

AIR QUALITY: Standards and Guidelines

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Comply with State, Federal Air Quality Standard, Clean Air Act	Each burn	Any adverse public reaction; smoke in inhabited area or exceeds Federal Standards of inhalable particulate matter (PM-10) no greater than 150 µg/m ³

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Prescribed Burn Plans, Fire Dispatch

Unit of Measure: Acres burned

Findings: In 2004, all prescribed burns complied with the State of Idaho Air Quality Standards and the Federal Clean Air Act. No inhabited areas exceeded inhaled particulate matter (PM-10) greater than 150 micrograms per cubic meter. The Dutchler Basin prescribed burn did experience a major smoke inversion for a few hours; then the wind increased and blew it out. The particulates at this time did not exceed the µg/m³.

Prescribed burns:

1997 – 2,178 acres

1998 – 5,223 acres

1999 – 22,270 acres

2000 – 10,684 acres

2001 – 7,866 acres

2002 – 3,097 acres

2003 – 5,058 acres

2004 – 4,377 acres

2005 – information is being gathered for fy 2005 acres

Variability: Predicted prescribed burn standards were exceeded on one prescribed burn. Recommend that monitoring be done either in the spring or fall, as needed, for units which may have off-site affects.

Evaluation: Prescribed burn level meets State and Federal air quality standards.

Appropriateness: Continue at current level to meet the legal requirements.

AIR QUALITY: Effects of Pollutants to Ecosystems

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2 (BL)	Effects of atmospheric pollutants to natural ecosystem	Annually	Significant change in pH of high alpine lakes in granitic watersheds. Decrease in ANC over time. Increase in nitrates plus sulfates.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Baseline

Data Source: USDA-FS – Fort Collins Water Lab and Salmon and Challis Lake Sampling Report.

Unit of Measure: pH (potential hydrogen), ANC (acid neutralizing capacity), mg/L (milligrams/liter) or µeq/L (milliequivalents/liter).

Findings: There is no additional information to report for 2005. Robert C. Musselman at the Rocky Mountain Forest and Range Experiment Station (3/19/04) states that lake chemistry data from the Forest lakes indicate no major problems in regard to nitrates and sulfates. The only items that need to be monitored for long term data are some of the lakes with an ANC of <50 milliequivalents per liter. All laboratory analysis is available at the Salmon-Challis National Forest Supervisor’s Office, Salmon.

Variability: Some variability between the same lakes exist and might be caused by time of year in which the samples were collected and the amount of runoff into the lake systems. Recommend monitoring in spring after snow melt and again in late summer.

Evaluation: Information gathered does not reflect our management activities, but rather outside influences on our National Forest land. This baseline data is needed to determine future acid deposition and establish a long-term (10 year) monitoring program.

Appropriateness: Continue monitoring as funding allows. Annual long-term monitoring suggested on the following lakes for acid rain deposition effects:

Low Sensitive ANC <50 µeq/l (milliequivalents/liter)

- Harbor Lake
- Wilson Lake
- Hat Creek Lake – SE

- Crimson Lake
- Knapp Lake
- Mill Lake - Upper

AIR QUALITY: Air Deposition Effects on Macroinvertebrates in the Ecosystem

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
BL-3	Macroinvertebrate Species Numbers	Annually	Decrease in mayflies and caddisflies

Monitoring Requirement: Not a required monitoring item

Monitoring Type: Baseline

Data Source: USDA-FS, Regional Ecologist and Salmon Supervisor’s Office reports

Unit of Measure: Number of species

Findings: There is no additional information to report for 2005. Laboratory analysis from the Salmon and Challis National Forests has indicated that 49 lakes have a pH of less than the critical 6.5. The following lakes have pH less than 6.0, which is critical for amphipods: Harbor; Wilson; Knapp #13, 14, 18, 25; Crimson #32, 36, 38, 39; Tango #31, 42; Shoban; Crater; Gooseneck; Skyhigh; and Reynolds. None of the lakes sampled at this time have pH less than 5.0, but not all of the lakes have been sampled for pH. Of those sampled, only Harbor Lake has been sampled for macroinvertebrates (in 1988) and also has a critical pH of 5.59.

Variability: Three stations were sampled in Harbor Lake in August 1988 with the primary purpose to establish baseline data for monitoring air quality. The macroinvertebrate community had fairly good diversity with most of the species tolerant of sedimentation or organic nutrients. There was a moderately tolerant caddisfly species, *Lepidostoma*, that would be a good species for indicating possible habitat degradation. Other possible indicator species would be the *Baetid* mayfly and *Cinygmula* mayfly found in this community, which are reported to be sensitive to changes in pH, particularly lower pH levels. They would be excellent indicators for air quality, because they are tolerant to many forms of common disruptions in the environment.

Evaluation: Macroinvertebrates are the first link in an ecosystem to show a potential crisis starting. We need to establish a good baseline data base at this time to determine any future decrease in species on selected lakes. The loss of fish populations is one of the LAST biological effects of acidification. We need to continue to monitor and increase monitoring from a low to a high level on selected sensitive lakes. With documentation from the National Atmospheric Deposition Program showing an increase in nitrates, we must establish a good baseline data base at this time.

Appropriateness: Continue to monitor on Harbor Lake and establish additional baseline monitoring stations on selected lakes over a five-year period if funding allows.

BUDGET: Receipt Shares to Counties

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Receipt Shares to Counties	Annually	Not Applicable

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Validation

Data Source: Reports from Regional Office, National Forest Receipts, and Idaho Public Lands Report.

FY 2005 information on Title I, Title II and Title III funds can be found at the following website <http://fsweb.r3.fs.fed.us/asc/bfm/programs/financial-operations/receivables-collections/asr/documents/reports/>

Unit of Measure: Dollars

Findings:

**Salmon and Challis National Forests
COMBINED RECEIPT SHARES TO COUNTIES
(Dollars)**

Year	Idaho	Blaine	Butte	Clark	Custer	Lemhi	Valley	Total
1997	10,927	74	6775	88	56,831	281,290	11,844	367,809
1998	8,605	126	11,492	150	96,688	231,563	9,327	357,951
1999	29,211	273	25,060	328	210,853	763,371	31,661	1,060,757
2000	2,806	87	7,930	104	66,726	82,308	3,041	163,002
2001	X	X	X	X	X	X	X	X
2002	X	X	X	X	X	X	X	X
2003	X	X	X	X	X	X	X	X
2004								
2005*	77,658	514	29,567	1,166	169,150	593,139	111,764	982,958

*2005 includes Title I, II and III funds

In 2001 the Forest Service changed the way it handled payments to States for both the Twenty-five Percent Fund and the PILT funds. These figures are no longer available to the Salmon-Challis National Forest.

The Salmon and Challis National Forests are located primarily in Custer and Lemhi Counties, Idaho. The percent of Federal ownership in these counties is 93 percent and 90 percent, respectively. County governments receive Federal payments to compensate for lost property tax revenue from two major sources:

1. Twenty-five Percent Fund – The Act of May 23, 1908, authorizes 25 percent of all payments received by the Forest Service during any fiscal year to be paid to the states. These payments are distributed to the counties in which they were earned. **In 2000 the “Secure Rural Schools and Community Self-Determination Act of 2000” was passed by Congress to restore stability and predictability to the annual payments made to States and counties containing national Forest System lands and public domain lands managed by the BLM for use by the counties for the benefit of public schools, roads and other purposes. Through this act Counties may receive amounts described in the Act under Title 1, Title 11 and Title 111 (All Service Receipts) in place of 25 % payment for FY 2001 through FY 2006.**

2. Payment in Lieu of Taxes (PILT) – Public Law 97-258 authorizes payment to counties containing Federal lands (Forest Service and BLM). PILT amounts depend on several variables. In Lemhi County, payments result from a \$0.10 per acre limit. In Custer County, payments are governed by a population factor.

Variability: PILT payments have been very constant from year to year, while the 25 percent fund receipts have not.

Evaluation: In order to understand the variability of 25 percent fund receipts, it must be divided into its individual resource components. The tables below identify how timber, grazing, recreation, special uses, and other resource areas contributed to the total funding from 1997 to 2003 for the Salmon and Challis National Forests.

**Salmon-Challis National Forest (Salmon Area)
Source of 25 percent Fund Receipts in Dollars**

Year	Forest Plan	*Timber	Lands	Rec-Land	Power	Minerals	Rec User	Range	Total
1997	679,000	-116,165	8,903	139,872	4,419	742	42,763	43,582	124,116
1998	679,000	31,753	14,188	79,773	4,383	585	114,348	40,618	285,648
1999	679,000	10,680	9,564	18,619	4,810	4,004	160,456	42,338	250,471
2000	679,000	2,832	14,332	7,717	5,111	480	111,003	46,460	187,935
2001	679,000	16,998	14,281	7,722	4,844	859	85,295	43,280	173,279
2002	679,000	6,798	16,938	5,740	4,703	889	101,369	36,807	173,244
2003	679,000	16,203	14,401	8,102	3,913	1,386	88,985	37,844	170,834
2004	679,000								
2005	679,000	42024	14137	6817	6064	1079	25036	49500	144657

**Salmon-Challis National Forest (Challis Area)
Source of 25 percent Fund Receipts in Dollars**

Year	Forest Plan	*Timber	Lands	Rec-Land	Power	Minerals	Rec User	Range	Total
1997	247,000	-14,077	4,069	114,177	273	1,735	32,724	93,976	232,877
1998	247,000	1,966	4,344	62,702	232	4,811	86,573	89,781	250,409
1999	247,000	2,644	4,251	7,782	233	2,773	82,705	86,173	186,561
2000	247,000	2,730	4,684	7,915	236	2,974	204,574	84,288	307,401
2001	247,000	3,743	7,342	3,447	240	1,340	187,175	72,330	275,617
2002	247,000	2,235	7,575	971	245	2,070	193,181	76,026	282,303
2003	247,000	1,965	8,584	3,063	246	918	195,094	74,212	284,082
2004	247,000								
2005	247,000	36547	8311	45	110	401	33917	85732	165064

*Figures for timber include dollars from the National Forest Fund, salvage sale, Knutson-Vandenberg (KV) fund, and purchaser road credits

Timber receipts are shown as negatives in both the Salmon and Challis areas due to the transfer of dollars previously deposited to the National Forest Fund accounts and subsequently transferred back and deposited to salvage sale funds and Knutson-Vandenberg funds.

The twenty-five percent fund receipts has been relatively constant for many resources areas. Recreation use has shown consistent increases while timber has shown a continuing decline.

PILT payments have also undergone a modification in payment method. Some counties have elected to change from an annual variable rate to a fixed average rate as a means of maintaining consistency.

Appropriateness: Continue as a Forest Plan monitoring requirement. The actual receipts to Counties is no longer available to the Forest, however, the data is available through State sources.

BUDGET: Comparison of Forest Plan Budget – Actual Budget by Resource

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Comparison of Budget by Resource	Annually	Not Applicable

Monitoring Requirement: Originally, this item was listed as a Salmon Forest Plan requirement but it is not specifically identified in the Forest Plan.

Monitoring Type: Validation

Data Source: Regional Office database files, FY04 and FY06 from Room Report

Unit of Measure: 1000 X Dollars

**Salmon and Challis National Forests
COMPARISON OF FOREST PLAN BUDGET AND ACTUAL DOLLARS
RECEIVED
(1000 X Dollars)**

RESOURCE	FOREST PLAN	FY '97	FY '98	FY '99	FY '00	FY '01	FY '02	FY '03*	FY 04	FY 05
Recreation/Heritage/Wilderness (NFRM/NFHF/NFWM = NFRW)	4,119	2,934	2,341	1,710	1,932	2,494	2,658	2,599	1544	2,388
Wildlife & Fish (NFAF/NFIF/NFTE/NFWL = NFWF)	1,500	1,091	1,299	1,217	1,247	1,634	1,379	1,269	800	1,293
Range (NFRG)	1,185	413	446	474	581	723	746	723	1351	707
Timber (NFTM)	4,886	1,108	880	763	669	585	597	609	360	724
Vegetation/Watershed/Air (NFFV/NFRV/NFSI/NFSO = NFVW)	643	529	949	1,132	1,842	1,782	1,926	2,158	1693	1,563
Minerals/Geology (NFMG)	1,369	569	635	744	638	735	819	881	527	724
Lands (NFLA/NFLL = NFLM)	588	251	243	223	359	374	194	166	97	245
Facilities/Capital Improvements & Maint. (CNRF=PAFC/NFRD/NFFA=PAMF= CMFC)	4,103	788	516	333	960	1,088	466	562	1163	746
Planning/Ecosystem Inv. & Monitoring (NFIM/NFPN)	583	1,230	1,141	1,108	1,139	1,053	971	1,028	799	1,099
Protection (WFPR)	2,231	2,734	2,509	2,941	2,989	4,459	4,432	5,201	3776	3,773
General Admin (NFGA = Cost Pools)	3,517	2,331	2,343	2,312	4,419	5,064	5,307	5,203	4992	4,036
TOTAL:	24,724	13,978	13,302	12,957	16,775	19,991	19,495	20,399	17,298	17,298

*Allocation Base + Earmarks (did not use Allocation Less Withdrawal)

Variability: Most resource areas were funded below Forest Plan levels. However, several resource areas were funded well above the Forest Plan levels, most noticeably Vegetation/Watershed/Air which includes such activities as weed treatments. Timber and Facilities/Capital Improvements were funded noticeably lower than Forest Plan levels over the last seven years validating the downward trend towards these Forest activities.

Evaluation: The budget, which comes from Congress, is influenced by social, political, and legal factors. The budget for any one resource area could increase or decrease based on social trends.

Appropriateness: Continue to report as a Forest Plan monitoring requirement. This information shows the dynamics of funding trends being influenced by social, political, and national interests. Including it as part of the Forest Plan monitoring report is one way to distribute the information.

BUDGET: Capital Investments

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Capital Investments	Annually	Meet Forest Plan Objectives and Targets

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Implementation

Data Source: Management Attainment Report. Beginning in FY 05 these items are not reported in the Management Attainment Report. INFRA was used as the resource specialist input for FY 2005.

Unit of Measure: Structures and miles

**Salmon and Challis National Forests
CAPITAL INVESTMENTS - CONSTRUCTION**

Year	Miles Trails	Miles Trail/Wldns	Structure Fish	Structure T&E	Structure Wildlife	Structure Range	Miles Roads
Forest Plan	8	0	52	0	28	39	35
1997	3	0	0	53	51	23	7
1998	7	0	0	0	59	25	7
1999	34	0	0	0	0	5	30
2000	24	0	0	0	0	5	10
2001	15	0	0	0	9	3	0
2002	22	0	0	0	0	0	0
2003	43	0	0	0	0	0	21
2004							
2005	0	0	0	0	0	1	0

Variability: The outputs were highly variable, mostly because they are dependent on the budget, which is influenced by social and biological factors.

Evaluation: Forest Plans predictions for outputs were based on knowledge of social and biological factors available at that time. We are unable to correctly predict what the budget will be over a ten-year period.

Appropriateness: Continue to report as this is useful information for employees and the public as a means of showing trends in implementing Forest Plan direction and therefore should be part of the Forest Plan monitoring requirement.

BUDGET: Returns to U.S. Treasury

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Returns to Treasury	Annually	Not Applicable

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Validation

Data Source: Forest Financial Statements, No longer available.

Unit of Measure: Dollars

Salmon-Challis National Forest (*Salmon Area*)

RETURNS TO U.S. TREASURY

(Dollars)

Year	Forest Plan	Timber	Lands	Rec-Land	Power	Minerals	Rec User	Range	Total
1997	679,000	-116,165	8,903	139,872	4,419	742	42,763	43,582	124,116
1998	679,000	31,753	14,188	79,773	4,383	585	114,348	40,618	285,648
1999	679,000	10,680	9,564	18,619	4,810	4,004	160,456	42,338	250,471
2000	679,000	2,832	14,332	7,717	5,111	480	111,003	46,460	187,935
2001	679,000	16,998	14,281	7,722	4,844	859	85,295	43,280	173,279
2002	679,000	6,798	16,938	5,740	4,703	889	101,369	36,807	173,244
2003	679,000	16,203	14,401	8,102	3,913	1,386	88,985	37,844	170,834
2004									
2005									
Average:	679,000	-4,414	13,230	38,221	4,598	1,278	100,603	41,561	195,075

Salmon-Challis National Forest (Challis Area)
RETURNS TO U.S. TREASURY
(Dollars)

Year	Forest Plan	Timber	Lands	Rec-Land	Power	Minerals	Rec User	Range	Total
1997	247,000	-14,077	4,069	114,177	273	1,735	32,724	93,976	232,877
1998	247,000	1,966	4,344	62,702	232	4,811	86,573	89,781	250,409
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2002	247,000	2,235	7,575	971	245	2,070	193,181	76,026	282,303
2003	247,000	1,965	8,584	3,063	246	918	195,094	74,212	284,082
2004									
2005									
Average:	247,000	172	5,836	28,580	244	2,374	140,289	82,398	259,893

Timber receipts are shown as negatives in both the Salmon and Challis areas due to the transfer of dollars previously deposited to the National Forest Fund accounts and subsequently transferred back and deposited to salvage sale funds and Knutson-Vandenburg funds.

Variability: As expected, there is a wide range of variability within the resources areas. The total performance is generally in line with the Challis Forest Plan prediction but significantly less than the Salmon Forest Plan prediction, primarily due to reduced timber sales.

Evaluation: Information is useful for comparison between resources and for comparison among years within a resource. However, the information does not reflect the cost to government to administer the program or the social benefits of the program.

Appropriateness: Continue to report; this is useful information for employees and the public. Although this information does not disclose whether or not we are moving toward desired future conditions it does show trends and the flaws of predicting monetary returns to the U.S. Treasury and therefore should be part of the Forest Plan monitoring requirement.

FACILITIES: Road Construction

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Road Construction	Annually	Only when mileage constructed exceeds planned mileage by 10 percent (Salmon); deviated by more than 10% (Challis).

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Annual Road Accomplishment Report

Unit of Measure: Miles

Findings:

**Salmon and Challis National Forests
ROAD CONSTRUCTION**

Year	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY04	<i>FY05</i>
Salmon	1.0	2.0	0.0	0.6	0.0	0.0	0.1	1.1	0.0	0.0
Challis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figures include purchaser credit and capital investment program roads

Variability: Salmon predicted 27 miles/year (pg. IV-85) for this decade; Challis predicted 1.9 miles/year (pg. V-2). Both Forests are below their predicted mileage due to reversal of timber sale decisions on appeal, withdrawal of timber sales, and the emphasis on helicopter yarding on remaining large sales. Logging systems have changed over the life of the plans, resulting in less miles of needed road construction, even if the timber program was producing sales. Roads support resource activities and, generally, aren't a stand-alone target, except for the arterial/collector road system. For these, the Forest requests funding from the Region where the Region then prioritizes and funds according to overall regional needs.

Evaluation: Road construction supports other resource activities. As resource activities changed over the planning period so did the need for road construction. In the Salmon NF, road construction has not exceeded planned mileage. For the Challis National Forest, with zero roads constructed, a deviation of greater than 10% has occurred. However, no further evaluation is needed.

Appropriateness: Continue as a Forest Plan monitoring report requirement even though targets and resource needs are outdated. Also, this item is tracked and available in the Road Accomplishment Report and entered into INFRA corporate database.

FACILITIES: Road Reconstruction

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Road Reconstruction	Annually	Only when mileage constructed exceeds planned mileage by 10 percent (Salmon); deviates by more than 10% (Challis).

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Annual Road Accomplishment Report

Unit of Measure: Miles

Findings:

**Salmon and Challis National Forests
ROAD RECONSTRUCTION**

Year	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY04	<i>FY05</i>
Salmon	6.4	6.9	11.9	25.1	0.0	0.0	0.0	24.4	3.7	0.6
Challis	0.0	0.0	3.6	6.5	0.0	0.0	0.0	2.8	7.1	0.0

Figures include purchaser credit and capital investment program roads

Variability: Salmon predicted 17 miles/year for this decade (pg. IV-85); Challis predicted 20.8 miles/year (pg. V-2). Both Forests are below their average for predicted mileage since management emphasis changed from timber production and the listing of endangered species. In addition, logging systems changed over the life of the plans, resulting in less miles of needed reconstruction, even if the timber program was being implemented at plan levels. The Region sets priorities for road reconstruction funding based on overall regional needs.

Evaluation: Due to emphasis on fish habitat, many existing roads could receive some reconstruction to reduce sedimentation and for fish passage. Road reconstruction supports other resource activities. As resource activities changed over the planning period so did the need for road reconstruction. In the Salmon NF, road reconstruction has not exceeded planned mileage. For the Challis NF, a deviation of greater than 10% has occurred. However, no further evaluation is needed.

Appropriateness: Continue as a Forest Plan monitoring report requirement. This item is not a resource output yet supports resource activities to the extent necessary. In addition, the activity is tracked annually in Road Accomplishment Reports and entered into INFRA corporate database.

FACILITIES: Road Closures

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Road Closures	Annually	If 15% of the newly constructed roads are open without meeting the stated criteria; or if 15% of the existing roads are closed without meeting the stated criteria.

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Implementation

Data Source: INFRA

Unit of Measure: Number of roads

Findings: **There is no new information to report for 2005.** This information has not been tracked through the life of the Plan and is not available at this time. Miles of road decommissioning has been tracked, but this doesn't relate to new or existing roads being closed for this monitoring item.

No comprehensive method exists to monitor this activity through Engineering or the Ranger Districts.

Variability: Not assessable

Evaluation: Unknown if meeting evaluation conditions or not. However, with extreme public interest in roads/access, any proposed action affecting roads or access is highly scrutinized. The roads analysis process is required anytime road management is being addressed.

Appropriateness: Discontinue as a Forest Plan monitoring report requirement. This item has not been tracked during the life of the Plan. Resource issues/benefits drive road closures and access needs drive keeping roads open. It's more appropriate to track habitat/watershed improvements and meeting access needs.

FACILITIES: Road Maintenance

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Road Maintenance	Annually	A 20% deviation from expected miles/year or a road condition not meeting objectives of management.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Road logs and condition surveys, road crew foreman maintenance logs, annual road accomplishment report

Unit of Measure: Miles

Findings:

Year	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY04	<i>FY05</i>
Challis	490	447	439	198	310	365	313	240	292	219

The average mileage bladed over the last 10 years is 331 miles/year, though with declining budgets, it's on a downward trend; more than 20% deviation from projected (pg. IV-44). Condition surveys are done for deferred maintenance reporting requirements but don't track annual road maintenance accomplishments. Condition surveys are done on a four-year rotation for ML 3-5 roads and only randomly sampled for ML 1 and 2 roads.

Variability: Predicted mileage is 560 miles/year. Accomplishment is only 39 percent of predicted due to significantly reduced budgets and lack of purchaser (timber) maintenance, since very few timber sales are being offered.

Evaluation: N/A

Appropriateness: Continue as a Forest Plan monitoring report requirement. Road maintenance is reported annually in Road Accomplishment Report and condition is tracked in INFRA database. Road maintenance is a function of available funding and has nothing to do with forest planning or resource outputs. Maintenance is performed in support of resource activities and public access needs.

FACILITIES: Bridge Construction and Reconstruction

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5	Bridge Construction and Reconstruction	Annually	A 10% deviation from projected quantities.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Annual Accomplishment Reports

Unit of Measure: Each

Findings:

Year	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY04	<i>FY05</i>
Challis	0	0	4	0	0	1	0	0	2	0

Variability: There is no specific target/goal for bridge construction/reconstruction identified in the Challis Forest Plan.

Evaluation: Bridges got lumped in with roads for this evaluation; no target exists for bridge replacement/repair.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Bridge inspections/condition/repairs are tracked in INFRA database and reported annually in Road Accomplishment Report. This item is not a resource output but supports resource/access activities.

FACILITIES: Buildings

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-6	Buildings	Annually	Identified deficiencies are not corrected.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Inspection Reports (replaced by INFRA database)

Unit of Measure: Each

Findings: **There is no additional information to report for 2005.** Currently, facility inspections/repairs are tracked in INFRA, as required, and that is all that's being done. According to the Forest Facilities Engineer, the Forest is current on their annual inspection and reporting requirements for INFRA.

Formal (written) inspection reports are done for INFRA reporting and data entry into the database.

Deficiencies, other than health and safety, are only occasionally corrected.

To properly maintain our structures, the budget would have to be approximately tripled (from 1995 report).

Variability: N/A

Evaluation: Deferred building maintenance is tracked in INFRA, and projects are prioritized from these reports.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Building inspections are tracked in INFRA database and are not a resource output.

FACILITIES: Dam Administration

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-7	Dam Administration	Annually	Identified deficiencies are not corrected.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Inspection Reports

Unit of Measure: Each

Findings: There is no additional information to report for 2005. Annual inspections are required on one dam, which are permittee-owned/operated and inspected annually by the State. An additional eight dams are permittee-owned/operated under special use permits, with inspection responsibility by the permittees every three to five years. The Forest Facilities Engineer doesn't receive copies of any of the inspection reports, but states that all meet inspection requirements.

It is unknown whether identified deficiencies on all dams are corrected in a timely manner.

Emphasis on the program is low. Repairs are done on a 'catch when you can' basis. Even on the permittee-owned dams, enforcement of repairs is not stressed.

Variability: Unknown

Evaluation: Facilities engineer doesn't receive reports in order to evaluate. However reports are filed with the special use permits when the permits are renewed.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Dam deferred maintenance duties and findings are reported in INFRA database. Inspections are valid but inclusion into the monitoring report is questionable.

FACILITIES: Water Quality

Monitoring Item	Activity to be measured	Monitoring Frequency	Conditions Which Initiate Further Evaluation
FP-6	Bacteriological sample of potable water supplies	Bi-weekly	Safe drinking water standards

Monitoring Requirement: This monitoring item was described in the Water section of the Salmon Forest Plan as item #2 and in the Challis Forest Plan under Facilities as item #5. It will be maintained in the Facilities section in this and future reports.

Monitoring Type: Effectiveness

Data Source: Forest Engineering Files

Unit of Measure: Total Coliform (presence/ absence)

Findings: Data is shown since 1989 to show results omitted in 1995-96 reports.

Year	# of Sites Monitored out of 80 Sites Established	% of Sites Monitored	Total # of samples analyzed
1989	3/80	4	15
1990	22/80	28	160
1991	25/80	31	192
1992	27/80	34	215
1993	27/80	34	228
1994	25/80	31	223
1995	52/80	65	383
1996	56/80	70	409
1997	64/80	80	428
1998	61/80	76	446
1999	58/80	73	319
2000	60/80	75	357
2001	57/80	71	367
2002	57/80	71	359
2003	55/80	69	351
2004	32/80	40	244
2005	53/81	65	387

Variability: Some sites may not be used every year or may only be used for a few months out of the year.

Evaluation: Bacteriological sampling for total coliform sampling is required by state law to be performed monthly and is effective in identifying the presence of coliform in potable water sources managed by the Forest.

Appropriateness: Continue as a Forest Plan monitoring requirement. Bacteriological sampling of potable water supplies on the Salmon/Challis NF should remain as a Forest requirement; however, the periodicity should be lowered from bi-weekly to monthly to align with the State requirements.

FIRE: Adequacy of Fire Prevention Programs

Monitoring Item	Activity to be measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Person-caused fires	Annually	Major increase in person-caused fires

Monitoring Requirements: Salmon and Challis Forest Plans

Monitoring Type: Effectiveness

Data Source: Annual Fire Report

Units of Measure: Number of person-caused fires and acreage

Findings:

**Salmon-Challis National Forest
Number of person-caused fires and Acreage**

Year	# Of person-caused fires	Acreage
1997	6	1
1998	7	31
1999	26	1,024
2000	22	113
2001	24	328
2002	22	35
2003	24	33,114
2004	8	11
2005	5	678

Variability: The trend for number of person-caused fires tracks with the drought trend and the use of ATVs. As the use of ATVs and other outdoor recreation uses increase, we expect to see an increase in person-caused fires.

Evaluation: The prevention program is shown to be effective at leveling off the number of person-caused fires. Large acreage of fires in 2003 was due to a wilderness fire during extreme fire weather conditions and located in a remote inaccessible portion of the Forest.

Appropriateness: Continue as a Forest Plan monitoring report requirement.

FIRE: Wildfire and Acres Burned

Monitoring Item	Activity to be measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Frequency of wild fire occurrence by size, distribution, intensity, and acres burnt.	Annually	20% increase (Salmon) in cumulative 5 year average; 30% increase (Challis)

Monitoring Requirements: Salmon and Challis Forest Plans

Monitoring Type: Validation

Data Source: Annual Fire Report

Units of Measure: Number of wildfires and total acres

Findings:

**Salmon-Challis National Forest
Number of wildfires and Acreage**

Year	# Of wildfires	Acreage
1997	54	102
1998	133	12,905
1999	92	3,407
2000	130	417,260
2001	82	24,266
2002	102	6,340
2003	109	62,993
2004	65	5,003
2005	85	36,406

Variability: The trend for number of fires and area burned tracks with the drought trend, fire weather, and available fire suppression resources at the time of fires. Area burned trends will likely continue to increase due to the un-natural fuel accumulations caused by fire exclusion and other management activities over the last 50 to 100 years.

Evaluation: The trends of increasing area burned have been recognized as a national issue across the western United States and Congress and agencies are addressing the problem in multiple ways, including the National Fire Plan, Healthy Forest Initiative, and the Healthy Forest Restoration Act.

Appropriateness: Continue as a Forest Plan requirement.

FIRE: Reduction in Fuel Loading from Forest Activities

Monitoring Item	Activity to be measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Field measurements after activity or fuel treatment	Sample 30% of Projects	Exceeding fuel level guidelines by 10% (Salmon); + or – 20% of Regional standards (Challis)

Monitoring Requirements: Salmon and Challis Forest Plans

Monitoring Type: Validation

Data Source: Annual Fire Report

Units of Measure: Number of acres treated

Findings:

**Salmon-Challis National Forest
Fuel Reduction Acres Treated (including fire-use fires)**

Year	Number of acres treated
1997	4,778
1998	10,123
1999	34,970
2000	10,684
2001	7,866
2002	3,366
2003	6,004
2004	7,318
2005	7,080

Variability: Field observations of projects indicated standards were met. Fuels treatment by mechanical methods and planned ignition will continue to increase. Area treated by fire-use (un-planned natural ignitions) will vary depending on the factors related to expected fire behavior (fire effects/benefits) and potential risks.

Evaluation: The National Fire Plan, Healthy Forest Initiative, and the Healthy Forest Restoration Act provide direction to increase the number of fuels treatment acres as related to wildland urban interface, fire regime condition class, and other important resource and social concerns.

Appropriateness: Continue as a Forest Plan monitoring report requirement.

FISHERIES: Anadromous and Resident Habitat

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	R1/R4 Basin Surveys of Fish Habitat	To be determined post-baseline	Future monitoring frequency should be established based on the level of management or possible change to baseline conditions from natural disturbances such as fire.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: District Offices and Supervisor’s Office fisheries files

Unit of Measure: Number of streams and miles of inventory

Findings:

Salmon National Forest

Year	Number of Streams Inventoried		Miles of Stream Inventoried	
	(Anadromous)	(Resident)	(Anadromous)	(Resident)
1997				
1998	1	1	3.5	4.25
1999		2		1.25
2000				
2001	1		9	
2002		1		1.25
2003				
2004	0	0	0	0
2005	0	0	0	0

Challis National Forest

Year	Number of Streams Inventoried		Miles of Stream Inventoried	
	(Anadromous)	(Resident)	(Anadromous)	(Resident)
1997	4	6	0.25	20.5
1998	0	0	0	20
1999	9	22	0.5	24.25
2000	6	13	0.5	20.75
2001	1	1	7	27
2002	1	1	7	17
2003	0	0	0	0
2004	0	0	0	0
2005	n.d.	n.d.	n.d.	n.d.

Variability: The R1/R4 Basin survey methodologies employed on both the Salmon and Challis National Forests since 1991 assess a wide variety of physical and biological components of the aquatic environment. Individual habitat parameters each present their own unique levels of variability with respect to both time and space, and may themselves be influenced by or strongly dependent upon other associated parameters. Surveys are designed to attempt to normalize or minimize the influence of the most highly variable of these parameters, such as streamflow, although the relatively short windows of accessibility associated with mountain climates place survey operations into a timeframe of highly variable streamflow.

Evaluation: Since 1997, approximately 165 miles of R1/R4 basin-wide surveys have been completed on streams within the Challis and Salmon National Forests. Initial R1/R4 aquatic habitat survey objectives are expected to be complete by 2004. Long-term project design calls for rescheduling of follow-up operations on a five or ten year rotational basis. As with other monitoring elements, actual scope and schedule of future activities is expected to be dependent upon budgetary constraints.

The Water monitoring section of this report contains information on sediment monitoring (FP-1), bank stabilization (FP-3), and instream flows (FP-5). The Range monitoring section of this report contains information on riparian vegetation conditions (FP-1).

Appropriateness: Continue to monitor and report as a Forest Plan monitoring requirement but at a reduced level of intensity. Since 1991, R1/R4 basin wide survey operations have been the primary mechanism utilized by both the Challis and Salmon National Forests to characterize the aquatic and riparian habitats of Forest streams. Future operations are designed to supplement original surveys and identify, as determined by analysis and monitoring needs, future changes in specific habitat parameters. A national database (NRIS) has been developed to serve both as a repository and processing mechanism for all current and future data. Program outputs have been and will continue to be a primary source of information for both NEPA project documentation and assessment of compliance with PACFISH and INFISH Riparian Management Objectives.

FISHERIES: Anadromous Fish Spawning Surveys

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Chinook Salmon Spawning Activity and Location	Annually	(None)

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Baseline

Data Source: District and SO fisheries files

Unit of Measure: Number of Chinook salmon redds

Findings:

Salmon National Forest

Survey Year	Stream Name	Completed Chinook Salmon Redds Observed ¹
1997	Camas Cr.: Castle to Hammer North Fork Salmon River	Not counted 10
1998	Camas Cr.: Castle to Hammer North Fork Salmon River	16 3
1999	Camas Cr.: Castle to Hammer North Fork Salmon River	3 2
2000	Camas Cr.: Castle to Hammer North Fork Salmon River	5 118
2001	Camas Cr.: Castle to Hammer Panther Cr.: Napias to Musgrove & 3 tribs. North Fork Salmon River	94 61 102
2002	Camas Cr.: Castle to Hammer North Fork Salmon River	84 36
2003	Camas Cr.: Castle to Hammer North Fork Salmon River Hayden Creek: Boulder Flat	93 36 4
2004	Camas Cr.: Castle to Hammer North Fork Salmon River	19 36
2005	Camas Cr.: Castle to Hammer North Fork Salmon River Panther Cr. Clear Cr. to 4th of July	20 18 20

Challis National Forest

Survey Year	Stream Name	Completed Chinook Salmon Redds Observed ²
1997-2003	No FS surveys conducted	--
2004	Hecla Mine discharge site	0
2005	No Data	--

¹North Fork District redd counts are conducted in association with Idaho Department of Fish and Game Chinook salmon spawning surveys.

²The Yankee Fork District participates in Chinook redd counts in a support capacity to the Sho-Ban Tribes. The District does not keep data on Chinook redds; only bull trout redds have been recorded and the information kept at the District. The District also monitors the area around discharged mine-site waters below the confluence of Jordan Creek and the Yankee Fork River.

Variability: Annual Chinook salmon redd counts reflect the cumulative influence of a multitude of factors affecting the survival of this Federally listed species. The migratory life cycle of this fish exposes all individuals to a wide variety of both natural and human-caused mortality factors, which influence the numbers of adults returning to spawn in Forest streams. Variations of these many factors can influence the size of adult spawning populations, resulting in yearly fluctuations exceeding those that could be attributed to just changes in on-forest spawning and rearing habitat alone.

Evaluation: The drastic decline of historic Chinook salmon populations throughout the Snake River drainage has been reflected in the trends of spawning activity within index streams of the Salmon and Challis Forests. The fluctuation of returning adults may also be affected by differences in annual weather patterns, stream flows and ocean conditions.

Appropriateness: Continue to monitor as a Forest Plan requirement. Due to the annual variability resulting from the combined influence of numerous factors throughout the salmon life cycle, redd counts alone cannot serve as a sole measure of on-Forest anadromous fish habitat conditions. Continued monitoring of index streams is recommended however, in order to monitor the status of returning populations in each watershed and evaluate habitat improvement efforts for on-forest populations and historical habitat areas.

FISHERIES: Resident and Anadromous Fish Populations – Presence/Absence

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Population presence/absence – methodology (snorkel, seine, electrofish, visual, and other)	To be determined post-baseline	Identified water quality problems

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Baseline

Data Source: District Offices, Supervisor’s Office, Rocky Mountain Research Station, and Idaho Department of Fish and Game.

Unit of Measure: Identification by species

Findings:

Salmon National Forest

Year	Number of Streams Surveyed	Number of Inventoried Streams in Which Noted Species Were Found		
		Chinook	Steelhead	Bull trout
1997	45	0	9	15
1998	31	12	2	9
1999	53	1	3	16
2000	31	3	0	10
2001	38	3	18	12
2002	73	32	18	30
2003	13	1	1	4
2004	42	3	20	19
2005	23	2	11	13

Challis National Forest

Year	Number of Streams Surveyed	Number of Inventoried Streams in Which Noted Species Were Found		
		Chinook	Steelhead	Bull trout
1997	47			13
1998	0	n.d.	n.d.	n.d.
1999	20			16
2000	7			5
2001	50			13
2002	76			25
2003	51			14
2004	16	0	1	14
2005	n.d.	n.d.	n.d.	n.d.

In 1990 the Salmon National Forest consolidated existing fish species distribution records into a Forest-wide GAWS Level I Stream Habitat Inventory Report. This report identified known game fish species occurrences for all named and unnamed perennial streams of the Salmon National Forest, now referred to as the North Zone of the SCNF. Resident populations of native rainbow trout, westslope cutthroat trout, bull trout, and mountain whitefish, introduced eastern brook trout, and occurrences of anadromous Snake River Steelhead, and Spring/Summer Chinook salmon were identified and cataloged. The history of hatchery fish plantings was also summarized. Non-game species of fish (such as squawfish, suckers, shiners, and sculpins) were not included in these listings.

Since 1992, the Salmon-Challis National Forest utilized R1/R4 basin-wide survey methodologies to describe physical habitat conditions of Forest streams. Snorkel surveys for presence/absence of fish species were performed as part of the basin-wide stream inventories. In order to be successful, snorkel surveys require water temperatures above 9 degrees C (48 degrees F) in order to enhance fish activity, observations were not in all survey reaches. Since the late 1990's electrofishing inventories have been the primary technique utilized to maintain fish species distribution databases on each Ranger District; efforts which have contributed to a local interagency data-base developed and maintained by the Idaho Department of Fish and Game, for the entire Salmon River basin.

Variability: Fish species distribution depends upon various factors that influence the suitability, availability and use of aquatic habitats. Physical barriers to upstream passage limit fish distributions to lower reaches of a stream, and isolate populations that were established prior to the establishment of such barriers. Water temperature regimes also exert a strong influence on the distribution of various fish life stages and the seasonal suitability of stream habitats.

Locally, water temperatures influence fish migrations throughout the year; from lower elevation (warm and low flow) streams, to cooler tributaries at higher elevations during the summer months. And, in contrast, migrations from tributary areas with stream-bottom anchor ice, to the deeper pools of larger streams and rivers during the winter. Insufficient flows or other stream habitat limitations can also preclude habitat utilization by various fish life stages at different times of the year.

Evaluation: Fish species occurrence surveys are an ongoing annual monitoring component of the Salmon-Challis Forest Fisheries Program. Along with physical and chemical water conditions, fish species life stage distributions provide a third component for characterization of the Forest's stream and lake resources. Monitoring of fish species distribution and aquatic habitat conditions provide the basis for fisheries support to other resource programs including their NEPA assessments, Biological Status and required Endangered Species Act consultations for Sensitive, Threatened and Endangered Species.

Appropriateness: Continue as a monitoring item. Designated funding for annual monitoring and reporting the Forest's fish species distribution is necessary in order to develop and maintain agency GIS and NRIS data bases, as well as those of other agencies. Annual monitoring and reporting is expected to continue declining in light of reductions in staffing and funding.

FREEDOM OF INFORMATION ACT (FOIA): FOIA Requests

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
TR-1	FOIA Requests	Annually by Fiscal Year	Not applicable

Monitoring Requirement: Not a required monitoring item

Monitoring Type: Tracking

Data Source: FOIA Annual Report

Unit of Measure: Number of requests by resource, cost to the government and fees collected.

Findings: 65 FOIA requests were received and processed in FY 2005 at an estimated cost of \$4,774.00. No processing fees were collected.

The following tables list the annual number of requests from 1998 through 2005, the number of requests by resource area and the key requesting organizations.

Total Number of Requests from 1998 Through 2005

YEAR	NUMBER OF REQUESTS
1998	56
1999	56
2000	69
2001	72
2002	106
2003	72
2004	70
2005	65

2005 Resource Area

Resource Area	Number of Requests
Mining	18
Grazing	10
Wilderness	5
Roads	0
Personnel	4
Outfitters	6
Fire	12
NEPA	5
Recreation	4
Miscellaneous	5

Key Requesting Organizations in 2005

ORGANIZATION	NUMBER OF REQUESTS
Western Watersheds Project	5
The Ecology Center	2
Defenders of Wildlife	1
Idaho Outfitters and Guides Assoc.	0
Wilderness Watch	0
Formation Capital Corporation	9
Forest Guardians	1

Variability: Not Applicable

Evaluation: The number of FOIA requests varies from year to year. The cost of processing FOIA requests rose steadily up through 2003, then dropped in 2004 and 2005. The average cost to process one request in 2005 was \$73.00.

Appropriateness: Although this is not a required monitoring item in the Forest Plan, it does provide interesting information on the increased interest in Forest activities and should continue to be monitored and reported.

HERITAGE: Site Deterioration

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Site deterioration	Annually	Cultural properties lose characteristics that make them eligible to the National Register of Historic Places

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Effectiveness

Data Source: Project inventory reports and monitoring reports

Unit of Measure: Number of sites monitored and number of sites in which National Register of Historic Places characteristics have deteriorated.

Findings:

Year	# Sites Monitored		# Sites Deteriorated		% Sites Deteriorated	
	Salmon	Challis	Salmon	Challis	Salmon	Challis
1995	211	83	78	23	37	28
1996	50	92	21	41	42	45
1997	146	68	43	14	29	21
1998	131	17	16	2	12	13
1999	70	22	13	1	19	5
2000	221	46	40	18	18	40
2001	140	68	7	4	5	6
2002	44	36	2	0	5	0
2003	56	39	1	5	2	13
2004	21	10	4	0	17	0
2005	31	15	14	9	45	60

Variability: The relatively high levels of sites that are deteriorated exceed appropriate levels from 1995 through 2000. However, the trend since then, with the exception of FY 2003 and 2005 on the Challis and FY 2004 and 2005 on the Salmon, seems to be six percent or less of the sites have deteriorated. It is interesting to note that the majority of site deterioration in 2000 was to the fact that about 450,000 acres of the Salmon-Challis NF burned that summer. The reason for the overall decrease from 2001 to the present is not known and longer-term study may help identify the cause or suggest it is due to sample bias. The reason for the increase in FY 2005 is chiefly due to site deterioration noted from recreation use on the Middle Fork and Main Salmon Rivers.

Evaluation: A review of site data suggests that over time the majority of sites monitored are not deteriorating. For the most part site deterioration is generally due to wild fires or a lack of proactive Heritage management, rather than poor project performance. Archaeological sites are damaged by various forms of erosion, animal impacts, weathering, nondesignated camping, wildfire and vandalism. Very little damage is due to direct project impacts, and most of those occurred many years ago. Restoration and closure projects are scheduled for FY '07 to correct many of the problems on the Middle Fork and Main Salmon Rivers. Forest Plan standards and guidelines are adequate to protect these sites; however, sufficient time and money is needed to correct these problems, where appropriate.

Appropriateness: Continue to monitor as a Forest Plan requirement. This type of monitoring is Mandatory under Section 106 and 110 of the National Historic Preservation Act.

HERITAGE: Site Preservation

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
TR-1	Site preservation	Annually	Cultural properties are not preserved according to management plans

Monitoring Type: Effectiveness

Data Source: Management plans and site monitoring reports

Unit of Measure: Number of sites slated for preservation and number of sites not preserved.

Findings:

Year	# Sites Proposed for Preservation		# Sites Preserved		% Sites Preserved	
	Salmon	Challis	Salmon	Challis	Salmon	Challis
1995	39	4	9	2	23	50
1996	38	6	4	3	11	50
1997	7	4	5	2	71	50
1998	12	6	12	6	100	100
1999	5	0	4	0	80	100
2000	21	15	18	13	86	87
2001	9	3	9	3	100	100
2002	2	8	2	8	100	100
2003	4	9	4	9	100	100
2004	12	24	12	24	100	100
2005	5	3	2	2	40	67

Variability: Those sites that have not yet been preserved are generally associated with projects that have not been implemented. In all cases, the preservation of these sites will be accomplished in out-years. The trend for preservation from 1995 to 1996 actually dropped, owing to a decrease in overall funding. Reductions in 2005 preservation levels were due to insufficient staffing and shifting priorities to other non-preservation activities in support of wild fire suppression, fuel reduction projects and range NEPA.

Evaluation: To date the data suggests that we are following through with planned preservation projects as funding and project implementation schedules allow.

Appropriateness: Continue to monitor. Monitoring is mandatory under Section 106 and 110 of the National Historic Preservation Act.

HERITAGE: Interpretation

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
TR-2	Interpretation	Annually	Cultural properties are not interpreted to the general or scientific public

Monitoring Type: Implementation

Data Source: Forest Archaeologist

Unit of Measure: List of interpretive products

Findings:

Year	Forest	Name of Interpretive Product
2005	Challis	Challis School Presentation (LYF Idaho Arch Week), Bonanza PIT Project, Custer Days Interpretation, Whiteknob Brochure reprint,
2005	Salmon	Salmon River Byway Brochure Development & Review, Middle Fork Heritage Times, L&C School Presentation, L&C Public Interpretation, Kids Day, PEO Womens Group L&C history in Lemhi Co, R-1 Regional Training Academy, Sextants to Satellites Heritage Expedition, Sacajawea Heritage Days (5 days interpretation), Development of two interpretive programs given 11 times total in campgrounds, 3 work months of Public outreach at Lemhi Pass in partnership with the Salmon Office of the BLM, 3 work months of Public outreach at Lost Trail Pass in partnership with the Beaverhead-Deerlodge NF, Bitterroot NF, and Big Hole National Battlefield, Support to Lemhi Pass Bicentennial Commemoration with Beaverhead-Deerlodge NF, Salmon Office of the BLM, and Big Hole National Battlefield (funded by NFRW and CMRD funds), Support to Lost Trail Pass Bicentennial Commemoration in partnership with the Beaverhead-Deerlodge NF, Bitterroot NF, and Big Hole National Battlefield, L&C Sign Production, L&C in Lemhi Co (North Fork RD section) Display, L&C in Lemhi Co Headquarters Display, L&C in Idaho Display at County Fair, Tent of Many Voices Presentation in Great Falls, Salmon, Hamilton and Kamia, L&C Reenactment (Community performances), and Fam Tour: Lemhi Pass and Lost Trail Pass.
2004	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Bonanza PIT Project

		Whiteknob Interpretive Association signs and brochure School presentations
2004	Salmon	Sextants to Satellites Heritage Expedition L&C Interpretive sign production, teachers workshop, school presentations, poster and placemat School presentations
2003	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Bonanza PIT Project School presentations
2003	Salmon	Sextants to Satellites Heritage Expedition L&C Interpretive Sign Production School presentations
2002	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Bonanza PIT Project School presentations
2002	Salmon	Sextants to Satellites Heritage Expedition Lemhi Pass and Wagonhammer Interpretive sign manufacture School presentations
2001	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support PIT Project Whiteknob Interpretive sign design School presentations Whiteknob PIT Project
2001	Salmon	Sextants to Satellites PIT Project Design work on five interpretive sites on Salmon River Fawn Creek Buffalo report and interpretive display School presentations
2000	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Whiteknob PIT project School presentations
2000	Salmon	L&C website design Development and installation of interpretive signs at six Salmon River sites Installation of three interpretive signs at Leesburg L&C National Historic Trail, Middle Fork Salmon River and Leesburg interpretive tours School presentations
1999	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support School presentations
1999	Salmon	L&C Campsite PIT Project School presentations

1998	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support School presentations Little Bayhorse Lake Brick Kiln interpretive signs and report
1998	Salmon	L&C Trail Mapping PIT Project School presentations
1997	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Little Bayhorse Brick Kiln PIT Project School presentations
1997	Salmon	California Bar PIT Project School presentations Thunder Mountain Trail interpretive report
1996	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee For Interpretive Association Support Interpretive signs along the Custer Motorway Challis-Bonanza Toll Road Passport in Time structures mapping and evaluations Custer Motorway Interpretive Brochure (reprint) Custer Walking Guide Brochure (reprint)
1996	Salmon	California Bar Passport in Time project Pahsimeroi Valley Passport in Time project Idaho Reflections talks County Fair “Life as a Lookout” display Construction of interpretive kiosk at Leesburg
1995	Challis	Yankee Fork Gold Dredge Interpretive Association Support Land of the Yankee Fork Interpretive Association Support Interpretive signs along the Custer Motorway
1995	Salmon	Native American month display Idaho Reflections talks Bear Valley Backcountry Horseman talk Lemhi History Project traveling display, brochure and reports County Fair “Life as a Lookout” display Lantz Bar Passport in Time excavation and news article Lewis and Clark Trail; trail foundation tour Leesburg pamphlet Wagonhammer Tour of Lewis and Clark Trail

Variability: Interpretive products vary over time depending on funding and workload.

Evaluation: The number of interpretive projects completed on the Forests provides a moderate level of public interpretation. The interpretive program has attempted to provide a wide variety of locations and styles of interpretation to reach the local audiences. The trend to provide more interpretive signs along the Salmon River Road and a greater push toward larger scale interpretive events should allow for even greater interpretive potential for the local public in the near future. Numerous interpretive signs

were designed and installed in preparation for the Lewis and Clark Bicentennial Commemoration. An interpretive program is strongly suggested under Section 110 of the National Historic Preservation Act.

Appropriateness: Continue to monitor.

HERITAGE: Middle Fork of the Salmon Wild & Scenic River
 Management Plan: Campsites with Cultural Values

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2 MFWSR-6	Cultural site stability	As needed	Detrimental site instability from activities

Monitoring Requirement: Salmon Forest Plan; Middle Fork of the Salmon Wild & Scenic River Management Plan

Monitoring Type: Implementation/Evaluation

Data Source: Field observations

Unit of Measure: Qualitative interpretation

Findings:

Year	# Sites Monitored for Stability	# Stable Sites	% Stable Sites
1996	82	72	88
1997	4	0	0
1998	5	0	0
1999	15	2	13
2000	21	2	10
2001	20	7	35
2002	18	8	44
2003	0	0	0
2004	10	4	40
2005	No information reported		

Variability: The relatively low percentage of stable sites from 1997 through 2004 is generally due to sampling. That is, the many stable sites were dropped from the monitoring program due to time constraints and efforts were concentrated where impacts were suspected or known to occur. This caused the number of stable sites to go down significantly and as such, it is difficult to compare the results between various years.

Evaluation: Overall, the stability of campsites on the Middle Fork Salmon River has not changed greatly, except with respect to the FY 2000 fires and to restoration work. The number of unstable sites went up in FY 2000 owing to very intense burning from wild fires. These have been monitored over time and for the most part have recovered without

increase expansion by campers. Several sites that were unstable in the 1996 inventory have become stable owing to closure and restoration activities. However, at least 10 or 11 sites continue to be unstable owing to camping, stock, and wildlife use. These sites are scheduled for restoration activities over time and it is envisioned that they will become stable.

Appropriateness: Continue as a Forest Plan monitoring requirement on an ‘as needed’ basis.

INSECTS AND DISEASE: Species

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Insect and Disease	Annually	Determine if outbreaks are likely to reach epidemic levels

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Effectiveness

Data Source: Aerial Pest Detection Survey, Forest Pest Management, Boise Field Office

Unit of Measure: Number of trees killed on infected acreage by species.

Findings: Annual flights are made in areas identified as moderate to high potential for insect and disease activities. Below are the survey results.

**Salmon National Forest
Total Number of Infected Acres / Trees Killed by Species**

Year	Mt. Pine Beetle	DF Bark Beetle	Western Pine Beetle	Spruce Beetle	Subalpine Fir Mortality Complex	Western Spruce Budworm
1997	/1000	300/400			300/3100	
1998	/100	700/1200				
1999	/200	600/950				
2000	/100	400/1600			500/1900	
2001	25/30	5304/8315	45/25		1587/2801	
2002	560/1021	2029/3523	175/42	5/5	3237/10,507	
2003	6322/17,869	13,794/35,216	719/2059		6645/15,660	13,322/
2004	16,598/38,180	48,855/84,361	498/326	15/15	9,968/22,617	478/
2005	17,294 / 540,110	22,663 / 48,318	10 / 48	2 / 5	16,778 / 42,635	948/

Challis National Forest
Total Number of Infected Acres / Trees Killed by Species

Year	Mt. Pine Beetle	DF Bark Beetle	Western Pine Beetle	Spruce Beetle	Subalpine Fir Mortality Complex	Western Spruce Budworm
1997	250/500	100/250			1000/2200	
1998	400/600					
1999	5100/7000	400/50				
2000	2400/5300	100/100			300/1700	
2001	7581/19,401	100/220		60/301	2073/10892	
2002	17,915/195,087	230/460	5/1	5/10	2351/5720	
2003	48,267/203,073	2287/5424	1345/3035	43/100	5669/14362	488/
2004	136,810/562,056	9,390/15,651	137/173	0/0	16,223/41,976	239/
2005	129,025 / 403,280	2,033 / 5,258	0 / 0	2 / 5	4,652 / 11,713	371 /

Aerial inventory indicated that no trees were directly killed by the Douglas fir Tussock Moth or the Western Spruce Budworm on either the Salmon or Challis National Forests.

Variability: Epidemic levels occurred only in isolated areas and were not widespread.

Evaluation: In the late 1990s the Salmon and Challis National Forests' timber sale program focused on the control of insect and disease problems, primarily in the Douglas fir and ponderosa pine types. More recently little has been done to avoid the widespread insect epidemics.

Appropriateness: Continue as a Forest Plan monitoring and report requirement. Monitoring insect and disease activities is required by the National Forest Management Act. This information is needed to assess Forest health and is useful in guiding Forest management activities.

LANDS: Right of Way Acquisitions
Information is being gathered for fy 05

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Road and Trail Rights-of-Way Acquisitions	Annually	If accomplishment in the first six years is less than 50% of the plan's program, evaluate the program. If adjustments are required, place them in the next plan period.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Rights-of-Way Acquisition Report

Unit of Measure: Number of cases

Findings:

	Forest Plan	1997	1998	1999	2000	2001	2002	2003	2004	total	Avg.
Salmon	4 to 5	2	6	5	0	1	0	3	0	17	2.1
Challis	4	0	5	0	2	0	1	0	0	8	1.0

Variability: Rights-of-way acquisitions have not been accomplished at the planned rate of four to five per year for the Salmon National Forest and four per year for the Challis National Forest. The Salmon Forest accomplished an average of about 2.5 per year and the Challis Forest, one per year.

Evaluation: Change objective in Forest Plans from acquiring eight to ten rights-of-way annually to two rights-of-way annually for the combined Forests, to reflect the degree of difficulty and time required to accomplish this objective.

Effect on the local community is that public access is not assured where rights-of-way have not been acquired.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Required as a Budget MAR target.

LANDS: Occupancy Trespass
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Occupancy Trespass	Annually	A stable or increasing number of trespass cases

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Survey Reports, Management Attainment Report

Unit of Measure: Case

Findings: Occupancy trespass can take several forms from a misaligned fence to structural buildings. Cases of structural trespass have been resolved primarily through The Small Tracts Act. Resolving occupancy trespass through the Small Tracts Act has resulted in approximately 2 cases per year across the Salmon-Challis National Forest.

	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
Salmon	0	0	3	2	2	3	3	0	2	15
Challis	0	1	0	0	0	0	0	1	0	2

The current number of occupancy trespass incidences is eight (3 on the North Zone [Salmon Forest] and 5 on the South Zone [Challis Forest]). Occupancy trespasses were tracked through the Encroachment Action Plan for the Salmon National Forest, November 1992, however this plan has not been maintained since the Forests were combined in 1995. The Forest Surveyor began documenting discoveries of occupancy trespass in fiscal year 1996.

Variability: Actual performance is lagging behind, but is close to predicted performance. Progress in resolving cases has been slow. The main problem causing the delay in processing cases has been the changes of ownership and, to some extent, changes in Forest Service personnel working on the cases. The application and processing of these cases starts over with each change of ownership.

Evaluation: An Encroachment Action Plan for the Salmon and Challis National Forests should be prepared and updated as needed per FSM direction in R-4 Supplement 5500-92-1, Effective 10/9/92, which also states that each National Forest shall incorporate into the Forest Plan their Encroachment Action Plan.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Continue to track resolved occupancy trespass cases through the Small Tracts Act.

LANDS: Person Years to Implement

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Number of person years to implement planned direction	Annually	Actual count at end of year deviates from predicted by 10% or more.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Validation

Data Source: Project Work Plans

Unit of Measure: Person Years

Findings: There is no additional information to report in 2005. The last year this monitoring item was reported was 1995. At that time the average person years to implement the planned actions was 3.7. There are several people involved in the Lands program, each with a variable fraction of work time allocated to Lands activities. Since 1995 the average person years for Lands has not changed significantly.

Variability: There has been little variation in person years for Lands during the Plan period.

Evaluation: The person year number is at a minimum needed to maintain a Lands program. We do not anticipate significant deviation. This is a monitoring item in the Challis Forest shown on page V-15 of the Forest Plan. The predicted number of person years was not included.

Appropriateness: Continue as a Forest Plan monitoring report requirement even though Lands is the only activity that has a monitoring item related to person years to implement planned direction.

LANDS: Goals and Objectives
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Monitor accomplishment of funded goals and objectives approved in the annual program of work.	6 months	Failure to meet reported targets.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Performance Review/Management Attainment Report

Unit of Measure: Targets

Findings: Information for 2004 is not currently available but will be compiled and presented in subsequent reports as information becomes available. Accomplishments comparing planned actions to actual accomplishments are designed to be reported through the Management Attainment Report (MAR). A summary of the MAR accomplishments is included in this Monitoring Report as part of the Budget (TR-1) monitoring items. Planned activities were generally accomplished from 1996 through 2003. The only exceptions were 2002 and 2003 when emergency fire activities shifted priorities.

Variability: Accomplishment is estimated to be less than what was planned. Stating whether or not a Lands related MAR target was attained is not meaningful without some explanation on why it was not attained. Many things contribute to meeting or not meeting Lands goals and objectives, such as budget constraints and the willingness of private landowners to exchange or sell.

Evaluation: The Data Source for this item is not appropriate. Performance reviews are not available for public disclosure. The MAR information is available through other sources. The MAR reporting system has been modified several times since 1996. This results in difficulties in data interpretation and comparing yearly findings. Interpretation of the various Lands actions is clouded in terminology (i.e., authorizations administered, land use proposals processed, special use permits processed, special use permits administered) from one yearly MAR to another.

Appropriateness: Continue as a Forest Plan monitoring requirement. Maintain a tracking system of planned activities and accomplishments through a consistently applied Management Attainment Report (MAR).

LANDS: Administration and Inspection
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5	Special Use Permit administration and inspection	Annually	Deviations from terms and conditions of the permit

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Implementation

Data Source: Forest Land Use Reports (FLUR) and Special Use Data System (SUDS) reports

Unit of Measure: Case

Findings: This report displays the number of Special Use Permits administered but not the number of permits inspected.

**Salmon-Challis National Forest
 Special Use Permit Administration
 Non-Recreation**

Year	Permits
1996	301
1997	296
1998	290
1999	269
2000	269*
2001	271
2002	272
2003	271
2004	271*

*no data available. Presume unchanged from previous year

Variability: The number of non-recreational Special Use Permits has stabilized since 1999. Inspections are performed on a variable cycle depending on the type of permits. With the advent of the INFRA database, information on permit inspections can be queried at the Forest or District level.

Evaluation: The SUDS reporting system was instigated in 2000 which allowed compatible reporting into the INFRA corporate database.

The “Conditions Which Initiate Further Evaluation” for this monitoring item is not relevant for Forest Plan monitoring. When deviations from the “terms and conditions of

the permit” are encountered, administrative actions are taken on the permit. The deviations do not provoke a Forest Plan action. In addition, “inspection” of permits is not a valid Forest Plan monitoring item. Inspections, per se, are operational and provide information on a district or more local scale.

Appropriateness: Continue as a Forest Plan monitoring report requirement. Continue to report through the SUDS reporting system and INFRA.

LANDLINES: Location
Information is being gathered for fy 05

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Landline location	Annually	If attainment varies from assigned target by more than + or – 10 percent.

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Implementation

Data Source: Management Attainment Report (MAR)

Unit of Measure: Miles per year

Findings:

Combined Salmon and Challis Landline Target and Attainments

Target	1997	1998	1999	2000	2001	2002	2003	2004	Avg.
Planned	19	20	4	7	1	0	0	0	6.4
Attained	24	12	0	10	0	0	0	0	5.8

Variability: The Salmon Forest Plan on page IV-83 shows the annual target to survey and post 14 to 17 miles of National Forest boundaries. The Challis Forest Plan did not set a target for this monitoring item. In 1995, the combined target for both Forests was reduced to 12.

Evaluation: What is actually planned for each year is below the Forest Plan target, indicating budget allocations and priorities vary considerably, the last few years being relatively non-existent.

Appropriateness: Continue as a Forest Plan monitoring requirement even though the targets and trends are no longer meaningful. Tracking of this activity is being maintained and is available in the Management Attainment Report.

MINERALS: Designated Gravel and/or Riprap Sources

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Designated gravel and/or riprap sources	Annually	Problems which do not meet Forest Plan objectives

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Validation

Data Source: Engineers or Project Administrators for ongoing projects.

Unit of Measure: Annual inspections

Findings: **There is no additional information to report for 2005.** Permits were issued for riprap, sand and gravel, and building stone with an annual average of approximately 300 cubic yards of material.

Variability: Access to suitable materials is keeping up with demand.

Evaluation: Although no formal evaluation of pits has been conducted, there have been no reported problems with permit compliance. The Votler Pit on the North Fork Ranger District is being considered for expansion.

Appropriateness: Continue as a Forest Plan monitoring requirement. Monitoring standards are appropriate.

MINERALS: Lease Stipulations and Forms

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Adequacy of lease requirements	Annually	Inadequate to meet Forest Plan objectives

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Validation

Data Source: Project Administrators Annual Reports

Unit of Measure: Compliance with lease stipulations

Findings: **There is no additional information to report for 2005.** There are many permitted activities regarding Mineral Management on the Forest; material permits, plans of operations, exploration, etc. There are three mineral leases in the Challis area and no leases in the Salmon area. However, none of the Challis leases are active.

Variability: N/A

Evaluation: Since there are no active leases on the Forest, there has been no formal evaluation of leases conducted.

Appropriateness: Continue as a Forest Plan monitoring requirement. Appropriate lease inspection and administration will occur should leases become active.

MINERALS: Reclamation Results

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Reshaping and Vegetation of Disturbance	Annually	Any unacceptable or unexpected results not meeting requirements

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Effectiveness/Validation

Data Source: Project Administrator’s file documentation

Unit of Measure: Compliance with plan requirements

Findings: **There is no additional information to report for 2005.** Final reclamation plans were completed and inspected for a number of exploration projects and mine projects.

Variability: Topographical, vegetation, aspect, and elevation have been dealt with successfully in meeting reclamation standards.

Evaluation: Reclamation plans and practices have been successful.

Appropriateness: Continue as a Forest Plan monitoring requirement.

MINERALS: Locatable Plans of Operation

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Compliance with Plan of Operations	During operations/annually	Any unacceptable or unexpected results not meeting Plan Standards

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation/Effectiveness

Data Source: Project Administrator’s file documentation

Unit of Measure: Compliance with Plan requirements

Findings:

Active Mines

The Forest has no actively producing mines. The mines formerly producing are now administered by the State or in the reclamation phase.

1. **Thompson Creek’s Molybdenum Mine**, located on the Yankee Fork Ranger District, went to patent and is administered by the State of Idaho.
2. **Hecla’s Grouse Creek Mine**, on the Yankee Fork Ranger District, suspended active mining operations in 1997. Portions of the project went to patent and pending applications are anticipated to be completed in 2006. Currently the Forest Service is administering the site which is in the dewatering phase and working with the company to produce a final reclamation plan.
3. **Meridian Gold’s Beartrack Mine**, located on the Salmon/Cobalt Ranger District ceased mining activity in March of 2000. The project is in the reclamation phase with over 70% of the earthwork and seeding completed. It is anticipated the project will be in the monitoring phase in 2007.
4. **U.S. Antimony’s Yellowjacket Mine**, located on the Salmon and Cobalt Ranger Districts is being monitored for vegetation establishment on the reclaimed area.

Exploration Plans of Operation

The Forest responds to 6 to 8 plans of operation annually. Since 1997, a number of active exploration programs were permitted; drilling activity occurred and reclamation work completed on all disturbance.

In addition to reclamation, Abandoned Mine Lands inventory and mitigation of sites has been initiated on the Forest with facilities removal, plugging of shafts, etc. as an ongoing active program. In 2005 the Forest removed the Pope Shenon mine building.

Monitoring

Monitoring is conducted in the form of site visits by the Forest Service and Interagency Task Force of State agencies on the large mines. Additionally, for surface and ground water sampling, aquatic life, archaeology, reclamation activities, etc., are compiled and submitted to the appropriate agencies annually. Agencies conducting site reviews of active mines since 1997 include the Environmental Protection Agency, National Marine Fisheries Service, Fish and Wildlife Service, Idaho Department of Water Resources, Idaho Department of Health and Welfare, Division of Environmental Quality, Idaho Department of Lands, Army Corps of Engineers, and the Idaho Department of Fish and Game.

Blackbird Mine Cleanup

This long-term project involves the Forest Service as a trustee of the mine site, along with the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. EPA is the lead agency in charge of the cleanup.

Variability: The number of inspections conducted varies. On average, large mine operations receive a minimum of one visit/contact per week. Active operations vary depending on level of activity, but inspections of exploration operations are usually conducted once every ten days.

Evaluation: The Forests have an active administration program. Operations are in compliance.

Appropriateness: Continue as a Forest Plan monitoring requirement.

RANGE: Condition and Trend

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluation
FP-1	Condition and trend of vegetation and soils	Annually	If trend is down or if condition is poor and trend is static

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Effectiveness

Data Source: Field Exam

Unit of Measure: Each previous comprehensive Forest Monitoring Report modified the unit of measure for this monitoring item. In 1995, the number of sites was used, while in 1996 the number of monitored acres were used, both comparing the results to meeting management objectives. This report is showing current (2005) conditions and trends.

Findings:

Uplands – Since 1997, a dramatic reduction of upland monitoring efforts has occurred as more focus was spent on riparian and aquatic areas. Upland nested frequency monitoring was originally designed around a 5 to 7 year re-read cycle, but these efforts have been effectively removed from the monitoring priority. The few that were completed were not evaluated for trend or for representative acres, the 1996 monitoring reporting unit.

Riparian – Greenline transects are designed to monitor the condition and trend of the riparian vegetation through analyzing the amount of late seral riparian plant communities. Long-term repeat monitoring of study areas is on a 3 to 5 year re-read cycle. Monitoring site locations have been expanded since their initiation in 1990 and especially since 1997. Currently, the available data indicates the Forest-wide condition and trend as assessed through the riparian greenline data shows:

- 74 study areas at potential natural condition (PNC)
- 72 study areas in late seral condition
- 54 study areas in mid-seral condition
- 50 study areas in early seral condition
- 18 study areas in very early seral condition

85 study areas with upward trend
60 study areas with static trend
29 study areas with downward trend
63 study areas are outside the scheduled re-read 3 to 5 year interval cycle
30 study areas were re-read in 2004 and 8 new greenlines were established in **2005** (see Greenline Monitoring summary table following the narrative below)

Variability: As discussed above, monitoring priorities shifted from upland monitoring to riparian and aquatic monitoring in 1997. The upland effectiveness monitoring nested frequency sites have not been abandoned, but have not been maintained at the 5-7 year re-read cycle. Given the available resources and priorities, future effectiveness monitoring on the uplands will only be possible in a few locations each year.

Evaluation: Comparisons and evaluations at the Forest level can be made on an annual basis by incorporating the findings from those sites scheduled for re-reading.

Appropriateness: Continue as Forest Plan monitoring requirement.

Chapter 2: MONITORING ITEMS

FY 97-05

Summary of Greenline Monitoring by District in 2005

District	Greenline Seral						Greenline Trend				Comments
	PNC	LS	MS	ES	VES	Total	Up	Static	Down	Total	
Challis	12	8	10	8	3	41	11	4	1	16	21 GLs beyond 3-5 year re-read cycle 0 GL re-read in 2005 1 new GL setups in 2005
Leadore	17	17	6	8	7	55	28	14	7	49	10 GLs beyond 3-5 year re-read cycle 0 GLs re-read in 2005
Lost River	27	34	18	25	4	108	31	32	16	79	10 GLs beyond 3-5 year re-read cycle 27 GLs re-read in 2005 5 new GL setups in 2005
Middle Fork	0	0	1	0	0	1	0	0	0	0	1 GL beyond 3-5 year re-read cycle
North Fork	3	0	2	2	0	7	1	3	1	5	1 GL beyond 3-5 year re-read cycle 0 GLs re-read in 2005
Salmon-Cobalt	15	13	12	3	1	44	13	7	3	23	11 GLs beyond 3-5 year re-read cycle 3 GLs re-read in 2005 1 new GL setups in 2005
Yankee Fork	0	0	5	4	3	12	1	-	1	2	9 GLs beyond 3-5 year re-read cycle 1 new GL setups in 2005
TOTALS	74	72	54	50	18	268	85	60	29	174	63 GLs beyond 3-5 year re-read cycle 30 GLs re-read in 2005 8 new GL setups in 2005

RANGE: Compliance With Standards

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Compliance with forage utilization standards	Annually	Forage utilization exceeds allowable use by 10 percent (Challis Plan)

Monitoring Requirement: Salmon (amended) and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Field Exam. Endangered Species Act Section 7 Reports, PACFISH/INFISH Biological Opinions

Unit of Measure: Percent utilization. Methods of monitoring utilization have progressed over the last several years to include measuring stubble heights on riparian herbaceous vegetation and on woody browse species.

Findings:

Uplands – Since 1997, upland monitoring efforts have been dramatically reduced by increased focus on riparian and aquatic areas. Monitoring upland grazing use continued in 1997 and 1998, but these efforts have been basically removed from the monitoring priority. Since 1999, upland utilization has largely been estimated based on observations, rather than quantifiably measured.

Riparian – Monitoring grazing use has been the focus in riparian areas where livestock tend to concentrate. Riparian grazing use has been monitored through measuring stubble heights of riparian hydric species and monitoring browsing of riparian woody species. The Forest provided the monitoring data in ESA Section 7 annual reports. The format and content of these reports have changed considerably over the years, and beginning in 1999, only contained summaries regarding riparian monitoring. The table below displays the utilization monitoring performed on riparian study areas (in the form of stubble height and woody browse monitoring) and upland areas where utilization studies were performed on key forage grass species. Beginning in 1999 when the ESA report was consolidated to include all the Forests within PACFISH /INFISH, data was summarized, by Forest, as meeting or not meeting only riparian grazing use standards.

Riparian			Uplands	
	<i>Performed</i>	<i>Met (%)</i>	<i>Performed</i>	<i>Met (%)</i>
1997	235	204 (87%)	139	136 (98%)
1998	253	223 (88%)	156	151 (97%)

Riparian			
<i>Year</i>	<i>Number of Monitored Pastures</i>	<i>Number Pastures Meeting Standards</i>	<i>Percent Pastures Meeting Standards</i>
1999	196	164	84%
2000	100	76	76%
2001	126	97	77%
2002	68	47	69%
2003	87	76	87%
2004	99	95	96%
2005	89	87	98%

Variability: Previous consolidated Forest Plan monitoring reports (1995 and 1996) addressed the issue of Conditions Which Initiate Further Evaluations (i.e. “exceeding the standard by 10 percent”). This was incorrectly interpreted in previous reports and will not be evaluated in this comprehensive report. Conditions which may initiate further evaluation are dependent upon the individual site characteristics and are typically triggered regardless of by how much the standard was exceeded.

Evaluation: The percentage of pastures with riparian areas being monitored and meeting standards varies widely, since many riparian areas were not grazed under refined grazing rotations and more restrictive management efforts. Continued improved efforts by permittees and agency personnel are expected to reduce the number of sites which exceed the standards.

Appropriateness: Continue as a Forest Plan monitoring requirement. This is a mandatory item agreed to during consultation with National Marine Fisheries Service and U.S. Fish and Wildlife Service.

RANGE: Forage Improvement

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Range Forage Improvement	Before treatment, second and fifth year after treatment	None

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Effectiveness

Data Source: Field Exam

Unit of Measure: Acres

Findings: **There is no additional information to report for 2005.** This monitoring item was listed only in the Salmon Forest Plan. Forage improvement projects, although identified in the plan, have been non-existent since the mid-1990s, primarily because of lack of money and the need to comply with various environmental laws and regulations. This monitoring item will be reported only when this type of project occurs.

Variability: Not applicable.

Evaluation: Improvement projects will be evaluated if and when projects are completed.

Appropriateness: Continue as a Forest Plan monitoring requirement. Forage improvement projects will be evaluated should they occur in the future.

RANGE: Predator Losses

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Predator Losses	Annually	Losses exceed 2 percent

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Baseline/Implementation

Data Source: Permittee reports, field observation

Unit of Measure: Each loss

Findings: **There is no additional information to report for 2005.** The annual permittee submitted range report encourages, but no longer requires the reporting of livestock losses from predators. This information is not readily or reliably available.

Variability: Not applicable

Evaluation: Data is not available

Appropriateness: Discontinue as a Forest Plan monitoring requirement. This information is not readily or reliably available.

RANGE: Frank Church – River of No Return Wilderness Management Plan: Grazing Use in Unique Vegetation Sites

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5 FC-RONRW-2	Grazing Use	As needed	Grazing use is altering natural ecological succession

Monitoring Requirement: Salmon Forest Plan; Frank Church – River of No Return Wilderness Management Plan

Monitoring Type: Implementation/Evaluation

Data Source: Field observations and measurements

Unit of Measure: Qualitative and quantitative evaluation and interpretation

Findings: **There is no additional information to report for 2005.** Only two allotments reside within the Frank Church – River of No Return Wilderness. Although both allotments are monitored for grazing use, neither supports unique vegetation sites that warrant specific grazing use monitoring as a means to evaluate natural ecological succession.

Variability: Not applicable

Evaluation: Not applicable

Appropriateness: Continue as a Forest Plan monitoring requirement even though specific grazing use monitoring as a means to evaluate natural ecological succession is not warranted.

RECREATION: Developed Recreation – Site and Facility Condition
Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Recreation Facility Condition	Annually	Deterioration of site beyond that anticipated under normal use.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 1998, the Forest began implementing a new mandatory inventory and database system called Infrastructure (INFRA).

Unit of Measure: Dollars needed for the maintenance, repair, rehabilitation or replacement of developed recreation facilities.

Findings: **There is no additional information to report for 2004.** Available funding is insufficient to prevent the gradual decline in quality and lifespan of facilities at most developed recreation sites. Order of magnitude is that current funding levels are approximately 10-15% of the actual need.

Variability: Predicted performance was that the Forest would make steady improvement in the quality of our developed recreation sites. Other higher priority demands for limited funding has precluded a general trend toward improvement and has resulted in a general trend of decline.

Evaluation: Data collected and reported through INFRA indicates investments needed for the operation and maintenance of all developed recreation facilities. Needs identified are then requested through the out year budget process.

Appropriateness: Continue trend information as a Forest Plan monitoring requirement and a mandatory reporting item. INFRA provides the detailed information. Mandated target is 20% of all facilities inventoried each year.

RECREATION: Developed Recreation – Amount and distribution of actual use compared with projections. Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Recreation use at developed sites	Annually	Use beyond est. maximum level

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 2003, the Forest implemented a new mandatory survey and data collection program called the National Visitor Use Monitoring (NVUM) project.

Unit of Measure: Recreation Visitor Days (RVD’s) through 1995.
Recreation Visits starting in 2003.

Findings: There is no additional information to report for 2004. The use numbers shown below are totals for both the Salmon and Challis National Forests, and include developed, dispersed (now General Forest Area), and wilderness use. The average annual use for the two Forests as projected in the Forest Plans was approximately 1,079,000 Recreation Visitor Days (RVD’s).

Recreation Visitor Days

Year	Use
2003	466,835 Visits
1996	1,308,400 RVD’s
1995	1,373,000 RVD’s
1994	1,548,000 RVD’s
1993	1,645,000 RVD’s

Variability: Comparison between “old” RIM use in RVD’s, based entirely on office estimates, and “new” NVUM use in VISITS, based on scientific sampling techniques, is meaningless.

Evaluation: Trend information will be available after 2008 and 2nd round of NVUM.

Appropriateness: The new National Visitor Use Monitoring project provides the scientific sampling techniques necessary to obtain accurate visitor use estimates. Continue as a Forest Plan monitoring requirement and mandatory reporting item. Decrease the monitoring frequency from annually to a 5 year cycle per the national schedule for NVUM. Surveys and estimation of use will occur on a Forest-wide basis every five years. Next sample year for the Salmon-Challis NF is 2008. The 2008 results compared to the 2003 results will provide important trend information.

RECREATION: Developed recreation – Facility Capacity (whether construction & reconstruction of facilities is keeping pace w/ demand). Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Occupancy versus capacity of dev. facilities	Annually	PAOT and PAOT Days greater than or equal to 90% of projected demand.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Validation

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 2003, the Forest implemented a new mandatory survey and data collection program called the National Visitor Use Monitoring project.

Unit of Measure: Recreation Visitor Days (RVD's) through 1995.
Recreation Visits starting in 2003.

Findings: **There is no additional information to report for 2004.** There is unused capacity at virtually all developed recreation sites on the Forest at virtually all times.

Variability: Growth in recreation use of the Forest is generally slower than previously predicted.

Evaluation: Non-scientific sensing and observations of field going personnel indicate that there are virtually no developed recreation sites on the Forest that are fully occupied other than a couple of major Federal holidays each year.

Appropriateness: Continue as a Forest Plan monitoring requirement. There is a component in the Infrastructure system that addresses use beyond capacity along with specific work tasks to be employed should use approach capacity. Further, should developed recreation sites ever become filled during more than major holiday weekends, the Forest would consider adding those specific developed sites to the National Recreation Reservation System.

RECREATION: Developed recreation – Soil and vegetation loss at developed sites.

Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Soil or vegetation losses at developed sites as a result of use.	5 years	Campsite condition below Class III using the Limits of Acceptable Change process.

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Implementation

Data Source: Transect photo points.

Unit of Measure: Limits of Acceptable Change (LAC) classes.

Findings: There is no additional information to report for 2004. LAC was never implemented on the Forest.

Variability: Significant degradation of soil or vegetation at developed sites has not occurred.

Evaluation: There is a general sense that soil or vegetation conditions at developed recreation sites are not substantially different today than 15 years ago.

Appropriateness: Continue as a Forest Plan monitoring requirement. There is a component in the Infrastructure (INFRA) database that addresses site condition and setting along with identification of work tasks should such losses occur.

RECREATION: Dispersed recreation – Site condition
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5	Recreation Site Condition	Annually	Salmon – Dispersed sites rated Frizzell Condition Class 4/5. Challis – Campsite condition below Class III using the Limits of Acceptable Change process.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Field inventory evaluating natural conditions at popular dispersed (non-developed) campsites using the Frizzell method (Salmon NF) or the Limits of Acceptable Change (LAC) process (Challis NF).

Unit of Measure: Frizzell Condition Class rating (Salmon NF) or Limits of Acceptable Change (LAC) Condition Classes (Challis NF).

Findings: **There is no additional information to report for 2004.** Neither system, Frizzell or LAC, has been implemented on either Forest in General Forest Areas (GFA's).

Variability: Predicted performance was that the two Forests would undertake a widespread inventory and evaluation of all popular dispersed camping spots in the General Forest Area. Inventory was never done.

Evaluation: Although there is no data to evaluate for the above described item, the new Infrastructure (INFRA) program includes a component for natural setting in the General Forest Area. Natural resource degradation as a result of recreation use is evaluated to determine rehabilitation or restoration needs on a specific site or location basis.

Appropriateness: Continue as a Forest Plan monitoring requirement recognizing data sources are outdated. Continue to identify adverse resource effects as a result of recreation use through the INFRA program.

RECREATION: Dispersed recreation – Amount and distribution of actual use compared with projections.

Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-6	Recreation use in General Forest Area	Annually	Use beyond est. maximum level

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 2003, the Forest implemented a new mandatory survey and data collection program called the National Visitor Use Monitoring (NVUM) project.

Unit of Measure: Recreation Visitor Days (RVD’s) through 1995.
Recreation Visits starting in 2003.

Findings: **There is no additional information to report for 2004.** The use numbers shown below are totals for both the Salmon and Challis National Forests, and include developed, dispersed (now General Forest Area), and wilderness use. The average annual use for the two Forests as projected in the Forest Plans was approximately 1,079,000 Recreation Visitor Days (RVD’s).

Recreation Visitor Days

Year	Use
2003	466,835 Visits
1996	1,308,400 RVD’s
1995	1,373,000 RVD’s
1994	1,548,000 RVD’s
1993	1,645,000 RVD’s

Variability: Comparison between “old” RIM use in RVD’s, based entirely on office estimates, and “new” NVUM use in VISITS, based on scientific sampling techniques, is meaningless.

Evaluation: Trend information will be available after 2008 and 2nd round of NVUM.

Appropriateness: Continue as a Forest Plan monitoring requirement and mandatory reporting item. The new National Visitor Use Monitoring project provides the scientific sampling techniques necessary to obtain accurate visitor use estimates. Decrease the monitoring frequency from annually to a 5 year cycle per the national schedule for NVUM. Surveys and estimation of use will occur on a Forest-wide basis every five

years. Next sample year for the Salmon-Challis NF is 2008. The 2008 results compared to the 2003 results will provide important trend information.

RECREATION: Dispersed recreation – Off road vehicle travel.
Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-7	Acres damaged by off highway vehicle (OHV) use to the point of triggering active rehabilitation	Annually	Acres increase by 10% over last inventory

Monitoring Requirement: Salmon and Challis Forest Plans. See also Soil FP-3.

Monitoring Type: Baseline/Implementation

Data Source: Field inventory.

Unit of Measure: Acres

Findings: There is no additional information to report for 2004. Inventory was never conducted.

Variability: Not applicable

Evaluation: Not applicable

Appropriateness: Continue as a Forest Plan monitoring requirement. A new Code of Federal Regulation is being proposed to close National Forest System lands to motorized use except for designated routes. Routes selected will be suitable for motorized use. Cross-country travel off designated routes will no longer be permitted.

RECREATION: Dispersed recreation – Trail conditions.
Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-8	Trail condition	10% Annually	Trail mileage classed as substandard exceeds management objectives or increase in substantiated complaint letters from the public.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Trail condition surveys.

Unit of Measure: Miles of trail.

Findings: **There is no additional information to report for 2004.** Available funding is insufficient to prevent the gradual decline in quality and condition of the trail system. Order of magnitude is that current funding levels are approximately 10% of the actual need to prevent further degradation of the system.

Variability: Predicted performance was that the Forest would make steady improvement in the quality and condition of our trail system. Other higher priority demands for limited funding has precluded a general trend toward improvement and has resulted in a general trend of decline.

Evaluation: Data collected and reported through INFRA indicates investments needed for the operation and maintenance of all developed recreation facilities. Needs identified are then requested through the out year budget process.

Appropriateness: Continue trend information as a Forest Plan monitoring requirement and a mandatory reporting item. INFRA provides the detailed information. Mandated target is 20% of all trails inventoried each year.

RECREATION: Wilderness – Campsite condition.
Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-9	Condition of wilderness campsites	5 years	Limits of Acceptable Change (LAC) analysis shows that the condition class has declined one class on 25% of inventoried sites.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Field inventory

Unit of Measure: Campsites by Condition Class

Findings: There is no additional information to report for 2004. Neither Forest implemented Limits of Acceptable Change process. Instead, the revised Frank Church-River of No Return Wilderness Management Plan adopted the Frissell method of determining campsite conditions. The Frissell system employs 5 classes ranging from Class I (most natural) to Class V (most modified). A survey and inventory of most campsites located within the Forests’ portion of the Frank Church – River of No Return Wilderness (910 campsites) indicates that on a wilderness-wide basis approximately 20% of campsites are in Class I (182 camps), 27% in Class II (248 camps), 26% in Class III (236 camps), 20% in Class IV (183 camps) and 7% are in Class V (61 camps). Direction is to undertake rehabilitation actions on Class IV and Class V sites.

Variability: Not applicable.

Evaluation: Change monitoring method from a LAC based system to the Frissell system. Establish a 10 year cycle for repeat of survey.

Appropriateness: Continue Wilderness Campsite Condition as a Forest Plan monitoring requirement. The Frissell method for estimating condition classes will continue to be used.

RECREATION: Wilderness – Amount and distribution of actual use. Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-10	Recreation use in designated Wilderness	Annually	Use beyond est. maximum level

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 2003, the Forest implemented a new mandatory survey and data collection program called the National Visitor Use Monitoring (NVUM) project.

Unit of Measure: Recreation Visitor Days (RVD’s) through 1995.
Recreation Visits starting in 2003.

Findings: There is no additional information to report for 2004. The use numbers shown below are totals for both the Salmon and Challis National Forests, and include developed, dispersed (now General Forest Area), and wilderness use. The average annual use for the two Forests as projected in the Forest Plans was approximately 374,000 Recreation Visitor Days (RVD’s).

Recreation Visitor Days

Year	Use
2003	34,178 Visits
1996	437,100 RVD’s
1995	447,000 RVD’s
1994	477,000 RVD’s
1993	374,000 RVD’s

Variability: Comparison between “old” RIM use in RVD’s, based entirely on office estimates, and “new” NVUM use in VISITS, based on scientific sampling techniques, is meaningless.

Evaluation: Trend information will be available after 2008 and 2nd round of NVUM.

Appropriateness: The new National Visitor Use Monitoring project provides the scientific sampling techniques necessary to obtain accurate visitor use estimates. Continue as a Forest Plan monitoring requirement and mandatory reporting item. Decrease the monitoring frequency from annually to a 5 year cycle per the national schedule for NVUM. Surveys and estimation of use will occur on a Forest-wide basis every five years. Next sample year for the Salmon-Challis NF is 2008. The 2008 results compared to the 2003 results will provide important trend information. It will be

necessary to add extra survey days specific to wilderness during the 2008 survey in order to most accurately assess Wilderness use as distinct from Forest use.

RECREATION: Salmon Wild & Scenic River Management Plan – Recreation segment – User Demands.
Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-11 SWSR(rec)-1	Reported conflicts between user groups	Annually	Recurring conflicts which could be resolved through regulations

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Written or verbal reports of conflicts.

Unit of Measure: Each report.

Findings: **There is no additional information to report for 2004.** Conflicts between user groups have not developed. Use for most of the year generally remains low. Conflicts within a user group have occurred during spring and fall steelhead seasons. Leaving unoccupied camps became a problem. The Special Order for length of stay was relaxed from 14 days to 16 days to encompass 2 weekends, with a special emphasis on enforcement. The problem has been generally resolved.

Variability: Predicted growth in use of the Recreation segment of the Salmon Wild & Scenic River has not occurred.

Evaluation: This anticipated issue has not developed as yet.

Appropriateness: Continue as a Forest Plan monitoring requirement and a mandatory reporting item. Continue to track at the Ranger District level.

RECREATION: Salmon Wild & Scenic River Management Plan –
 Recreation segment – Allocation system.
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-12 SWSR(rec)-2	Need for restrictions	Annually	Recurring conflicts which could be resolved through regulations or an allocation system

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Effectiveness

Data Source: Written or verbal reports of conflicts.

Unit of Measure: Each report.

Findings: **There is no additional information to report for 2004.** As stated under FP-11, anticipated conflicts due to use levels have not occurred. There is no need at the present time, nor in the foreseeable future, for a launch allocation system between private and commercial boating use on the Recreation segment of the Salmon Wild & Scenic River.

Variability: Predicted growth in use of the Recreation segment of the Salmon Wild & Scenic River has not occurred.

Evaluation: This anticipated issue has not developed as yet.

Appropriateness: Continue as a Forest Plan monitoring requirement and a mandatory reporting item. Continue to track at the Ranger District level.

RECREATION: Salmon Wild & Scenic River Management Plan –
 Recreation segment – Boating use.
 Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-13 SWSR(rec)-3	Amount of boating use of the Recreation segment of the Salmon River	Annually	Recurring conflicts which could be resolved through regulations or an allocation system.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Voluntary self-registration system at boat launches supplemented by random observation.

Unit of Measure: Number of boaters.

Findings: **There is no additional information to report for 2004.** Self-registration system was never implemented.

Variability: Predicted growth in use of the Recreation segment of the Salmon Wild & Scenic River has not occurred.

Evaluation: This anticipated issue has not developed as yet.

Appropriateness: Continue as a Forest Plan monitoring requirement and a mandatory reporting item. Continue to track at the Ranger District level.

RECREATION: Salmon Wild & Scenic River Management Plan –Wild segment – Visitor use.

Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-14 SWSR(wild)-8	Amount of recreation use of the Wild segment of the Salmon River	Annually	Use beyond estimated maximum level

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Baseline

Data Source: Annual Recreation Information Management (RIM) Report (through 1995). In 2003, the Forest implemented a new mandatory survey and data collection program called the National Visitor Use Monitoring project. Use data during the controlled permit season is available from the permits.

Unit of Measure: Recreation Visitor Days (RVD’s) through 1995.
Recreation Visits starting in 2003.

Findings: **There is no additional information to report for 2004.** The most accurate information available for use of the Wild segment of the Salmon Wild & Scenic River is the mandatory permit system which is in place from June 20 through September 7 of each year. The permit tracks number of people in the party as well as their length of stay. The next most accurate piece of information comes from the National Visitor Use Monitoring project, however use calculations in that process are on a Forest-wide basis, therefore site-specific locational information is not available from this first round of surveys. Future surveys will have a mechanism for gathering more site-specific use data should the Forest have the need for such data. The next survey cycle for our Forest will be in 2008. The least useful information came from RIM, where use estimates were entirely guessed at with virtually no basis in scientific sampling techniques.

Variability: Comparison of today’s Unit of Measure, Site Visits, with RIM’s previous Unit of Measure, Recreation Visitor Days, is meaningless. Our next opportunity to determine use trends will come from round 2 of NVUM, scheduled for 2008. Use figures during the control season continue to be our most reliable information during that season.

Evaluation: Data and trends will best be evaluated after 2008.

Appropriateness: Continue as a Forest Plan monitoring requirement. Continue to track float use levels during the control season at the Ranger District level.

RECREATION: Frank Church - River of No Return Wilderness Management Plan – Middle Fork of the Salmon River – Launch Allocation. Information is being gathered for fy 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-15 FCWMP-1	Allocation of launches between outfitted and non-outfitted groups on the Middle Fk of the Salmon River	Annually	Significant number of unused launches by either group or significant changes in demand for launches by either group.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Effectiveness

Data Source: Ranger District records of launches used by outfitted and non-outfitted groups.

Unit of Measure: Launch

Findings: **There is no additional information to report for 2004.** Current allocated launches are fully utilized by both groups.

Variability: Actual performance matches predicted performance.

Evaluation: Recent Management Plan revision for the Frank Church – River of No Return Wilderness maintained the current allocation of launches on the Middle Fork of the Salmon River.

Appropriateness: Continue as a Forest Plan monitoring requirement and a mandatory reporting item. Continue to track at the Ranger District level and make adjustments as needed through standard management actions.

RESEARCH NATURAL AREAS: Number and Acres

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
TR-1	Number of RNAs and total acres	Annually	N/A

Monitoring Requirement: This item is identified as a Tracking Item

Monitoring Type: Tracking/Implementation

Data Source: Establishment records

Unit of Measure: Number and acreage

Findings: The last three proposed RNAs were designated in the Challis area by Plan Amendment in November 1996. These were Sheep Mountain, Cache Creek Lakes, and Mystery Lake. All the proposed RNAs identified in the two Forest Plans have been designated except for the Deadwater RNA which was dismissed due to excessive non-native vegetation that detracted from its RNA characteristic. No more RNAs are proposed.

Salmon and Challis Forest-wide RNAs:

Allan Mountain	1,650 Acres
Kenney Creek	1,690
Davis Canyon	1,215
Dry Gulch – Forge Creek	3,235
Frog Meadows	330
Mill Lake	720
Bear Valley	2,530
Colson Creek	280
Dome Lake	1,415
Gunbarrel	1,600
Soldier Lakes	155
Surprise Valley	1,470
Merriam Lake Basin	740
Middle Canyon	2,200
Smiley Mountain	3,080
Mahogany Creek	3,650
Cache Creek Lakes	795
Mystery Lake	517
Sheep Mountain	1,542
Iron Bog	434
Meadow Canyon	3,880 (part on Targhee)
TOTAL	33,128 acres

Variability: N/A

Evaluation: N/A

Appropriateness: Discontinue as a Forest Plan monitoring and reporting item. Tracking and implementation of RNA establishment has been complete.

SOIL: Ground Disturbing Activities With the Potential to Alter Soil Productivity

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Disturbing activities altering soil productivity	Appropriate sample of projects	Detrimental soil productivity levels

Monitoring Requirement: Challis (item #2) and Salmon (item #4) Forest Plans. This monitoring item is closely related to and tiers to monitoring item Water FP-4.

Monitoring Type: Implementation/Effectiveness

Data Source: Field measurements, observations, Soil Quality Assessments

Unit of Measure: Ground cover, soil compaction

Findings: In FY 2005 representative potentially ground disturbing projects were monitored. Visual estimates and transects were performed monitoring the amount and effectiveness of ground cover. Beginning in 2003, the Soil Quality Assessment process was initiated which includes qualitative observations and quantitative sampling of erosion indicators, ground cover, and soil compaction (bulk density). The following pre-project monitored was conducted in FY 2005:

- Coal Creek-Big Creek Road Project
- Moyer-Salt Prescribed Burn
- Salmon-Moose Hazardous Fuels Reduction Project
- Stanley Interface Fuels Reduction Project
- Fourth of July Timber Sale
- Ransack Timber Sale
- Goldbug Salvage Sale

Variability: Monitoring only a representative of potentially detrimental projects is not occurring. Virtually all projects that have the potential to detrimentally affect soil productivity are being sampled at some level appropriate for the project.

Evaluation: The general results of the monitoring and soil quality assessments indicated no unanticipated short-term or long-term alteration of soil productivity.

Appropriateness: Continue as a Forest Plan monitoring requirement. This type of resource monitoring is being implemented at the project level. There is a direct relationship with the goals, direction, standards, and guidelines of the Forest Plans.

SOIL: ORV Damage

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Sequential photo points of ORV damage	Annual	Closure of areas upon evidence of watershed damage

Monitoring Requirement: Salmon Forest Plan. See also Recreation FP-7.

Monitoring Type: Baseline/Implementation

Data Source: Standard methods

Unit of Measure: Photo interpretation and evaluation

Findings: There is no additional information to report for 2005. No photo points were established for the purpose of evaluating ORV damage

Variability: Not applicable

Evaluation: Soil disturbance and accelerated erosion from ORVs is a concern on the Forest. The use of ORVs on and off roads and trails has increased dramatically over the last ten years.

Appropriateness: Continue as a Forest Plan monitoring requirement. Consider initiation of a monitoring protocol and monitor ORV use as a Forest Plan monitoring requirement once the pending Forest Service-wide formal direction has been established regarding ORV use.

SOIL: Benchmark Soils

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Recognize and establish benchmark soils that are representative of large areas	Continuous	Initiate further investigation after establishing representative sampling sites

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Baseline/Implementation

Data Source: Land Types, Land Type Associations

Unit of Measure: Number

Findings: There is no additional information to report for 2005. Numerous Land Type Associations have been identified as benchmark soil types representing the larger, more dominant land types within the Forest.

Variability: N/A

Evaluation: Soil map unit descriptions accompany the various soil and land type surveys that have been accomplished over the years on the Forest. Map unit descriptions identify and describe the various characteristics and properties of the major soil types within the map unit. At the project level, the soil characteristics at the site level are compared to those described for the Land Type. Any significant differences are evaluated and used to modify the proposed project design to eliminate or minimize adverse effects to the soil resource.

Appropriateness: Continue as a Forest Plan monitoring requirement. However, the recognition and establishment of formalized ‘benchmark’ soil types representing larger areas is not necessary. Representative soil types are already identified as part of the Land Type and soil mapping process.

SOIL: Comparing Erosion for Various Forest Practices

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5	Quantified project level erosion sampling	4 plots per year	Exceeding local soil loss tolerance level evaluations

Monitoring Requirement: Challis (item #1) and Salmon (item #3) Forest Plans

Monitoring Type: Implementation

Data Source: Erosion troughs, fabric cloth, 3-F erosion bridge

Unit of Measure: tons/acre

Findings: **There is no additional information to report for 2005.** No project level quantified erosion studies have been performed.

Variability: Not applicable

Evaluation: Not applicable

Appropriateness: Continue as a Forest Plan monitoring requirement. Establishing quantitative soil erosion studies such as those listed at the project level is desired in order to evaluate the effects of management practices or the effectiveness of mitigation measures.

SOIL: Soil Survey Activities

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-6	Soil survey activities	Annually, fiscal year program of work target	+/- 25% of Plan direction

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Baseline

Data Source: Progress reviews; Management Attainment Report

Unit of Measure: Acres surveyed

Findings: In 2005, approximately 2.5 million acres of mapping (at various levels) on the Challis National Forest were consolidated into a Landtype Association map at the 1:100,000 scale.

Variability: The opportunity to plan and complete soil surveys is totally dependent upon a reliable budget source which has not been available in the recent past.

Evaluation: The two Forests now have a consistent Land Type Associations map that can be incorporated into the NRIS corporate database and used and understood by all resource specialists regardless of the project location or survey vintage. Mapping at a finer scale could be addressed in the future if funding becomes available.

Appropriateness: Continue as a Forest Plan monitoring requirement. Should funding become available and soil surveys become a priority, reportable units will be adequately monitored and reported.

SOIL: Naturally Unstable Areas

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-7	Naturally unstable areas	Annual	Sites which are not stable due to natural conditions

Monitoring Requirement: Salmon Forest Plan. See also Soil FP-1 Natural Erosion.

Monitoring Type: Effectiveness/Validation

Data Source: Observations of incidences, landslide data files

Unit of Measure: Number of events

Findings: Several areas of natural soil instability are present throughout the Salmon-Challis National Forest. Incidences of natural debris flows have been recorded and photographically captured. Landslide prone areas have been identified on topographic maps indicating where historical mass wasting prone soils are located. No instances of landslides or debris flows are known to have occurred or were recorded in 2005.

Variability: Not applicable

Evaluation: Knowing where natural soil instability is located and the types of soils prone to instability assist Forest specialists in planning and managing Forest activities.

Appropriateness: Continue as a Forest Plan requirement. These sites should be monitored by maintaining a photographic report file of incidences and maintaining the landslide prone map files as additional areas are further investigated.

SOIL: Vegetation and Soil Conditions: Salmon Wild & Scenic River Management Plan (Wild Segment): Campsites

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-8 SWSR(wild)-2	Vegetation and soil stability	Every three years	Detrimental site instability from activities

Monitoring Requirement: Salmon Forest Plan; Salmon Wild & Scenic River Management Plan

Monitoring Type: Baseline/Implementation/Evaluation

Data Source: Photo points, field observations

Unit of Measure: Qualitative interpretation

Findings: There is no additional information to report for 2004. Photo points were never established in the seven selected campsites (Devil’s Toe, Bargamin Creek, Big Mallard, Corey Bar, Rhett Creek, Bull Creek, and Horse Creek). David Cole of the Aldo Leopold Wilderness Research Institute has been conducting campsite investigations on a randomized sample of eleven campsites from 1996 through 2002. Two (Devil’s Toe and Bargamin Creek) of the seven campsites were included in his report. His findings are summarized below.

The campsites are generally large in size with abundant social trails and satellite sites. Vegetation is sparse with abundant sand and rock below the high water mark. The size of campsites, the extent of satellite sites, and the amount of social trails increased from 1996 through 2002, especially above the high water line.

Variability: The information from the Cole report could be used as a baseline to establish additional monitoring sites on the other 5 campsites, or re-evaluate the original campsite selection to include Cole’s campsites.

Evaluation: Trends in campsite expansion and extent of social trails are increasing on at least two of the selected 7 campsites and on the other nine studied by Cole.

Appropriateness: Continue as a Forest Plan monitoring requirement. Use the Cole report to select additional sites for quantitative sampling and/or photographic record.

TIMBER: Offer, Sold, and Cut

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Timber Sold	Annually	Timber offer not progressing as scheduled

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: PTSAR, PSS, TCS, and TSPIRS Reports

Unit of Measure: Volume: MBF; Area: Acres

Findings:

Refer to the table on the next page for a summary of the volumes offered, sold, and cut on the individual Salmon and Challis Units and a total for the combined Forests.

Planned logging is listed in the Salmon and Challis Forest Plans and is stored in our Timber Activity Control System (TRACS) and Forest Plan Timber Summary (FPTS) Area. The volume in Thousand Board Feet (MBF) and the Acres sold in a given year are stored in the Program Sale Statement (PSS) Area and Timber Cut and Sold (TCS).

Two categories of timber volume exist: 1) The Allowable Sale Quantity, which is the quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the Plan. This quantity is usually expressed on an annual basis as the “average annual sale quantity.” 2) The second category of volume is an estimated amount of volume called Non-Chargeable Volume in TRACS. This is volume from trees not used in the determination of ASQ, such as fuelwood from logging residue, etc. These two categories are listed as “ASQ” and “NON-ASQ” in the tables on the following pages.

Salmon Unit “Planned”			Challis Unit “Planned”		
	MBF	ACRES			
ASQ	21,630		ASQ	3,000	
Non ASQ	2,800		Non ASQ	2,300	
Total	24,430	4,635	Total	5,300	1,575

Volume Sources: Salmon Forest Plan Page VII-A-8, EIS Page IV-34, Page II-137
 Sawtimber = 21,147 MBF + Roundwood = 169 MCF x 3.3 = 558 = about 21,700 ASQ.
 The TRACS 21,630 value is due to rounding.
 Fuelwood (NON-ASQ) = 814 MCF x 3.47 = 2,800 MBF

Challis Forest Plan Page IV-39. ASQ = 3,000 MBF. NON-ASQ = 2,250, 2,300 in TRACS. Acres sources: Salmon Plan Page III-1, EIS Page IV-34. Sawtimber = 4,012. Challis Plan Page IV-40, Sawtimber = 550 acres. Acres are increased in TRACS for Roundwood and Fuelwood.

Variability: Salmon offered and sold ASQ volumes were only 16% of the Forest Plan average, the bulk of which occurred between 1997 and 2001. Challis' sold ASQ has been right at the planned level until 1998, and then dropped to approximately 53% of the Forest Plan average.

Evaluation: Section 7 Consultation for salmon under ESA began late in 1992, and marked the beginning of reduced volume offer on the Salmon Unit.

Appropriateness: Continue as a Forest Plan monitoring requirement as a means of displaying the trends of timber sales from Forest Plan projections.

MBF VOLUME: Offered, Sold, and Cut. ACRES Sold and Cut; Salmon and Challis Units FY 97 through FY 05

FY	SOURCE OF INFO	SALMON UNIT			CHALLIS UNIT			COMBINED SCF		
		MBF OFFER	MBF or AC CUT	MBF or AC	MBF OFFER	MBF or ACRES CUT	MBF or AC CUT	MBF OFFER	MBF or AC CUT	MBF or AC CUT
		PTSAR	TCS	TSPIRS	PTSAR	TCS	TSPIRS	PTSAR	TCS	TSPIRS
97	ASQ NON ASQ TOTAL VOL TOTAL AC.	2983	2498		2720	2720		5703	2554 2664 5218	5903 2689 8592
				739			85			824
98	ASQ NON ASQ TOTAL VOL TOTAL AC.	7198	4016		1936	1936		9134	3762 2190 5952	4922 2670 7592
				369			268			637
99	ASQ NON ASQ TOTAL VOL TOTAL AC.	5181	4924		1510	1510		6691	3671 2763 6434	2738 2341 5079
				1190			194			1384
00	ASQ NON ASQ TOTAL VOL TOTAL AC.	5523	4890		924	924		6447	3872 1942 5,814	2150 1975 4125
				379			105			484
01	ASQ NON ASQ TOTAL VOL TOTAL AC.	2142	1594		1568	1568		3710	134 3028 3162	1986 2716 4702
				699			0			699
02	ASQ NON ASQ TOTAL VOL TOTAL AC.	1224	1224		1332	1332		2556	487 2069 2556	4979 2246 7225
				1002			4			1006

Chapter 2: MONITORING ITEMS

FY 97-05

03	ASQ NON ASQ TOTAL VOL. TOTAL AC.	2536	2780	103	1328	1280	0	3864	1210 2850 4060	1231 2674 3905 103
04	ASQ NON ASQ TOTAL VOL. TOTAL AC.	1202	1718	97	1187	1178	0	2389	50 2846 2896	552 3132 3684 97
05	ASQ NON ASQ TOTAL VOL. TOTAL AC.	2403	1,845	153	1773	1,754	45	4176	1106 2493 3599	TSPIRS Report dis- continued 198
Ave Per YR.	ASQ NON ASQ AV TOT VOL AV TOT AC.	3377	2832	526	1586	1578	78	4963	1872 2538 4410	604

TIMBER: Fuelwood Sold

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Fuelwood cut	Annually	Significant drop in volume indicating a change in supply/demand

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: TSPIRS Report 1988-1998
 Annual Free Use Report 1997-2003 – combination of the Salmon and Challis NFs changed the reporting system. After 1996, we can only show Free Use. The commercial and personal use are incorporated into the Offered, Sold and Cut Report.

Unit of Measure: MBF

Findings: **Salmon NF**

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	Average
Fuelwood: Personal Use Free Use	988	557	1050	989	591	283	60	62	81	518
Total	988	557	1050	989	591	283	60	62	81	518

Challis NF

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	Average
Fuelwood: Personal Use Free Use	0	0	0	0	0	0	167	192	460	273
Total	0	0	0	0	0	0	167	192	460	273

Variability: The Challis National Forest did not provide Free Use firewood until 2003.

Evaluation: The trend since 1997 shows a decline in the annual permits for this product on the Salmon National Forest. On the Challis National Forest the demand for fuelwood has been increasing since 2003. The supply of fuelwood is apparently adequate to meet demand.

Appropriateness: Continue as a Forest Plan monitoring requirement

TIMBER: Reforestation and Stand Improvement

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Reforestation and Timber Stand Improvement	Annually	Significant reduction in Forest Plan outputs

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: TRACS and Reforestation/TSI Annual Accomplishment Report

Unit of Measure: Acres

Findings:

Salmon National Forest

Forest Plan (FP) Year	FP Annual Output	1997	1998	1999	2000	2001	2002	2003	2004	2005	Avg
Planting		238	66	143	91	348	443	0	241	184	190
Site Prep Nat		391	348	216	0	0	0	0	133	91	131
Total Reforestation	1870	629	414	359	91	348	443	0	374	274	321
*Cert w/o S.P.		1221	108	367	48	0	2	0	26	0	197
Release Thin		351	0	0	0	0	0	0	0	0	39
		0	0	1340	145	613	659	203	569	979	501
Total TSI	950	1082	1282	1340	145	613	659	203	569	979	540

*Note: The reforestation goal in the Forest Plan was based on planting and site preparation for naturals. Certification of natural regeneration without site prep was not included.

Variability: Long term reforestation (exclusive of certification of natural regeneration without site prep) ranged from a high of 1,423 acres in 1988 to 0 acres in 2003. The 1997-2005 reforestation average is 321 acres. Timber stand improvement (TSI) was even more variable than reforestation, ranging from a low of 145 acres in 2000 to a high of 1,443 acres in 1995. The nine-year average for TSI is 540 acres.

Evaluation: Annual reforestation and timber stand improvement accomplishments are subject to many yearly variables. These include changing budgets, cutting levels, seedling availability, and even the type of fire season (in emergency situations, project crews are pulled away to battle forest fires). Long-term trends and yearly averages are more meaningful. It is significant that the nine-year average reforestation accomplishment is significantly below Forest Plan goal (321 acres versus 1,870 acres).

The average annual TSI program has been below the Forest Plan’s goal from 2000 to 2003 and presently is showing an upward trend.

Appropriateness: Continue as a Forest Plan monitoring requirement.

Challis National Forest

	FP Annual Output	1997	1998	1999	2000	2001	2002	2003	2004	2005	Avg.
Planting		0	67	0	0	0	0	0	196	0	29
Site Prep Nat		175	193	263	44	25	6	0	0	0	78
Total											
Reforestation	653	175	260	263	44	25	6	0	196	0	107
* Cert. w/o S.P.		0	73	0	0	0	38	0	15	12	15
Release		0	0	130	0	0	0	0	138	0	30
Thin		17	141	194	0	485	33	0	160	0	114
	69	17	141	324	0	485	33	0	298	0	144

Variability: Long term reforestation (exclusive of certification of natural regeneration without site prep) has been highly variable and ranges from a low of zero acres in 1988 to 1,119 acres in 1994. From 1997 to 2005 reforestation average is 107 acres. Timber stand improvement has been equally variable, ranging from a low of zero acres in 2000, 2003 and 2005 to 677 acres in 1989. The nine-year TSI average is 144 acres.

Evaluation: Annual reforestation and timber stand improvement accomplishments are subject to many yearly variations; long-term trends and averages are more meaningful. On average, reforestation has dropped to only 16% of annual output estimated in the Forest Plan. On the other hand, timber stand improvement is progressing two times faster than projected in the Forest Plan. Forest Standards and Guidelines are being met on these TSI projects. Increasing timber stand improvement work will have a positive impact on Forest Health and future timber yields.

Appropriateness: Continue as a Forest Plan monitoring requirement as a means to evaluate long-term trends of forest management.

TIMBER: Restocking

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-4	Adequate Restocking within 5 years	Annually 5 years after final removal	Suitable lands fail to be regenerated within 5 years

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Validation

Data Source: Reforestation and TSI Accomplishment Report, Table 22 – 1988-1996
Silva Report (Management Attainment Report) – 1997-2004

Unit of Measure: Percent acres adequately stocked

Findings:

Salmon National Forest

Year Logged	Final Cut Acres	Percent		Retreat Acres	5-Year Period	Survival Transect Acres	
		Adq Stocked	Not Stocked			1 st Yr.	3 rd Yr.
1992	513	100	0	0	1997	260	346
1993	485	100	0	0	1998	--	57
1994	495	100	0	0	1999	32	--
1995	617	100	0	0	2000	91	11
1996	682	100	0	0	2001	161	32
1997	238	100	0	0	2002	107	91
1998	99	100	0	0	2003	78	148
1999	202	100	0	0	2004	108	114
2000	91	100	0	0	2005	59	29

In 1995, a significant drop occurred in the number of acres of 5-year-old cutover stands certified as restocked. Silviculturists and foresters contacted concerning acres planted from 1992 to 1998 said that walk-throughs and survival transects show them to be adequately stocked. Due to reduced budgets not all acres have been put into data systems as have walk-throughs.

Variability: Restocking of 5-year old cutover stands was good in 1993 and 1994. The drop in stands that could be certified in 1995 and 1996 correlate to extremely dry growing seasons during 1990-1992, and again in 1994.

Evaluation: 1993 and 1995 were normal in terms of moisture. Regeneration associated with these good years resulted in certifying the stands as restocked.

Appropriateness: Continue as a Forest Plan monitoring requirement.

Challis National Forest

Year Logged	Final Cut Acres	Percent		Retreat Acres	5-Year Period	Survival Transect Acres	
		Adq Stocked	Not Stocked			1 st Yr.	3 rd Yr.
1992	0	100	0	0	1997	--	--
1993	164	100	0	0	1998	--	232
1994	0	100	0	0	1999	65	72
1995	235	100	0	0	2000	--	67
1996	80	100	0	0	2001	--	--
1997	0	100	0	0	2002	--	--
1998	67	100	0	0	2003	754	--
1999	0	100	0	0	2004	196	--
2000	0	100	0	0	2005	0	749

Variability: Restocking of five-year old cutover stands was excellent for the past 11 years.

Evaluation: Restocking requirements on five-year old stands have been met on all stands cut between 1988 and 2005.

Appropriateness: Continue as a Forest Plan monitoring requirement.

TIMBER: Openings

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-5	Maximum size of openings	Annually	Openings exceed maximum size

Monitoring Requirement: Salmon and Challis Forest Plans.

Monitoring Type: Implementation

Data Source: STARS and RMRIS data bases

Unit of Measure: Number of even age units greater than 40 acres

Findings: Maximum size limit for openings created in one logging operation by even-aged management is 40 acres. Exceptions are covered in the Regional Guide. The Regional Forester’s approval is required for openings over 40 acres. Forest Plan Reference: Salmon Plan, Page IV-41; Challis Plan, Page IV-16.

Salmon National Forest

Year	Total Acres Sold	# of CC Units	Size of Clearcut Units over 40 acres
1997	739	0	
1998	369	0	
1999	1190	0	
2000	379	0	
2001	699	0	
2002	1002	0	
2003	103	0	
2004	97	0	
2005	153	0	

Challis National Forest

Year	Total Acres Sold	# of CC Units	Size of Clearcut Units over 40 acres
1997	85	0	
1998	268	0	
1999	194	0	
2000	105	0	
2001	0	0	
2002	4	0	
2003	0	0	
2004	0	0	
2005	45	0	

NOTE: Mine and road clearing projects are included in total acres sold but do not meet the definition of even-aged management.

Variability: Between 1990 and 1992, eight units exceeded 40 acres in size on the Salmon. No units have exceeded 40 acres since. No clearcuts over 40 acres exist on the Challis National Forest.

Evaluation: The eight units that exceeded 40 acres in size on the Salmon averaged 46 acres, and were justified primarily because of dwarf mistletoe infestations and blowdown in Spruce-fir. Since 1992, neither Forest has exceeded a 40 acre clearcut size.

Appropriateness: Continue as a Forest Plan monitoring requirement. Determine if we meet objectives of logging areas (creating openings) over 40 acres. The number of acres over 40 is not the critical issue, but whether or not we are meeting our objectives of logging larger areas for other purposes (i.e., insect and disease control). “The conditions which initiate further evaluations” should be changed to reflect monitoring for effectiveness.

VISUAL RESOURCE: Compliance with Visual Quality Objectives. Information is being gathered for FY 05

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Any management activity or project	Annually	Significant failure to meet assigned Visual Quality Objectives on a project basis.

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Field observation or photo documentation of completed projects.

Unit of Measure: A project.

Findings: **There is no additional information to report for 2004.** All projects monitored and evaluated to date have generally met their assigned Visual Quality Objectives.

Variability: Not applicable

Evaluation: Not applicable

Appropriateness: Continue as a Forest Plan monitoring requirement pending implementation of the new and improved Scenery Management System.

WATER: Substrate Depth Fines

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Fish Habitat (Substrate Depth Fines)	Annually to Biannually	Failure to meet Forest Plan sediment standards of State fisheries goals; 20 percent change in habitat quality

Monitoring Requirement: Salmon (item #7) and Challis (item #2) Forest Plans

Monitoring Type: Baseline/Effectiveness

Data Source: Watershed files; Annual Watershed and Fisheries Monitoring Report

Unit of Measure: Percent substrate fines by depth (Relation to Forest Plan and State fisheries goals); Trend

Findings: Data shown from initiation through 2005 to derive long-term trend

Zone	Year	Stream Stations Surveyed	Stations Meeting Plan Standards or Goals <u>1</u> , <u>2</u> /	Forest-wide Sites Displaying Downward Trend for Depth Fines 1992-2005	Forest-wide Sites Displaying Upward Trend for Depth Fines 1992-2005
Salmon	1992	4	0 (0%)	71 (66%)	36 (34%)
	1993	92	47 (51%)		
	1994	88	44 (50%)		
	1995	55	24 (43%)		
	1996	71	23 (32%)		
	1997	64	41 (64%)		
	1998	71	50 (70%)		
	1999	68	45 (66%)		
	2000	61	29 (48%)		
	2001	71	39 (55%)		
	2002	68	30 (44%)		
	2003	71	46 (65%)		
	2004	64	41 (64%)		
	2005	53	41 (77%)		
Challis	1995	43	31 (72%)	23 (40%)	34 (60%)
	1996	27	20 (74%)		
	1997	39	29 (74%)		
	1998	41	37 (90%)		
	1999	44	29 (66%)		
	2000	46	35 (76%)		
	2001	44	29 (66%)		
	2002	42	27 (64%)		
	2003	49	35 (71%)		
	2004	46	33 (72%)		
	2005	27	24 (89%)		

1/ Salmon National Forest Plan Goal: 20 percent fines by depth in anadromous habitats; 28.7 percent fines by depth in resident habitats.

2/ Challis National Forest Plan Standard: 30 percent fines by depth in all perennial habitats.

Variability: Analysis of the results of 10 years of core sampling operations on the Salmon/Challis N.F. streams has indicated a generally high level of both spatial and temporal variability of depth fine levels in forest streams. Besides land and resource management activities, factors known to exert significant influence on observed levels of substrate fines include basic geology and geomorphic factors such as parent geology, watershed aspect and channel type, and natural events such as drought, wildfire, excessive runoff flows, or isolated high intensity storm events. These factors must all be considered in any cause and effect analysis on stream substrate sediment levels.

Statistical analysis on subsets of the core sampling data from the Salmon/Challis N.F. suggests that, within the range of values observed, changes of less than five percent fines on an absolute basis, or 20 percent fines on a relative basis, do not indicate a statistically significant change in substrate conditions.

Evaluation: As identified in the accompanying table, 1992-2005 core sampling operations indicated that 71 percent of the total inventoried Salmon Zone streams, and 23

percent of the total inventoried Challis Zone streams have downward trends for depth fines in spawning habitat. Cumulatively, for the 2005 monitoring there were 41 out of 53 (77%) stations that meet Salmon Zone Forest Plan sediment goal and 24 out of 27 (89%) that meet the Challis Zone Forest Plan sediment standard. Differences in the percentage numbers between Salmon and Challis Zones are in part attributed to the more stringent goal identified for anadromous waters in the Salmon National Forest Plan. Sampling crews who surveyed both North and South zone waters found no readily observable differences in stream characteristics between the two areas.

Appropriateness: Continue as a Forest Plan monitoring requirement. Despite a relatively high level of variability due to the influence of natural events, levels of substrate depth fines in Forest streams are widely acknowledged as an indicator of the basic production capabilities of fish spawning and incubation habitats. Although relatively labor intensive, the McNeil core sampling methodology employed by the forest is among the most objective, repeatable, and biologically relevant of the various methods utilized to assess fish spawning habitat conditions of Forest streams. Ongoing consultations with the NOAA Fisheries additionally include identification of sediment trends in Chinook salmon spawning habitats as a principal term and condition of concurrence with Biological Assessments for Salmon/Challis N.F. watersheds.

WATER: Best Management Practices; Water Quality (Temperature)

Monitoring Item	Activity to be Measured	Monitoring Frequency	Condition Which Initiate Further Evaluations
FP-2	Water Quality (Water Temperature)	Annually	Exceedence of PACFISH, INFISH or State Water Temperature Standards or Guidelines

Monitoring Requirement: Salmon (item #1) and Challis (item #1) Forest Plans

Monitoring Type: Baseline/Effectiveness

Data Source: Watershed files; Annual Watershed and Fisheries Monitoring Report

Unit of Measure: Water Temperature (Seasonal Max/Min; Incidence of exceedence of PACFISH or INFISH Standards or State Water Quality Beneficial Use Criteria for coldwater biota and salmonid spawning)

Standards:

- I. State of Idaho Beneficial Use Water Temperature Criteria
 - A. Coldwater Biota: Water temperatures of 22 degrees C (71.6 degrees F) or less with a maximum daily average of no greater than 19 degrees C (66.2 degrees F)
 - B. Salmonid Spawning: Water temperatures of 13 degrees C (55.4 degrees F) or less with a maximum daily average no greater than 9 degrees C (48.2 degrees F) (during identified spawning /incubation period)
- II. PACFISH Water Temperature Criteria
 - A. Trend: No measurable increase in maximum water temperature (7 day moving average of daily maximum water temperature measured as the average of the maximum daily temperature of the warmest consecutive seven day period)
 - B. Migration/Rearing: Maximum water temperatures below 64 degrees F (17.8 degrees C) within migration and rearing habitats
 - C. Spawning: Maximum water temperatures below 60 degrees F (15.6 degrees C) within spawning habitats

III. INFISH Water Temperature Criteria

- A. Trend: No measurable increase in maximum water temperature (7 day moving average of daily maximum water temperature measured as the average of the maximum daily temperature of the warmest consecutive seven day period).
- B. Adult Holding: Maximum water temperatures below 59 degrees F (15 degrees C) within adult holding areas.
- C. Spawning/Rearing: Maximum water temperatures below 48 degrees f (8.8 degrees C) within spawning and rearing habitats.

Findings: Water temperature monitoring is no longer performed as baseline monitoring across the Forest due to time constraints and accessibility. Temperature data is obtained at the project level where activities may potentially impact water temperature. (See table on following page)

Temperature Data 1997-2005

Year	Stations Meeting Idaho Coldwater Biota Criteria?	Stations Meeting Idaho Salmonid Spawning Criteria?	Stations Meeting PACFISH Rearing Criteria?	Stations Meeting PACFISH Spawning Criteria?	Stations Meeting INFISH Rearing Criteria?	Stations Meeting INFISH Spawning Criteria?
1997	124/138 90%	Spring 49/138 36%	91/97 94%	Spring 48/139 35%	12/139 9%	20/138 14%
		Fall 84/138 61%		Fall 85/139 61%		
		Chinook 21/63 33%		Chinook 21/63 33%		
1998	98/104 94%	Spring 23/55 42%	84/98 86%	Spring 38/53 72%	6/100 6%	11/99 11%
		Fall 51/104 49%		Fall 86/104 83%		
		Chinook 16/58 28%		Chinook 35/58 60%		
1999	189/194 97%	Spring 66/192 34%	107/122 88%	Spring 92/121 76%	118/194 61%	64/189 34%
		Fall 151/189 80%		Fall 112/118 95%		
		Chinook 18/70 26%		Chinook 47/70 67%		
2000	142/150 95%	Spring 28/144 19%	120/145 83%	Spring 71/148 48%	79/149 53%	13/111 12%
		Fall 59/119 50%		Fall 105/120 88%		
		Chinook 7/69 10%		Chinook 10/69 14%		

Year	Stations Meeting Idaho Coldwater Biota Criteria?	Stations Meeting Idaho Salmonid Spawning Criteria?	Stations Meeting PACFISH Rearing Criteria?	Stations Meeting PACFISH Spawning Criteria?	Stations Meeting INFISH Rearing Criteria?	Stations Meeting INFISH Spawning Criteria?
2001	97/99 98%	Spring 31/99 31%	79/101 78%	Spring 64/100 64%	54/100 54%	86/101 85%
		Fall 94/101 93%		Fall 97/100 97%		
		Chinook 17/100 17%		Chinook 37/100 37%		
2003	106/110 96%	Spring 35/96 36%	91/110 83%	Spring 69/96 72%	56/106 53%	65/76 86%
		Fall 101/103 98%		Fall 104/106 98%		
		Chinook 10/38 26%		Chinook 26/38 68%		
2004	46/47 98%	Spring 30/47 64%	47/50 94%	Spring 41/47 87%	35/47 74%	22/47 47%
		Fall 43/47 91%		Fall 44/47 94%		
		Chinook 6/11 55%		Chinook 9/11 82%		
2005	60/60 100%	Spring 23/55 42%	56/60 93%	Spring 40/55 73%	41/60 68%	26/50 52%
		Fall 50/53 94%		Fall 51/53 96%		
		Chinook 6/22 27%		Chinook 17/27 63%		

Variability: Thermograph results have shown temperature regimes to be highly variable from year to year, particularly with the highly variable climactic patterns observed during the past decade. Yearly differences in absolute summer maxima spanning more than ten degrees have been observed in individual streams in recent years. Data to date suggests that absolute summer water temperature maxima may be as influenced by winter snow

pack levels and consequent summer flow levels as they are by summer air temperature regimes.

Evaluation: Designated rearing temperature criteria varies significantly between the State's Beneficial Use Criteria and interim PACFISH and INFISH Riparian Management Objectives (RMOs). Prior to 1995, the only rearing temperature criteria guiding Forest direction was the State of Idaho Beneficial Use Criteria for coldwater biota, which identified 71.6 degrees as a recommended maximum for maintenance of aquatic life-forms. Adoption of PACFISH and INFISH in 1995, by way of Forest Plan Amendment, revised these criteria to a maximum of 64 degrees and 59 degrees within the PACFISH (Salmon River Basin) and INFISH (Big and Little Lost River Basins) management areas, respectively. The Draft PACFISH EA originally identified a rearing temperature criteria of 68 degrees, which closely approached the State's value, but this was revised downward to its 64 degree value in the final document. The 59 degree INFISH value appears to reflect the lower temperature preferences of bull trout, but the selected INFISH EA alternative applies these criteria to all waters within the INFISH management area.

As with rearing temperature criteria, spawning temperature criteria varies significantly between Idaho state guidelines, and PACFISH and INFISH RMOs.

The Idaho Beneficial Use Criteria for salmonid spawning identifies a maximum daily temperature of 55 degrees and a mean daily temperature of 48 degrees or less. As written, the Idaho State criteria indicates that the specified standards pertain only within the period of spawning and incubation for the individual fish species present in the stream or stream reach. Generalized spawning and incubation timeframes for various salmonid species are included within the State of Idaho Criteria document, but more site-specific periodicities have been documented by both Salmon and Challis National Forest Fisheries Biologists, and these localized temporal envelopes were utilized for evaluation of seasonal temperature data. Identified to assist with instream flow fish habitat evaluations, these periodicities encompass both the earliest and latest dates of observed spawning activity on Forest streams. The actual initiation of spawning activity in individual streams may be weighted toward either the early or late portions of these identified periodicity ranges due to the influences of elevation, basin aspect, shading, and other factors upon water temperatures. This variability within the identified periodicity dates must be considered when evaluating suitability of observed spawning temperature regimes, particularly for chinook salmon and bull trout.

In contrast to the State standards, neither PACFISH nor INFISH specifically link spawning temperature criteria to the spawning periodicities of target species. Designated maxima also deviate from the State standard, with PACFISH identifying a 60 degree maxima (revised upward from the original 55 degree value identified in the Draft PACFISH EA), and INFISH identifying a 48 degree maxima. As with its adult holding criteria, the INFISH spawning/rearing criteria appears to reflect the spawning temperature requirements of bull trout, but is applied to all waters within the INFISH management area, regardless of species present.

Appropriateness: Continue to monitor as a Forest Plan requirement. Seasonal water temperature regimes are a driving factor shaping the metabolic activity and scope for growth of most aquatic organisms. Optimum spawning, incubation and rearing temperature ranges have been identified for most fish species. Temperature regimes substantially outside these identified ranges can produce deleterious effects upon egg development and survival, and reduce metabolic efficiency causing reduction or complete cessation of growth. Temperatures in the mid to high seventies can be directly lethal to cold water fish species, and persistent temperatures in the low sixties can limit bull trout distribution.

Water temperature monitoring operations are, therefore, considered among the most biologically relevant of the various methods utilized to assess fish habitat conditions of Forest Streams. Ongoing consultations with NOAA Fisheries additionally include identification of seasonal temperature regimes in Chinook salmon spawning and rearing streams as a principal term and condition of concurrence with Biological Assessments for the Salmon/Challis watersheds.

WATER: Changes in Channel Stability and Riparian Integrity

Monitoring Item	Activity to be Measured	Monitoring Frequency	Condition Which Initiate Further Evaluations
FP-3	Channel Stability; Channel Geometry	Annually to Five Years	Major observed changes in streambank stability of channel width-to-depth ratio

Monitoring Requirement: Salmon (item #6) and Challis (item #4) Forest Plans

Monitoring Type: Evaluation

Data Source: Watershed Files; Annual watershed and Fisheries Monitoring Report

Unit of Measure: Percent streambank stability

2005 Findings

The table below shows a complete list of locations where streambank stability has been monitored. Over 100 sites have been annually monitored across the Forest. Trends have not been statistically analyzed but of those sites sampled in 2005, 88% were greater than the 80% stable PACFISH Riparian Management Objective.

Forestwide Streambank Stability Monitoring Results

Stream/Station	Grazed	Percent Stable Streambanks												
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Antelope 1R	Yes			64.5		53.5	65.0	29.0	56.0	57.0	70.0	65.0	84	
Arnett 1R	Yes		96.5	95.5	92.0	79.0	93.5	86.0	88.0	99.5	77.5	96.0	91.5	93.0
Badger 1R	Yes			83.5					95.5			99.0	90.5	
Basin 1A	Yes/No				94.0	87.5	100.0	71.0	90.0	87.5	95.5	100.0	98	
Bear Valley 1A	No		46.0	83.0	96.5	70.0	82.5	83.0	79.0	91.0	87.0	64.5	95.5	90.5
Bear Valley 2A	No		50.0											
Bear Valley 3A	No		78.0	90.0	93.0				72.0					
Bear Valley 4A	No		92.0			85.0	88.0				94.0	64		
Beaver 1A	No		96.5				99.0		93.5	97.0	91.0	95.0		
Big 1R	No			85.5			86.0	86.5	91.0	94.0	91.5	92.0	95.5	89.0
Big 1R	Yes								50.0			91.0	95.5	96.5
Big Bear 1R	No		94.0	95.0	65.5	85.0	86.0	96.5		98.0	99.0	95.5	98	
Big Deer 1A	No		97.5	97.0		87.0		98.0		63.0	90.5			
Big Deer 2R	No									94.0	89.5	97.5	91	87.5
Big Deer 3R	No									87.5	94.5	98.5	94.5	93.5
Big Eightmile 1R	Yes		100.0		91.0	79.0	88.5	69.0	84.0	86.0		88.5		
Big Eightmile 2R	Yes		91.5	95.5	93.0	73.0	93.5		85.0		80.5	91.0	96	

Chapter 2: MONITORING ITEMS

FY 97-05

Big Hat 1R	Yes		85.0		77.5							73.0		
Big Timber 1R	Yes		89.0	97.0	96.0	88.0	99.0	100.0	92.0	89.5	79.5	90.0	97.5	
Block 1R	Yes					71.5		89.5	86.0					
Cabin 1R	Yes			97.5										
Camas 1A	Yes		53.0	94.0	85.5	68.5	72.5	70.0	53.0	73.5	75.5	72.0	91.5	94.5
Camas 2A	Yes		58.0	95.5	86.0	56.0	38.5	41.0	55.0	54.0	60.0	49.5	72.5	93.0
Camas 3A	Yes		81.5	93.0	60.5	44.0	34.0	38.5		37.5	55.0	63.0	48.3	
Canyon 1R	No		99.0	98.5	95.0	88.0	84.0	80.0	81.0	92.5	87.0	98.5	88.5	99.0
Carmen 1R	Yes		100.0	100.0	96.5	95.0	97.5	100.0	95.0	100.0	93.0	95.0	98	98.0
Castle 1A	Yes		88.5							80.5	73.0	72.0	84.5	
Challis 1A	Yes			81.0	53.0	59.0	75.0	43.0	69.0	55.5	70.0	54.5	90	90.5
Challis 2A	Yes					56.5		41.0	52.0	74.0	71.5	84.5	95	
Challis 3A	Yes										79.0		94	94.5
Challis 4A													99	74.0
Cherry 1R	Yes			63.0		56.0	77.0	53.0	74.0	71.0	82.0	87.5	88	73.0
Clear 1A	No		100.0	100.0	99.5	68.0	94.5	88.5	71.0	84.0	18.0	50.5		
Clear 2A	No		100.0								17.5			
Colson 1A	No	86.5	78.0	99.5	86.5	74.0	63.5	57.0	75.0					
Corn 1A	No		97.5										0	
Dahlonga 1A	No		91.5		84.0	49.0	76.5	62.0	70.0	82.5	91.0	88.5	97	99.5
Deep 1A	No		96.0	99.0	95.5	93.0	95.0	96.0	90.5	97.5	97.5	95.5	98	95.5
Ditch 1R	Yes			99.5	96.5									
Ditch 2R	Yes			99.5										
Dry 1R	Yes								94.0			95.0	100	
East Boulder 1R	Yes		81.5			63.0	83.0	78.0	81.5	76.0	85.5	87.5	87.5	87.0
East Pass 1A	Yes			76.0	84.0	92.5	90.0	86.0	85.5	89.0	89.5			
EF Big Lost 1R	Yes			87.0	83.0	73.5	97.5	69.5	77.0	73.5	71.5	72.0	92.5	74.0
EF Big Lost 2R	Yes			85.0	79.5	59.0	90.0	79.5	81.0	82.5	88.0	81.0	91	
EF Big Lost 3R	Yes			53.5	86.5	92.0	89.0	81.5	93.5	89.0	97.5	96.5	100	99.5
EF Hayden 1A	Yes		98.0						90.0					98.0
EF Hayden 2R	Yes		100.0			91.0	94.0	94.5	99.0	96.0	100.0	97.0	99	98.0
Fivemile 1A	No			86.0		71.0	98.0	83.0	76.0	62.0	77.0	86.5	88	
Fouth of July 1A	Yes		100.0	94.5	64.5	76.0	89.5	82.5		94.5		74.0		
Garden 1A	No		97.5							93.5	26.5		31.5	25.0
Garden 1A	Yes			90.0		93.0	98.0	96.0	100.0	100.0	100.0	97.5	99	
Hat 1R	Yes		95.0					53.0	51.0			84.0		
Hawley 1R	Yes		88.0	97.0	89.0	91.1	96.0	99.0	94.5	91.0	92.0	96.0	93.5	94.5
Hayden 1A	Yes		93.5	98.0	93.5	84.0	80.0	84.5	87.0	89.0	80.0	99.0	95.5	
Haynes 1R	Yes		92.0						55.0			86.5	92.5	76.5
Herd 1A	Yes			75.0	90.0	73.5	84.0	83.0	91.5	88.0	72.5	75.5		98.0
Herd 2A	Yes											91.5		99.0
Hoodoo 1A	No		94.0								93.0			
Horse 1A	No		98.0	100.0	96.5									
Horse 2A	No		89.5	99.5	92.0	83.5	97.5	89.5				91.5		
Hughes 0A	Yes			100.0										
Hughes 1A	Yes		94.0	94.5	85.5	28.0	55.5	80.5	68.5	61.0		89.0	95	92.0
Hull 1R	Yes		94.5	92.0	89.5		100.0					97.5	98.5	99.0
Indian 1A	No		94.5	98.5	88.5	68.0	63.5	62.0	92.0	96.0	92.0	91.5	95	95.5
Indian 2A	No		99.5	100.0	97.5					83.0		98	99	99.5
Iron 1A	Yes		99.0	99.0	89.5	79.0	90.5	86.0	83.0	100.0	96.0	97.5		
Iron 2A	Yes													
Jesse 1R	No		90.5				91.0		98.5		93.0	97.5		
Jordan 0A	No			91.0	87.5	89.0	83.0	70.5	81.0	70.5	92.0	90.0	100	100.0

Chapter 2: MONITORING ITEMS

FY 97-05

Jordan 1A	No			91.0									94	
Jordan 2A	No				77.5	62.5	96.0	80.5	85.5	89.5	76.0	97.5		
Jordan 3A	No			83.0	82.5	68.0	94.0	78.0	71.0	73.5	76.0	78.5	94.5	
Jordan 4A	No													
Jordan 5A	No													
Kenney 1R	Yes		91.5									74.5		
Lake 1R	No		97.0	99.0	95.5	91.0		100.0		91.0	97.0	98.0	98	98.5
Lake 2R	Yes							99.0		96.0				
Little Deep 1R	Yes									69.5	99.0	96.5	96.5	93.5
Little Deer 1R	No									21.5	57.5	76	83.5	84.0
Little Eightmile 1R	Yes			100.0				75.5					59	
Little Lost 1R	Yes									45.0		67.5	80.5	91.0
McKay 1A	Yes			73.0		89.0	86.5	92.0	86.0	91.5	97.5	95.5	96	
McKim 1R	Yes		87.0		87.0		82.5	79.0						
MF Little Timber 1R	Yes		78.0										89	
Mill 1R	Yes		91.0					88.0	93.0	82.0		95.5	97	98.5
Mill 1R	Yes				88.5	56.0	98.0	65.0	79.0	95.0	97.5	100.0	94.5	
Moose 024 1R	Yes		98.0			66.0	78.0	68.5	78.0	82.5	79.0	96.5		93.0
Moose Cr 019 1R	No			99.5	89.0	98.0	99.5	94.5	94.5	100.0	84.5		92.5	
Morgan 1A	Yes			88.0	91.5	68.5	99.0	81.0	73.0	94.0	81.0	81.5	87.5	90.0
Morgan 2A	Yes			50.0	64.0	62.0	74.0	63.5	69.0	70.0	69.0	72.0	67	71.0
Morgan 3A	Yes			86.0	86.0	78.0	84.0	81.5	67.0	86.0	88.0	87.5	82	90.0
Moyer 1A	Yes		93.0	91.0	86.0	96.0	99.0	90.5	80.5	88.5	90.5	96.0	91.5	96.0
Moyer 2A	Yes		74.5		76.0	84.0	93.0	71.0					91	
Muldoon 1R	Yes			94.0		77.5	100.0	76.0	83.0	90.0	94.0	97.0	100	78.5
Musgrove 1A	Yes		82.5	86.5	92.5	92.0	92.5	93.0	77.0	74.5	84.5	85.0	88	90.5
Napias 1R	No		92.0	82.5	66.0	67.0	56.0	31.0	61.5	69.5	89.0	45.5	73.5	69.0
Napias 2R	Yes		100.0	97.5	87.0	76.0	89.5	80.0	90.0	89.5	94.5	84.0	98	92.5
Napias 3R	Yes		98.5	99.0	96.5	75.0	89.0	92.5	96.0	100.0	95.5	94.5		98.0
Napias 4R	No		97.0	99.5	91.0	54.5	93.5	88.5	89.0	97.5	85.5	49.5		98.5
Napias 5R	Yes		93.5	94.0	88.5	68.0	94.5	79.0	91.5	98.0	87.5	97.5	93.5	98.0
NF Big 1R	No			93.5			100.0	89.5	99.0	97.0	99.0		99.5	
NF Big Lost 1R	Yes			60.0	52.0	27.5	38.0	30.0	14.0	20.5	26.0	46.0	47	55.5
NF Big Lost 2R	Yes			70.5	56.5	57.5	69.0	23.0	35.0	46.0	46.0	63.5	86	80.0
NF Iron 1A	Yes		94.0	100.0	94.5	92.0	98.0	86.5	92.0	93.0	96.5			100.
NF Little Timber 1R	Yes		95.0										98.5	96.0
NF Rankin 1R	No												94.5	
NF Salmon 1A	No		96.0	100.0	93.0	82.0	94.0		97.5	95.0	91.5	93.5		93.0
NF Salmon 2A	No		84.5	100.0	89.0	71.0	95.5	78.0	84.0	95.5	93.0	86.5	98	96.0
NF Salmon 3A	No		88.5	96.5	94.0	85.0	86.5	65.5	67.5	76.5	66.5	46.5		83.0
Owl 1A	No		99.5	100.0	99.0	96.0	97.0	85.0	97.5	92.5		98.5	98	
Owl 2A	No													
Owl 3A	No		95.4											
Pahsimeroi 1R	Yes			66.0										
Panther 0A	No								80.5	66.0	89.0	36.0	98	86.0
Panther 1A	No		100.0	100.0	97.5	99.0	97.0	80.5	99.5	97.5	98.0	94.5	99	100
Panther 2A	No		90.5	100.0	93.5	90.0	77.5	85.5	45.0	54.5	96.5	88.0	100	100
Panther 3A	Yes		95.5	94.5	91.5	70.0	92.0	75.0	75.5	92.5	80.5	86.5	95.5	89.0
Panther 4A	Yes			95.0	94.0	80.0	95.5	81.0	92.0	88.5	92.0	94.5	97	96.0
Panther 5A	Yes				94.5	87.0	67.5	48.5	77.0	80.0	81.0			
Pass 1R	Yes			90.5			90.0	79.0	82.5	75.5	82.5	80.0	87.5	

Chapter 2: MONITORING ITEMS

FY 97-05

Pattee 1R	Yes		86.5							76.0	86.0	80	91.5	83.5
Perreau 1R	Yes		96.0	93.5					95.0	96.5	93.5	97.5	97	97.5
Phelan 1R	Yes		82.5		79.0	60.5	88.5	68.0	75.5		75.0	67.5	89	93.5
Pierce 1A	No		80.0											
Pine 1A	No		100.0		97.0	76.0	91.5		95.0	93.5	95.0	96.5		
Pine 3A	No							90.5		95.5				
Porphyry 1R	Yes		96.0				82.5	69.0	63.0	83.5	90.0	96.0	95	95.0
Rankin 1R	No											85.5		
Reservoir 1R	Yes		84.0	94.0	68.0	90.5	78.0		64.0		91.5	86.0	89	
SF Big 1R	No			80.0			92.0	86.0	75.5	85.5	73.0	93.0	97.5	
SF Iron 1A	Yes	79.0	96.0		80.5	97.0	99.5			95.5		99.5		
SF Moyer 1R	Yes		88.0										92.5	
Sheep 024 1A	No		81.0	100.0	88.0	74.0	95.5	94.0	93.0	91.0	78.5	97.0	99.5	98.0
Silver 1A	Yes		80.5	98.5	93.5	59.0	57.5	39.0	73.5	84.5	75.5	88.5	93.5	
Silver 2A	Yes								82.5	92.5	92.0	95.5	82.5	
Smithie Fk Ltl Lost 1R	Yes									57.0		89.5	85.5	72.5
Spring 1A	No		94.5	100.0	93.5	87.0	92.0	84.0		90.0	96.0	95.5		99.5
Spring 2A	No													
Squaw 1A	No		62.5	100.0	90.5	77.0	93.0	88.5	91.0	93.0	94.5	83.5	83.5	99.5
Squaw 1A	Yes			85.5	87.0	84.0	97.0	93.5	93.5	92.0	97.5	97.0	79.5	
Squaw 1R	Yes									100.0		100.0	100	95.0
Star Hope 1R	Yes			95.0		77.5	96.5	75.5	89.5	70.5	74.5	86.0	95	93.0
Tenmile 1A	No			91.5		90.5	88.0	69.0	72.0	87.0	82.5	82.0	88.5	
Thompson 1A	Yes/No			93.5	91.5	83.0	91.0	94.0	99.0	100.0	100.0	100.0	100	100
Trail 1A	No		99.0							77.5	98.5	97.0	99	99.5
Trail 1A	Yes				91.5									
Twelvemile 1R	Yes		92.0	94.0	74.0		93.5				93.5	96.5	97	
Twelvemile 2R	Yes													
Twin 1A	No		73.5		96.5	70.0	97.5	94.5	83.5		78.0		96	89.5
Valley 1A	Yes			94.5				82.0	81.5	87.0	83.0	91.5		
Wagonhammer 1R	Yes	83.5	92.0	94.5	75.5	87.0	89.0	60.5		95.5	91.0	94.0	96	91.0
Warm Springs 1R	Yes	95.0	50.0	91.5	84.0		85.5		71.5					
Wet 0R	Yes								92.0			84.5	91.5	
Wet 1R	Yes			58.5	76.5	87.5	87.0	81.0	84.0	87.5	81.0	88.0	81.5	91.0
Wet 2R	Yes					79.0	44.0	59.0	64.0	66.5	33.5	35.5	56.5	
WF Camas 1A	Yes		84.5		55.0	48.5	20.5		29.0	22.5	21.5	36.5	89	
WF Herd 1A	Yes			70.0	88.5	74.0	88.0	85.5						
WF Iron 1A	Yes		100.0		93.5	87.0	96.5	96.0	95.5	98.0	99.5			100
WF Morgan 1A	Yes			81.0	91.5	85.0	90.0	87.5	75.0	82.0	97.0	82.0	87	
WF Yankee Fork 1A	No			92.5		79.5	84.0	73.0	79.0	84.5	76.5	79.5	85	
Wildhorse 1R	Yes			89.5		76.5	96.5	67.0	82.5	92.5	92.5	97.0	98	82.0
Williams 1A	Yes		94.0	100.0	80.5	81.0	86.0	96.0	91.0	83.5	96.0	78.0	99	98.5
Withington 1R	Yes		98.0									76.5		92.5
Woodtick 1A	No		100.0	100.0	96.0			98.0		98.5	85.5		100	
Yankee Fork 1A	No			92.5	89.5	85.5	99.0	95.5	96.0	95.0	100.0	98.5	100	100
Yankee Fork 2A	No			92.0	86.0	72.5	77.0	82.5	64.0	90.0	76.5	79.0	97	
Yankee Fork 3A	No			84.5	71.5	81.0	59.0	54.0	83.0	66.5	79.0	88.0	89.5	85.5
Yankee Fork 4A	No			87.0	94.0	77.5	90.0	75.5	79.0	91.0	77.0	76.5	92.5	
Yankee Fork 5A	Yes			80.0	83.5	60.0	71.0	69.0	72.0	95.0	83.5	84.5	80.5	
Yellowjacket 1A	No		97.5		96.5									
Yellowjacket 2A	No		83.0		89.0			88.0		88.0	85.5			

WATER: Best Management Practices

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluation
FP-4	Soil and Water BMPs	Annually to Biannually	Failure to implement Forest Soil and Water Best Management Practices; Erosion rates exceeding predicted effect of project design

Monitoring Requirement: Salmon and Challis Forest Plans. This monitoring item is closely related to and tiers to monitoring item Soil FP-2.

Monitoring Type: Implementation/Effectiveness

Data Source: Watershed Files, annual Watershed and Fisheries Monitoring Report, Soil Qualitative Assessments

Unit of Measure: Field measurements, ocular assessment

Findings: Project level soil and water best management practices (BMPs) are developed through project design for a specific project to eliminate or minimize adverse effects. Although implementation of these BMPs is monitored, site specific monitoring and evaluation of the effectiveness of specific BMPs is not performed on a continuing basis.

In 2005, potentially ground disturbing projects were sampled. Visual estimates and transects were performed monitoring the amount and effectiveness of ground cover, as being the foremost BMP protecting the soil and water resource. Beginning in 2003, the Soil Quality Assessment process was initiated which includes qualitative observations and quantitative sampling of erosion indicators, ground cover, and soil compaction (bulk density). Pre-project monitoring conducted in 2005 includes:

- Coal Creek-Big Creek Road Project
- Moyer-Salt Prescribed Burn
- Salmon-Moose Hazardous Fuels Reduction Project
- Stanley Interface Fuels Reduction Project
- Fourth of July Timber Sale
- Ransack Timber Sale
- Goldbug Salvage Sale

Post-project monitoring will be conducted for these projects after implementation to verify the effectiveness of BMPs applied.

Variability: Virtually all projects with potential to detrimentally affect soil productivity are being monitored and best management practices evaluated at some level appropriate for the project. The number and scope of specified project BMPs vary with the size, scope, nature, complexity, and setting of proposed projects. Specified measures may be straightforward in design or may require additional onsite modification or refinement by the project administrator.

Evaluation: The general results of the monitoring and soil quality assessments indicated no unanticipated short-term or long-term alteration of water or soil productivity and that best management practices are effective at eliminating or minimizing adverse effects.

Appropriateness: Continue as a Forest Plan monitoring requirement. This type of resource monitoring is being implemented at the project level. There is a direct relationship with the goals, direction, standards, and guidelines of the Forest Plans. Multidisciplinary reviews of best management practices are an integral component of the Forest Planning Process feedback monitoring loop. These annual onsite reviews provide the primary mechanism for verification of BMP effectiveness and refinement of project planning processes.

WATER: Maintenance of Minimum Bypass Flows

Monitoring Item	Activity to be measured	Monitoring Frequency	Conditions Which Initiate Further Evaluation
FP-5	Instream Flow	As Issues Arise	Failure to meet specified minimum bypass flow levels

Monitoring Requirement: Challis Forest Plan

Monitoring Type: Effectiveness

Data Source: Forest Watershed Files

Unit of Measure: Instream flow (Cubic Feet/Second); Compliance assessment

Findings: There is no additional information to report for 2005.

Unit	Diversion Sites Surveyed	Minimum Bypass Flow Maintained?
Salmon	No sites surveyed this period	Not Applicable
Challis	No sites surveyed this period	Not Applicable

No bypass flow issues were identified during the period. Consequently, no instream flow monitoring operations were specified or conducted.

Variability: Not Applicable

Evaluation: Not Applicable

Appropriateness: Continue as a Forest Plan monitoring requirement. Stream bypass flow monitoring has been identified as an important component of the Challis National Forest Watershed Monitoring Plan, and has been reaffirmed as an appropriate monitoring item within the combined Salmon and Challis National Forests Watershed Program. However, reporting will be dependent upon identification of site-specific flow issues.

WATER: Peak flow crest gauging

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-7	Stream peak flow (cfs)	Annually as appropriate for specific timber harvest projects	Change in R1/R4 channel stability rating to poor.

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Evaluation

Data Source: Watershed Files

Unit of Measure: Cubic feet per second (cfs)

Findings: There is no additional information to report for 2005.

Unit	Watersheds Measured	Baseline Flow	Post Harvest Flow
Salmon	No sites surveyed this period	Not Applicable	Not Applicable
Challis	No sites surveyed this period	Not Applicable	Not Applicable

Variability: Not Applicable

Evaluation: Not Applicable

Appropriateness: Continue as a Forest Plan monitoring requirement. Published literature provides guidance with regards to flow increases due to timber harvest; however, data is not specific to the Salmon-Challis National Forest. Peak or flood flows should be monitored and evaluated as needed to enhance forest databases and peak flow calculations.

WATER: Ocular evaluation of erosion related to roads and trails design

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-8	Ocular evidence of erosion	Whenever erosion is observed	Erosion rate exceeding predicted effect of project design

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Evaluation

Data Source: Watershed Files and Road Crew Reports

Unit of Measure: Not Applicable

Findings: Successful management of erosion and sediment delivery can be achieved when best management practices (BMP) are properly applied. Road condition surveys, which note observations of erosion from roads, were completed in 2005 on approximately 170 miles of Level 3, 4 and 5 roads, and about 60 miles of Level 1 and 2 roads. This is reported in the INFRA database.

Variability: Not Applicable

Evaluation: Not Applicable

Appropriateness: Continue as a Forest Plan monitoring requirement. Published literature and established BMPs are well tested and provide valuable guidance; however, site specific evaluation of their effectiveness is necessary. Evaluation of effectiveness given our landtypesypes, climate and implementation methods are valuable in documenting what works and which of our forest practices need to be modified with regards to erosion and sediment transport.

WATER: Special Studies – Effectiveness of Buffer Zones with Herbicide Spraying

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-9	Water Quality	As Needed	Dependent upon specifics of study

Monitoring Requirement: Reporting on special studies occurring on the Forest is not identified as a Forest Plan monitoring requirement. Summarizing special studies in a monitoring report is an opportunity to share information.

Monitoring Type: Implementation/Evaluation

Data Source: Watershed Files; Special Study Reports

Unit of Measure: Not Applicable

Findings: There is no additional information to report for 2005.

Variability: Not Applicable

Evaluation: Not Applicable

Appropriateness: This monitoring requirement should be maintained on an as needed basis rather than a specific schedule. As special studies are conducted this report will serve as a place to share data obtained in the highlighted studies.

WATER: Salmon Wild & Scenic Rivers- Salmon River, Recreation segment- Water Quality

SWSR(rec)-4: Water quality within the river will be monitored twice annually at approximately the same water levels each year to develop baseline data.

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-10 SWSR(rec)-4	Water Quality	Biannually	Deviation from forest water quality of state water quality standards

Monitoring Requirement: This monitoring item can be found in the Fisheries section under FP – 2.

WATER: Wild & Scenic Rivers- Salmon River, Recreation segment- Water Quality (Newland Bridge)

Discontinued in 2004 report

SWSR(rec)-5: A baseline station will be developed at the Newland Bridge to monitor upstream bacteriological quality.

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-11 SWSR(rec)-5	Water Quality Bacteriological monitoring	Baseline development	Deviation from Forest water quality or State water quality standards

Monitoring Requirement: Salmon and Challis Forest Plans: Salmon Wild & Scenic River Management Plan (Recreation segment) item #5

Monitoring Type: Baseline

Data Source: Forest Watershed Files

Unit of Measure: Dependent on sample parameter

Findings: Baseline studies were conducted between 1970 and 1983 and are located in the forest watershed files.

Variability: Not applicable.

Evaluation: Not applicable.

Appropriateness: Discontinue as a Forest Plan monitoring requirement due to the removal of the outhouses along the Salmon River and the pack-it-in-pack-it-out requirement on the river.

WATER: Salmon Wild & Scenic Rivers- Salmon River, Wild Segment- Water Quality

SWSR(wild)-3: Salmon River water quality monitoring will be continued as identified in the “Water Quality Monitoring Plan” for the Salmon National Forest. Action will be taken to eliminate new pollution sources immediately.

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-12 SWSR(wild)-3	Water Quality on the mainstem Salmon River	As identified in the Water Quality Monitoring Plan	Deviation from Forest water quality or State water quality standards

Monitoring Requirement: Salmon and Challis Forest Plans: Salmon Wild & Scenic River Management Plan (Wild segment) item #3

Monitoring Type: Evaluation

Data Source: Forest Watershed Files

Unit of Measure: Dependent on sample parameter

Findings: **There is no additional information to report for 2005.** No samples analyzed this period. Baseline studies were conducted between 1970 and 1983 and are located in the forest watershed files.

Variability: Not applicable.

Evaluation: Not applicable.

Appropriateness: Continue as a Forest Plan monitoring requirement. This monitoring requirement should be maintained on an as needed basis rather than a specific schedule. As potential natural or man-caused threats to water quality arise, monitoring should be conducted to best evaluate, monitor, and plan to reestablish the desired water quality in the Salmon River.

WATER: Middle Fork of the Salmon Wild & Scenic River Management Plan: Water Quality

MFWSR-1: Continue water quality monitoring program on the Middle Fork River and expand to other streams and lakes to establish baseline data for existing and potential heavy use areas.

MFWSR-3: The approved Forest Water Quality Monitoring Plan describes the monitoring objectives for the Middle Fork of the Salmon River. To reiterate, water quality monitoring was originally established on the Middle Fork River to monitor general trends as a result of recreation use. Consistent with the objective found in the wilderness plan, the current program direction includes identifying potential problem areas and evaluating site-specific impacts, while still monitoring general trends in water quality.

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-13 MFWSR-1, 3	Water Quality	As identified in the Water Quality Monitoring Plan	Deviation from Forest water quality or State water quality standards

Monitoring Requirement: Salmon and Challis Forest Plans: Middle Fork of the Salmon Wild & Scenic River Management Plan items #1 and 3.

Monitoring Type: Baseline/Evaluation

Data Source: Forest Watershed Files

Unit of Measure: Dependent on sample parameter

Findings: **There is no additional information to report for 2005.** No samples analyzed this period. Baseline studies were conducted between 1970 and 1983 and are located in the forest watershed files.

Variability: Not applicable.

Evaluation: Not applicable.

Appropriateness: Continue as a Forest Plan monitoring requirement even though baseline data has been obtained. Monitoring should be maintained on an as needed basis rather than a specific schedule. As potential natural or man-caused threats to water quality arise monitoring should be conducted to best evaluate, monitor, and plan to reestablish the desired water quality in the Middle Fork of the Salmon River and other streams and lakes.

WATER: Frank Church – River of No Return Wilderness Management Plan: Water Quality

FCWMP- 3: Continue the water quality monitoring program on the Salmon and Middle Fork Salmon Rivers and expand to other streams and lakes to establish baseline data for existing and potential heavy use areas.

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-14 FCWMP- 3	Water Quality	As identified in the Water Quality Monitoring Plan	Deviation from Forest water quality or State water quality standards

Monitoring Requirement: Salmon and Challis Forest Plans: Frank Church – River of No Return Wilderness Management Plan item #3

Monitoring Type: Baseline/Evaluation

Data Source: Forest Watershed Files

Unit of Measure: Dependent on sample parameter

Findings: **There is no additional information to report for 2004.** No samples analyzed this period. Baseline studies were conducted between 1970 and 1983 and are located in the forest watershed files.

Variability: Not applicable.

Evaluation: Not applicable.

Appropriateness: Continue as a Forest Plan monitoring requirement even though baseline data has been obtained. Monitoring should be maintained on an as needed basis rather than a specific schedule. As potential natural or man caused threats to water quality arise monitoring should be conducted to best evaluate, monitor, and plan to reestablish the desired water quality in the Salmon and Middle Fork Salmon rivers and other streams and lakes in the Frank Church – River of No Return Wilderness.

WILDLIFE: Management Indicator Species (MIS) and Threatened and Endangered Species (T&E)

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-1	Habitat and Population Trends for MIS and TE	1 to 10 years (varies by species)	Decline in habitat and populations

Monitoring Requirement: In February 2004 both the Salmon and Challis Land and Resource Management Plans were amended to reduce the list of Management Indicator Species in order to improve the reliability, efficiency, and cost-effectiveness of monitoring habitat and populations as a result of Forest management.

The species selected as Management Indicator Species are:

- Pileated Woodpecker for the coniferous community/habitat type
- Greater Sage-Grouse for the sagebrush community/habitat type
- Columbia Spotted Frog for the riparian habitat/community type
- Bull Trout for the aquatic habitat/community type

Monitoring Type: Effectiveness

Data Source: Idaho Department of Fish and Game, Salmon-Challis National Forest District Surveys, and Salmon-Challis NF Weed Management FEIS, September 2003

Findings:

Bald (Threatened) and Golden Eagles

Each winter District personnel participate in the Annual Interagency Bald and Golden Eagle counts. This is part of a nationwide eagle monitoring effort to assess long-term population trends. Mid-winter Bald eagle counts in the Salmon/Challis area have ranged from a low of 7 in 1980, to a high of 137 in 2005. The trend has been up for the past 16 years.

Golden eagle numbers have ranged from a low of 9 birds counted in 1980, to a high of 46 observed in 2003. With 26 birds found in 2005, a slight upward trend exists for Golden eagles for this 26 year period.

Pileated Woodpecker - MIS

The Salmon-Challis NF participates in the annual nationwide Breeding Bird Survey, which is a long-term monitoring effort to assess population trends of many species of songbirds, including neotropical migratory birds. Seven monitoring routes are surveyed

each year, the oldest of which were established in 1974. This data reveals an average of

Location	District	2005 Date	Number of Individuals
Deep Cr.-Cobalt	Salmon-Cobalt	04/19/05	1 bird
Copper Cr.-McDonald Gulch	Salmon-Cobalt	5/18/05	2 birds (1 pair)
Beaver Cr.	Salmon-Cobalt	5/16/05	3 birds (1 pair)
Perreau Cr.	Salmon-Cobalt	4/23/05	2 birds (1 pair)
Challis Creek Road (Transect 1)	Challis	4/4/05	3 birds (2 pair)
Morse Cr. Road	Challis	4/28/05	1 bird (1 pair)
West Fork Morgan (Transect 1)	Challis	4/15/05	2 birds (1 pair)
Yankee Fork Road (Transect 1)	Yankee Fork	4/7/05	6 birds (3 pair)
Squaw Creek Road (Transect 1)	Yankee Fork	4/20/05	0
Joe's Gulch Road	Yankee Fork	4/28/05	2 birds (1 pair)
Sawmill Canyon	Lost River	4/26/05	1
Boundary Creek (Transect 1)	Middle Fork	5/26/05	1
Lick/Sheep/Hughes	North Fork	3/20/05	0
Colson Creek Road	North Fork	3/27/05	0
Salmon River Rd.	North Fork	4/10/05	0
Hayden/Mill-Loop	Leadore	6/3/05	3 birds
Lemhi Pass/Upper Kenney Cr.	Leadore	6/15/05	1 bird

40 different species is detected per route. Specific local or Forest trends in the various bird species observed each year are not readily apparent, but numbers of non-indigenous species such as cowbirds appear to be increasing. In contrast, the number of breeding bird survey routes observing Pileated woodpeckers on-Forest declined from 7 to 3, which indicates a recent downward trend in sightings. The bird's status throughout Idaho however, showed a non-significant increase in populations across 18 survey routes. The Salmon-Challis National Forest established 19 point transects across all Districts in 2005 to establish baseline data for all bird species, including Pileated Woodpeckers. This data is presented in the table above.

These permanent point transects will be periodically repeated to provide long term population trend data across the Forest.

Relative abundance and trends of bird populations, as determined from Partners in Flight Database for Bird Conservation Region 10 (Rocky Mountains) and Physiographic Area 68 (Northern Rockies) indicates a relative abundance of 4 on the Salmon-challis Forest, with a significant region-wide increasing trend for Pileated woodpeckers and bald eagles.

Species	Relative Abundance (2=high, 3=moderate, 4=low, 5=lowest)	Region 10 Trends (Physiographic Area 68)
Pileated Woodpecker	4	Stable
Bald Eagle	4	Stable

Relative abundance is a measure of the component of vulnerability reflecting the abundance of breeding individuals of a species within its range, relative to other species, with the premise that rare or uncommon species are more vulnerable to decline or extinction than more common species.) [avg # birds/BBS route]

Greater sage-grouse - MIS

Monitoring of the greater sage-grouse on the S-C Forest occurs in cooperation with the Idaho Department of Fish and Game and the Bureau of Land Management. Monitoring is performed by counting the number of male birds occupying leks along an established lek route in the early spring. There is extensive long term data on many lek routes over the past 20 years. The following table displays recent data within forest areas of the Upper Snake Region from 1994 through 2006.

Route Name	'05	'04	'03	'02	'01	'00	1999	1998	1997	1996	1995	1994
Upper Big Lost (a) (d)	72	87	35	N/C	51							
Antelope Creek, Big Lost (b)	111(1)	43	N/C	35	31	29	24	31				
Lower Big Lost (b) (e)	n/c	N/C	51	81	67	50	74	62				
Little Lost	57	91	81	109	115	157	131	67	77	48	79	57
Upper Birch Creek	n/c	28	25	12	22	19	17	11	13	8	4	0

- (a) New route established in 2001
- (b) New routes established in 1998
- (d) Change in lek locations in 2004
- (e) Route discontinued after 2003
- N/C Not counted

A total of 14 lek routes within the Salmon Region are summarized in the table below, for 1994 through 2005.

Year	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994
Number of leks	43	30	38	51	32	27	20	14	36	19	6	12
Number of male birds	524	548	543	573	464	349	238	114	158	84	79	117

Population numbers and lek activity has been very cyclic over the years throughout the region. **2005** monitoring data generally indicates a continued slight decline since 1986. Exact estimates of trend are difficult due to missing data, variable monitoring and collection methods from year to year.

Columbia spotted frog - MIS

There are numerous spotted frog observations and inventories throughout the Forest, but very little information is available regarding their population viability. Spotted frogs have been observed throughout all Districts within the Forest, most typically in association with vernal pools. Baseline monitoring data was established in 2004 at 26 sites across the Forest and includes egg mass and frog age counts. This baseline data will be expanded in 2005 to identify a sufficient number of representative sites for repeat monitoring on a defined schedule. With additional site monitoring, trends in frog viability can be better assessed. Baseline data is presented in the table below.

Location	District	2005 Date	Egg Masses	Adult Frog	Juvenile Frog	Tadpole
Moyer A. Ponds	Salmon-Cobalt	6/20/05	Dry			
Powder House	Salmon-Cobalt	4/25/05	0	5	0	0
		5/3/05	2	0	0	0
		5/20/05	0	4	0	0
		6/21/05	0	20	0	0
		8/2/05	0	1,000	0	0
Big Hill Stock Pond	Challis	5/5/05	0			
		5/20/05	0			
Daugherty Gulch Stock Pond	Challis	4/25/05	0			
		5/20/05	0			
Pine Summit #1	Challis	5/5/05	0			
		5/20/05	1			
Pine Pine Flat Pond #1	Challis	4/12/05	0			
		4/27/05	0			
		5/5/05	0			
Pine Flat Pond #2	Challis	4/12/05	0			
		4/27/05	0			
		5/5/05	11			
Slab Barn Lake	Challis	4/11/05	0			
		4/27/05	0			
Little West Fork Morgan Cr.	Challis	5/6/05	0			
		5/24/05	29			
Squaw Cr. Trailhead Pond	Yankee Fork	4/20/05	0			
		5/10/05	0			
Kelly Cr. Pond	Yankee Fork	5/4/05	6			
		5/25/05	16			
Joe's Gulch Pond	Yankee Fork	5/4/05	0			
		5/25/05	0			
Pond Below Little Bayhorse Lk.	Yankee Fork	5/26/05	0			
		6/6/05	0			
Little Bayhorse Lk.	Yankee Fork	5/26/05	0			
		6/6/05	14			
Bayhorse Lk.	Yankee Fork	5/26/05	0			
		6/6/05	70			
Pond #1	Lost River	5/13/05	0	0	0	0
		5/19/05	0	0	0	0
		5/25/05	6	5	0	0
		5/31/05	13	2	0	0
Pond #2	Lost River	5/13/05	0	0	0	0

		5/19/05	0	0	0	0
		5/25/05	0	1	0	0
		5/31/05	0	1	0	0
Pond #3	Lost River	5/13/05	0	1	0	0
		5/19/05	0	0	0	0
		5/25/05	0	0	0	0
		5/31/05	0	3	0	0
Boundary Cr. Pond	Middle Fork	5/26/05	13	0	0	0
Hughes Barn Pond	North Fork	3/26/05	8	0	0	0
		4/12/05	15	0	0	0
		5/27/05	0	0	0	0
Lower Spring Cr.	North Fork	3/26/05	0	3	0	0
		4/10/05	10	52	0	0
		5/24/05	0	0	0	0
Upper Spring Cr.	North Fork	3/26/05	0	0	0	0
		4/10/05	0	31	0	0
		5/24/05	0	4	0	0
Grove Pond	Leadore	4/16/05	7	0	0	0
		5/13/05	19	0	0	0
		5/24/05	19	1	0	0
Quaking Aspen Pond	Leadore	4/16/05	0	0	0	0
		3/13/05	17	0	0	0
		5/24/05	18	2	0	0
Wildcat Pond	Leadore	5/25/05	7	0	0	0
		6/3/05	4	0	0	0
Frank Hall Beaver Pond	Leadore	5/25/05	3	0	0	0
		6/3/05	7	1	0	0

Bull trout - MIS

A total of 36 Forest streams have been selected for population trend monitoring as Bull trout “Index Areas”. Three Index Areas are monitored annually on each Ranger District, with the intent of monitoring each Index Area at least three times by 2010. This will provide the data necessary to determine trends in Bull trout density (Measured as the number of fish per unit area of stream.) and trends in Bull trout spawning (Measured as the number of redds per Index Area.).

Spawning redd counts, snorkeling, and electrofishing are used to gather this data, depending on stream type, size, and specific data needs. The two tables below show monitoring results from 1997 through 2005 for both population density and spawning. Baseline data from these Bull trout Index streams indicate that considerable variability existed between streams. Spawning redd counts indicate a large degree of recruitment, between years and different reaches within the same stream. Fish density data also indicate the variability of fish populations between different streams. In general, bull trout population trends over the past decade appear to be generally stable to increasing slightly, in some areas.

Index Areas-Number of Completed Spawning Redds Counted (Recruitment)

Stream	Ranger District	1997	1998	1999	2000	2001	2002	2003	2004	2005
1. Napias Cr (No. Redds Counted)	Salmon Cobalt	-	-	36	15	6	30	28	25	Dropped
2. Little Deep Cr (No. Redds Counted)	Salmon Cobalt	-	-	21	19	10	49	30	16	Dropped
3. Panther Cr. Hdwtrs (No. Redds Counted)	Salmon Cobalt	-	-	-	53	33	40	34	24	Dropped
4. E.Fk.Mayfield (No. Redds Counted)	Middle Fork	-	-	-	-	-	-	-	n.d.	5
5. Ten Mile Cr. (No. Redds Counted)	Yankee Fork	-	-	-	-	-	5	4	3	2
6. McKay Cr (No. Redds Counted)	Yankee Fork	-	-	-	-	-	10	9	5	0
7. E. Fk. Hayden Cr (No. of Redds Counted)	Leadore	-	-	-	-	-	-	-	n.d.	2
8. Bear Valley Cr (No. of Redds Counted)	Leadore	-	-	-	-	7	18	2	n.d.	n.d.
9. Everson Cr (No. of Redds Counted)	Leadore	-	-	-	-	-	-	-	n.d.	n.d.
10. Big Timber Cr (No. of Redds Counted)	Leadore	-	-	-	-	-	-	-	n.d.	n.d.
11. Big Bear Cr (No. of Redds Counted)	Leadore	-	-	-	-	-	-	-	n.d.	n.d.

Index Areas-Number of Bull Trout per 100 Square Meters (Population)

Stream	Ranger District	1997	1998	1999	2000	2001	2002	2003	2004	2005
1. Little Deep Cr (Snorkel Density)	Salmon Cobalt	-	-	3.6	0	0	2.7	0.6	0	Dropped
2. Panther Cr. Headwaters (Snorkel Density)	Salmon Cobalt	-	-	-	-	3.5	6.3	4	1.9	Dropped
3. Hat Cr (Snorkel Density)	Salmon Cobalt	-	-	-	9.9	4.8	3.5	2.9	4.8	Dropped
4. McKay Cr. (Electrofishing)	Yankee Fork	-	11	4	-	-	-	-	n.d.	n.d.
5. Yankee Fork. Cr. (Electrofishing)	Yankee Fork	-	1.7	0.5	-	0.3	-	-	n.d.	n.d.
6. W.Fk. Yankee Fork (Electrofishing)	Yankee Fork	-	2.7	-	-	-	-	-	n.d.	n.d.
7. Jordan Cr. (Electrofishing)	Yankee Fork	-	-	-	-	0.9	-	-	n.d.	n.d.
8. Squaw Cr. (Electrofishing)	Yankee Fork	-	-	-	-	0.1	-	-	n.d.	n.d.

Chapter 2: MONITORING ITEMS

FY 97-05

9. Thompson Cr. (Electrofishing)	Yankee Fork	-	-	-	-	-	-	-	n.d.	n.d.
10. Carmen Cr (Electrofishing)	North Fork	10	-	-	-	-	0	0	9	5.8
11. Fourth of July Cr (Electrofishing)	North Fork	5	-	8	-	-	5	-	4	6.7
12. Squaw Cr (Electrofishing)	North Fork	2.2	-	-	3	-	1.5	0.2	3	5.1
13. Boulder Cr. (Electrofishing)	North Fork	4	0	0	-	2	3	-	5	3.1
14. Moose Cr. (Electrofishing)	North Fork	0	0	0	-	-	4	-	n.d.	0
15. Twin Cr (Electrofishing)	North Fork	5	10	-	9	-	7	-	2	2.6
16. Hughes Cr. (Electrofishing)	North Fork	0	2	-	-	0	0	0	1	1.2
17. Woods Cr. (Electrofishing)	North Fork	4	-	7	-	8	4	-	5	2.5
18. Horse Cr (Electrofishing)	North Fork	14	7	8	10	10	4	-	8	21
19. Timber Cr (Electrofishing)	Lost River	6.7	-	-	14.1	14.5	-	-	5.2	n.d.
20. Sawmill Cr (Electrofishing)	Lost River	0	-	-	-	-	-	-	0.1	n.d.
21. Williams Cr (Electrofishing)	Lost River	-	-	-	4.5	-	-	-	12.7	n.d.
22. Wet Cr (Electrofishing)	Lost River	8.2 ¹	-	11.4	-	7.6	1.6	-	0.3	n.d.
23. Challis Cr (Electrofishing)	Challis	-	-	-	-	3.5	-	-	0	n.d.
24. E. Fk. Pahsimeroi Cr (Electrofishing)	Challis	-	-	-	-	1.8	-	-	0.4	n.d.
25. Morgan Cr (Electrofishing)	Challis	-	-	-	-	0.1	-	-	0	n.d.
26. South Fk Big Cr. (Electrofishing)	Challis	-	-	-	-	-	0.4	-	1.0	n.d.
27. E. Fk. Hayden Cr (Electrofishing)	Leadore	-	-	-	-	-	-	-	11.7	10
28. Bear Valley Cr (Electrofishing)	Leadore	-	-	-	-	1.1	-	-	3.1	6.1
29. Everson Cr (Electrofishing)	Leadore	-	-	-	-	3	-	-	3.1	0.5

30. Big Timber Cr (Electrofishing)	Leadore	0.9	-	-	-	-	-	5.5	0	0.2
31. Big Bear Cr (Electrofishing)	Leadore	-	-	-	-	-	-	-	n.d.	0
32. Big Eightmile Cr. (Electrofishing)	Leadore	-	-	-	-	-	-	-	5.1	6.9

Terrestrial Mammals

While no terrestrial mammals have been designated as Management Indicator Species, monitoring routes have been established on most Ranger Districts for Forest carnivore winter track surveys. These routes provide a degree of trend monitoring for species of special concern, such as gray wolf, wolverine, marten, fisher, and lynx. In addition, the Idaho Department of Fish and Game now monitors wolves to determine their productivity, population sizes, distribution and range.

Table 1. Population status and trends for T&E Mammals on the S-C NF

Species	Population Status	Population Trend
Gray wolf	Experimental, non-essential	Increasing
Grizzly bear*	No documented presence	Absent
N. American Lynx	No documented presence	Absent

*The grizzly bear recovery plan does not include the S-C NF.

Variability: Baseline monitoring is now established and variability may be addressed in the future once there is sufficient data to better determine and evaluate trends for these species.

Evaluation: With ongoing reductions in Wildlife program personnel and funding, key program activities like monitoring have received low priority for funding within Forest-wide priorities for annual work plans.

Appropriateness: Continue as a Forest Plan monitoring requirement. Monitoring is essential to assess long-term trends in MIS and TES habitats and populations. Both the Salmon and the Challis Forest Plans were amended in February 2004 to modify the list of Management Indicator Species from forty four to four species. Forest-wide monitoring protocols have been established for each of these species in order to provide population trend data required by both Forest Plans.

WILDLIFE: Habitat Improvement Accomplishments

Monitoring Item	Activity to be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-2	Habitat Improvement Accomplishments	Annual	N/A

Monitoring Requirement: Salmon and Challis Forest Plans

Monitoring Type: Implementation

Data Source: Annual Wildlife Report, Management Attainment Report

Unit of Measure: Number of improvement projects and acres

Findings: The table below illustrates Wildlife habitat improvements performed since 1997 in response to Forest Plan Goals and Objectives.

Wildlife Habitat Improvement - Structures and Acres

Year	Structures Implemented	Acres Treated
Forest Plan Goal/Year	28	1,395
1997	108	1,698
1998	45	838
1999	0	18,996
2000	0	12,077
2001	9	16,685
2002	0	29,250
2003	0	4,191
2004	0	4,900
2005	45	10,270

Variability: The capability to perform habitat improvement projects fluctuates from year to year, depending on funding of the Wildlife program for these actions.

Evaluation: Although the implementation of Wildlife habitat structures initially met or exceeded the Forest Plans’ goals their maintenance and development has declined in recent years. The number of acres of Wildlife habitat treated for improved condition continues to exceed initial goals but definitions for the acres “treated” have changed and the number of acres receiving habitat type conversions is actually in decline. Monitoring of projects should occur annually to every five years, depending on the nature of the improvement performed. Maintenance of past structures and treatments has not been occurring forest-wide and efforts are underway to try and provide some funding within the program for these requirements in order to protect existing investments.

Appropriateness: Continue as a Forest Plan monitoring requirement.

WILDLIFE: Standard and Guideline Performance

Monitoring Item	Activity to Be Measured	Monitoring Frequency	Conditions Which Initiate Further Evaluations
FP-3	Standard and Guideline Performance	Annually for two major projects per year	Significant deviation from prescribed parameters

Monitoring Requirement: Salmon Forest Plan

Monitoring Type: Post Project Implementation Monitoring

Data Source: Ranger Districts

Unit of Measure: Number of projects significantly deviating from the wildlife standards and guidelines contained in the Salmon NF Land and Resource Management Plan.

Findings: There is no project monitoring information to report for 2005.

Appropriateness: Continue as a Forest Plan monitoring requirement as a means to sub-sample project level compliance to Forest Plan standards and mitigations measures identified during the NEPA process and Record of Decision.