised and in effect during the 1991 fire season.

Coordinated Wilderness Management

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

In the Gospel-Hump Wilderness, administered entirely by the Nez Perce NF (Red River and Salmon River Ranger Districts), preseason and on-the-ground coordination meetings were held in 1991. Information on 1991 accomplishments is being assembled for the annual report to Congress, and initial steps were taken to begin revising the prescribed natural fire plan for the Gospel-Hump Wilderness.

Coordinated management of the Selway-Bitterroot Wilderness (SBW) has been formalized by creating a SBW Leadership Policy Council and Steering Group comprised of members from the Clearwater, Bitterroot, and Nez Perce National Forests, as well as the Regional Office. For 1991 activities, a comprehensive

Wildernesswide report has been prepared, entitled "Selway-Bitterroot Wilderness, 1991, State of the Wilderness Report." It contains, in over 50 pages, a detailed monitoring report for the SBW, including the following sections:

Section 1	Areas that do not meet Forest Plan Standards
Section 2	Summary of FY 1991 Management Accomplishments Vegetation Wildlife and Fisheries Boundary Signing Soil and Water Recreation Trails Prescribed Natural Fire Cultural Resources Administrative Structures Research Law Enforcement
Section 3	FY 1991 Minimum Tool Use Report
Section 4	Findings and Recommendations of Field Reviews
Section 5	Emerging Issues (monitoring triggers) and NEPA Projects that may affect the Selway-Bitterroot Wilderness
Section 6	Budget and Personnel Needs to Meet Implementation Schedule Items
Section 7	Other Concerns

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

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

1. Changes in Acreage

2. Significant Management Activities

   a. Resource Management
      1) Cultural Resources
      2) Fire management
      3) Fisheries
      4) Grazing (range)
      5) Lands
      6) Minerals
      7) Soil, air, and watershed
      8) Exotic plants
      9) Threatened and Endangered Species

10) Wildlife

b. Recreation Management
1) Trail/trailhead development
2) Signs
3) Bridges
4) Other accomplishments
5) Administration of special use permits
6) Wilderness education/information/public contact

c. Administration
1) Administrative use of motorized equipment (FS)
2) Authorized use of motorized equipment (non-FS)
2a) Unauthorized use of motorized equipment
3) Search and rescue
4) Violations and law enforcement action

d. Administrative structures and cleanup
1) Stations, lookouts, and electronic sites

e. Ongoing research projects, including non-FS

3. Administration

Existing Plans and Status
Project Level Planning and Status

a. Status of Wilderness Implementation Schedules

b. Regulations in Effect

c Staffing
1) Personnel and budget

d. Ongoing Partnerships that Assist Wilderness Management

e. Other Administrative Actions
1) Summary of 1990 Admin. Study Action Plan Items
2) Groups that specify/implement policy for FC-RONR
3) Issues

4. Problems that Limit Effective Management of this Wilderness, Excluding Funding Constraints

5. Forthcoming Actions - FY92

6. Appendix Material (Appendices A through F)

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

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

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

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, 1990 - September 30, 1991)
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 adapting, them to meet current on-the-ground conditions and Forest Plan direction.

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

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

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, 1990 to September 30, 1991)
Reporting Period:	5 years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Following a 5-year period, information which would indicate management direction for designated or eligible wild, scenic, or recreation rivers is not being followed.

Discussion:

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

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

Monitoring Results:

Designated Rivers:

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

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

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

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

Eligible River Segments

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

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

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

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

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

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

Meadow Creek (Tributary to Selway River) -- No activities; grazing allotment in use status; in compliance with Forest Plan direction for this eligible wild and recreation river.

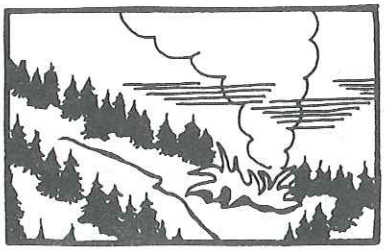
South Fork Clearwater River (Recreational) -- Modification of a clearcut unit on the Shooting Star Timber Sale occurred in FY 1990 because it can be seen from the South Fork Highway (M.P. 37). Minor aspects of the harvesting became visible prior to modification. Idaho Highway Department waste dump sites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

Evaluation of Monitoring Results:

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

Management of eligible segments also appears to meet management direction. Lack of funding in the recreation and lands programs inhibits the monitoring and management of these segments, and of completing the suitability analyses for the eligible segments.

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



PROTECTION

Item 1k:	Acres and Numbers of Wild and Prescribed Fires
Frequency of Measurement:	Annually (October 1, 1990 to September 30, 1991)
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:

Additional fire protection acreage, 193,017 acres, was assumed when the Forest took over administration of the Bitterroot National Forest's portion of the Frank Church-River of No Return Wilderness. Of this acreage, 43,600 acres are actually protected by the Salmon National Forest. The remainder is the responsibility of the Nez Perce National Forest.

Monitoring Results:

ACRES AND NUMBER OF WILDFIRES

	Number of Fires					Acres Burned				
Types of Fires	1988	1989	1990	1991	10-Yr. Avg.[1]	1988	1989	1990	1991	10-Yr. Avg.[1]
Lightning Fires	122	310	178	238	156	102,236	8,850	95	176	13,580
Lightning Fires with Control Strategy	106	310	155	238	148	59,426	8,850	83	176	7,670
Lightning Fires with Contain, Confine Strategy	16	0	23	0	8	42,810	0	12	0	5,910
Person-caused/ Misc.Fires	21	16	24	32	16	3,707	38	548	2,031	2,223
Total Fires	143	326	202	270	172	105,943	8,888	643	2,207	15,803

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

PRESCRIBED NATURAL FIRES (WILDERNESS)[1]

	1988	1989	1990	1991	10-Year Avg.[2]
Number of Fires	3	0	2	13	13
Acres Burned	520	0	0	3,311	1,883

[1] See the Selway-Bitterroot Wilderness "State of the Wilderness Report" fire section for further information.
[2] The 10-year average is the average for the past 10 years.

Individual fire reports were completed on all 1991 fires.

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

The Forest has two fuels targets (acres). One concerns the use of fire protection dollars, and the other, brush disposal funds. The target for use of fire protection dollars was 1,470 acres. This target was exceeded by 121 acres. Both natural and activity fuels (logging debris) were treated with these funds.

The Forest target, 4,860 acres, treatment of activity fuels with the use of brush disposal funds, was not attained. Only 3,590 acres were treated in FY91. This was due in part to unfavorable (dry fall) burning conditions.

The Forest Fire Management program was not funded at the most cost-efficient level as described by the National Fire Management Analysis System. However, it did receive an additional $517,000 of severity funding in support of the fire management organization. Of this amount, approximately $329,000 was spent.

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

Evaluation of Monitoring Results:

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

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

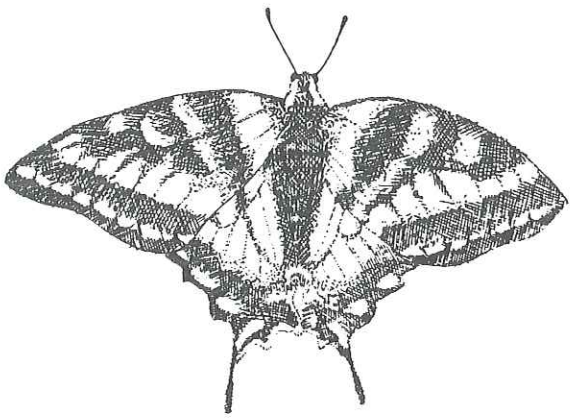
Item 7:	Insect and Disease Activity
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Significant increases in population or damage levels of insects or diseases

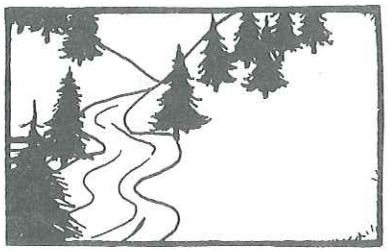
Monitoring Results:

Mountain pine beetle-infested lodgepole pine and ponderosa pine were reduced from 1990. Mountain pine beetle infestations, along with numerous other minor pests, remained relatively stable. Western pine beetle, fir engraver, and western budworm infestations declined from 1990. The balsam wooly adelgid remained in subalpine and grand firs in 1991. 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.





FACILITIES

Item 2k:	Mitigation Measures Used for and Impacts of Transportation Facilities on Resources
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 1991 included specific mitigation measures to reduce facilities' impacts on resources. The following mitigation measures were used (not all were used on every project).

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

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

Table 2k-1 MITIGATION MEASURES SPECIFIED ON PROJECTS IN FY 1991

Project	Planned Sedi-ment Mitiga-tion (%)	Windrow Slash	Rock Surfac-ing	Rock Ditches	Grass Seeding Fertiliza-tion	Straw Bales	SPS 204[1]	Layer Place Fills	Critical Logging Controls (designed into Package)	Tempo-rary Water-bars	Gates Traffic Control	Total project cost $M[2]
PUBLIC WORKS												
Mallard Creek [4]	80	N/A	X	X	X	X	X	X	N/A	X		877
Nez Perce Trail [4]	80	N/A	X	X	X	X	X	X	N/A	X		539
Lower Peasley [3,4]	80	X	X	X	X	X	X	N/A	N/A	X	X	93
244 Tie [4]	80	X	X	X	X	X	X	X	N/A	X	X	97
Meadow Creek Bridge [4]	80	N/A	X		X	X	X	X	X			65
Carey Creek [4]	80	N/A	X	N/A	X	X	X	X	N/A			156
Wall Creek Watershed [3,4]	80	X	X	X	X	X	X	X	N/A	X		249
Orogrande Crushing	80	N/A	X				X		N/A	X		504
TIMBER SALES												
North Fork Red River [4]	80	X	X		X	X	X	N/A			X	7
Sibling Salvage [4]	80	X	X		X	X	X	X			X	104
Elkhard	80	X	X	X	X	X	X	X	X	X	X	339
Lower Cougar [3,4]	80	X	X	X	X	X	X	X	X	X	X	625
Winter Surveyor	80	X	X	X	X	X	X	X	X	X	X	589
No Business	80	X	X	X	X	X	X	X	X	X	X	1744
Chinese Rabbit Stew [3,4]	80	X	X	X	X	X	X	X	X	X	X	2277
East Fork American [4]	80	X	X	X	X	X	X	X	X	X	X	547
Noble Creek [4]	80	X	X	X	X	X	X	X	X	X	X	481
Grouse and 1190B [4]	80	X	X	X	X	X	X	X	X	X	X	249
Four/Six Mile [4]	80	X	X	X	X	X	X	X	X	X	X	437

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

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

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

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

Table 2k-2 MITIGATION ON MAINTENANCE PROJECTS

ROAD NO.	DESCRIPTION*	COST ($)
221	Slide removal, installed 3 drop inlets	15,000
221/263	Flash flood repairs	30,000
279	Slide removal	500
285	Installed 2 corrugated metal pipes, repaired ditchout and road drainage	1,500
309	Correct corrugated metal pipe problems	1,500
317	Installed 8 water diverters, 20 opentops, cleaned sediment trap	5,000
357	Repaired corrugated metal pipe extension, installed 2 corrugated metal pipes, 52 opentops	22,000
464	Slide removal	500
470	Installed downspout and gabion	2,500
487	Installed corrugated metal pipe extension, repaired subgrade	1,500
522	Installed 2 drop inlets	2,000
649	Cleaned sediment trap twice	500
1150	Reconstructed cattleguard	500
1188	Installed corrugated metal pipe and drop inlet	500
1831	Installed drop inlet	500
2102	Filled large potholes in subgrade	500
4600	Installed corrugated metal pipe extension	500
9704	Installed 16 drop inlets	5,000
9713	Installed barrier	500
	Rehabilitated Elk Summit Pit	500
	Installed corrugated metal pipe at Dixie Work Center for proposed fire camp	1,000

* All disturbed ground seeded.

ROAD MILES MAINTAINED*

Maintenance Level	To Standard (Mi.)	Not To Standard (Mi.)
1	1407	607
2	490	132
3-5	650	33

*Includes purchaser maintenance.

Miles Brushing	(Roadside)	187
MUTCD Signing*	New	256 each
	Maintenance	127 each

*Manual of Uniform Traffic Control Devices (Federal Highway Standards for road signs)

TRAIL MILES MAINTAINED

Maintenance Level	Total Miles Maintained
Level I	1128
Level II	87
Level III	46
Less than Level I	189
Total	1450

Table 2k-3 MITIGATION ON REHABILITATION PROJECTS THROUGH FOREST ROAD PROGRAM FUNDING

NAME	UNIT	AMOUNT	DESCRIPTION	COST $M
Forestwide Materials			Purchase seed, straw, and filter cloth for erosion control; culvert, woven-wire basket	28
Allison Free Use	Mi.	5.6	Rock replacement	115.2
Squaw Creek	Mi.	2.1	Rock replacement	19.3

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

In addition, the Forest Engineer and District Rangers reviewed 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 91 has been attained and will be met in FY 92.

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, monitoring information comes from a variety of sources: facility maintenance records, environmental assessment documents, public letters and requests, and biological evaluations. The Nez Perce Access Management Guide also contains methodology and documentation designed to assist in monitoring.

Monitoring Results:

In 1984, 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 43 sites. Future monitoring and evaluation will involve moving surveillance sites throughout the Forest as warranted by changes in user trends.

Presently, we have 5-8 years of data collected from 26 surveillance sites, and anywhere from 1 to 4 years on 17 surveillance sites. There were 11 new surveillance sites installed at the beginning of 1991. Analysis from sites with 4 or more 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. A more indepth analysis of the collected data could possibly show trends attributed to other Forest users. From our data, it is obvious that the highest recreational use on monitored roads is during hunting season.

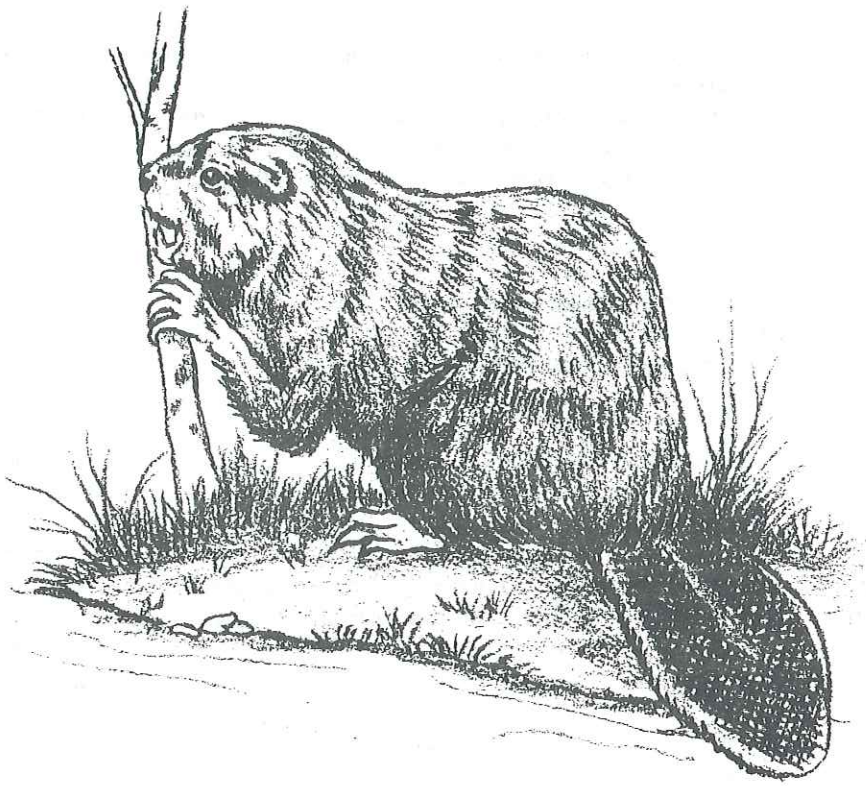
The Forest has undergone 3 years of implementation of the Access Management Guide.

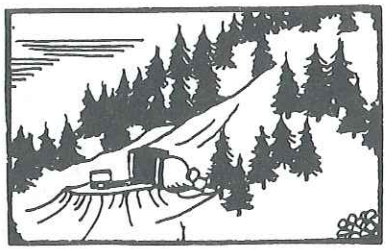
A new Forest visitor's map was published in 1991. The new map was revised to highlight recreation opportunities instead of emphasizing road closures.

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, 1990 - September 30, 1991)
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 88 active Plans of Operation, six need modification or updating to more accurately describe existing surface disturbance and/or changes in the operation. In five 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 13 need to be increased or decreased to more accurately reflect reclamation costs. Three 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	11	0	0	1
Clearwater	0[2]	0	0	0
Red River	17	4	3	0
Moose Creek	0	0	0	0
Selway	0	0	0	0
Elk City	50[3]	2	10	2
TOTAL	88	6	13	3

[1]Does not include Notices of Intent

[2]Although the Clearwater District did not have any active operations this year, there is still one inactive operation which needs to be reclaimed.

[3]Case files were not reviewed, but estimates were made in each category.

The Forest conducted an interdisciplinary field review of one proposed mining operation on the Elk City Ranger District.

The proposed operation is a gold heap leach operation called Ericson Reef. It is located approximately 6 miles north of Elk City, Idaho. It also falls within the Elk City Municipal Watershed. There are concerns with potential problems which might occur in transporting the sodium cyanide used in the leaching up the South Fork of the Clearwater River. There is also concern about how to protect the municipal watershed in case of leaks in the leach pad lines. To date, there is not an approved operating plan or completed NEPA document for this proposal. If an operating plan is accepted, bonding would be adequate to cover both site reclamation and emergency spills. An opportunity to stabilize and reclaim an old placer mining area by the company proposing the operation was identified.

There are still problems with the two operations on the Salmon River and Red River Ranger Districts. These were identified in the minerals section of the 1990 Monitoring Report. The lack of funding and staffing to adequately deal with these problem areas carried through 1991.

Evaluation of Monitoring Results:

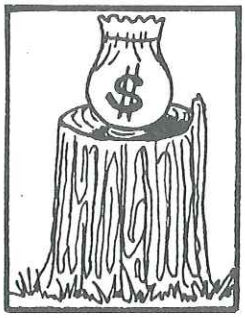
These monitoring results indicate that the Forest is carrying out its minerals management responsibilities in conformance with Forest Plan direction in most, but not all, instances. The above data indicate that 7 percent of all active operations on the Forest are not fully in compliance with their approved Plan of Operations or need to have their Plans modified to better protect surface resources. Fifteen 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 3.5 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
1991	7	15	3.5

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



ECONOMICS

Item 3:	Cost of Implementing Resource Management Prescriptions
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
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 3, found in the beginning of this report, displays predicted average annual costs, budget allocations, and actual expenditures for the fiscal years 1988, 1989, 1990, and 1991. Dollars have been adjusted to constant 1991 values.

Table 4 displays projected annual costs of full implementation for outyears FY 1992 - 1994. This table updates projected annual costs shown in Appendix K of the Forest Plan. Corresponding activities and outputs for the Forest Plan period are displayed in Table 2.

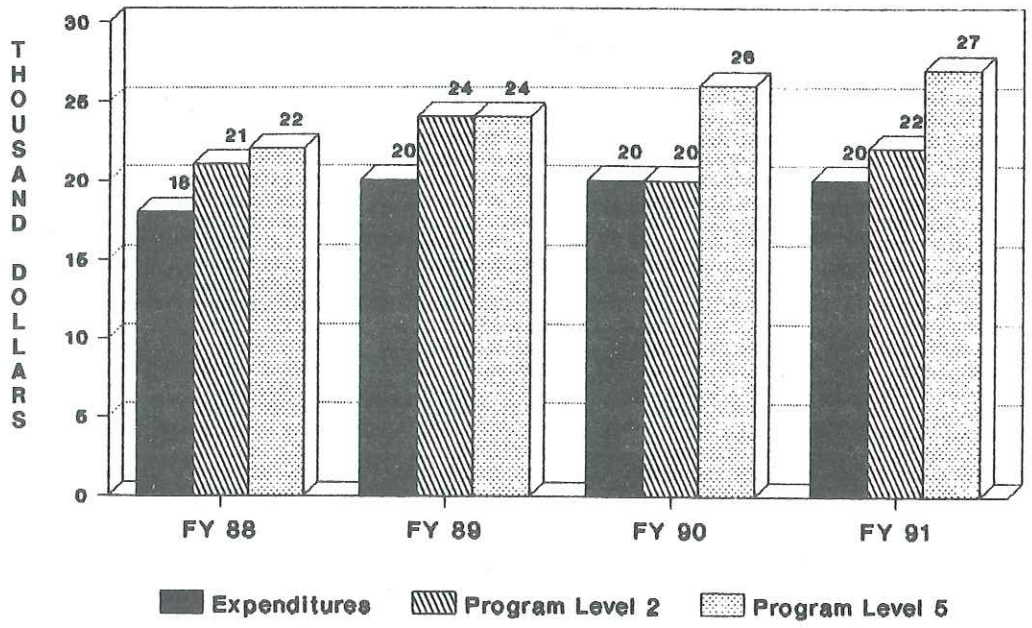
Funding for fiscal years 1988 and 1989 were 81 percent of what is needed to fully implement the Forest Plan. Funding for FY 1990 was 78 percent of full Forest Plan implementation needs. In 1991, funding was 73 percent of full Forest Plan implementation needs.

Evaluation of Monitoring Results

Funding levels received have consistently been less than Forest Plan funding levels. These decreased budgets are not expected to change the long-term goals and objectives of the Forest Plan. However, the activity and output levels of some resources projected at Forest Plan funding levels have not been attained and as shown in Table 2, may not be attained in the future.

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.

IMPLEMENTATION FUNDING (FY 1988 - 1991)



The chart shown above shows that funding levels received by the Forest have been lower than predicted in the Forest Plan. The funding amount shown in Program Level 5 is that needed to fully implement the Forest Plan. The funding amount shown in Program Level 2 is similar to budgets received in previous years.

The effects of this reduced funding level can be seen in the sections of this report describing individual resource areas.

Item 3a:	Forest Resource-Derived Revenues
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	5 Years (FY 1992)
Variability Which Would Initiate Further Evaluation:	Any change in resource-derived revenues altering the implementation of Forest Plan long-term goals and objectives will necessitate a Forest Plan Amendment.

Resource outputs to which dollar values were assigned constitute the priced benefits included in the FORPLAN PNV (present net value) calculations. While both market and nonmarket benefits were used in the Forest Plan to determine total priced benefits, only certain resource benefits were used to determine the allocation and scheduling of prescriptions in FORPLAN. Only timber and range revenues are used in calculating returns to the government.

Monitoring Results

Revenues	Forest Plan Revenues (FY 91$)	FY 1988 Revenues (FY 91$)	FY 1989 Revenues (FY 91$)	FY 1990 Revenues (FY 91$)	FY 1991 Revenues (FY 91$)
Timber	$14,472,149	$5,133,254	$7,938,529	$7,110,741	$4,620,547
Range	$66,176	$38,866	$41,630[1]	$43,372	$37,191

[1]Range revenues in the 1989 monitoring report omitted collections amounting to $860.

Timber Revenues

The timber revenues used in this report are taken from the Timber Sale Program Information Reporting System (TSPIRS). The differences between projected Forest Plan timber revenues and actual timber revenues are due to two factors. First, we are not experiencing stumpage values as high as predicted in the Forest Plan. 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.

The revenue increase experienced in 1989 over 1988 can be attributed primarily to the increase in timber sale receipts. More timber was harvested in 1989, perhaps a function of more favorable market conditions.

The revenue decrease from 1990 to 1991 was a largely a result of different accounting methods used in TSPIRS between 1990 and 1991. In particular, established Purchaser Credits for roads were used in 1990, while charged Purchaser Credits for roads were used in 1991. The method of depreciating roads also changed in 1991.

The 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 1991$)	FY 1989 (FY 1991$)	FY 1990 (FY 1991$)	FY 1991 (FY 1991$)
Gain/Loss before Payments to States	329,215	1,550,043	703,635	-2,024,194
Payments to States	1,081,768	1,313,781	1,288,359	1,266,408
Gain/Loss after Payments to States	-751,865	236,262	-584,724	-3,290,602

Range Revenues

Differences between projected Forest Plan range revenues and actual 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 $0.36 per head month for sheep (FY 90$) while fiscal year 1991 grazing fees are calculated at $1.97 per head month for cattle and horses and $0.39 for sheep (FY 91$).

While the Forest provided forage for 43,000 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. In fiscal year 1991, a total of 23,602 head months were billed, accounting for the lower range revenues in fiscal year 1991.

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 and 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, 1990 - September 30, 1991)
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 4 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:

Validation of Resource Prediction Models: Some members of local industry are concerned that timber entries are being held up because of opinion rather than valid data. They want more validation monitoring of the models that affect (constrain) timber harvest, especially the sediment, fishery, and elk models.

Livestock Management: The removal of natural barriers to livestock movement, as the result of timber harvest and road construction, is making it more difficult for permittees to manage their livestock.

Elk City Watershed: Concerns have been expressed that projects on Forest Service land in the Elk City Municipal Watershed have the potential to affect the water quality of the watershed.

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.

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. Stream and channel bank improvement projects were implemented under this process in 1991.

Pacific Yew Harvesting: The harvesting of Pacific Yew material for treatment of cancer may affect the traditional rights of the Nez Perce Tribe to gather yew material.

The availability of Pacific Yew bark from the Forest for treatment of cancer may affect the success of ongoing clinical trials. How the Forest treats the demand for Pacific Yew bark may affect other government agencies' interests (i.e., Idaho Department of Fish and Game and their interest in how we manage habitat for moose).

North Idaho's yew bark processing facility, located in Grangeville, added to the local economy. Approximately $1,000,000 was paid to bark collectors and processors from this facility. Roughly one-quarter of the bark processed at the facility was collected on the Nez Perce National Forest.

Tribal Access to the Forest: Traditional campsites used by the Nez Perce people are being used heavily by non-Indians. Indian families are being denied access to these sites because of their occupancy by non-Indian people. Traditional campsites have/are being developed for other uses.

Rackliff Big Game Winter Range Burning: The September 19, 1991 big game habitat improvement burn shrouded Clearwater Valley residents in smoke for about 6 weeks. The fire also caused anger among residents who were concerned that they were not involved in the original decision to burn. In addition, residents were angered by the proximity of the burn to private property, and they felt they received inadequate notification that the burn was being lit.

Post and Pole Sale Pre-Logging: This type of post and pole sale is helping us meet the demand for post and pole products. These are good public service projects.

Forest Service Payments to Idaho County from All Receipts

Idaho County receives a payment equal to 25 percent of total gross receipts. Receipts for FY 91 were $1,303,797.30. Timber receipts account for approximately 98 percent of the gross receipts.

Payments to Idaho County from All Receipts

Fiscal Year	Payment to County from Nez Perce NF
1991	$1,303,797
1990	1,276,546
1989	1,243,278
1988	995,846
1987[1]	845,957
1986[1]	1,104,748
1985[1]	1,228,458
1984[1]	596,575
1983[1]	454,011
1982[1]	338,171
1981[1]	1,168,039
1980[1]	1,243,044

[1] Receipts received prior to implementation of the Forest Plan.

Evaluation of Monitoring Results:

The Forest needs to seek input from the Nez Perce Tribe and other interested parties when proposing action to harvest Pacific Yew material. A consultation process needs to be arranged to ensure that this happens.

The Forest needs to work more closely with private landowners to improve watershed conditions for the Elk City Municipal Watershed. We should look at helping to develop a Coordinated Resource Management Plan for the watershed. This process helps the public and other government agencies to be involved in land management planning where mixed ownership lands occur.

The Forest needs to work more closely with permittees to review timber harvest activities that may affect their livestock management.

We need to put more emphasis on validating our NEZSED, FISHSED, and elk resource prediction models. We need to keep interested members of the public involved in the validation process.

When competing activities (i.e., an activity's contribution toward allowable sediment yields) are identified in a watershed, we need to make a special effort to keep the affected people apprised of how the activities may affect them.

Given the dry conditions, the Forest made a mistake in proceeding with the Rackliff wildlife burn. A new analysis will be conducted prior to future burns and public input will be actively sought from area residents. In addition, a field trip will be conducted in the spring of 1992 to allow residents to take a closer look at the burned area. A review of the fire was conducted and the results are available.

Item 9:	Effects of Other Government Agencies' Activities on the National Forest
Frequency of Measurement:	Annually (October 1, 1990 - September 30, 1991)
Reporting Period:	Annually
Variability Which Would Initiate Further Evaluation:	Unacceptable effects determined by the Forest Interdisciplinary Team.

Monitoring Results:

State of Montana and State of Idaho (Air Quality): The Forest joined the North Idaho Airshed Group in 1990. This group's objective is to minimize or prevent the accumulation of smoke in Idaho to meet State and Federal ambient air quality standards when prescribed burning is necessary. From time to time, the State of Montana and the State of Idaho have asked us to curtail our burning for air quality purposes, but this did not occur in 1991.

State of Idaho Department of Lands: Under our cooperative agreement with the State of Idaho Department of Lands, cooperation and exchange of firefighting resources is continuing. This was beneficial to the Forest in fighting Forest fires. The Idaho Department of Lands (IDL) and the Forest cooperated very well in fighting the Dewey Fire on the Forest/IDL boundary. The Forest was busy with other fires when this fire broke out and IDL's participation helped us with our firefighting workload.

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 (IDHW): This agency administers the Idaho Water Quality Standards. The Forest is bound to follow these standards under the Clean Water Act. During 1991, personnel from this Department participated on the Antidegradation Local Working Committees and were involved in numerous other projects on the Forest. The Forest also prepared basin status reports for the 1991 Basin Area meetings. The Forest cooperated with the IDHW in developing and implementing a monitoring plan for the Big and Little Elk Creek stream segments of concern.

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 compilation efforts to support 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.

Idaho Department of Fish and Game (IDFG): Big game winter surveys conducted by the Idaho Department of Fish and Game provided data for monitoring big game populations. The IDFG, Region 2, cooperated in a lead role to continue infra-red, tripped camera monitoring for grizzly bear presence in the Selway-Bitterroot Wilderness . The nongame division of the IDFG assisted in monitoring the Shingle Creek peregrine nest results in FY91. They provided funding, through Kelly Creek Flycasters, for the Mullens fisheries habitat improvement project.

Idaho State Historical Preservation Office (SHPO): The Idaho State Historic Preservation Office monitors the Nez Perce National Forest's compliance with Section 106 of the National Historic Preservation Act of 1966. This office reviews all cultural resource reports and site record forms. If a cultural resource is to be impacted by a Forest activity, the impact is mitigated through consultation with SHPO.

Idaho State Board of Aeronautics: The Board periodically inspects Moose Creek and Shearer Airfields, and has been involved in the planning effort and proposals for the other airstrips.

University of Idaho: The College of Forestry, Wildlife, and Range Sciences cooperated with the Forest in a monitoring study of elk use of Selway winter range resulting from prescription burning.

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.

Nez Perce Tribe/Columbia River Inter-Tribal Fish Commission: The Nez Perce Indian Tribe, as in previous years, assisted the Forest in cultural awareness, recruitment, training and firefighting activities. This assistance was of value in helping the Forest diversify its workforce and accomplish resource management objectives.

This year, the Tribe monitored some of our activities and provided us with feedback on their findings. Some of these findings have been incorporated into this report. The Nez Perce Tribe has also been helping us monitor our effectiveness in implementing elk summer range objectives. The Tribe's participation strengthens the Forest/Tribe working-together relationship and provides valuable assistance to the Forest monitoring efforts.

Negotiations are continuing on the Columbia River Inter-Tribal Fish Commission's appeal of the Forest Plan. This includes negotiators from Forest Service Regions One, Four, and Six. The main effects of the negotiations with the Commission are:

1. The refinement, type, and amount of wildlife- and fisheries-related data that's being collected and analyzed for project implementation.

2. Stronger acknowledgement of Treaty rights on public lands within the Nez Perce National Forest.

U.S. Army Corps of Engineers (COE): The COE was consulted on projects involving wetlands under provisions of Section 404 of the Clean Water Act.

U.S. Fish and Wildlife Service (USFWS): Eighty five biological evaluations were conducted for threatened and endangered, and sensitives species in FY91. The USFWS provided input to the process. THey also provided funding for fisheries improvement work (Mullens project).

U.S. Department of Agriculture (USDA): The National Cancer Institute (NCI) entered into a "Cooperative Research and Development Agreement" (CRDA) with Bristol-Meyers Squibb (B-M S) for the research and development of Taxol, a promising anticancer drug. The Secretary of Agriculture signed a cooperative agreement with B-M S, for the Forest Service to provide the bark of Pacific yew (Taxus brevifolia), a source of Taxol.

This led to an immediate review of existing timber sales for Pacific yew. A new permit system was developed, and collections required administration.

Bureau of Land Management (BLM): The BLM and Nez Perce National Forest were involved in cooperative cadastral surveys. This was very beneficial to both agencies, with excellent results. An annual coordination meeting takes place. Activities coordinated include timber, range, mining, recreation, and water monitoring.

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

Idaho Conservation Data Center (ICDC): The ICDC cooperated with the Forest in conducting presence/distribution surveys for two sensitive plants and one sensative animal, and helped develop a species management guide for one sensitive plant.

Evaluation of Monitoring Results:

As in previous years, in fiscal year 1991 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.

D. Other Monitoring

This section addresses monitoring information that is not identified as a requirement in the Nez Perce National Forest Plan (Table V-1). The Forest feels this information is important to monitor as part of Forest Plan implementation.

1. Nez Perce National Forest Accessibility for People with Disabilities

Discussion:

The Architectural Barriers Act (ABA) of 1968 requires that all public buildings, facilities and programs funded in whole or part with federal funds be accessible to and usable by physically disabled persons. Section 504 of the Rehabilitation Act of 1973, as amended in 1978 states, "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any program or activity conducted by Federal financial assistance or by any Executive Agency". The Americans with Disabilities Act (ADA) of 1990 which provides standards - even when no Federal funds are involved - for addressing discrimination against individuals with disabilities in employment, transportation, telecommunications, and services operated by private entities.

In 1991 the Nez Perce Forest Human Resource Team identified the need to evaluate accessibility of Forest facilities to people with disabilities. In June of 1991 a survey was initiated, using the newly developed Forest Service accessibility survey tool, to determine the accessibility of Forest campgrounds/picnic areas.

General Description of the Different Levels of Accessibility (Interim Draft, Design Guide for Accessible Outdoor Recreation).

Accessible	Challenge Level 1	Challenge Level 2
All facilities are accessible for most people with disabilities without assistance. Facilities meet Uniform Federal Accessibility Standards (UFAS).	Most facilities are useable with effort by the "average" person with a disability. Generally meets UFAS requirements.	Site and facilities are useable unaided by an athletic disabled person, or by an "average" disabled person with assistance.

Monitoring Results:

Accessibility by Challenge Level

Facility	Accessible	Challenge Level 1	Challenge Level 2
Fish Creek Pavillion *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Fish Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Castle Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
South Fork Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Race Creek Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Slims Camp Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Selway Falls Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
O'Hara Bar Campground *	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Spring Bar Campground	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Spring Bar Boat Ramp Parking Area	Not Accessible at this level	Not Accessible at this level	Accessible at this level
Allison Creek Picnic Area	Not Accessible at this level	Not Accessible at this level	Accessible at this level

* These facilities are listed in our 1991 Visitors Guide to Idaho County as being accessible to people with handicaps.

Evaluation of Monitoring Results:

Eleven Forest facilities were reviewed to determine their accessibility to people with disabilities. None of the 11 facilities were found to be accessible at the Accessible and Challenge Level 1 levels. All facilities were accessible at the highest challenge level (Challenge Level 2). In 10 of the 11 facilities, it was difficult for someone in a wheelchair to use the toilet facility. Five of the 11 facilities had toilets that were labeled with the international sign for accessibility to people with disabilities.

The Nez Perce Forest has a number of recreation areas that have a great potential for service to people with disabilities. The activities director from one of the local nursing homes indicated that they would love to take some of their residents to the forest if they could be assured of having accessible campgrounds and picnic facilities.

Recommendations have been given to the Forest on how to make the facilities we reviewed, accessible to people with disabilities.

2. Environmental Analysis Accomplishments Related to Timber

Monitoring Results:

Following is the Forest Supervisor-authority environmental analysis accomplishment since the Forest Plan went into effect.

Fiscal Year	No. of Decisions	Included No. of Sales	Total Acres Analyzed	Proposed Harvest Acres	Percentage of Analysis Acres Actually Proposed for Harvest	Proposed Harvest Volume (MM)[1]
88	3	3	24,400	1,662	6.0	27.0
89	8	15	164,480	5,908	3.6	102.1
90	2	7	38,296	4,677	12.2	42.1
91	3	11	81,964	6,164	7.5	88.5
Total	16	36	309,140	18,411	6.0	260.1

[1] Proposed harvest volume figures in this table are different than those exhibited in Table 1 on pages 5 and 9 because of the rounding off of numbers.

As of the end of fiscal year 1991 (4 years since the Forest Plan went into effect), the Forest had completed site-specific analysis of 34 percent of the total suitable land base of 911,669 acres. Volume per acre for all proposed projects shown above is 14.1 MBF/acre. Of the 16 total decisions, three were Environmental Impact Statements, and 13 were Environmental Assessments.

Evaluation of Monitoring Results:

Many National Environmental Policy Act (NEPA) documents require more than 1 year to complete. This results in high variability from year to year with respect to the number of decisions and acres analyzed.

Much of the proposed harvest volume is planned to sell in fiscal years 1993-1995. The 14.1 thousand board feet per acre estimated for future projects further substantiates the overestimate of volume/acres in the Forest Plan found in sales sold to date.

Although 34 percent of the suitable acres were analyzed, only 24 percent of decadal allowable sale quantity (ASQ) was proposed for harvest on those same acres. Unless this 30 percent volume shortfall can be made up on other acres (which is not likely), the Forest will fall short of decadal ASQ.

3. Harvest of Pacific Yew Bark for Cancer Research

Discussion:

In recent years, the National Cancer Institute has been researching a promising new drug, Taxol. Found in Pacific yew and other Taxus species, early testing has proven favorable on ovarian and other cancers.

In 1991, the National Cancer Institute entered into a Cooperative Research and Development Agreement with Bristol-Meyers Squibb (B-MS) for clinical and commercial development of the clinical drug Taxol. In June, Secretary of Agriculture Madigan signed a Cooperative Agreement with B-MS, stating that the USDA Forest Service will provide bark from the Pacific yew (Taxus brevifolia) for the studies. This is a 5-year agreement.

This was the first year that large scale harvesting of the bark of Pacific yew occurred on the Nez Perce National Forest. In previous years, small amounts have been harvested on the Forest for similar studies.

Monitoring Results:

The Bureau of Land Management and Forest Service goal was 750,000 pounds of bark. Nationally, the Forest Service collected 825,769 pounds; of this, the Nez Perce National Forest collected 87,668 pounds. The bark was collected from seven timber sales (36 harvest units; 517 acres) on two Districts. It was harvested in five of the sales before logging occurred; collection on the other two followed logging. All of the collection areas were within existing timber sale harvest units.

Evaluation of Monitoring Results:

The Forest provided a substantial portion (11 percent) of the bark collected on all National Forest lands in 1991. Bark collection took place from May through September while the sap was flowing and the bark could be easily peeled. Collection areas were selected from areas where the Pacific yew would have been destroyed by previously planned management practices. In all cases, the trees were felled leaving a high stump to promote sprouting for replacement trees. The bark was then hand peeled from the limbs and bole down to pieces 2 inches in diameter.

All harvest units were adjacent to roads, where peelers could carry their sacked bark to vehicles. In some instances, access permits were issued to allow vehicles to enter roads that were otherwise closed.

The Clearwater District experienced the theft of bark in four locations. The bark from some 305 trees on about 37 acres was stolen. This resulted in a review and improvement in collection administration procedures. Tracking procedures were developed to record who collected the bark, and under what permit.

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.

9. Habitat relationships and limiting factors for most sensitive species (plant and animal) are poorly understood. Research is needed to better define critical habitat components for these species and risk posed by Forest management activities.

IV. PROPOSED AMENDMENTS

Following are proposals to amend the Forest Plan. These are the same proposals that were made in the FY 1990 Monitoring Report.

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.

Selway-Bitterroot Wilderness Management

Parts of the Selway-Bitterroot Wilderness General Management Direction and the Forest Plan need to be amended to address wilderness management problems associated with use of trails, campsites, and airfields. This amendment was proposed in FY 1991 and implemented in FY 1992 (see Nez Perce National Forest Amendment 16).

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. Fifteen amendments and one revised amendment have been issued and several others have been proposed. They are listed in the "Proposed Amendments" section of this report.

Following are summaries of those amendments made to date. A copy of any amendment(s) can be obtained by contacting the Nez Perce National Forest Supervisor's Office.

Amendment #1: Clarifies our intent to protect potential Wild and Scenic Rivers upon their inclusion into the National Wild and Scenic Rivers system, by providing more detailed Forestwide standards.

Proposed changes in the management standards were developed following guidance contained in the Wild and Scenic River Evaluation section of the Forest Service Land and Resource Management Planning Handbook (FSH 1909.12, Chapter 8).

Amendment #1 (REVISED): Revised Forest Plan Amendment #1 is exactly the same as the original amendment except that the following statement has been removed. The amendment was necessary to settle an appeal of Amendment #1.

> "Boundaries may include adjacent areas needed to protect the resources or facilitate management of the river corridor."

Amendment #2: Clarifies the Forest's definition and management of motorized recreation on the Nez Perce National Forest.

Amendment #3: Modifies standards listed in Chapter II (Forestwide Management Direction) and Chapter III (Management Area Direction). Clarification is provided in changes to the minerals section of Chapter VI (Summary of the Analysis of the Management Situation) and the glossary and monitoring items.

The specific standards modified are those relating to minerals, wildlife and fish, and riparian area management, and to provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

The need for changes and clarification in management standards was the result of negotiations with the Independent Miners Association's appeal of the Nez Perce National Forest Plan. An interdisciplinary team developed the settlement agreement that addressed the appellant's concerns and a proposal for correcting the Plan.

Amendment #4: Modifies standards listed in Chapter II (Forestwide Management Direction), modifies the visual resource standards in Chapter III (Management Area Direction) and modifies specific monitoring requirements in Forest Plan Appendix O dealing with visual resource management.

The need for changes and clarification in management standards was the result of environmental analysis of proposed timber sales and road construction in the Wing Creek-Twentymile area. During the comment period of the Wing Creek-Twentymile Draft Environmental Impact Statement, concern was expressed on conflicting Forest Plan language pertaining to visual resource management. An interdisciplinary team was used to analyze the concerns and develop a proposal for correcting the Forest Plan.

Amendment #5: Corrects errors displayed in the Nez Perce National Forest Plan Appendix A, Forest Fishery/Water Quality Direction by Prescription Watershed. These objectives provide management direction in terms of the maximum estimated increase in sediment over baseline conditions that can be approached or equaled for a specific number of years per decade.

Some of the changes are planning errors made in identifying sediment yield and entry frequency guidelines. Site-specific analysis and stream surveys have also revealed that some streams were incorrectly identified as not supporting anadromous fish. The errors were identified through environmental analysis of proposed timber sales and road construction. An interdisciplinary team was used in identifying the needed changes and proposing the corrections.

Amendment #6: Corrects errors in Forest Plan Chapter II (Forestwide Management Direction), Chapter III (Management Area Direction), Chapter V (Implementation), Chapter VII (Glossary), and Appendix A (Fishery/ Water Quality Direction).

The corrections made in this Forest Plan amendment provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

An error was identified through environment analysis of a proposed timber sale and associated road construction and habitat improvement project. Forest Plan Appendix A describes current fishery habitat quality in the West Fork of Red River (Prescription Watershed 17060305-04-18) as 50 percent of potential habitat quality. The West Fork of Red River is in a pristine natural condition. This watershed is roadless and no management activities are known to have occurred in either the watershed or the stream. The stream is, therefore, in a pristine, natural condition and it is appropriate to display it at 100 percent of potential habitat quality.

The Forest Interdisciplinary Monitoring Team identified additional typographical errors in the Forest Plan. This Forest Plan amendment includes the correction of those errors.

Amendment #7: Clarifies language found in the following sections:

Chapter II (Forestwide Management Direction)
Chapter V (Implementation)
Chapter VI (Summary of the Analysis of the Management Situation)
Appendix O (Forest Plan Monitoring)

The specific items modified provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

The need for changes and clarification in management standards was the result of negotiations with the Nez Perce Indian Tribe on their appeal of the Nez Perce National Forest Plan. An interdisciplinary team was used in developing the settlement agreement that addressed the appellant's concerns and developed a proposal for correcting the Forest Plan.

Amendment #8: The purpose of Forest Plan Amendment #8 is to clarify language in Appendix O (Forest Plan Monitoring Requirements).

During this past year the Forest Interdisciplinary Monitoring and Evaluation Team identified some items in the Forest Plan Monitoring Requirements Appendix that need correction or clarification.

These items focus on fish and wildlife monitoring. Specifically, the changes relate to forage production, wildlife population trends, and fisheries and watershed monitoring station costs.

The corrections made in this Forest Plan amendment provide clarification that will not alter the multiple-use goals and objectives as identified in the Forest Plan.

Amendments #9 and #10: These amendments deal with management practices specific to the Cove and Mallard Timber Sales as described in the recently released Final Environmental Impact Statements for those sales. Amendment No.9 was formally adopted in the Mallard Record of Decision, and Amendment No. 10 was formally adopted in the Cove Record of Decision. Both of these amendments correct oversights in the Forest Plan.

These two amendments apply only to the timber sales analyzed in the Cove and Mallard Environmental Impact Statements. They do not apply to other timber sales on the Forest.

The two amendments will allow clearcutting and sanitation/salvage harvesting within Management Areas 12 and 17.

Amendment #11: Forest Plan Amendment No. 11 makes adjustments in the Forestwide monitoring program and updates the fish/water quality objectives in Appendix A to the Plan. The changes in the monitoring program were recommended by the Forest Interdisciplinary Monitoring Team in the Nez Perce National Forest Monitoring and Evaluation Report for FiscalYear 1989; the objective was to make the program more comprehensive. The revised fish/water quality ojectives are based on recent stream surveys. Specific changes in both the monitoring program and the fish/water quality objectives are listed in the Decision Memo for Amendment No. 11.

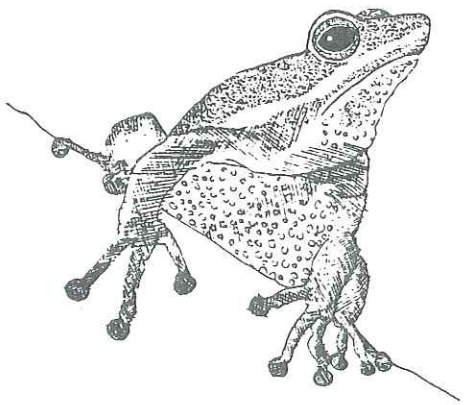
Amendment #12: Amendment 12 makes minor changes to the Wall Creek Municipal Watershed direction (Management Area 22) contained in the Nez Perce Forest Plan. These changes relate to improving the range of management practices identified in the Forest Plan, and specifically to items such as notifying the Water District if a fire occurs in the watershed and taking special precautions with machinery and chemicals.

Amendment #13: Amendment 13 brings the Plan into compliance with legal requirements and Forest Service directives dealing with animal damage control. It should be noted that the amendment does not authorize any specific projects.

Amendment #14: Amendment 14 has been voided, as directed by the Washington Office of the Forest Service. This amendment dealt with separately showing the allowable sale quantity (ASQ) that came from inventoried roadless areas and roaded areas.

Amendment #15: Amendment 15 amends the Frank Church-River of No Return Wilderness Management Plan and the Forest and Land Management Plans for the Bitterroot, Boise, Challis, Payette, Nez Perce, and Salmon National Forests.

The amendment changes wording in the Wilderness Management Plan related to reducing the storage of items and removal of plumbing fixtures from the wilderness. The amendment only modifies the schedule of implementation.



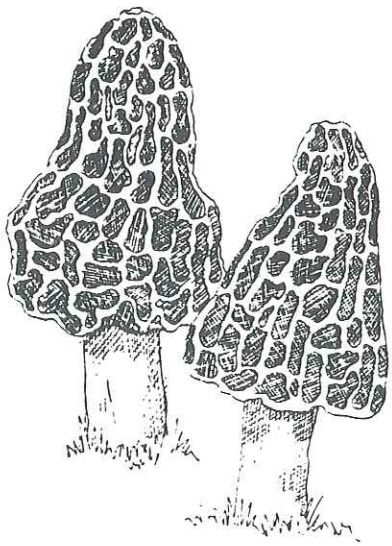
VI. LIST OF PREPARERS

The following individuals contributed to the development of the Monitoring and Evaluation Report for the Nez Perce National Forest for fiscal year 1991. 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
	Nancy Rusho *	Minerals
	Dave Green *	Implementation Analysis and Economics
	Brian Vachowski*	Recreation
	Ali Abusaidi*	Cultural Resources
	Ollie Goldammer*	Fire
	Pat Green *	Soils
	Gary Kellogg *	Land Management Planning Specialist and Forest Interdisciplinary Monitoring Team Leader
	Steve Blair*	Wildlife
	Scott Russell*	Fisheries
	Susan Kelly*	Engineering
	Laura Smith	Graphics Illustrator
	Gayle Hauger	Technical Support
Salmon River Ranger District	Mike McGee*	Salmon River District Monitoring Coordinator
Clearwater Ranger District	Sue Paradiso *	Clearwater District Monitoring Coordinator
Red River Ranger District	Rondi Fischer*	Red River District Monitoring Coordinator
Moose Creek Ranger District	Mark Woods *	Moose Creek District Monitoring Coordinator
Selway Ranger District	Jerry Bird *	Selway District Monitoring Coordinator
Elk City Ranger District	Paula Guenther*	Elk City District Monitoring Coordinator

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

Michael King	Forest Supervisor
Ihor Mereszczak	Timber, Range, and Minerals Staff Officer
Michael Cook	Forest Engineer, Contracting, Purchasing, and Communications Staff Officer
Joe Bednorz	Planning, Budget, and Information Systems Staff Officer
David Poncin	Recreation, Wilderness, Fire, and Lands Staff Officer
Phil Jahn	Fisheries, Wildlife, Watershed, and Soils Staff Officer
Bob Abbott	District Ranger, Salmon River Ranger District
Barb S. Beck	District Ranger, Clearwater Ranger District
Ed Wood	District Ranger, Red River Ranger District
Dennis Dailey	District Ranger, Moose Creek Ranger District
Cynthia Lane	District Ranger, Selway Ranger District
Jim Wiebush	District Ranger, Elk City Ranger District



VII. APPROVAL

I have reviewed the annual Forest Plan Monitoring and Evaluation Report for Fiscal Year 1991 for the Nez Perce National Forest that was prepared by the Forest Interdisciplinary Team. I am satisfied that the Monitoring and Evaluation effort meets the intent of both the Forest Plan (Chapter V) and 36 CFR §219. I have also considered the recommendations of the Interdisciplinary and Leadership Teams on proposed changes to the Forest Plan and will process the necessary Amendments after appropriate notification.

This report is approved:

Michael King

MICHAEL KING
Forest Supervisor

3/31/92

Date

APPENDIX

ACTION ITEMS

Action items are concerns that were identified during Fiscal Year 1991 monitoring that need to be acted upon. Action to resolve these concerns will be taken in 1992.

Item 1: Continue to work on action items that have been identified in previous Forest Annual Monitoring and Evaluation Reports that have not been resolved.

Item 2: Develop a recordkeeping system to track the percent of riparian acres, both suitable and unsuitable, by stand.

Item 3: Emphasize the need to adapt existing contracts to achieve current riparian objectives.

Item 4: Re-establish a concentrated effort to update the R1/R4 Guide (sediment yield monitoring).

Item 5: Validate the sediment, fishery, and elk models.

Item 6: Develop criteria for evaluating impacts of off-highway vehicle (OHV) use. Determine what is unacceptable change on a transportation system or land base as the result of these uses and user types.

"ORV" or "OHV" describe vehicle types such as motorcycles, minibikes, trailbikes, snowmobiles, dunebuggies, all terrain vehicles (ATV) and 4-wheel drive, high clearance vehicles.

Item 7: Develop a Management Area to address management goals, resource potentials, and limitations for "grand fir mosaic" areas.

Item 8: In regard to Pacific yew management, the Forest needs to:

- Amend the Plan with a new definition of MA 21 and new management direction for MA 21 which reflects current knowledge about the winter habitat needs of moose.
- Complete a Forest yew inventory that will be adequate to identify the suitability of inventoried areas for moose winter range and the need of moose for those areas as winter range.
- Identify the 52,798 acres of MA 21 allocated by the Forest Plan using the completed inventory and the distribution needs of moose.
- Amend the Plan to incorporate the national Yew Conservation Guidelines.

Item 9: Look into the possibility of providing information on our firewood permits to help retain wildlife snags.

Item 10: Review the appropriateness of adding a monitoring element to the Forest Plan addressing the Forest situation regarding commodity vs. non-commodity vegetation.

STATUS OF ACTION ITEMS IDENTIFIED IN FY 1990 MONITORING & EVALUATION REPORT

The following action items were identified during FY 1990 monitoring. Following is the status of action taken on these items.

Action Item	Status or Action Taken
Item 1: The Coordinated Resource Management Plan (CRMP) process and its successes need to be highlighted. CRMP is a planning process administered by the Soil Conservation Service. It facilitates communication and cooperation between agencies and landowners. Agencies, groups, and people need to be recognized for their CRMP work. The Forest needs to explore increasing awareness and use of the CRMP process.	The CRM process has been recommended for two additional watersheds on the Forest. The Elk City Antidegradation Local Working Committee endorsed CRM as a way to consider comprehensive watershed management needs in the American River basin. To date, no formal action has been taken to form a CRM committee. The Red River Ranger District is exploring formation of a CRM committee in the Red River basin to address watershed management needs. The Clear Creek CRM group has remained active and reached out to the local community through efforts with the Idaho Wildlife Council and the Valley Elementary School in Kooskia.
Item 2: Fishery/water quality objectives for the South Fork of Clear Creek should be consistent with objectives for similar Chinook habitat on the Forest. Also, one-half mile of stream in the Clear Creek drainage does not have an assigned fishery/water quality objective.	No action has been taken to amend the Forest Plan to reflect these changes. This amendment is planned to be submitted by the Clearwater Ranger District in 1992.
Item 3: The Forest Service and the Idaho Department of Fish and Game should attempt to cooperatively develop a joint strategy to address the emerging bull elk vulnerability issue.	The Nez Perce Forest Access Management program provides opportunities to address the bull elk vulnerability program. Access decisions are the Forest's primary contribution toward resolving bull vulnerability issues. In concert with the Forest's efforts, the Idaho Department of Fish and Game is making adjustments in hunting season dates, seasons, and is currently working to develop a bull vulnerability model to assess impacts.

Action Item	Status or Action Taken
Item 4: Riparian area action that needs to be addressed: - Amend the Forest Plan and incorporate into Management Area 10 all the riparian area direction that occurs throughout the Forest Plan. Included in that direction should be the consideration of MA 10 as connecting corridors between old-growth stands. Also included would be appropriate portions of the "Guide to Timber Management in Riparian Areas."	
- The Forest needs to complete a preliminary version of the riparian classification system and see how it corresponds to the "Guide to Timber Management in Riparian Areas."	The Forest accomplished additional sampling in 1991, but data are not yet adequate to draft a version that would address all Forest stream types. A draft write-up is planned for FY 92 that would include preliminary descriptions of those types that have been sampled.
-- The "Guide to Timber Management in Riparian Areas" needs to be brought up to date and, after interdisciplinary review, formally adopted.	The Forest has decided to not complete the "Guide to Timber Management in Riparian Areas" in its present format. Interdisciplinary review has indicated the need for an intermediate, more concise statement that clarifies Forest Plan intent with respect to implementing riparian area standards and guidelines. A draft policy statement has been developed that defines riparian areas, reiterates Forest Plan standards, and proposes a process of inventory, analysis, and environmental documentation necessary before management activities in riparian areas may be undertaken. This draft document is currently undergoing Forestwide review. Parts of the "Guide to Timber Management" may be used as interim guidance, and later as appropriate to meet the requirements of the proposed policy statement. A new group will be formed in 1992 to address the question of guidance for management of riparian areas.
Item 5: The Forest needs to develop direction on Pacific yew. Specifically, the following areas need to be addressed: - How should increasing requests for bark collection permits be handled.	(1) A new permit was designed and issued by the Clearwater District, that became the Forest permit. It was also modified as a Regional permit. (2) Permits were issued to the collector and the agent at times. We need to clarify who will receive the permit this winter. Permits were not issued to peelers this year. (3) Since the monitoring report was (last) written, Hauser NW became our primary collector, as defined through our cooperative agreement with B-MS. We have not dealt with others presently, nor with those interested in materials left by Hauser NW. This may become more of an issue at any time.

Action Item	Status or Action Taken
- Determine what kind of Pacific yew stands and stand structure is important as moose habitat.	Two meetings were held (4/4/91, 10/31/91) with invitees from Idaho Department of Fish and Game, Nez Perce Tribe, and the University of Idaho, as well as biologists, foresters, and silviculturists from the Forest in an attempt to identify this information considering the rising demand for yew bark. Some basic recommendations were gathered from the participants on sites and methods to employ in the harvest; however, lack of additional scientific information and monitoring of post-treatment sites was very limited.
- Amend MA 21 and clarify objectives.	The Forest Wildlife Biologist completed a comprehensive summary of the existing research along with feedback gathered from the 4/91 and 10/91 meetings. A proposed definition and revised objectives were developed, which will undergo review by interested groups and other resource specialists.
Item 6: The Forest should continue its comprehensive inventory of the Pacific yew stands/structures that are determined to be important as moose habitat.	Draft guidelines for stratifying the relative value of MA21 stands based on available information and professional judgment were provided to the Pacific yew coordinator for the planned yew inventory contract in FY 92.
Item 7: Travel management needs to be better coordinated Forestwide.	In 1991, the Nez Perce combined visitor/travel map was revised in a totally new format. Displays of access management information, including legends, were simplified and formatted to be more user friendly and understandable. A companion document listing all roads on the Forest and their regulations was started, but not completed. It should be completed in 1992. The mapping exercise and road listing, along with implementation of the Access Management Guide, are a start toward Forestwide consistency in access management, but there is still considerable variability among Ranger Districts in access management implementation.
Item 8: We need to improve our efforts to give verification of quality, amount, and distribution of snags during project planning.	Efforts to increase Forest employees' awareness of and emphasis upon verification of snag qualities, amounts, and distribution include distribution to all District Wildlife Biologists, "How to Determine Snag Density" by E.L. Bull, R.S. Holthausen, and D.B. Marx. In 1989, a Forestwide Snag Workshop was held to identify barriers to retaining and managing for adequate snag numbers and practical solutions to the problem. Forestwide recognition of the issue and efforts to improve performance have since included proposals to create snags with K-V funding where existing densities are insufficient to meet standards.
Item 9: Timber stand inventory systems need to be adapted to the linear nature of riparian forest stands. The record keeping system should be adapted to allow grouping plots between stands into riparian substands, as well as keeping track of riparian acres within a stand.	

Action Item	Status or Action Taken
Item 10: Through further development and implementation of the Access Management Plan, the Forest needs to develop a systematic method to monitor off-road vehicle use and impacts.	No systematic method of monitoring off-road vehicle use and impacts was developed.
Item 11: The Forest needs a review and revision of Recreation Opportunity Spectrum (ROS) maps Forestwide, incorporation of ROS into all environmental analyses, and a mechanism for updating ROS acreage changes in a data base. All of these will be necessary in order to adequately monitor ROS after a 5-year period.	ROS considerations were incorporated into most environmental analyses. The Forestwide review, revision, and mechanism for updating ROS acreage changes were not done.
Item 12: The Forest needs to improve its control of water quality impacts from water quality and fish habitat improvement projects.	No definitive action was taken on this item. Forest personnel have been encouraged to minimize the temporary impacts of fish habitat improvement projects on sediment production through application of mitigation measures.
Item 13: The Forest will encourage the Region to reconvene the Northern and Intermountain Region (R-1/R-4) technical task force to revise the 1981 Sediment Yield Guidelines, incorporating new information.	The Forest continues to lobby for reconvening of the task force to update the R1/R4 Guide. Some efforts have been undertaken through implementation of the Region's WATSED computer program.
Item 14: The Forest has several years of sediment yield data from six gaged monitoring stations. These data should be evaluated to assist in validation of the sediment yield model.	Partial analysis was completed on five of eight gaged stations on the Forest, comparing measured and modeled sediment yields. The results of this analysis will be presented at the Idaho Nonpoint Source Monitoring Results Workshop in January 1992.
Item 15: The Forest needs to place more emphasis on inventorying sensitive plants and biological evaluations.	In FY 91, additional energies were focused on plant identification training for field-going crews and cooperative assistance from botanists of the Idaho Conservation Data Center were implemented. Increased awareness and completion of biological evaluations resulted in newly discovered locations of candystick, Payson's milkvetch, broad-fruit mariposa lily, Idaho douglasia, and evergreen kittentail. Planned harvesting on one timber sale was revised to reflect appropriate protections for candystick.
Item 16: The Forest Plan identifies a segment of White Bird Creek as an eligible waterway for the Wild and Scenic River system. None of this eligible waterway is on Forest Service land. We need to review whether the Forest Service or some other agency should take the lead in conducting a suitability study of the eligible segment of White Bird Creek.	Staff work has been completed on this action item. The Forest will be proposing that the State of Idaho or the National Park Service take the lead role in conducting the study. The Forest Service has no authority to conduct a Wild & Scenic River suitability study on lands where the eligible waterway is entirely outside the Forest boundary.

STATUS OF ACTION ITEMS IDENTIFIED IN FY 1989 MONITORING & EVALUATION REPORT

The following action items were identified during FY 1989 monitoring. Following is the status of action taken on these items.

Action Item	Status or Action Taken
Item 1: For practices that don't meet the Idaho Forest Practices Act, how do we ensure that we get a variance?	The Regional Forester provided direction to Idaho Forests on variance procedures in the Idaho Forest Practices Act in March 1990. This was done in FY 1991.
Item 2: What constitutes an opening for vegetative management purposes?	Clarification on definition of opening was sent to the Districts. This clarification referenced the "Northern Regional Guide"'s ROD of June 10, 1983, Sections 2-5A through 2-6A. The bottom line said that the definition of an opening is dependent on the management area objectives in the Forest Plans. An opening in areas with emphasis on big game summer range may have different vegetative characteristics than areas with visual emphasis or strictly timber emphasis. High emphasis MA-16 might require big game hiding cover before it is considered a "non-opening," while certified regeneration may constitute a non-opening where big game summer range is not a strong consideration.
Item 3: Application of the sediment model as it relates to reconstruction and future reduction of sediment yield needs to be clarified.	The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."

Action Item	Status or Action Taken
Item 4: Re-examine assignments of elk summer habitat objectives (see FP, page II-18, item 6) to ensure manageable habitat units are delineated that can be coordinated with timber harvest, access management, and livestock use. Current assignments in some areas are fragmented and effects of proposed activities cannot be modeled using the "Guidelines for Evaluating & Managing Summer Elk Habitat in North Idaho." Establish procedures for examining manageability during project planning and involvement of the Idaho Department of Fish and Game, the Nez Perce Tribe, and other affected parties.	Forest Biologists Steve Blair and Kim Mitchell made a presentation at the February Leadership Team meeting, discussing the need to make adjustments in the EAU boundaries and to analyze the existing condition Forest-wide. On June 27, the Forest Supervisor sent a letter to the District Rangers requesting that each District estimate the funding needed to complete the work. Enclosed with the letter was a "stepwise approach" developed by Steve Blair, outlining how best to proceed with the work. On August 14, a meeting with the Nez Perce Tribe and the Idaho Department of Fish and Game was held to discuss the need and recommended process for re-delineation of the Forest's elk objective boundaries. This meeting resulted in agreement on a general process that would be followed by each District, and is documented in an August 20 letter to District Rangers from the Forest Supervisor. Based on this finalized process, each District was asked to update their estimate of time and costs necessary in FY 91 to complete the task. The work is ongoing by the Forest and District biologists.
Item 5: The Forest Plan decade for modeling sediment yield and entry frequencies began in FY 88 (10/87). Project analyses will consider activities in the decade prior to the Forest Plan to determine the effect of past actions/activities on proposed projects.	This is Forest direction. The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."
Item 6: How do we modify the Timber Stand Management Record System (TSMRS) to track small inclusions of management areas such as riparian areas?	This item is still on the agenda. Forest planning personnel will be developing a table in 1992 that will track percent of riparian acres, suitable and unsuitable, by stand.

Action Item	Status or Action Taken
Item 7: Concern that monitoring cost will continue to increase as public concern over the accuracy of the Forest Plan outputs increase. As monitoring costs rise, the burden of funding the cost from District project funds will become more difficult. Recommend that Forest management codes be created and that all monitoring activities be charged as worked.	No Forestwide direction has been provided to date. Forest units have the ability to create project management codes for tracking these costs.
Item 8: How should managers consider the effect of water yield increases in small drainages?	Guidance for this concern is provided on a case-by-case basis. No Forestwide guidelines have been issued.
Item 9: How is the Forest going to accomplish range management plan updates?	A schedule based upon priorities has been developed for accomplishing range management plan updates.
Item 10: How can the Forest develop a systematic method for monitoring ORV use?	The Forest did not develop a systematic method for monitoring ORV use in 1990. We will continue to work on this in 1991.
Item 11: How to apply the water quality guidelines in Appendix A of the Forest Plan to mineral activities?	The requested guidance has been issued in draft form in the "Care and Feeding of Appendix A - An Implementation Guide to the Fish/Water Quality Objectives in the Nez Perce National Forest Plan."

REFERENCES

The Nez Perce National Forest Headquarters can be contacted in regard to locating copies of the following cited material referred to in this report:

- Thompson, K. 1990. Utilization of Instream Habitat Improvement Structures for Summer Rearing by Juvenile Hatchery and Wild Steelhead Trout in an Idaho Stream. M.S. Thesis, Humboldt State University.

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