

Appendix E. Monitoring and Evaluation

Introduction

The goal of travel plan monitoring is to determine how well the travel plan is working and what is not working, and to help identify what changes are needed in travel management or monitoring methods. Monitoring and evaluation tell how travel management decisions have been implemented (called “implementation monitoring”) and how effective the implementation has proven to be in accomplishing the desired outcomes (called “effectiveness monitoring.”).

Not all distinctive variables can be monitored. Monitoring has administrative costs to the agency and is contingent on future funding, so a selection of a monitoring item in the Record of Decision for the Travel Plan represents a statement of management intent to fund the implementation of that monitoring item in the future.

There are eight monitoring items associated with this Travel Plan:

Wildlife:

- ✓ Effectiveness of closures at Northern Idaho Ground Squirrel sites
- ✓ Effectiveness of closures in areas where elk habitat security is a concern
- ✓ Verification and protection of potential wolverine denning habitat, lynx habitat, and wildlife habitat connectivity

Recreation:

- ✓ Effectiveness of Over-snow motorized closures
- ✓ Level of use or overuse on motorized trails

Soil and Water:

- ✓ Project monitoring, recreation management, implementation and effectiveness of travel plan ATV Project Design Features (PDFs)
- ✓ Project monitoring, recreation management, effectiveness monitoring of the travel plan’s designation of areas open to “limited motorized access” on the protection of the soil, water, riparian, and aquatic (SWRA) resources within riparian conservation areas (RCAs)
- ✓ Project monitoring, recreation management, implementation and effectiveness of closure of unauthorized routes

Fish:

- ✓ Terms and Conditions from National Marine Fisheries Service

Effectiveness of Closures at Northern Idaho Ground Squirrel Sites

PROGRAM: Wildlife

MONITORING ITEM: Effectiveness of closures at Northern Idaho Ground Squirrel (NIDGS) sites

PROJECT NAME: PNF Travel Plan

LOCATION: Occupied NIDGS sites on the PNF.

PRIORITY: High

OBJECTIVES: Minimize impacts to NIDGS populations from unauthorized motorized travel.

PARAMETERS: Evidence (i.e., tire tracks, photo-monitoring) of off-road travel and use of unauthorized roads.

METHODOLOGY: Field evaluation and/or photo-monitoring to determine occurrence of off-road travel and use of unauthorized roads and motorized trails in spring and summer in areas occupied by NIDGS.

FREQUENCY/DURATION: Periodically during spring and summer from the time NIDGS emerge to when they go below ground in mid-August.

DATA STORAGE: Project files

ANALYSIS/REPORT: Written report

PERSONNEL: District wildlife biologists and/or technicians

PROJECTED COSTS: \$2,200/year includes personnel and vehicle costs

RESPONSIBLE INDIVIDUAL: District wildlife biologist

RESPONSIBLE OFFICIAL: District Ranger

PREPARER: Ana Egnew, Wildlife Biologist

DATE: 2/2007

Effectiveness of Closures in Elk Habitat

PROGRAM: Wildlife

MONITORING ITEM: Effectiveness of closures in areas where elk habitat security is a concern

PROJECT NAME: PNF Travel Plan

LOCATION: On PNF lands where elk habitat security is a concern (e.g., EAAs with low proportions of elk habitat security and/or watersheds where road densities are near to 2 miles per square mile -- to be determined in coordination with IDF&G).

PRIORITY: High

OBJECTIVES: Minimize impacts to elk habitat security from unauthorized motorized travel.

PARAMETERS: Evidence (i.e., tire tracks, photo-monitoring) of off-road travel and use of unauthorized roads

METHODOLOGY: Field evaluation and/or photo-monitoring to determine occurrence of off-road travel and use of unauthorized roads and motorized trails during hunting season in areas where elk habitat security is a concern.

FREQUENCY/DURATION: Once before the beginning of hunting season and 2-3 times during hunting season..

DATA STORAGE: Project files

ANALYSIS/REPORT: Written report

PERSONNEL: District wildlife biologists and/or wildlife technicians

PROJECTED COSTS: \$3,300/year includes personnel and vehicle costs

RESPONSIBLE INDIVIDUAL: District wildlife biologist

RESPONSIBLE OFFICIAL: District Ranger

PREPARER: Ana Egnew, Wildlife Biologist

DATE: 2/2007

Verification and Protection of Potential Wolverine Denning Habitat, Lynx Habitat, and Wildlife Habitat Connectivity

PROGRAM: Wildlife

MONITORING ITEMS: 1) Effectiveness of closures to protect potential wolverine denning habitat and wildlife habitat connectivity in winter; 2) location and amount of snow compaction activities in lynx habitat ; 3) winter track surveys to determine presence of wolverine, lynx, and other forest carnivores; and 4) verification of wolverine denning habitat and lynx habitat on the ground in summer.

PROJECT NAME: PNF Travel Plan

LOCATION: Areas closed and open to over-snow motor vehicle use in modeled potential wolverine denning habitat, lynx habitat, and wildlife habitat/travel corridors

PRIORITY: High

OBJECTIVES: Provide adequate protection of wolverine denning habitat, lynx habitat, and wildlife habitat connectivity.

PARAMETERS: Evidence of over-snow motorized vehicle use and evidence of wolverine, lynx, and other forest carnivores based on winter track surveys, and ground verification of wolverine denning habitat and lynx habitat.

METHODOLOGY: Two to three aerial flights each winter to look for unauthorized use (as evidenced by snowmobile tracks) in areas closed to protect potential wolverine denning habitat and to investigate extent of snow compaction activities in lynx habitat. Fifteen days of winter track surveys to determine presence of wolverine, lynx, and other forest carnivores in or adjacent to these areas (note: track surveys must be conducted on foot in closure areas). Ten to fifteen days of surveys in summer to ground verify potential wolverine denning habitat and lynx habitat

FREQUENCY/DURATION: Winter surveys will occur annually. Summer surveys will be conducted until all potential habitat has been ground checked and verified or modified.

DATA STORAGE: Project files

ANALYSIS/REPORT: Written report

PERSONNEL: Forest and district wildlife biologists and/or technicians

PROJECTED COSTS: \$2,000/year for flights, \$3,500/year for winter track surveys, and \$2,500/year for summer habitat verification surveys (includes vehicle costs)

RESPONSIBLE INDIVIDUAL: Forest wildlife biologist

RESPONSIBLE OFFICIAL: Forest Supervisor

PREPARER: Ana Egnew, Wildlife Biologist

DATE: 2/2007

Recreation Monitoring

PROGRAM: Recreation

MONITORING ITEM: Effectiveness of over-snow closures to motorized use along distinguishable boundaries

PROJECT NAME: Payette National Forest Travel Management Plan

LOCATION: Entire Payette National Forest excluding the Frank Church and Hells Canyon Wilderness areas

PRIORITY: High

OBJECTIVES: Determine if the winter over-snow closures to motorized use are located along distinguishable boundaries by monitoring the effectiveness of the closures and how well motorized use has been excluded from the new closure areas, primarily those in the Granite Basin area.

PARAMETERS: Observed snowmobile tracks entering closure areas.

METHODOLOGY: Via snowmobiles, conduct field evaluations to document motorized intrusions into the winter closure areas. Are they repeatedly along certain boundaries, or in certain areas? Use a form/map similar to the one that would be handed out to Brundage Snow-cats. Concentrate primarily on “76” and “Granite” closures. Check other closure areas across the Forest as feasible on routine winter patrols. If over a two year period, reports come in from the public that report other problem areas, redirect field evaluations to those areas. Also, use Brundage Mountain Snow-cats to report violations of the closures as they conduct tours in the closure areas. Brundage Snow-cat permittee would be given a form/map to fill out that would track where the snowmobile tracks are located entering into closure areas.

FREQUENCY/DURATION: Motorized closures will be checked throughout the winter months, at least monthly, and by Brundage Snow-cats when in operation.

DATA STORAGE: Project files

ANALYSIS/REPORT: Written report

PERSONNEL: District recreation specialists and seasonal workforce

PROJECTED COSTS: \$5,000./year plus \$2000. snowmobile costs over a five year monitoring cycle = \$35,000. total

RESPONSIBLE INDIVIDUAL: Forest Recreation Program Manager

RESPONSIBLE OFFICIAL: Forest Supervisor

PREPARER: Jane Cropp, Forest Recreation Program Manager

DATE: 2007

Recreation Monitoring

PROGRAM: Recreation

MONITORING ITEM: Crowding on two-wheel motorized trails as a result of closing Forest to motorized cross-country travel.

PROJECT NAME: Payette National Forest Travel Management Plan

LOCATION: Two-wheel motorized trails across the Forest

PRIORITY: Moderate

OBJECTIVES: Determine if closing the Forest to motorized cross-country travel has resulted in overcrowding on two-wheel motorized trails.

PARAMETERS: Reported safety incidents and trail counter tallies

METHODOLOGY: Install trail counters on three two-wheel motorized trails that had previous use figures collected. Install counters for the summer, fall season to measure trail use levels. Pick one trail with low use, one with moderate use, one with high use. Compare use figures to 2007 use figures when cross-country motorized travel was still allowed. Measure change in use.

FREQUENCY/DURATION: Set up trail counters on three trails when trails open in the spring, and keep them up until trails close in the fall. Review trail data over a five year period to track incidents reported and trail use numbers.

DATA STORAGE: trail counters and project files

ANALYSIS/REPORT: Annual report, track over a six year period, one year prior to closing to motorized cross-country travel, 5 years after closing Forest to motorized cross-country travel.

PERSONNEL: District recreation specialists and seasonal workforce

PROJECTED COSTS: \$1,000./year plus \$1000. vehicle/motorcycle costs. Purchase 3 trail counters = \$1200.; total cost = \$2,000./year for six years = \$13,200.

RESPONSIBLE INDIVIDUAL: Forest Recreation Program Manager

RESPONSIBLE OFFICIAL: Forest Supervisor

PREPARER: Jane Cropp, Forest Recreation Program Manager

DATE: 2007

ATV Project Design Features

PROGRAM: Travel Access Management

MONITORING ITEM: Project monitoring, recreation management, implementation and effectiveness of travel plan ATV Project Design Features (PDFs).

PROJECT NAME: Payette National Forest Travel Management Plan

LOCATION: Payette National Forest lands

PRIORITY: High

OBJECTIVES: Determine the implementation and effectiveness of the new designated ATV PDFs.

PARAMETERS: Specific PDFs, visual evidence of surface erosion, digital photographs.

METHODOLOGY: Implementation monitoring will be accomplished through field verification of the PDFs on all new ATV trails prior to designating new ATV trails on the MVUM.

Effectiveness monitoring will be accomplished through field verification of the planned treatments including:

- Repeat photography at photo points.
- Visual inspection of erosion/sedimentation
- Visual inspection of stream crossings and wetlands.

FREQUENCY/DURATION: Implementation monitoring will occur prior to designating new ATV trails as open.

Effectiveness monitoring will occur once following the first open season. After the first year, monitoring will be based on the normal trail maintenance program.

Duration is ongoing.

DATA STORAGE: District files.

ANALYSIS/REPORT: Field documentation and on-site photographs before and after project implementation. The written report will follow the format of the monitoring results data form developed on the Payette National Forest.

PERSONNEL: One GS-7 Hydro-Technician, one GS-11 Hydrologist

PROJECTED COSTS: NFRW \$xxx

RESPONSIBLE INDIVIDUAL: District Hydrologist and Hydrologic Technicians

RESPONSIBLE OFFICIAL: District Rangers

PREPARER: David Kennell, ID Team Soils/Hydrologist.

DATE: December 2006

Effectiveness of managing dispersed recreation by designating areas open to “limited motorized access” in the protection of the SWRA resources

PROGRAM: Travel Access Management

MONITORING ITEM: Project monitoring, recreation management, effectiveness monitoring of the travel plan’s designation of areas open to “limited motorized access” on the protection of the soil, water, riparian, and aquatic (SWRA) resources within riparian conservation areas (RCAs).

PROJECT NAME: Payette National Forest Travel Plan.

LOCATION: Priority recreation areas and RCAs listed by specific Management Area objectives in the Forest Plan.

- Reduce soil compaction and restore vegetation by restricting dispersed camping to specific sites around Goose Lake Reservoir and Brundage Reservoir (Objective 0629).
- Identify recreational campsites or parking areas that are contributing unacceptable levels of accelerated sediment or compaction to the Payette Lakes and Lake Fork Creek riparian areas. Relocate or harden sites where needed to reduce compaction and erosion to riparian areas by end of planning period (Objective 0726).
- Reduce impacts to Kennally Creek, Powelson Creek, and Rapid Creek riparian areas from recreation sites or uses. Identify campsites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss to the creek riparian areas. Rehabilitate, relocate, or harden sites where needed to reduce impacts (III-202: Objective 0823).
- Reduce impacts to Warren Creek and tributary riparian areas from recreation sites or uses. Identify recreational camping sites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts (: Objective 1023).
- Reduce impacts to riparian areas from recreation sites or uses[in the SFSR]. Identify recreational campsites or parking areas that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts (Objective 1238).
- Reduce impacts to riparian areas from recreation sites or uses [in Big Creek]. Identify recreational campsites, parking areas, or trails that are contributing unacceptable levels of accelerated sediment, compaction, or vegetation loss. Rehabilitate, relocate, or harden sites where needed to reduce impacts (Objective 1317).

PRIORITY: High

OBJECTIVES: Determine the implementation and effectiveness of designating area of “limited motorized access” in protection the SWRA resources.

PARAMETERS: Visual evidence of surface erosion, damage to riparian vegetation, and stream banks. Digital photographs.

METHODOLOGY: Effectiveness monitoring will be accomplished through field verification of the planned treatments including:

- Repeat photography at photo points
- Visual inspection of erosion/sedimentation

- Visual inspection of damage to riparian vegetation
- Visual inspection of damage to stream banks.

FREQUENCY/DURATION: Effectiveness monitoring will occur on a rotating schedule every third year.

Duration is ongoing.

DATA STORAGE: District files.

ANALYSIS/REPORT: Field documentation and on-site photographs before and after project implementation.

PERSONNEL: One GS-7 Hydro-Technician, one GS-11 Hydrologist

PROJECTED COSTS: On an annual basis once project activity begins: approximately \$1,500.

RESPONSIBLE INDIVIDUAL: District Hydrologist and Hydrologic Technicians

RESPONSIBLE OFFICIAL: District Rangers

PREPARER: David Kennell, ID Team Soils/Hydrologist

DATE: December 2006

Closure of Unauthorized Roads and Trails

PROGRAM: Travel Access Management

MONITORING ITEM: Project monitoring, recreation management, implementation and effectiveness of closure of unauthorized routes.

PROJECT NAME: Closure of Unauthorized Roads and Trails

LOCATION: Programmatically on all ASC and High Priority Active WARS subwatersheds on each Ranger District. On all low and moderate WARS subwatersheds during project inventory on major EAs and EISs.

PRIORITY: High

OBJECTIVES: Determine the implementation and effectiveness of the closure of unauthorized roads and trails.

PARAMETERS: Forest GIS database; Visual evidence of motorized vehicle use; Visual evidence of surface erosion and sediment delivery; Digital photographs.

METHODOLOGY: Implementation monitoring will be accomplished through field verification of known unauthorized travel routes. Effectiveness monitoring will be accomplished through field verification of unauthorized routes including:

- Repeat photography
- Visual inspection of erosion/sedimentation
- Documentation in GIS database.

FREQUENCY/DURATION: A programmatic schedule will be developed in FY 2007 by each District to inventory and assess implementation and effectiveness monitoring of closed roads on ASC and Active High Priority WARS subwatersheds. It is expected that each of these subwatersheds will be evaluated once over the next 5 years. Approximately 20 percent of the ASC and High Priority subwatersheds will be done each year.

Low and moderate priority WARS subwatersheds will be inventoried and assessed during preparation of major project EAs or EISs as appropriate.

Duration: up to ten years.

DATA STORAGE: District files.

ANALYSIS/REPORT: Field documentation and on-site photographs before and after project implementation. The written report will follow the format of the monitoring results data form developed on the Payette National Forest.

PERSONNEL: One GS-7 Hydro-Technician, one GS-11 Hydrologist

PROJECTED COSTS: NFRW

RESPONSIBLE INDIVIDUAL: District Hydrologist and Hydrologic Technicians

RESPONSIBLE OFFICIAL: District Rangers

PREPARER: David Kennell, ID Team Soils/Hydrologist

DATE: December 2006