Road Decommissioning Program

Goal

The goal of road decommissioning on the Clearwater National Forest is to reduce watershed impacts by reclaiming roads that are no longer a necessary part of the Forest's transportation system. The primary objectives are:

- Reduce erosion from road surfaces and slopes and related sedimentation of streams.
- Reduce the risk of mass failures and subsequent impact on streams.
- Restore natural surface and subsurface drainage patterns.
- Restore vegetation and site productivity
- Restore stream channels at road crossings and where roads run adjacent to channels
- Use road maintenance funds more effectively - concentrate the available funds on roads that are needed for long-term access.
- Protect and restore fish habitat.

Accomplishments/Findings

Road decommissioning includes activities that stabilize and restore unneeded roads to a more natural state. In most cases, road decommissioning involves using heavy equipment to decompact road surfaces, remove drainage structures and fill material from streams and draws, recontour through unstable areas, and revegetate.

The Clearwater National Forest and the Nez Perce Tribe have worked together since 1996 to decommission roads on National Forest under a watershed restoration partnership. Over 480 miles of problem roads have been decommissioned since 1996. Approximately half of these have been decommissioned in partnership areas where the Tribe contributes funds and labor directly to the project.

Based on field information about the road's condition, a road to be decommissioned is targeted either for abandonment or some level of decommissioning (previously referred to as obliteration). A road to be *abandoned* is already stable and is revegetating naturally. No physical work is required for abandonment, just a change in the database to reflect the fact that it no longer will be tracked as a road. However, roads to be *decommissioned* will require some physical work in addition to the database change. The extent of decommissioning work required is classified in four levels.

- Level I. Recontouring at the start of the road to restrict vehicle access.
- Level II. Some work required along the road to address mass failure or erosion risk factors.
- Level III. Substantial work required along the full length of the road.
- Level IV. Recontouring of most of the road.

Decommissioning roads to Levels 2 through 4 includes several standard approaches to treatment. Treatments along the road prism range from decompaction in areas with stable fill but reduced infiltration and productivity, to strong outslopes or complete recontours in areas requiring fill stabilization. For every road, all culverts and ditches are pulled. Revegetation of treated areas combines seeding with a non-persistent grass mix, scattering duff excavated from natural ground above road cutslope, and transplanting native forbs and shrubs which are growing on-site either adjacent to or on the road surface. Natural mulch consisting of onsite woody debris, logs and stumps as well as imported weed-free straw mulch (used in areas

where natural mulch is scarce) cover all disturbed ground. Treatments along stream crossings require a complete recontour of all fill material with stream channels restored to natural grade and dimensions. Each stream crossing receives the same revegetation prescription as the roadbed with a special emphasis on transplants of riparian vegetation. At completion, the area will no longer convey vehicle traffic, and requires no maintenance.

In FY03, 33.3 miles of road were decommissioned at a cost of $7,000 per mile. This cost includes equipment, materials, labor and project administration and inspection. The Nez Perce Tribe contributed funding and labor under a Watershed Restoration Partnership for the decommissioning of 23 miles on the Powell Ranger District.

Year	Reconstruction (Miles)	New Construction (Miles)	Decommissioning (Miles)	Intermittent Service (Miles)
1998	85.3	1.1	134	8.6
1999	19.8	1.0	83.5	10.6
2000	33.1	8.6	47.4	4
2001	11.6	0	64	8.3
2002	0.0	0.1	40.4	3.0
2003	24.4	0	33.3	4.6
TOTAL	**174.2**	**10.8**	**402.6**	**39.1**

Roads that are needed for the long-term transportation system but are not being used now (and probably won't be needed for at least 10 to 20 years) are put into "intermittent service" (IS) status. This requires ensuring that the road is stable and will not need to be maintained for the non-use period. Roads put into IS status typically have their culverts and associated fill removed. The road may be outsloped and fills in unstable areas may be pulled.

MONITORING ROAD DECOMMISSIONING

GOAL

The Clearwater National Forest and the Nez Perce Tribe monitor road decommissioning projects in order to track the effectiveness of the Forest's decommissioning program. The Nez Perce Tribe and the Forest Service cooperatively fund the monitoring of road decommissioning projects on the Forest. The monitoring crew is made up of employees of both the Tribe and the Forest. Monitoring protocols are designed to answer questions pertinent to decommissioning goals (listed above) and provide feedback to the decommissioning program on treatment effectiveness.

This monitoring plan looks to provide some feedback to the program goals by looking for answers to the following questions:

- Is there surface erosion associated with the decommissioned road segment and how much?
- Are there mass failures present?
- Are natural surface and subsurface drainage patterns restored?
- Is there vegetation coverage? Is there succession to native plants?
- Are stream channels restored to the point that subsequent adjustments are minimal?
- Is the treatment appropriate for the site/landtype where it was used?

MONITORING ACTION

Field methods include both qualitative assessments and quantitative measurements on selected ¼ mile segments of decommissioned roads. Approximately one monitoring segment will be set up for every 10 miles of road decommissioned. These segments are established in the year they were decommissioned (year 0). Data is collected along the segments in the first year after decommissioning (year 1), the second year after decommissioning (year 2), and the fifth year after decommissioning (year 5). The intent is to revisit these sites in the tenth year (year ten) after decommissioning. The findings and discussion below apply only to monitoring segments that were visited in 2003 with the exception of mass failures, which are reported annually for all monitoring segments.

ACCOMPLISHMENTS/FINDINGS

1. **Surface Erosion**: How much surface erosion was observed on the decommissioned road segments? Define the feature or treatment associated with the recorded erosion.

   Any surface rilling or gullying or sheet erosion is noted and, as of 2002, the dimensions recorded. Prior to 2002, the monitoring crew made qualitative observations of "significant" or "insignificant". "Significant" was defined as highly visible and likely to get worse while "insignificant" was defined as visible but minor. In 2002, protocol was changed to a more quantitative method of estimating the percent of surface area of a feature affected by surface erosion. Mass failures less than 10 cubic yards are tracked as surface erosion.

   Findings:

   - 46% of segments monitored (11 of 24 total) exhibited at least one instance of surface erosion.
   - Only one segment showed signs of surface erosion was noted outside of channel areas in the interfluvial zones. The Road 729 segment exhibited spotty surface erosion (mostly pedestalling) over approximately 5% of the entire segment. This segment lays on extremely erodible Revett Quartzite soils the Deception point area on the North Fork District.
   - There were 8 instances (32% of the surface erosion observed) where the surface erosion was associated with stream grade channels. In 5 cases, the surface erosion affected 25% or less of the total surface area of the channel. In the remaining 3 cases, the surface erosion affected more than 25% of the total surface area of the channel.
   - There were 16 instances (64% of the surface erosion observed) where the surface erosion was associated with cross drain channels. In 12 cases, the surface erosion affected 25% or less of the total surface area of the channel. In the remaining 4 cases, the surface erosion affected more than 25% of the total surface area of the channel.

   Discussion: Surface erosion occurs as a function of concentrated flow. It appears within interfluvial zones, adequate infiltration of precipitation and snowmelt occurs to prevent excessive surface runoff and related erosion. Mulch and vegetation help control surface erosion in these interfluvial zones (see revegatation, below)

   Both cross drain channels and stream grade channels are areas of concentrated flow. Stream grade channels, if done correctly, are fully recontoured. The reconstructed channel bottom should be on original channel bed material. Because streams are dynamic by nature, we expect to see some movement of the channel, both vertically in the way of aggradation and degradation, and laterally by meanders reflecting channel adjustment.

   Cross drain channels function to drain intercepted subsurface water, such as in a wet ditchline, Unlike Stream Grade Channels, cross drain channels are not necessarily in a topographic feature such as a draw or swale. Thus, when we construct a "channel" to drain this intercepted water, we concentrate flow in a feature that has not evolved to handle concentrated flow. We are currently working on techniques, such as brush blankets, to help this converted subsurface water reinfiltrate (see Cross Drain Channels, below). These techniques should help reduce surface erosion in the cross

drain channels. As most of our instances of surface erosion occur in cross drain channels, we recommend that we continue to focus on revegetation of these areas.

In the past, erosion control blankets were often used in these cross drain areas; however, we found that, though they were effective at reducing erosion, the blankets inhibited revegetation. Brush blankets appear to be successfully reducing erosion as well as encouraging infiltration and revegetation. There may be places where brush is not readily available where erosion control blankets are a good choice.

2. **Mass Failures**: Are there any mass failures along the decommissioned road? How large are they (cubic yards)?

For monitoring purposes, any slide, slump or debris flow larger than ten cubic yards that initiates on a road after it has been decommissioned is monitored as a mass failure. An attempt is made to identify the cause of the failure, the feature it is associated with, and the likelihood of it continuing or becoming larger. Any decommissioned road segment with a known mass failure is designated as a monitoring segment.

Findings:

- From a total of over 450 miles of road decommissioned on the Clearwater National Forest since 1992, there are 10 known mass failures over 10 cubic yards in size (Table 17). Three of these are new this year.
- One new road fill failure was noted at the beginning of a monitoring segment on an abandoned segment of road (Road 5540-Canyon Creek).
- Another new fill failure into an intermittent stream was identified on an unmonitored portion of road 729 in "intermittent storage" indicates that the treatment (outslope) was too light. We will monitor in the future.
- New movement associated with a pre-existing rotational slump ona Road 830476 segment recontoured in 2002 is being tracked as a 10 cubic yard failure. There is also new tension cracking at this site, indicating potential future movement.
- Five of these mass failures are associated with historic or pre-existing landslides.
- One growing slump area was noted on Road 564 of 26.6 cubic yards associated with glacial till.
- There are two existing failures on Road 4773 (340 cubic yards and 370 cubic yards), both associated with one historic landslide. These were not visited in 2003.

Table 1. Mass Failures on Monitoring Segments.

Road	Drainage	District	Year Deco	Year Noted	Size (Cy)	Associated Feature / Treatment
5540	Canyon Cr	Lochsa	1997	2003	510	Fill failure into stream; abandoned section
729	Deception	North Fork	1999	2003	35	Fill failure into intermittent stream, light outslope
830476	Deception	North Fork	2002	2003	10	Preexisting - 10cy movement in 2003
729B	N. Fk. Face	North Fk	2001	2002	10	Small slump in stream grade channel; stable
564	Post Office	Powell	2001	2001	27	Strong outslope in glacial till
4773	Schwartz	Palouse	1995	1999	340	Outslope near top of preexisting landslide
4773	Schwartz	Palouse	1995	1999	370	Cross drain channel, crosses preexisting slide
6056	Fish Cr	North Fk	1998	1998	12	Top preexisting failure, stream grade channel
4801	Salmon Cr	North Fk	1998	1999	531	Preexisting debris torrent, stream grade channel
5540	Canyon Cr	Lochsa	1997	1998	27	Sideslope saturation, outslope

Discussion: Most of our large mass failures are associated with landslides that were evident prior to decommissioning the road and probably prior to road construction. However, we observed at least three failures (on road 5540 and road 729) on high risk segments where the treatment was probably too light. All mass wasting is on high risk landtypes. The segment on road 830476 is not mapped as a high risk landtype, however this road crosses a large rotational slump.

Based on these observations, one might suggest that lighter treatments such as abandonment or minor (±10%) outslope are inappropriate treatments for high risk landtypes. Prior to decommissioning a road, we should record the mapped land type and then ground truth. Prescriptions for treatment should account for high risk landtypes, both mapped and observed in the field.

3. **Cross Drain Channels:** Are the cross drain channels associated with surface water drainage or converted (intercepted) groundwater? Do the cross drain channels function to restore natural surface and subsurface drainage patterns? How well are they mimicking natural function while minimizing risk?

   Cross drain channels promote the drainage of saturated hillsides, seeps, natural swales, subsurface water, and other areas that may accumulate water. When monitoring cross drain channels, we note whether they lie in a natural topographic feature such as a draw or swale, we determine whether they primarily drain surface water or intercepted subsurface water (such as wet ditches) and we note any surface erosion or mass wasting associated with the channel. In addition, we note any other problems observed.

   Findings:

   - 12 (36%) in swales (draining primarily surface water),
   - 16 (48%) in seeps (draining primarily converted ground water),
   - 5 (15%) channels were identified as draining both seeps and swales.
   - Mass Movement: 4 incidents (12%), 1 predating road decommissioning activities
     - Most mass movement is small, less than 5 CY
     - One channel (Road 4773) was associated with a landslide
   - Surface Erosion: 17 incidents (52%)
     - Most of the surface erosion in cross drain channels is minor sheet erosion
     - Two channels exhibit rilling
     - Two channels exhibit gullies

   Discussion: Primarily, construction of cross drain channels provides a drain for seeps or saturated areas resulting from road construction. In addition, cross drains provide drainage at minor swales and undefined draws. Forest roads can intercept shallow subsurface flow paths, converting groundwater to surface water. True restoration of the natural slope hydrology would necessitate reconstruction of the pre-existing subsurface flowpaths; however, because of the complexities of flowpath development and extensive alteration of the hillside during road construction, it is unlikely that these flowpaths could be recreated through a simple recontour of fill material. In fact, case studies demonstrate that burying converted subsurface water through recontour or outslope may cause saturation of the reconstructed hillslope resulting in landslides. While, true restoration may not be possible, the most effective treatments should return groundwater exposed as surface flow back to subsurface. The goal is to encourage infiltration of the shallow subsurface water without causing saturation and subsequent landslides.

   We see both mass wasting and surface erosion associated with cross drain channels. The mass failures tend to be associated with saturation, while the surface erosion tends to be associated with concentrated overland flow. Over half (52%) of monitored cross drain channels exhibit some surface erosion. This may be a result of concentrating flow in a feature that never evolved to handle concentrated flow. Revegetation of these channels and reinfiltration of converted subsurface water should continue to be a major emphasis of the road decommissioning program.

Brush blankets can be used in cross drain channels to encourage infiltration of water in boggy or saturated areas. The excavator operator uses the bucket and thumb to transplant existing vegetation from the untreated road or adjacent slopes. Transplants are planted in strips across the constructed channel at 4' to 8' intervals from the top to the bottom of the channel. Vegetation slows surface water movement and breaks up the soil serving the dual purpose of filtering suspended sediment and increasing infiltration. The risk of mass failure is much reduced since the fill is removed and a runoff path is available. Brush blankets have been widely used on decommissioned roads on the Clearwater National Forest since the year 2000. We expect to have some monitoring results for brush blankets in 2004.

Erosion control blankets can also be used to decrease surface erosion in cross drain channels. The blankets can be laid out down the center of the channel perpendicular to the water flow. Unfortunately, our monitoring shows that while erosion control blankets are quite effective at decreasing erosion, they appear to inhibit revegetation. In addition, erosion control blankets can preclude the use of brush blankets and other vegetative techniques.

4. **Revegetation**: Is there sufficient ground cover to control surface erosion? Is there succession of native plant species?

Revegetation goals are twofold: Short-term erosion prevention and long-term conversion to the native vegetation of the slope. The road decommissioning seed mixture is designed to be aggressive in the short term and less persistent over time, promoting native species succession. All disturbed areas are seeded with a non-native seed mix of annuals and non-persistent perennials for short-term erosion prevention and soil amending properties.

During road decommissioning, the excavator transplants clumps of native brush and sod during the treatment of the prism. The excavator operator conserves vegetation growing on the untreated sideslopes as well as on the untreated roadbeds. The excavator operator uses the bucket and thumb to plant the conserved vegetation, including the root mass and surrounding soil, on the treated prism. The operator can also scatter some of the duff layer from the top of the cutslope across the treated road prism. This incorporates organic material on the newly treated slope, recruiting seeds, nutrients, soil microbes and other organisms. In areas of specific need, we plant nursery-grown stock, either trees or shrubs. We also sprig wet areas with willow, cottonwood, dogwood and other species that grow from cuttings.

Methods for monitoring vegetation and ground cover are borrowed from ECODATA (USDA Forest Service, 1992). The point cover method is used to measure the amount of ground cover after decommissioning. Ground cover is important in controlling surface erosion. Most ground cover is in the form of mulch or planted vegetation.

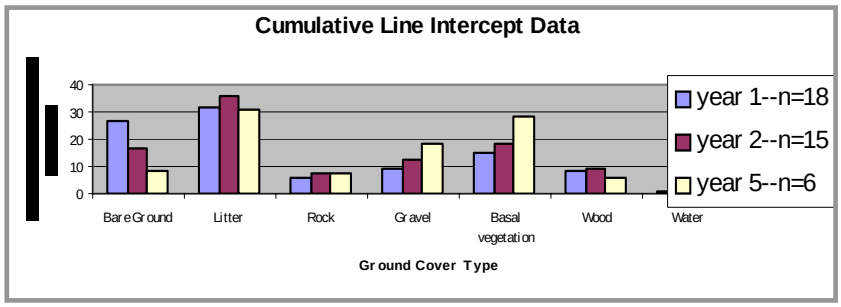

Figure 1. Changes in ground cover type over time on decommissioned road monitoring segments.

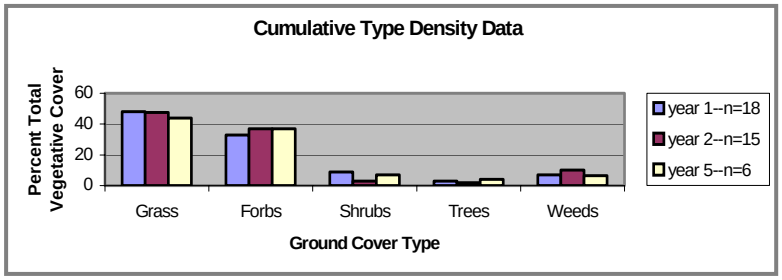

Figure 2. Breakdown of vegetative cover on segments monitored in 2003.

Discussion: On average, the percentage of bare ground on monitoring segments decreased from 26.5 percent to 8.3 percent from the first year after decommissioning to year 5 after decommissioning while the amount of vegetative cover increased from 15 percent to 28.5 percent in the same timeframe (Figure 13). The overall drop in litter and wood after year 0 is probably due to decomposition of straw and native wood mulch (the apparent rise in the amount of litter in year 2 is probably due to differences in sampling techniques). Ground cover appears to be sufficient as little surface erosion was noted (with the exception of erosion in channel structures and, presumably due primarily to concentrated flow).

There appears to be moderate succession to native species, although nonnative grasses are persistent to 5+ years (Figure 14). This trend may be influenced by the fact that a seed mix with more persistent nonnative grasses was used prior to 1999. Due to this, future monitoring may show a trend toward better succession of native species.

5. **Stream Grade Channels:** How much does each channel adjust (degrade/aggrade) over time? Is the size of the bed material increasing (indicating degradation) or decreasing (indicating aggradation) over time?

   Stream grade channels are restored live water crossings, usually where a culvert (metal, log. or slash) was removed. Restoration of channels includes: removal of structure, removal of fill to grade, recontour of adjacent slopes, installation of channel stabilization structures (weirs and bank armor) and revegetation of the area.

   In order to track channel stability and channel adjustment over time, we collect the following information: 1) Channel cross-sections, 2) Longitudinal surveys, and 3) Wolman pebble counts.

   Findings:

   - Nearly all channel cross sections show settlement of six to twelve inches over the first winter (see Figure 16 example).
   - Minor changes (primarily degradation, less aggradation) occur on nearly every cross section from year to year.
   - Longitudinal Surveys indicate some minor changes to the stream channel including small headcuts, establishment of step/pool systems, and minor degradation (see Figure 17 example).
   - Wolman pebble counts indicated an overall increase in D50 of approximately 8.0 millimeters and an overall increase of 26 millimeters at D84 for the average of all pebble counts conducted in year 0 and year 1 of monitoring.

   Discussion: It appears that there is some settling of the entire disturbed surface over the first winter as the snow packs the freshly disturbed soil. This may be due in part to some erosion of the surface material in addition to some recompaction of the surface.

   The cross sections, the profiles and the pebble count all indicate that in the first year, in these freshly disturbed channels, we see a flush of fines and small particles from the channel surface. The changes in the aggregated pebble count indicate scouring of silt and sand size particles. We predict that we will see less change as the channel adjusts then stabilizes.

6. **General Prism Treatments** (recontour, outslope, decompact, abandon): Is the treatment appropriate to the site/landtype where it was used?

   By using data from the road log it is possible to determine at what frequency general prism treatments are applied to decommissioned roads.

Table 2. Road prism treatments by landtype. -- a. Low to Moderate Risk Segments

Road	District	Drainage	Yr Monitored	Template Treatments (in feet)					Landtype
				Abandon	Decompact	Outslope	Recontour	Total	
730 s1	North Fk	Deception	Yr2	0	0	1400	0	1400	32R66
830476	North Fk	Deception	Yr1	0	0	1188	132	1320	31R20
3255B	Palouse	Yellowpine	Yr2	0	0	1640	0	1640	31Q25
5220B	North Fk	Fuzzy	Yr5	0	330	686	304	1320	24S20
73731	Palouse	White Pine	Yr2	0	446	669	0	1115	24Q20-31Q10
75158	Lochsa	Pete King	Yr0	0	0	1128	199	1327	31S20
75181	Lochsa	Walde	Yr5	665	0	0	665	1330	24G10-24S20
6016	North Fk	Washington	Yr5	0	647	237	435	1320	23K20
563 80 / 90	Powell	Legendary Bear	Yr5	528	0	627	165	1320	13A00-13Q20
Total Feet				1193	1423	7575	1900	12092	
Percent Total				10	12	63	16	101	

b. High Risk Segments

Road	District	Drainage	Yr Monitored	Template Treatments (in feet)					Landtype
				Abandon	Decompact	Outslope	Recontour	Total	
75671	Powell	Badger	Yr2	0	0	0	1527	1527	61U26
5619	Powell	Fishing	Yr5	0	515	593	222	1330	61U26
830063	North Fk	Deception	Yr1	0	0	1056	264	1320	61S44
460	Lochsa	Walde	Yr5	0	0	331	998	1329	61S20-31S20
5540	Lochsa	Glade Cr	Yr 6	0	0	1070	251	1320	61S20-31K20
6056	North Fk	Sneak	Yr5	0	611	225	411	1247	61S10
729B	North Fk	Deception	Yr2	0	70	280	1050	1400	61r10-24R00
730 s2	North Fk	Deception	Yr2	0	0	1358	42	1400	61R10
729	North Fk	Comet	Yr3	79	264	542	435	1320	61R10
75669	Powell	Cold Storage	Yr2	0	0	1353	0	1353	61G20
75665 s2	Powell	Wendover	Yr2	0	0	1643	0	1643	61G20
564	Powell	Postoffice	Yr2	44	0	1409	0	1453	61G20
5620B	Powell	Badger	Yr0	0	0	310	1240	1550	61G20
5649	Powell	Parachute	Yr0	0	330	726	264	1320	61G20
75665 s1	Powell	Wendover	Yr2	0	0	1406	0	1406	61G10-61U26
75760	Powell	Postoffice	Yr1	0	0	1195	133	1328	61G10-61U26
250 cm1	North Fk	Orogrande	Yr5	0	356	660	304	1320	60Q20-31Q10
4801	North Fk	Salmon	Yr5	108	0	996	242	1346	50
Total Feet				231	2146	15153	7383	24912	
Percent Total				1	9	61	29	100	

Discussion: General road treatments include recontouring, outsloping, decompacting, and abandonment of roads templates. The intent of the general prism treatment is to restore slope stability and drainage patterns. In order to leave a decommissioned road segment in stable condition, more intensive treatment (more earth moved) is generally necessary on higher risk ground.

Full re-contouring involves reestablishing the natural contours of the hillside, restoring the original topography. Outsloping involves pulling up fills; leaving a 10 - 30 percent cross slope that water can run off. Decompacting or ripping involves reducing compaction to allow for water infiltration and plant growth. Stable sections of roads without channel crossings that are already somewhat outsloped and vegetated may be abandoned. Although recontoured or outsloped sections may also be decompacted, they are recorded only as recontoured or outsloped on the road log.

The road log data summarized in the tables 6a and 6b show that inspectors are requiring more intensive treatment (less abandonment and decompaction; more recontour) on roads on more unstable landtypes, as expected. This is also appropriate to the extent that more effort is invested on higher risk roads.

SUMMARY

The monitoring program on the Clearwater National Forest is designed primarily as a feedback loop to the road decommissioning program to ensure that the goals of the program are being met. The 2003 results indicate that most of the problems with surface erosion and small mass failures are associated with cross drain channels. In the future, we will focus more emphasis on techniques to lessen these problems.

ACKNOWLEDGEMENTS

The Nez Perce Tribe and the Clearwater National Forest joined together in a watershed restoration partnership in 1996. The road decommissioning monitoring program is a part of this partnership. The monitoring crew is made up of employees of both the Forest and the Tribe. Both entities also provide technical support to the program.

ROADS

Item No. 13: Miles of Road Open/Restricted

Frequency of Measurement: Annual
Reporting Period: Five Years

MONITORING ACTION

The Forest engineer will annually review total miles of road on the Forest and display the data to show miles of open roads and miles of restricted roads. The restricted road information will be broken down to show roads that are closed yearlong to all vehicle traffic and roads that are restricted for some part of the year.

ACCOMPLISHMENTS/FINDINGS

The Forest development road system on the Clearwater National Forest is made up of roads that vary from narrow single-lane unsurfaced to double-lane paved roads. This system of approximately 4,430 miles provides access to all major areas of the Forest. Road restrictions are a major component in resource protection. Driven by resource needs, including habitat needs of big game and water quality, road restrictions are reviewed annually and revised when necessary to meet the current management situation.

Miles of Restricted and Open Roads

Restricted			Method Of Closure				Open
District	Yearlong (miles)	Seasonal (miles)	Gates	Guardrail	Earthen Barrier	Posted: Sign Only	Year-round, weather permitting
Pierce	360	171	140	69	49	37	533
Palouse	180	411	74	41	71	34	265
North Fork	447	117	67	42	135	24	557
Lochsa	247	40	80	53	45	18	113
Powell	383	82	44	48	129	17	348
TOTAL	**1,617**	**821**	**405**	**253**	**429**	**130**	**1,816**

SCENIC RESOURCES

GOAL

In association with other resource management activities, maintain a natural appearing forest landscape as viewed from designated visual travel corridors, recreation sites, wilderness, high-use recreation areas and administrative areas.

STRATEGY

The Forest landscape architect and District personnel will review proposed management activities; provide input when proposed management activities are located in the viewshed of designated visual travel corridors, recreation sites, wilderness, high use recreation areas and administrative areas; and recommend actions that will meet Forest Plan *scenic integrity objectives* (formerly referred to as Visual Quality Objectives). Management activities will be monitored during implementation and at completion for success in meeting *scenic integrity objectives* (*SIOs*).

Item No. 3: Visual Quality Objectives

Frequency of Measurement: Annual
Reporting Period: Five Years

MONITORING ACTION

The Forest landscape architect, assisted by District personnel reviewed all of the current year's completed timber harvesting activities to determine if SIOs were met for FY03. Other management activities monitored for their effects on the scenic resource were recreation development, fire effects and road decommissioning projects. The monitoring process included field observations of selected management activities and an office review of project reports.

ACCOMPLISHMENTS/FINDINGS

The Forest landscape architect and District personnel provided input to District Rangers by serving on interdisciplinary teams (IDT) for timber harvesting proposals, recreation projects, watershed analysis and prescribed fire proposals. Recommendations were provided for these projects that outlined practices, which would aid the Districts in meeting SIOs on several proposed management actions. These activities will continue to be monitored during the implementation phase of the project.

A total of two timber sales and seven small salvage sales were completed and closed out in FY03.

> Top of the World Timber Sale is located on the Palouse Ranger District. The timber sale area is adjacent to the access road to Elk Creek Falls Trailhead, a heavily used recreation area, and to State Highway 3. The sale was designed to use harvest methods that would minimize visual effects within these important visual corridors. Screening was retained where necessary and skidding corridors were carefully treated to reduce the visual effects of the harvest activities. The completed timber sale met or exceeded the SIO of *Moderate (VQO of Partial Retention).*
>
> Rascal Ridge Timber Sale is located on the Powell Ranger District. It is adjacent to a low use travel corridor and has a SIO of Very Low (VQO of Maximum Modification). It met this Scenic Integrity Objective.

There were seven salvage sales including 5201 Salvage, 5028 Salvage, Austin Salvage, Lookyhere Salvage, Yellow Pine Restoration, Johnson Creek Salvage and Wagner Gulch Salvage. Most critical were the Johnson Salvage and Wagner Gulch Salvage which are located adjacent to heavily used recreation corridors. All of the salvage sales met or exceeded the SIO for the area which ranged from *Moderate (VQO of Partial Retention)* for the Wagner Gulch area to *Very Low (VQO of Maximum Modification)* for the 5201 and 5028 Salvage.

There were several prescribed fires on the Clearwater National Forest in FY03. Of significance was a prescribed burn along the U.S. Highway 12 corridor near Syringa on the Lochsa Ranger District. This activity was designed to reduce fire hazard and to improve habitat. The burn reduced the brush undergrowth, removed a few trees and darkened the bark on some, but by spring the effects were very minimal and the corridor appears natural, with no long term negative visual effects. Additional prescribed fires were completed, but all were small and in areas outside of critical viewing corridors. There was no significant impact on the scenic integrity from any critical viewpoints from these activities.

Another area of concern in protection of the scenic quality of forested landscape is in road management. Currently, the Forest is completing a number of road decommissioning projects all of which were outside critical visual travel corridors this year. With most road decommissioning projects, there is a short-term effect on the visual condition during the period when excavation takes place, but vegetative cover returns within one year and a positive effect on the scenic quality of an area is obvious within five years.

Additional information regarding effects on scenery of other FY03 management activities is available at the Supervisor's Office.