

11. Road Maintenance and Abandonment Planning for Large Forest Landowners

11.1 Introduction

Forest Practices Rules include a Road Maintenance and Abandonment Program to help prevent sediment and hydrology-related impacts to public resources such as fish and water quality and to fix fish passage barriers. The Road Maintenance and Abandonment Plan (RMAP) rules require large forest landowners to plan and schedule all of the work needed on their lands necessary to improve and maintain their forest roads to meet standards specified in chapter 222-24 WAC. In an effort to minimize the economic hardship on small forest landowners, the 2003 Washington State Legislature passed a RMAP bill (HB1095) that modified the definition of “small forest landowner” and clarified how the RMAP requirements applied to them. Small forest landowners have the option to submit a “checklist” RMAP with each Forest Practices Application or Notification, rather than providing a plan for their entire ownership.

Large forest landowners were required to have all roads within their ownership covered under a DNR-approved Road Maintenance and Abandonment Plan (WAC 222-24-051) by July 1, 2006 and to bring all roads into compliance with forest practices standards by July 1, 2016. This includes all roads that were constructed or used for forest practices after 1974. An inventory and assessment of orphaned roads (i.e., forest roads and railroad grades not used for forest practices since 1974) must also be included in the plan. Forest Practices Rules require large forest landowners to prioritize road maintenance and abandonment work based on a “worst first” principle — starting with road systems where improvements would produce the greatest benefit for public resources and schedule their RMAP work to be metered throughout the time period on an “even-flow” basis so as not to wait until the last few years to complete all the work. Within each plan, maintenance and abandonment work is prioritized as follows:

- Remove blockages to fish passage,
- Prevent or limit sediment delivery,
- Correct drainage or unstable side-cast in areas with evidence of instability that could adversely affect public resources,
- Disconnect the road drainage from typed waters,
- Repair or maintain roads that run adjacent to streams,
- Minimize road interception of surface and ground water.

11.2 Extension of RMAP Deadline

The Forest Practices Board (Board) amended WACs 222-24-050 and 222-24-051 to allow forest landowners to extend the deadline for completing the road work scheduled in their Road Maintenance and Abandonment Plans (RMAPs). The rule change allows for an extension of the deadline for up to five years, or until October 31, 2021. While landowners have made substantial progress in meeting their RMAP commitments, the Board has adopted this rule amendment because of the impact of the 2008 economic downturn on forest landowners.

Landowners depend on the revenue from timber harvests to accomplish their road improvements. On August 9, 2011 the Board adopted the RMAP extension process. During this reporting period, seven RMAP extensions have been requested by forest landowners and received approval. This brings the total to nine RMAPs that have received approved extensions since rule adoption.

Beginning with the 2011 RMAP reporting cycle, the Forest Practices Program implemented standardized RMAP data collection and evaluation, and improved the reporting process. Particular attention remains focused on implementation consistency and standardization including even-flow and worst-first assessment and tracking. The program has made the following improvements:

- Applying consistent interpretation of accomplishment reporting elements,
- Standardizing data collection methods,
- Creating a statewide corporate Geographic Information System (GIS) database for RMAP information, tracking, and reporting purposes for fish passage barriers,
- Improving data sharing and transparency,
- Adding two accomplishment reporting elements in order to provide a baseline for improving evaluation of even-flow:
 - Total number of fish passage barriers identified,
 - Total number of forest road miles identified needing improvement.

The Board has amended Board Manual Section 3 *Guidelines for Forest Roads*, which explains requirements and processes in the RMAPs program.

11.3 Road Maintenance and Abandonment Plan Implementation

Following are three tables:

- *Statewide Road Maintenance and Abandonment Plan Accomplishment Report 2001-2012*;
- *Statewide Cumulative Road Maintenance and Abandonment Plan Accomplishment Report*; and
- *Fish Passage Barrier Information for Large Landowners*

These tables detail the progress that's been made by forest landowners from July 2001 until December 2012. The information provided in the tables is derived from data supplied by landowners as part of their annual accomplishment review. Following the *Statewide Road Maintenance and Abandonment Plan Accomplishment Report 2001-2012* is a description of each reporting element. In addition, several of the descriptions include reasons why some reporting element numbers fluctuate as well as providing more in-depth information on why earlier accomplishment reports differ from this report.

Statewide Road Maintenance and Abandonment Plan Accomplishment Report 2001-2012

DNR Region	Number of approved RMAPs	Miles of forest road assessed	Miles of forest road identified needing improvement*	Miles of road improved	Miles of road abandonment	Miles of orphaned roads	Number of fish passage barriers identified	Number of fish passage barriers corrected	Miles of fish habitat opened	Total of RMAP checklists from small forest landowners
Northeast	89	7,625	739	5,119	302	96	833	683	365	2,914
Northwest	28	5,614	1109	2,477	2,801	726	538	381	121	1,633
Olympic	23	6,482	1510	820.38	135	256	1,286	719	352	897
Pacific Cascade	74	22,429	3180	9,830	683	536	3,174	2,210	1357	3,395
South Puget Sound	25	8,856	739	1,187	498	276	772	441	218	775
Southeast	15	6,500	289	592	582	271	689	412	245	654
Statewide Totals	254	57,506	7,568	20,025	5,002	2,162	7,292	4,846	2,659	10,268

The content of this table is based upon data provided by landowners who are responsible for the facts and accuracy of the information presented herein.

Note:

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Beginning with the 2011 RMAP reporting cycle (January 1, 2011 to December 31, 2011), landowners provided a new data element — “*miles of forest road identified needing improvement*”— based on the definition below. The data was first incorporated in the 2012 *Forest Practices HCP Annual Report*.

Reporting Elements

Number of Approved RMAPs

The number of approved Road Maintenance and Abandonment Plans (RMAPs) represents those plans submitted mostly by large forest landowners. Many large landowners have more than one plan. There currently are 18 small forest landowners that could have opted to submit a “checklist” RMAP, but have chosen (in writing) to continue to follow their pre-2003 submitted RMAP, or have decided to submit a plan as described in 222-24-0511(2). This does not include land previously owned by a large landowner covered under an approved RMAP, which has been sold to a small forest landowner that chooses not to continue/implement the plan.

Previously, this number was reported as either:

- 1) *Number of landowners* having an approved RMAP (i.e., 11 landowners within one region would equal 11 RMAPs), or
- 2) *Number of approved RMAPs* (i.e., 11 landowners within one region, each having 3 separate RMAPs, would equal 33 RMAPs).

Beginning with the 2010 RMAP reporting cycle (compiled and reported the next spring), and thereafter, this number is reported as ‘*Number of approved RMAPs*’. The program chose this reporting strategy due to the importance of monitoring and tracking the number of approved plans rather than the number of landowners.

The number of approved RMAPs is dynamic in nature and can change over time. Large landowners may have one RMAP for large holdings or multiple RMAPs covering several blocks within the large holding. A landowner may choose to change their strategy on the number of RMAPs they manage. Property transactions can lead to an increase or decrease in the number of approved RMAPs. Small landowners that decide to discontinue their plan and obtain a checklist would result in a decrease of RMAPs reported. Another reduction in the number may be due to a large forest landowner’s decision to discontinue or reduce the amount of harvest, and submit a request to be released from the program due to qualifying as a small forest landowner (WAC 222-16-010).

Miles of Forest Roads Assessed

Landowners arrived at this number by conducting an inventory and assessment of all forest roads contained within a specific RMAP. This number includes roads that meet Forest Practices Rule standards as well as those that need to be improved.

Large landowners have completed a full year reporting cycle using the new RMAP annual accomplishment reporting form. This data is not expected to fluctuate significantly over time.

Miles of Forest Road Identified Needing Improvement

Implementing the definition as described below, *Miles of Road Improvement*, the data was partially completed (dependent upon each landowners RMAP accomplishment reporting date) and first reported in the 2012 FPHCP Annual Report. All landowners have now completed a full reporting cycle for the annual RMAP accomplishment report.

Miles of Road Improvement

For Road Maintenance and Abandonment Plan purposes, an improved road or road segment is defined as locations where actions have been taken to address issues associated with:

1. fish passage;
2. delivery of sediment to Typed waters;
3. existing or potential slope instability that could adversely affect public resources;
4. roads or ditch lines that intercept ground water, and
5. roads or ditches that deliver surface water to any Typed waters.

The improvements are to meet the current Forest Practices Rule requirements and are identified in the landowner plan, or problematic road conditions are subsequently discovered and actions are identified for inclusion within the time period associated with an approved RMAP.

Once a landowner identifies that a road or road segment is brought up to current rule standards, it is captured in that year's accomplishment report. Provided the DNR RMAP Specialist concurs, the road no longer will be identified as an RMAP obligation; therefore, the road or road segment would not be included in subsequent reporting years for miles of road needing improvement. Over time, the "miles of forest road identified needing improvement" will decrease as the "miles of road improved" increases. All roads not under an RMAP obligation are subject to standard Forest Practices Rules found in Chapter 222-24 WAC.

Miles of Road Abandonment

The number of road abandonment miles includes those that have been reported under an approved Road Maintenance and Abandonment Plan as abandoned per WAC 222-24-052(3). Roads are not considered 'officially abandoned' until the DNR RMAP Specialist or Forest Practices Forester reviews the on-the-ground abandonment to ensure it meets the requirements. Reported road abandonment miles reflect some road miles that may not have been officially abandoned at the time this report was distributed.

Miles of Orphaned Roads

The number of miles of orphaned roads includes those that have been reported under an approved RMAP as orphaned. Inventory and assessment of orphaned roads will be used to help in the evaluation of the hazard-reduction statute and to determine the need for cost-share funding (RCW 76-09-300).

This information is challenging to track precisely due to the difficulty in locating orphaned roads on the landscape; they often are obscured by brush and forest cover and do not appear on any map. Some orphaned roads have been converted to active forest roads, some abandoned, and some may be scattered throughout the landscape with present status unknown.

Number of Fish Passage Barriers Identified

The total number of fish passage barriers includes those identified as part of an approved RMAP inventory.

In 2006, the revised water-type map was used as an additional tool to identify potential fish passage barriers. The total number of fish passage barriers will fluctuate over time, depending on when landowners verify on-the-ground physical characteristics and/or perform a protocol survey or other approved methodology for verifying fish presence or absence. In cases in which a stream type has been changed from ‘Type F’ to ‘Type N’—therefore negating the landowners’ obligation to remove fish passage barriers—sizing of the culvert will be assessed to ensure that it is able to pass a 100-year flood level event. Due to limited habitat gained, barriers also may be removed from the total number, if the structure was determined by WDFW to be sufficient to remain until the end of its functional life. Also, a barrier may be removed from the list if the structure was determined to play an important role in maintaining pond or wetland habitats; these decisions are made with stakeholder consultation.

Number of Fish Passage Barriers Corrected

The corrected number of fish passage barriers includes the total number that have been permanently removed or fixed with a fish-passable structure. Previously, this number included some streams that had been downgraded from a ‘Type F’ to a ‘Type N’, which did not meet the intent of this reporting element. Beginning in the 2010 RMAP reporting cycle, and thereafter, this number is reported as the number of actual fish passage barriers corrected.

Miles of Fish Habitat Opened

The ‘miles of fish habitat opened’ refers to stream habitat opened for fish use after the fish passage barrier has been removed or replaced. This number is an estimate, due to the inability to always measure stream length on the ground. The measurement often is based upon aerial photos or maps.

This number of miles of fish habitat opened may fluctuate depending on when, or whether or not, a stream type verification survey occurs. If there are no protocol surveys to pinpoint exact breakpoints, this number is reflected by large forest landowner data or topographical information. It also is difficult for landowners to determine this number if the stream enters another ownership.

Number of Checklists Submitted by Small Landowners

The ‘number of checklists’ is the total submitted to the DNR regions by small forest landowners since the 2003 rule change. Small forest landowners may submit more than one RMAP Checklist.

Beginning in the 2007 RMAP reporting cycle and thereafter, checklists have been separated from the ‘Number of Approved RMAPs’ and tracked separately.

The following table, *Statewide Cumulative Road Maintenance and Abandonment Plan Accomplishment Report* displays the data cumulatively by year, rather than by DNR region.

Statewide Cumulative Road Maintenance and Abandonment Plan Accomplishment Report

Year	Number of Approved RMAPs & Submitted Checklists	**Total # of RMAP Checklists from Small Forest Land-owners	***Miles of Forest Road Identified Needing Improvement	Miles of Road Improved	Miles of Road Abandoned	Miles of Orphaned Roads	Miles of Habitat Opened	# of Fish Passage Barriers Corrected
2001-2002	4,066	---	---		645	502	52	46
2001-2003	5,530	---	---		1,007 / *362	1,246	175 / *123	355 / *309
2001-2004	7,401	---	---		1,587 / *580	1,944	647 / *472	1,217 / *908
2001-2005	8,419	---	---		1,856 / *269	2,107	775 / *128	1,363 / *146
2001-2006	9,950	---	---		2,068 / *212	2,313	982 / *207	1,819 / *456
**2001-2007	107	8,121	---	13,140	2,153 / *85	2,293	1,221 / *239	2,248 / *429
2001- 2008	130	8,628 / *506	---	15,019 / *1,879	2,431 / *278	2,305	1,448 / *227	2,871 / *623
2001-2009	126	8,804 / *176	---	16,195 / *1,176	2,621 / *190	2,305	1,569 / *121	3,141 / *270
2001-2010	262	9,187 / *383	---	18,475 / *2,280	2,915 / *294	2,333	1,772 / *203	3,769 / *628
2001-2011	247	9,696 / *509	7,413	18,738 / *263	3,090 / *175	2,393	2,189 / *417	4,258 / *489
2001-2012	254	10,268 / *572	7,568	20,026 / *1,288	5002 / *1,912	2162	2659 / *470	4,846 / *588

* Number represents the increase from the previous year's report.

** Beginning in reporting year 2007 and thereafter, checklists have been separated from the 'Number of Approved RMAPs' and tracked separately.

*** This was a new reporting element beginning with the 2011 RMAP reporting cycle.

Fish Passage Barriers

In addition to the fish barrier information in the above tables, the following table, "*Fish Passage Barrier Information for Large Landowners*" displays how many barriers have been repaired cumulatively since 2001; the total repaired in calendar year 2012, and the percent of total repaired as of December 31, 2012.

Fish Passage Barrier Information for Large Forest Landowners

DNR Region	Number of fish passage barriers identified*	Number of fish passage barriers corrected from 2001-2012	Number of fish passage barriers corrected in 2012	% of total fish passage barriers corrected as of 12/31/2012
Northeast	833	683	32	82%
Northwest	538	381	45	71%
Olympic	1,286	719	99	56%
Pacific Cascade	3,174	2,210	319	70%
South Puget Sound	772	441	88	57%
Southeast	689	412	5	60%
Totals	7,292	4,846	588	66%

*This number may fluctuate annually as water types are confirmed and/or modified.

11.4 Washington Department of Fish and Wildlife Efforts

Biologists from the Washington State Department of Fish and Wildlife (WDFW) provide an essential role in the review and implementation of RMAPs. In Fiscal Year 2013, WDFW biologists reviewed approximately 500 Road Maintenance and Abandonment Plans statewide and issued approximately 400 Hydraulic Project Application (HPA) permits associated with those plans. As many HPAs include multiple projects or locations, these 400 HPAs equate to more than 700 projects or locations associated with RMAPs.

WDFW biologists reviewed RMAPs as landowners made annual changes pertaining to fish passage structures, fish habitat, stream typing, and sediment delivery. Ownership changes require additional RMAP revisions and review. The complexity of technical assistance and HPAs needed from WDFW biologists has increased as work is shifting from the easier barrier fixes to the more challenging crossing structures, especially those higher in the watersheds.