

Forest Road Vacating

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Introduction

Road access management is necessary to help meet management goals and objectives for fisheries, wildlife, recreation, timber and other forest resources as well as to reduce maintenance costs and sediment loads by restricting traffic. Roads can be grouped into four management categories:

- **Active Use.** Active use roads are those that are part of the permanent road system and those temporary roads that are currently in use or will be in use in the near future. These roads are usually available for use at any time of the year. Use may be continuous or intermittent. Roads in this category require active maintenance and have a full maintenance obligation under the Oregon Forest Practices Act.
- **Road closure.** Road closure involves restricting access to the road for part or all of the year. This may be as simple as placing a sign or other marker at the start of the road as might be the case in a cooperative travel management area for wildlife protection. Or, it might involve placing a semi-permanent barricade at the start of the road. This barricade can be a gate, large boulders, stumps and logs, or a trench. This strategy does not significantly alter the nature of the road, and the obligation to maintain the road remains. Road maintenance needs and sediment loads are reduced due to the elimination of traffic-related wear.
- **Partial vacation.** Partial vacation involves barricading the road and installing minor drainage structures, which might include the construction of water bars or rolling drains. This strategy is best suited for roads that will be needed again after long periods (perhaps as much as 15 to 20 years) of inactivity. Ridge top roads or other roads where drainage and sediment issues are negligible are good candidates to consider. The nature of the road may be somewhat altered through the addition of waterbars and other drainage structures, but the obligation to maintain the road

remains. Sediment loads are reduced due to the elimination of traffic-related wear, and road maintenance needs are greatly reduced.

- **Full vacation.** Full vacation involves removing all stream crossing structures, installing maintenance-free drainage (outsloping, water bars, rolling dips, etc.), pulling back any sidecast material, grass seeding disturbed soil, and barricading the road. The road is effectively “put to bed.” All access is prevented, and there is no maintenance obligation. Cross drain culverts may be left in place but will not be considered as a functional drainage feature.

There are many reasons for proactively vacating a forest road. Most involve excessive maintenance costs, lack of continued need, or continuing water quality problems. Not all roads need to be part of a permanent road system. For example, temporary roads are used once, then “put-to-bed” until they are needed again. In addition to newly built temporary roads, there are existing roads that may no longer be needed, and older abandoned roads that are now overgrown. The same techniques can be used to erosion-proof these roads to prevent further erosion and sediment yield, and, as an added benefit or incentive, save the work and expense of continued maintenance.

All forest managers that may have a future management need for a road should be involved in the decision to vacate a road. See the Road Proposed for Vacating form at the end of this section.

Landings associated with any road that is vacated must also be left in a maintenance free condition. The considerations used in vacating roads will also be applied to landings.

This section of the manual will cover goals, objectives and strategies for forest road vacating.

Goals of Forest Road Vacating

The primary goal for vacating forest roads is to leave the vacated road in a condition where road related damage to the waters of the state is unlikely. Achieving this goal contributes to the achievement of the following supplemental goals:

1. Reduces the impacts of roads on water quality, aquatic habitat, wildlife habitat and other forest resources.
2. Reduces the amount of forestland occupied by roads.
3. Reduces the overall costs of road maintenance.
4. Provides opportunities to use vacated roads for other uses such as hiking trails.

Forest Road Vacating Objectives

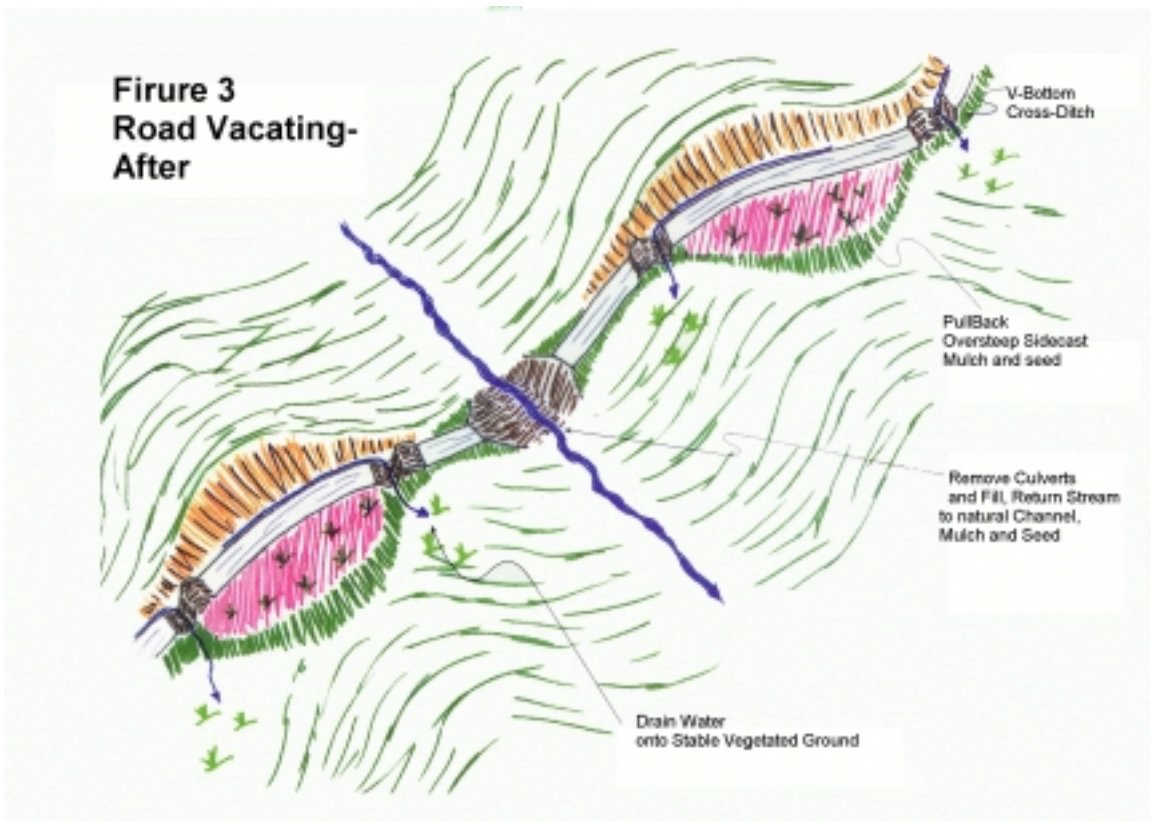
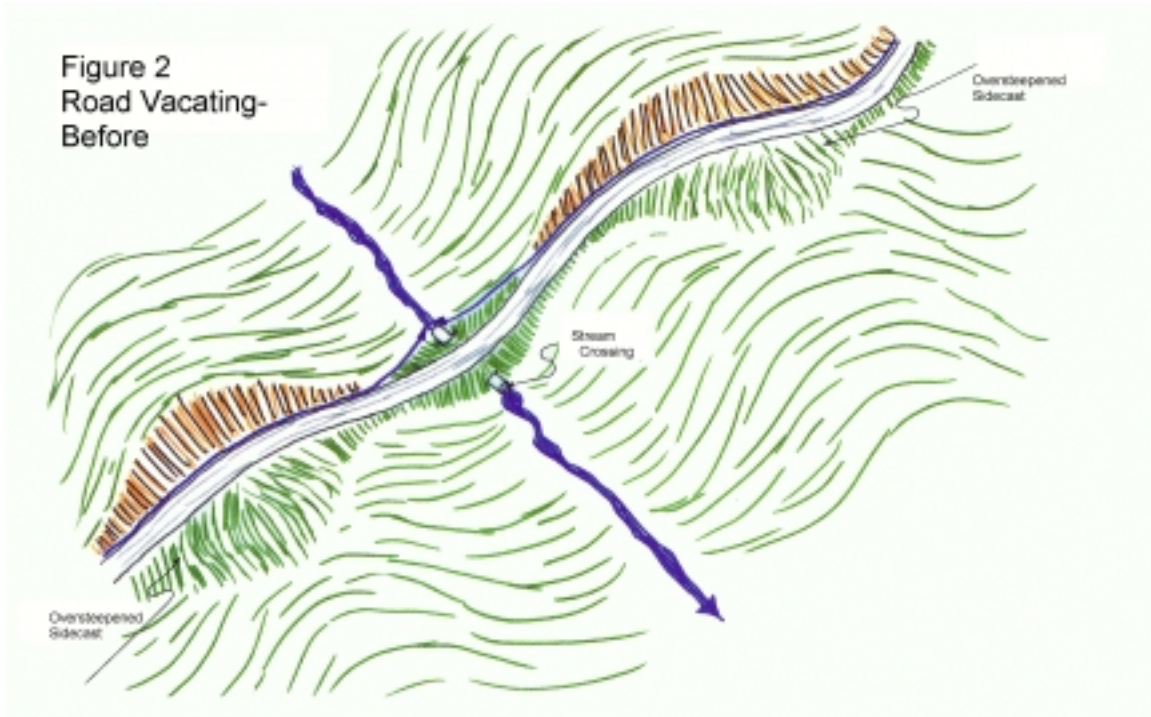
When a road is to be vacated and taken off the active road network, erosion prevention work will be performed so that continued maintenance is not necessary. All vacated roads will be “erosion-proofed” by excavating stream crossings and removing culverts, excavating unstable road and landing fills, treating the ditch and road surface to disperse runoff and prevent surface erosion, and revegetation of exposed soils.

Vacating a road does not imply that every foot of the road needs intensive treatment to prevent future erosion. Segments of a road that have near natural levels of risk for sediment delivery can be left intact and receive minimal road drainage improvements. When or if the road is needed again, it can be reconstructed with minimal effort.

The objectives for forest road vacating include:

1. Returning stream channels to natural conditions by removing all stream crossing structures including any fill associated with the crossing.
2. Establishing maintenance free surface drainage by removing berms and installing drainage structures such as water bars and drainage dips.
3. Eliminating unstable or potentially unstable road or landing fills or sidecast material by removing the material to a stable location.
4. Preventing surface erosion by revegetating all areas of exposed soils.
5. Preventing the use of the roadbed by mechanized equipment by installing permanent barricades.
6. Complying with the requirements of the Oregon Forest Practices Act regarding the vacation of roads.

Figure 2. Road Vacating – Before



Road Vacating Strategies

Road vacating strategies are the specific actions and standards that will lead to achieving the goals and objectives of this section of the manual.

Road Vacating Assessment

The first step in vacating a road is to determine in a logical manner those roads that are candidates for vacating. Factors to consider include the need for current and future use of the road, the amount of environmental damage that road is currently causing or likely to cause, and the short-term cost of vacating the road versus the long-term cost of maintaining the road.

Implementation plans and forest management operations plans can be used to help determine the current and future use of the road. The Road Proposed for Vacating form provides a checklist for determining the current and future uses of a road. It also serves a review mechanism for the managers that are involved in making the decision to vacate a road.

The assessment will also include an evaluation of the environmental damage that is currently occurring or likely to occur at some time in the future from the road. The proximity to streams, the stability of road fills and sidecast material, the condition of the road's drainage system, and chronic maintenance problems are some of the factors to be considered in the evaluation. Roads that are causing significant damage or likely to cause significant damage will be considered as a high priority candidate for vacating.

A comparison of the short-term cost of vacating the road with the long-term cost of maintaining the road should be made. Any time the cost of vacating a road is less than the cost of maintaining the road and the road is not essential for management purposes, the road will be considered as a candidate for vacation.

There is no formula that will determine when a road should be vacated. Managers will need to weigh all of the factors affecting the decision and estimate the costs and benefits of vacating the road. The following is a list of roads that might be candidates for vacation:

1. Roads constructed for temporary access.
2. Roads that will not be needed for fire protection, forest management, recreation or other uses for several years.
3. Roads with excessively high maintenance costs.
4. Roads with persistent erosion and water quality problems.
5. Roads crossing steep slopes where landslide risk is high.
6. Roads exhibiting potential for fill slope or cutbank failures, often showing tension cracks.
7. Roads built with excessive sidecast or fill, in unstable locations, or perched above stream channels.
8. Roads built in, along or immediately adjacent to stream channels.

9. Old roads that have not been used for some time and have overgrown with vegetation, especially those with washed-out stream crossings and/or fill failures.

Stream Crossing Excavations

Removing a stream crossing involves removing the stream crossing structure (bridge, culvert, etc.) and excavating and removing all fill materials placed in the stream channel when the crossing was built. Fill material will be excavated to recreate the original channel grade, width and orientation.

All drainage structures in streams (live or intermittent), and culverts covered with over 2 feet of fill, in gullies or draws will be removed. Natural drainage will be restored during vacating.

Removal of stream crossing structures and fill material will be at a time that does not conflict with any restrictions on in-stream activities.

Road Surface Runoff and Other Drainage Structures

Roads that are to be vacated will have adequate, self-maintaining surface drainage. The drainage system will disperse rather than concentrate surface water and should maintain natural drainage patterns. Drainage water will be kept away from steep slopes and unstable areas.

Cross road ditches will be installed and take the place of cross-drainage culverts. The cross road ditches should intercept water from inside ditches, be deeper than standard waterbars, and drain onto stable, vegetated ground. As a minimum, cross road ditches will use 1/2 distance of spacing guidelines used for culverts. (See **Table 1. Guide Table for Water Bar and Relief Culvert Spacing** in the section on forest road design)

Removal of outside berms and/or outsloping of the road surface may also be needed to aid in the dispersal of drainage water.

Treatment of Unstable Areas

Any unstable or potentially unstable road or landing fills or sidecast will be excavated and placed in a stable location so that material does not enter a stream or destroy downslope vegetation. A stable location may be the inside part of the road prism or may be a waste area some distance away. Excavated areas will be shaped for natural drainage as will the excavated material that is deposited in a stable location.

Consult with the geotechnical specialist where risk assessment and confidence in technical design is needed. A slope stability investigation may be needed to ensure the proposed action is appropriate for the site. A slope stability investigation can provide interpretation of the geology in the area and increased confidence in the risk and design of the project.

Erosion and Sediment Control

Erosion control measures will be used where soil has been exposed. Vegetation is the ultimate, long-term erosion control agent. Seeding with grass and legumes will reduce surface erosion and can improve soil productivity. However, because it may take time to grow a thick, effective cover, some short-term erosion control measures (such as straw mulch or silt fences) may be needed for the first year or two after a road is vacated.

Planting with trees and shrubs can provide a long lasting vegetative cover and provide stronger root systems, which enhance soil stability for long term erosion and sediment control.

Blocking the Road

The vacated road needs to be blocked to vehicular traffic to prevent road surface rutting and damage to vegetation and crossroad ditches. One method used to block a road is to construct a trench across the entrance that is large enough to make it difficult to bridge or fill. Other methods include piling large stumps, boulders, concrete blocks or other debris in the entrance to block access.

Posting a sign stating that the road is closed may be helpful in advising the public that the access to the road is restricted to prevent damage to forest resources and that the road may be unsafe for use by mechanized equipment.

Timing

To prevent unnecessary damage or erosion, the work needed to vacate roads will be performed during periods when soil moisture is low. The work will also be timed to be in compliance with any restrictions on in-stream activities.

While it is assumed that properly vacated roads will not need further maintenance, their condition will be monitored. If unforeseen road drainage or stability problems develop after the road is vacated, consideration will be given to correcting the problems. The decision to take corrective action will depend upon the feasibility and practicality of the action.

Guidelines for Areas of Special Concern

Removal of fills over 10 feet in vertical height will have a project administrator present during removal. The project administrator should have some background regarding the removal of large fills. Natural slopes associated with large fills will be reestablished as closely as is feasible.

Removal of stream crossing structures in fish-bearing streams, including round culverts, arch pipes, bottomless arch pipes, and bridges, will have a project administrator present during removal. These structures will be removed with the least soil disturbance feasible. Removal of structures in fish-bearing streams will involve consultation with an ODFW fish biologist to ensure that removal will have a minimal impact on aquatic habitat and the fish.

Any unstable slopes or wet areas encountered during vacating must have immediate action taken to minimize the risk of failure. Consultation with a geotechnical specialist may be needed to determine the proper course of action.

All activities conducted while vacating forest roads on state-owned forest land will meet or exceed the requirements of the Oregon Forest Practices Act.

Road Proposed for Vacating Form

The Road Proposed for Vacating form will be found on the next page. The form provides a checklist for determining the current and future uses of the road. It also serves as a review mechanism for the managers that are involved in making the decision to vacate a road. Managers should keep in mind; there may be other uses besides forestry for a road that will warrant keeping the road in an active state. The Recreation Coordinator is one example of a check off point that will help make a road vacating decision. Additional input or approvals may be added to the forms approval list as needed.

ROAD PROPOSED FOR VACATING

ROAD NAME _____

The road on the attached map is being considered for vacating. This may involve culvert removal, water barring and blocking to vehicular traffic. Please look over your needs and check [yes] or [no] in the appropriate areas. If you are currently using the road but will have no future use after the project is completed, please fill in project completion date under -NO-(DATE). If you are not currently using the road, but expect a future use, please fill in date under -YES-(YEAR).

<u>CURRENT USE</u>		<u>ROAD USE</u>	<u>FUTURE USE</u>	
-NO-	-YES-		-NO-(DATE)	-YES-(YEAR)
_____	_____	Fire Protection Net	_____	_____
_____	_____	Management Net	_____	_____
_____	_____	Timber Sales - Clear cut	_____	_____
_____	_____	Commercial Thinning	_____	_____
_____	_____	Cedar Sale Activities	_____	_____
_____	_____	Woodcutting Activities	_____	_____
_____	_____	Bough Sales	_____	_____
_____	_____	Slash Burning	_____	_____
_____	_____	Tree Planting	_____	_____
_____	_____	Spray Projects	_____	_____
_____	_____	Hand Release	_____	_____
_____	_____	Precommercial Thinning	_____	_____
_____	_____	Tree Pruning	_____	_____
_____	_____	Stocking Surveys	_____	_____
_____	_____	Progeny Site Access	_____	_____
_____	_____	Property Survey Access	_____	_____
_____	_____	Recreation Access	_____	_____
_____	_____	Easements	_____	_____
_____	_____	Other (describe):	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

TYPE OF VACATING RECOMMENDED: _____

APPROVED:

 Reforestation Unit Forester

 District Engineering Supervisor.

 Management Unit Forester

 Recreation Coordinator

 Assistant District Forester