

APPENDIX D

**Monitoring Plan for the
Snake River Recreation Plan**

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Monitor various activities to provide an evaluation of the effect of management activities upon the environment of the corridor. Evaluate compliance in achieving the goals and objectives of the Forest Plan, the protection and enhancement of the ORVs of the river corridor, and the ability to achieve and maintain the ROS characteristics displayed in the ROS tables. Actively pursue cooperative agreements for monitoring with river users and organizations. Based upon an evaluation of the monitoring results, the Area Ranger will recommend to the Forest Supervisor changes to the management direction for the river corridor.

Monitoring Item **Hells Canyon National Recreation Area Act**

Goal

Ensure the administration of the river corridor in accordance with the laws, rules, and regulations applicable to the national forests for public outdoor recreation in a manner compatible with the objectives of Section 7 of the HCNRA Act.

Purpose of Monitoring

Determine if the the implementation of the river management plan is effective in managing the river corridor in accordance with the HCNRA Act.

To determine if selected projects and practices are effective in meeting both project and HCNRA Act objectives.

Who and How

Area Ranger

For projects within or affecting wild and scenic or study sections, complete a project-based standard and guideline monitoring check list.

Prepare an annual summary report by November 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Failure to meet legislative requirements from the HCNRA Act, or direction in the regulations, or implementing direction in the Forest Plan or the river management plan.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$1,500 annually

Monitoring Item
Wild and Scenic Rivers Act

Goal

Preserve the wild and scenic characteristics of the Snake River as part of the national wild and scenic rivers system.

Purpose of Monitoring

Determine if the the implementation of the river management plan is effective in managing the river corridor in accordance with the Wild and Scenic Rivers Act.

To determine if selected projects and practices are effective in meeting both project and wild and scenic river management objectives.

To determine if outstandingly remarkable values and special sites are being protected, and, as appropriate, enhanced.

Who and How

Area Ranger

For projects within or affecting wild and scenic or study sections complete a project based standard and guideline monitoring check list.

Prepare an annual summary report by November 15.

Forest River Planning Staff

Consolidate summary reports by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Failure to meet legislative requirements from the Wild and Scenic Rivers Act, or implementing direction in the Forest Plan or the river management plan.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$1,500 annually

**Monitoring Item
Recreation Setting**

Goal

Ensure that resource protection, development of lands and facilities, user capacities, and other management practices are being implemented as necessary or desirable to achieve the purposes of the Wild and Scenic Rivers Act.

Sustain a balanced and stable range of recreation opportunities, services, and facilities within the wild and scenic sections of the river corridor to ensure that the physical and social capabilities of the river environment are protected.

Purpose of Monitoring

Determine if the implemented recreation use levels for river-, land-, and air-based use levels achieves the desired future condition for the recreation outstandingly remarkable value.

Determine whether established ROS settings with desirable recreation attributes are being achieved and managed to provide high quality and stable opportunities for outdoor recreation.

Monitor dispersed and developed campsites and facilities to ensure they are maintained to a standard that provides for customer satisfaction.

Provide assurance that the physical, social, and managerial attributes are maintained at levels identified in the standards and guidelines.

Who and How

Area Ranger

Develop and test a monitoring survey format for implementation by river staff by the end of the 1994 primary season. Format for the monitoring survey will encompass sampling the achievement and maintenance of established ROS settings; DFC for the recreation ORV; water-, land-, and air-based use levels; and customer satisfaction surveys.

Prepare summary report by November 15.

Forest Recreation Staff

Prepare Forest-wide summary report by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Failure to achieve the standards and guidelines for recreation opportunities within each ROS setting.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$5,000 for development and testing of monitoring survey format in FY 94.

\$5,000 annually for implementation and evaluation of monitoring survey.

Monitoring Item
Visual Resource Objectives

Goal

To manage the Wild and Scenic Snake River corridor and other HCNRA lands seen from the river corridor to obtain the highest possible visual quality, commensurate with other appropriate public uses, costs and benefits.

Purpose of Monitoring

Determine if projects, activities, or modifications which alter landform, vegetation, water, color, or character of the viewshed as seen from the river or high use areas are consistent with visual resource management objectives, including established ROS settings.

Determine if corrective scenery management actions achieve the visual resource management objectives and established ROS settings.

Who and How

Area Ranger

Complete standard and guideline monitoring check lists for project level work.

Complete scenery survey for the river corridor by December 1996, as an update to the EDAW plan (done by Los Angeles consulting firm in 1975).

Forest Monitoring Coordinator

Compile information from check lists by November 15.

Forest Recreation Staff

Prepare a summary report from the above information by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Zero percent increase in management actions or developments (or proposed developments) not consistent with wild and scenic river classifications, visual resource management objectives (including ROS settings), and the architectural design guides and standards.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$5,000 annually as part of project level work.

\$30,000 one time cost for scenery survey.

Monitoring Item
Dispersed Campsites

Goal

To protect resources within dispersed camping areas.

Purposes of Monitoring

To determine if standards and guidelines, user education programs, and low impact camping methods are reducing physical and biological impacts of dispersed camping.

Conduct baseline monitoring of all known recreation activities within the river corridor and at dispersed campsites.

Who and How

Area Ranger

Inventory all dispersed recreation activities within the river corridor to identify impacts outside of dispersed campsites.

Conduct an inventory and assessment of all dispersed campsites using established inventory methods for vegetation, camp area size, barren sites, erosion and social trails, fire rings, scars, and tree damage. Measure natural erosion outside of dispersed campsites as a baseline.

Re-measure and assess dispersed campsites once every three years or when conditions indicate a need.

Prepare progress report by November 15.

Forest Recreation Staff

Prepare Forest-wide summary by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Zero percent increase in onshore impacts over 1994 survey data combined with a decreasing trend in recreation-related impacts.

Monitoring Frequency

Every three years (or when conditions indicate a need), following the primary season.

Costs

\$3,000 during inventory years.

Monitoring Item

Cultural and Historic Site Protection, Rehabilitation, and Interpretation

Goal

To provide for the identification, protection, preservation, enhancement, and interpretation of cultural resources.

Purpose of Monitoring

To determine the effects natural process, e.g., streambank and beach erosion, deflation, etc., are having on listed and potentially eligible heritage sites.

To determine the effects of human use, e.g., camping, boatings, site theft, etc., on listed and potentially eligible heritage sites.

To determine the direct and indirect effects of agency decisions, activities, and undertakings on listed and potentially eligible heritage resources and to insure that these activities and actions are consistent with PL 94-199, the NRA Act as it pertains to the protection, preservation, enhancement, and interpretation of heritage resources.

To determine if activities are designed to protect National Register characteristics of un-evaluated and significant cultural resource properties as stated in the comprehensive management plan for the HCNRA and Forest Plan.

To assess whether appropriate stabilization, rehabilitation, or mitigation of damaged sites eligible for inclusion in the National Register of Historic Places is being done as stated in the Forest Plan and HCNRA CMP.

To assure protection/mitigation measures are effective in meeting cultural resource management direction.

To determine whether survey methods are adequate to identify all locatable sites.

Who and How

Area Ranger

Report by November 30:

- Total number of sites visited in the fiscal year.
- The number of sites visited in the fiscal year where activities with potential to impact resources have occurred (activities that would lead to the need to prescribe protection or mitigation).
- The number of sites from above that were impacted by the activity.
- For each impacted site provide a brief explanation (one to two lines) of the type, magnitude, and timing (when happened) of the impact.

Forest Monitoring Coordinator

Compile information from the standards and guidelines check lists by November 15.

Forest Archaeologist

Prepare a summary report from above information by December 31 for submittal to the Forest monitoring coordinator.

Threshold of Variability

If there is a failure to adequately protect a listed, potentially eligible, or un-evaluated prehistoric heritage resource, or significant vertebrate or invertebrate paleontological site.

Monitoring Frequency

Monitoring within wild and scenic river corridor will be an ongoing program. All listed and potentially eligible prehistoric and historic archaeological, heritage resources within the corridor should be monitored at least once every three years.

The following non-administrative historic structures should be monitored yearly: Battle Creek Cabin, Bernard Creek Cabin, Sluice Creek Cabin, Caribou Creek Cabin, Myers Creek Cabin, Carter Mansion.

Monitoring Priorities

First priority should be given to those listed and eligible prehistoric and historic heritage sites located adjacent to the following high use areas:

Hells Canyon launch, Brush Creek, Chimney Bar, Warm Springs Bar, Battle Creek, Wild Sheep/Bull Creek, Granite Creek, Cache Creek (south), Oregon Hole Bar, Saddle Creek, Bernard Creek, Rush Creek, Sheep Creek, Willow Creek, Two Corral Creek, Kirkwood Creek, Pittsburg Landing, Tryon Creek, Deep Creek/Robinson Gulch, Eureka Bar, Geneva Bar, Cache Creek, (north) and Cottonwood Creek.

Estimated Cost of Monitoring

\$20,000 annually.

Monitoring Item
Fisheries Habitat

Goal

Maintain or improve anadromous and resident fish habitat.

Purpose of Monitoring

Ensure that Forest Plan standards and guidelines are met.

Determine if implementation of the river management plan effectively meets objectives of the Forest Plan and CMP.

Who and How

Area Ranger

Evaluate the success or failure of the mitigation measures by conducting physical habitat surveys throughout the watershed, and making site-specific observations in and around representative locations of floating and powerboating activities.

Basic habitat survey may be completed using the Region 6 stream survey method. Adjustments to the technique will need to be made for the method to fit a river the size of the Snake River.

Prepare a summary report of stream and riparian condition by November 15. Compare results of monitor surveys to baseline inventory survey.

Forest Fisheries Biologist

Prepare a summary by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Habitat within the Snake River should meet management objectives for riparian areas. DFC's for fisheries resources are presented in the Forest Plan. Interim values for DFC's have been proposed for the region. These objectives should be met in the Snake River watershed.

Monitoring Frequency

Inventory/monitoring of fisheries habitat in the Snake River should be repeated every five years at a minimum.

Estimated Cost of Monitoring

Funding will be secured from the stream survey program.

Monitoring Item
Powerboat and Spawning Fall Chinook Interaction

Goal

Project objectives meet "not likely to adversely affect" criteria discussed in the biological assessment through implementation of the project.

Purpose of Monitoring

To determine whether implementation of the river management plan jeopardizes the "not likely to adversely affect" for the Snake River chinook salmon and habitat. Results of observations would also indicate the potential for disturbance to eggs and embryos of salmon in the redds.

To determine if implementation of the river management plan meets the "not likely to adversely affect" criteria.

Who and How

Area Ranger

Site specific observations will include observations of selected index areas where redds are known to occur. The Forest Service fisheries biologist will coordinate with the Fish and Wildlife Service biologist overseeing the aerial surveys of fall chinook redds for locations of redds which would be representative of areas susceptible to disturbance from boating traffic. The observer will record entry of jetboats and floatboats into an area surrounding the redd. The observer will also coordinate with biologists from other agencies for information and observations of redd locations and actual disturbance of redds or spawning fish from jetboats or floatboats. Observations will be made on a weekly basis during the time of spawning from the last week of October through the second week of December.

Also noted will be behavior of the fish indicating habituation to powerboat and floatboat traffic. Special attention will be made to any situations where fish appear to be forced to abandon redd sites.

Actively participate (dependent upon funding availability) in proposed studies of boat use effects on salmonids which are applicable to the Hells Canyon reach.

Summarize results, draw a narrative conclusion and recommend action to be taken by November 15.

Forest Fisheries Biologist

Prepare a summary by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

If initial observations show that jetboats are entering occupied spawning areas, more specific observations will be made to determine if the fish are actually being disturbed.

Monitoring Frequency

Annually or until actual conclusive determination of effects are made.

Estimated Cost of Monitoring

\$4,000 annually

Monitoring Item
Accidental Catch of Listed Fisheries

Goal

Prevent adverse impacts to listed salmon in the river corridor from angling.

Purpose of Monitoring

To determine if salmon are caught accidentally in the HCNRA and if so, are they released unharmed.

Who and How

Area Ranger

The Forest Service fisheries biologist will contact state agencies for monitoring reports of any incidental take of adult or juvenile chinook salmon, and for monitoring reports of any harassment, or disturbance to redds or spawning chinook.

Responsibility for enforcement of fishing regulations lies on the state fish and game agencies. The monitoring information has been offered to the Forest Service from Idaho Department of Fish and Game. The information is based on creel surveys and contacts made by enforcement personnel.

The Forest Service fisheries biologist will summarize results, draw a narrative conclusion and recommend action by November 15.

Forest Fisheries Biologist

Prepare a summary by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Taking of listed salmon in excess of the section 10 taking permit issued to IF&G from the NMFS.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$600 annually.

Monitoring Item
Tributary Stream Fisheries

Goal

Prevent adverse impacts to fisheries resources in tributaries to the Snake River in the river corridor.

Purpose of Monitoring

To determine if salmonids using tributary streams are successfully using the habitat available, without disturbance from visitors to the HCNRA.

Who and How

Area Ranger

The Forest Service fisheries biologist will coordinate with state agencies for monitoring reports of spawning escapement into tributary streams within the wild and scenic segment of the Snake River. Important spawning areas will be visited and site specific observations of activities during the spawning season will be made. Key to the monitoring elements will be the review of reports and observations of disturbance or harassment to salmonids spawning in the tributary streams.

Responsibility for enforcement of fishing regulations lies on the State fish and game agencies. The Forest Service will monitor for potential disturbance in order to make management recommendations in regard to any problems resulting to fisheries resources from encounters of visitors.

The Forest Service fisheries biologist will summarize results, draw a narrative conclusion and recommend action by November 15.

Forest Fisheries Biologist

Prepare a summary by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Any harassment of fish during spawning would not be acceptable.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$1,000

Monitoring Item
Bald Eagles

Goal

To protect and manage habitat for the perpetuation and recovery of bald eagles.

Purpose of Monitoring

To determine if the nesting, communal roosting, and associated foraging habitats are being identified and protected.

Determine if recreational activities are affecting occupancy and foraging.

Who and How

Area Ranger

Periodic roost counts and nest site observations to determine nest and roost occupancy and productivity.

Report information to Forest wildlife biologist by November 15.

Forest Wildlife Biologist

Prepare a summary report by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

A single nest or roost site is compromised due to Forest Service and/or river related activities.

Two years or more from time of discovery to complete an approved site management plan.

Monitoring Frequency

Monthly, mid-winter roost counts (October through April), conducted annually.

Estimated Cost of Monitoring

\$2,400 Annual monitoring costs are collected as part of the overall Forest monitoring program.

Monitoring Item
Peregrine Falcons

Goal

To protect and manage habitat for the perpetuation and recovery of peregrine falcon.

Purpose of Monitoring

Determine if the nesting and associated foraging habitats are being identified and protected.

To decide whether potential nest habitats are identified and being managed to maintain suitability.

Determine if the young-per-occupied-territory goals are being met.

Who and How

Area Ranger

Determine nest site occupancy. If any nests are found, conduct periodic field observation and report nest site productivity.

Forest Wildlife Biologist

Prepare a summary report by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Thresholds of variability for this monitoring item are part of the overall Forest-wide thresholds for peregrine falcons on page 5-54 of the Forest Plan.

Monitoring Frequency

Nest site occupancy monitoring will be done annually, May through July.

Estimated Cost of Monitoring

First year inventory costs: \$9,600

Subsequent monitoring cost per year: \$2,400

Monitoring Item
Bats

Goal

To protect and manage habitat for the perpetuation of bats.

Purpose of Monitoring

Determine if the communal and maternity roost sites are being identified and protected.

Determine if project objectives and practices are adequate to protect species viability and prevent uplisting of species.

Who and How

Area Ranger

Continue surveys for suitable habitats, two surveys per year.

Monitor changes in population numbers at known sites.

Prepare progress report on monitoring results by November 15.

Forest Wildlife Biologist

Prepare a summary report by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

No loss or compromise of staging sites, maternity roost sites, or hibernaculum due to recreation related or Forest Service activities.

Monitoring Frequency

Annually

Estimated Cost of Monitoring

\$10,400

Monitoring Item**MacFarlane's Four-O'Clock (Mirabilis macfarlanei)****Goal**

Manage colonies of MacFarlane's four-o'clock (Mirabilis macfarlanei) in accordance with the USFWS Recovery Plan to insure the continued existence and viability of the species. Inventory all areas of potential habitat within the Snake Wild and Scenic River corridor.

Purpose of Monitoring

To identify new colonies and to insure that objectives outlined in the recovery plan are met for all known colonies.

Who and HowArea Ranger

Establish and conduct monitoring programs in accordance with the USFWS Recovery Plan to document changes in existing colonies. Continue to survey approximately 2,000 acres per year for additional populations within the river corridor.

Prepare progress report by November 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

Any reduction in habitat quality.

The objectives of the recovery plan are not being met.

Monitoring Frequency:

Annually

Reporting Frequency:

Annually

Estimated Cost of Monitoring:

\$3,000 annually.

Monitoring Item
Noxious Weeds

Goal

Control noxious weed infestations according to the EIS for Managing Competing and Unwanted Vegetation, the Forest Plan, and applicable State laws and regulations. Control and/or eradicate where possible those noxious weeds with the intent of protecting or enhancing the Snake River ORV's. Support the involvement of public partners in the weed control efforts.

Purpose of Monitoring

To determine if noxious weed infestations are being treated in accordance with the EIS for Managing Competing and Unwanted Vegetation, Forest Plan direction, and applicable State laws and regulations.

Who and How

Area Ranger

Annual monitoring of treatment areas and inventory.

Noxious weed effectiveness monitoring is to be recorded as directed in the April 1992 memo (2200) on Forest Plan Monitoring for Range Vegetation Management. Monitoring is to be completed on 5% to 10% of all treatment projects and treatment records are to be completed for each project. Prepare progress report by November 15. ("Noxious Weed Effectiveness Monitoring" report format is on file at the HCNRA office.)

Forest Range Staff

A Forest-wide summary report of the data from the districts will be completed by December 15 for submittal to the Forest monitoring coordinator.

Threshold of Variability

For new invader species, 0% increase in new populations with eradication. For established infestations, 0% spread in infestations with containment and reduction in size.

Monitoring Frequency

Each of the treatment areas will be monitored annually to determine treatment effectiveness, and the type of future treatment needed. For those weed infestations having a high damage potential and are small enough that eradication is possible individual site monitoring may occur 3-5 times each year.

Estimated Cost of Monitoring

\$1,000 annually.