



Forest Practices Habitat Conservation Plan

5 YEAR REPORT

Washington State Department of Natural Resources

Forest Practices Program, Forest Practices Division

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Introduction



In 2005, Washington State completed the *Forest Practices Habitat Conservation Plan* (Forest Practices HCP) to protect aquatic and riparian-dependent species habitat on more than 9 million acres of state and private forestlands. That is, the State and private forest landowners made a commitment to protect habitat for certain fish and amphibians that live in or depend on streams, lakes, and wetlands and the forests adjacent to them. The Forest Practices HCP was the final product (following development of the Forests and Fish Report, new Forest Practices Rules, and legislation directing the development of a Habitat Conservation Plan) needed to solicit Federal assurances for conducting forest practices that could put a listed fish or amphibian species at risk. The Forest Practices HCP was submitted to The United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA Fisheries) (collectively, “the Services”). The Services accepted Washington’s Forest Practices HCP and under the authority of the Endangered Species Act, on June 5, 2006, issued Incidental Take Permits to Washington State.

Protection measures in the Forest Practices HCP include state forest practices laws, rules, guidance, and an administrative framework designed to minimize and mitigate forestry-related impacts and conserve habitat for species covered by the plan. The protection measures address: riparian and wetland management zones; channel migration zones; wetland and water typing systems; equipment limitation zones; protection measures related to unstable slopes; road construction, maintenance, and abandonment; fish passage at road crossings; and rain-on-snow hydrology. Together these measures are designed to contribute to the improved quality of stream habitat function by:

- Ensuring adequate levels of large wood recruitment
- Providing shade, bank stability, nutrients, and litter fall
- Limiting excess fine and coarse sediment delivery to surface waters and wetlands
- Assuring no net loss of wetlands due to road construction
- Maintaining hydrologic regimes

Under the Forest Practices HCP, the state committed to submit a comprehensive report to the Services every five years. This Forest Practices HCP comprehensive review marks the completion of the first five years of implementation of the Forest Practices HCP. The intent of this review is to provide information on accomplishments, challenges, trends, and future goals for the Forest Practices HCP implementation.

Accomplishments

Generally, accomplishments can be categorized into two broad areas: direct on-the-ground habitat protection measures; and administrative and process improvements that ultimately assist in on-the-ground protection. During the first five years of the Forest Practices HCP implementation, there were several accomplishments in both areas.

Habitat Protection Measures

The current Forest Practices program under the Forest Practices HCP protects more habitat than was protected under the prior Forest Practices program through:

- **Increased riparian management zone protection:** For example, in western Washington, previous Forest Practices Rules, on fish bearing streams, allowed for a minimum riparian management zone width of 25 feet. New Forest Practices Rules under the Forest Practices HCP have a minimum width on fish bearing streams that varies between 90 and 200 feet depending on site class, which is a measure of potential tree growth.
- **Roads constructed and maintained under more protective rules:** Proposed road work under more stringent rules was included on 11,437 submitted Forest Practices Applications during the first five years of Forest Practices HCP implementation.
- **Brought existing roads built under less protective road standards up to current,** more protective standards on 18,738 miles of forest road.
- **Corrected 4,390 fish passage barriers** opening 2,272 miles of habitat.

Administrative and Process Improvements

The Forest Practices Program administrative framework supports the development, implementation and refinement of the program, and each part has established processes that function as infrastructure for accomplishing tasks. Processes are examined regularly for improvement.

Highlights of efforts during the five years:

- Changes to Forest Practices Board rules in several areas—perennial initiation points; long-term Forest Practices Applications for small forest landowners; desired future condition; riparian open space program; watershed analysis mass wasting prescriptions; and forest biomass.

- Completion of 32 Adaptive Management Projects since the inception of the Adaptive Management Program in 2001.
- Development of the Adaptive Management Program Strategic Plan.
- Changes to Cooperative Monitoring, Evaluation, and Research (CMER) Work Plan that allows for better understanding of how rule group critical questions (see following AMP section for more information) are being addressed and for comprehensive project statuses.
- Re-prioritization of Adaptive Management Program projects.
- Use of creative outreach methods to reach small forest landowners about available financial assistance programs.
- Completion of five annual compliance monitoring samples, including: 654 water or wetland prescriptions; 194 road construction or haul route prescriptions; and one year focus samples of wetland management zones, riparian zones in Exempt 20-Acre ownerships, alternate plans, water classification and wetland classification.
- Creation of compliance monitoring chartered stakeholder (advisory) committee.
- Completion of two biennial compliance monitoring reports.
- Revised Forest Practices Rules and updated guidance on landowner-tribal meetings.
- Completion of major update of tribal areas of interest and contact information to improve interactions regarding submitted Forest Practices Applications.
- Ongoing efforts across the state on education of landowners regarding cultural resources and their protection.
- Preservation of Forest Practices Program operational staffing levels during challenging economic times.
- Completion of 9 out of 21 Clean Water Act Milestones.
- Development of Road Maintenance and Abandonment Plan website that can be accessed by stakeholders to review RMAPs for completion.

Challenges

- Board implementation of permanent water-typing rules.
- Efficiency of the Adaptive Management Program review and approval consensus decision-making process.
- Availability and capacity of human resources to implement the Adaptive Management Program.
- Establishment of a consensus strategy through the Adaptive Management Program for identifying the uppermost point of perennial flow on Type N waters.
- Long-term funding for the Adaptive Management Program.

- Ways to reach small forest landowners to inform them of available cost sharing programs.
- Economic recession impact on rate of road improvements.
- Concerns regarding wide confidence intervals in certain samplings for the Compliance Monitoring Program.
- Ways to acknowledge the high level of compliance with rule conditions when non-compliance is due to an impact rated as “minor”.
- Budget constraints due to the economic slowdown which affected the State’s budget, and therefore the Forest Practices Program budget. This has affected all parts of the program.
- Limited budget for Forest Practices Program-lead training of stakeholders, forest landowners, and program staff.
- Inaccurate water typing reported on Forest Practices Applications.
- Lower than desired compliance for riparian management zone prescriptions and for forest road construction and maintenance prescriptions—particularly those implemented by small forest landowners.

Trends and Notable Points in Implementation

The first five years of Forest Practices HCP implementation has revealed several challenges and noticeable trends:

Refinements are needed to improve efficiency and effectiveness of the Adaptive Management Program.

Project demand for financial assistance surpasses available funding for the Forestry Riparian Easement Program, the Family Forest Fish Passage Program, and the Rivers and Habitat Open Space Program (formerly named the Riparian Open Space Program).

A very low percentage of Forest Practices Applications are associated with Exempt 20-Acre parcels.

An extremely low number of Forest Practices Applications are submitted for activities in the bull trout areas of concern. This implies that riparian function will not be measurably diminished in these sensitive areas.

There is a need for annual refresher training for DNR staff regarding the Forest Practices HCP and the reporting requirements for the Incidental Take Permit.

Steady, on-going corrections to remove fish passage barriers are being made through Road Maintenance and Abandonment Plans and the Family Forest Fish Passage Program.

Steady, ongoing road improvements are resulting from implementation of Road Maintenance and Abandonment Plans.

Compliance monitoring results show less than desirable compliance for riparian management zone prescriptions and road construction and maintenance prescriptions, particularly as implemented by small forest landowners.

Future Forest Practices HCP Implementation Goals and Desired Outcomes

Addressing the challenges associated with trends and points above—and others—will involve finding new ways to work through these questions. Work will include diverse stakeholders that sometimes hold opposing views on issues and approaches. Some of the goals related to addressing challenges and other desired outcomes include:

- The Board will implement the permanent water-typing rule.
- The State will find more effective and efficient processes in the Adaptive Management Program using tools such as LEAN.
- The State will find partners for the Adaptive Management Program that can help alleviate the limited human resources for program implementation.
- The State's Adaptive Management Program will identify a strategy to help determine the method for identifying the uppermost point of perennial flow.
- The State's Adaptive Management Program participants will find long-term funding for the program.
- The State's Small Forest Landowner Office will find ways to reach small forest landowners to inform them of available cost sharing programs.
- The State will find ways to clarify compliance monitoring results.
- The State Forest Practices Training Program, *given additional budget from the legislature for training*, will reinvigorate the training program to help contractors, stakeholders, and state staff understand relevant Forest Practices Program topics.
- The State will work with the legislature to meet the Forest Practices' program's budget needs and will find alternative funding sources.
- The State will improve the accuracy of water types reported on Forest Practices Applications.

Forest Practices Board Summary

The Forest Practices Board (the Board) sets specific standards that are the basis for the Forest Practices program through promulgation of the Forest Practices Rules and approval of board manual sections that provide guidance to those conducting forest practices activities. DNR regulatory staff implement and enforce the rules. Additionally, the Board directs the forest practices Adaptive Management Program.

Over the past five years, the Board addressed a number of issues, making adjustments in the Forest Practices Rules and board manual where needed to ensure the protection of public resources and public safety. It can take several years for a rule to be adopted or a board manual to be changed. Often issues are first negotiated with stakeholder groups; others come directly from the legislature to the Board and can be (but are not always) relatively simple changes. Some issues must traverse multiple stages of consideration before they are decided upon by the Board.

Below is the table showing the new/revised rules that were adopted and sections of the board manual that were approved during the first five years of Forest Practices HCP implementation.

Summary of Rules Adopted and Board Manual Sections Approved July 1, 2007 – June 30, 2011

State Fiscal Year (FY)	Rule Change or Board Manual Change	Summary
FY 2007	Perennial Initiation Points <i>Rule Change</i>	A scientific study completed under the Adaptive Management Program, Type N Stream Demarcation Study, Phase I: Pilot Results (Palmquist, 2005), indicated that the default basin sizes available for use in determining stream perennial initiation points were too large. The Board adopted a rule change to eliminate the option to use a default basin size to determine the demarcation between non-fish seasonal and non-fish perennial streams.
FY 2008	Long-term Forest Practices Applications for small forest landowners <i>Rule Change</i>	The Board adopted rules that authorize DNR to grant approvals of small forest landowners' Forest Practices Applications for up to 15 years. The rule also provides for an analysis of all long-term applications and their impact on public resources when either a Forest Practices Rule change is in process or a new species is listed as threatened or endangered.

State Fiscal Year (FY)	Rule Change or Board Manual Change	Summary
FY 2008	Board Manual Section 21, Guidelines for Alternate Plans	Riparian function information and guidance was added to Board Manual Section 21, <i>Guidelines for Alternate Plans</i> , to help landowners identify, and ultimately understand how to restore and maintain riparian function.
FY 2008	Board Manual Section 21, Guidelines to Alternate Plans	A new section was added to Board Manual Section 21, <i>Alternate Plans for Restoring Riparian Function in Eastern Washington – Identifying Stands at Imminent Risk from Insects, Disease and Fire</i> . This section is intended to help landowners expedite restoration of riparian function to stands that are at imminent risk from insects, disease, or fire.
FY 2008	Northern Spotted Owl Rule Change	The Board extended a moratorium on the practice of decertifying Status 1, 2, and 3 spotted owl site centers. This moratorium was originally adopted in 2005 via an amendment to the definition of “Northern spotted owl site center” in WAC 222-16-010.
FY 2008	Historic sites Rule Change	The Board adopted rule amendments to clarify Class IV-special and Class III classifications of forest practices involving historic sites and other cultural resources. The definition of “historic sites” was removed from WAC 222-16-010, and WAC 222-16-050(1)(f)(ii) was amended to clearly delineate the types of cultural resources, including historic sites, that are classified Class IV-special, which triggers the State Environmental Policy Act (SEPA) process.
FY 2009	Conversion Activities Rule Change	The Board added a definition of “conversion activities” to WAC 222-16-010. This was due to legislative amendments to chapter 76.09 RCW that modified a process when landowners conduct unpermitted conversion activities (Second Substitute Senate Bill 5883, 2007).
FY 2010	Desired Future Condition Rule Change	A scientific study completed under the Adaptive Management Program, <i>Validation of the Western Washington Riparian Desired Future Condition (DFC) Performance Targets in the Washington State Forest Practices Rules with Data From Mature, Unmanaged, Conifer-Dominated Riparian Stands</i> (Schuett-Hames et al., 2005), found that basal area per acre of mature, unmanaged conifer-dominated riparian stands is significantly greater than the basal area targets required in WAC 222-30-021(1)(b). The study also analyzed the difference between the basal area calculations of riparian areas found in the five site classes listed in the rules and concluded there is no statistical difference for basal areas between site classes. In response, the Board adopted rule amendments increasing the target basal area per acre from 275 to 325 square feet for all site classes.

State Fiscal Year (FY)	Rule Change or Board Manual Change	Summary
FY 2010	Board Manual Section 7, Riparian Management Zones	This section was revised to reflect the change to the riparian desired future condition basal area targets in the Western Washington riparian management zone rules. The rule changed from five basal area targets according to site class, to one target of 325 square feet per acre for all site classes. In addition, the entire manual was revised to become a more streamlined and user-friendly document
FY 2010	Northern Spotted Owl Rule Change	The Board adopted rule amendments to discontinue the moratorium on decertifying unoccupied spotted owl site centers (WAC 222-16-010), added a definition of “spotted owl conservation advisory group” (WAC 222-16-010), and added language to WAC 222-16-080 that specified the advisory group’s function. It was the Board’s intention that the existence of this three-member advisory group would add assurance that no potentially important habitat would be lost through timber harvest during the time that the Board developed a long-term conservation strategy.
FY 2010	Board Manual, Section 21, <i>Guidelines for Alternate Plans</i>	The Board approved adding a <i>Fixed Width Riparian Buffers for Small Forest Landowners</i> template to Board Manual Section 21, <i>Guidelines for Alternate Plans</i> . The template prescribes no-harvest buffer widths according to site class that are narrower than the widths prescribed under the RMZ harvest options in WAC 222-30-021(1)(b)(ii).
FY 2011	Riparian Open Space Program (now called “Rivers and Habitat Open Space Program”) Rule Change	The Board adopted changes to chapter 222-23 WAC, <i>Riparian Open Space Program</i> . The rules incorporated 2009 legislative changes to add acquisitions of conservation easements for critical habitat for threatened and endangered species listed in WAC 222-16-080 <i>Critical habitats (state) of threatened and endangered species</i> . This is in addition to habitat within unconfined channel migration zones, which was the single focus of the original program enacted by the state legislature in 1999.
FY 2011	Watershed Analysis Rule Change	The Board adopted changes to the watershed analysis rules to address concerns as to whether the existing unstable slope (mass wasting) prescriptions developed under watershed analysis (chapter 222-22 WAC) were sufficient to minimize or avoid the effects of forest management activities. The new rules instituted a clear review and reanalysis process for DNR to ensure all watershed analyses prescriptions, including mass wasting prescriptions, are kept up- to-date or rescinded.
FY 2011	Forest Biomass Rule Change	The Board adopted an amendment to the definition of “forest practice” in WAC 222-16-010 to include forest biomass. The Board’s purpose was to make it clear to the public that forest biomass harvest is subject to the same resource protection measures as timber harvest in the Forest Practices Rules.

State Fiscal Year (FY)	Rule Change or Board Manual Change	Summary
FY 2011	Administrative Appeals Rule Change	The Board adopted rules incorporating portions of 2010 legislation that streamlined environmental and land use administrative appeals. For the Forest Practices Program the significant aspects of the legislation eliminated the Forest Practices Appeals Board, made DNR's decisions appealable to the Pollution Control Hearings Board, standardized appeal deadlines to 30 days, and defined the term "date of receipt" as the standard trigger for appeal timelines.
FY 2011	Board Manual Section 11, <i>Standard Methodology for Conducting Watershed Analysis</i>	The Board approved two new parts to Board Manual Section 11. Part 8, <i>Review and Reanalysis of Watershed Analysis</i> , provides a general overview of the review and reanalysis process adopted in the watershed analysis rules. Appendix K, <i>Mass Wasting Reanalysis</i> , provides guidance for the reanalysis process for mass wasting (unstable slope) prescriptions.
FY 2011	Board Manual Section 18, <i>Rivers and Habitat Open Space Program</i>	The Board approved this new manual which provides guidance for applicants for the Rivers and Habitat Open Space Program. The program compensates forest landowners for conservation easements on lands within unconfined channel migration zones or containing critical habitat for threatened or endangered species under RCW 76.09.040. Additionally, the name of the program was changed to "Rivers and Habitat Open Space Program."

Water typing rule implementation

The permanent water-typing rule has yet to be fully implemented. The Forests and Fish Policy Type F subcommittee is assessing the effectiveness of the current processes for determining the location break between Type F and Type N Water, and the interplay between the interim and permanent Type F water typing rules. Upon completion of the assessment the subcommittee will provide recommendations to the Policy Committee for the transition from the interim water typing rule to a permanent rule.

Forest Practices Board Response to the December 2007 Storm



Wind damage that occurred near Raymond and flooding damage between Montesano and Elma from the storm event.



An extreme weather event occurred during the first five years of Forest Practices HCP implementation on December 2 and 3, 2007. The State of Washington responded immediately to help those in need and to investigate if any Forest Practices Rules needed to be changed to avoid impacts during similar future events. The storm brought heavy precipitation and high winds. As much as 19 inches of rain fell near the Rock Creek drainage in Wahkiakum County. Wind gusts exceeded 80-miles per hour along the coast and more than 140- miles per hour at Radar Ridge just west of Naselle, Washington. The duration of the wind event was unprecedented in Washington.

The combination of strong winds and high rainfall combined with rapid snow-melt caused severe damage downstream. Effects on forestland included extensive damage to forest roads, bridge

washouts, numerous landslides, debris slides and slumps, and massive blow-down in some areas. Heavy rain reduced soil stability and resulted in extensive flooding.

The state of Washington responded immediately to the disaster. Governor Gregoire created a task group to coordinate various branches of state and local government and others to provide relief to those affected by the floods, and to work on recovery and prevention. The group focused on four areas of work: human services, repairing public systems, financial recovery, and natural resources.

The Forest Practices Board devoted the February 13, 2008 board meeting to the storm. [Presentations](#) were made to the Board describing the storm, the effects of the storm on forest land, post-storm geological reconnaissance, and outreach and landowner assistance including expedited processing of Forest Practices Applications, alternate plan considerations and debris clean-up.

The Board asked whether current rules had been followed in harvest units that contributed to storm damage, and if they were sufficient to protect against damage in future storms. The Board committed to ensuring a thorough review of the potential relationship between forest practices and the impacts of the storm.

The DNR Division of Geology and Earth Resources surveyed and mapped more than 1,000 landslides. Most of the landslides were found to be debris flows. Bedrock and shallow soils were key components of the landslides. More information can be found in DNR's Division of Geology and Earth Resources report, [Landslide Reconnaissance Following the Storm Event of December 1-3, 2007 in Western Washington](#).

DNR worked in partnership with local county governments, local conservation districts, and other state and federal agencies to assist landowners in storm recovery efforts. DNR's outreach to landowners included assistance in debris removal from agricultural land, working individually with industrial forestland owners and family forestland owners, and expediting the processing of storm damage Forest Practices Applications. More detailed information about the expedited processing of storm-related applications can be found [in the memo](#) which was written by Gary Graves (DNR Forest Practices Division Manager).

DNR also held public informational meetings and special storm-related educational workshops, and provided question and answer information on the Small Forest Landowner Office website. More information regarding assistance to small forest landowners can be found in the SFLO authored report [Small Forest Landowner Assistance after the December 2007 Storm](#), September 2008.

The Board decided that follow-up work should be done to help the Board determine if changes were needed to the Forest Practices Rules and/or operational guidance to prevent potential damage to public resources during future storm events. DNR staff proposed and the Board

accepted a work plan at the May 2008 Board meeting. The work plan focused on the following four actions:

1. Convene a group of experts to discuss:

Given the state of science today, are the watershed analysis prescriptions for mass wasting and unstable slopes still effective at reducing landslides and sediment flowing into rivers and streams or should that portion of the rules be revised or replaced in some way? (Refer to chapter 222-22 WAC for information about the watershed analysis process.)

2. Conduct a review of how DNR is processing Forest Practices Applications involving unstable landforms and current guidance on that process.
3. Review, with the Forests and Fish Policy Committee, the adaptive management strategies related to unstable slopes.
4. Provide the Board with the most current climate change information coming from the University of Washington and the Governor's Climate Action Team.

The State is responsive to issues of concern regarding forestland and the species that depend on our forests. This historic storm event initiated a large response effort from the State to address the damaging aftermath and to instigate changes to minimize damage from future events. Rule changes were made after the many discussions and reviews directed by the Forest Practices Board. A brief description of the changes is described in the table above titled *Summary of Rules Adopted and Board Manual Sections Approved* under Fiscal Year 2011, Watershed Analysis/Rule Change.

Adaptive Management Program

Accomplishments

Over the five-year period FY 2007 through FY 2011, the Adaptive Management Program had a diverse set of accomplishments. These included implementing Cooperative Monitoring, Evaluation, and Research (CMER) Committee research and monitoring projects and studies, developing a Strategic Plan adopted by Forests and Fish Policy (Policy), and supporting the Forest Practices Board adoption of rule and board manual changes based on Policy consensus recommendations.

Since the beginning of the Adaptive Management Program in 2001, 32 projects (of 97 total projects in the CMER Work Plan) have been completed. The CMER Committee was working on 19 active studies as of June 2012. Much of the program’s early projects were rule tools -- projects designed to develop, refine or validate tools (or methods and protocols) used to implement the Forest Practices Rules that support the 1999 *Forests and Fish Report*. These projects have helped define, test, or refine protocols, models, and guides that allow the identification and location of rule-specified management features, such as the Last Fish/Habitat Model (a method for evaluating streams for typing), landslide screens, or the achievement of specified stand conditions, such as the ‘desired future riparian condition’ basal area target (DFC). The products of these projects were classified as “rule tools.” These projects did not necessarily result in a final project report or rule change, but did result in draft reports, GIS products or other types of databases.

CMER Research and Monitoring Products

CMER Work Plan	Completed
97 total projects	32
◦ 27 rule tools	15
◦ 61 effectiveness monitoring	16 + 3
◦ 7 extensive (status and trends)	1 + 2
◦ 2 intensive monitoring	0

Over the last few years the Adaptive Management Program has focused much of its effort on effectiveness monitoring and extensive (status and trends) monitoring projects. In addition to the 16 completed effectiveness monitoring projects, three are close to completion. Two extensive monitoring projects are also close to completion in addition to the one completed. Few completed projects have resulted in Policy recommendations to the

Board for action regarding proposed rule or board manual changes because they have either been reports on method development or only the initial phases of multiphase projects.

The [CMER Work Plan](#) is revised annually. The plan underwent significant changes over the last few years. Three particular changes of note are the:

1. incorporation of a new section to each of the research and monitoring programs called “Link to Adaptive Management,”
2. development of a table of CMER projects, objectives, and targets, and
3. re-prioritization of projects by the Policy Committee.

The [CMER Work Plan](#) includes an overview of CMER’s research and monitoring program, with program and project descriptions organized by nine separate rule groups – Type N Riparian Prescriptions, Type F Riparian Prescriptions, Channel Migration Zone, Unstable Slopes, Roads, Fish Passage, Pesticides, Wetland Protection, and Wildlife. The “Link to Adaptive Management” sections were added to the work plan primarily to help the Policy Committee and the Board to understand how the critical questions (critical research and monitoring questions that are pertinent to evaluating rule, guidance, and DNR products effectiveness) for each rule group (groupings of State rule or law by topic) are being addressed by the projects. Knowledge gained or anticipated, identified gaps, and recommendations for addressing gaps are discussed for each critical question. The [Table for CMER Projects, Objectives and Targets](#) shows the complementary relationships among studies found in the annual [CMER Work Plans](#) addressing Forests and Fish Report goals and resource objectives. For each project, the table displays the status, task type, goals, resource objectives, and performance targets addressed by the project.

Table of CMER Projects, Objectives, and Targets					
CMER Projects	Status	Task Type	Goals	Resource Objectives	Performance Targets

Construction of this table has allowed the committee to review all of its projects in a comprehensive way. It provides valuable information to the Policy and CMER committees in their assessment of the balance of efforts being placed in answering questions related to the various resource objectives and performance targets. It also helps answer questions about the balance in the types of research and monitoring undertaken, e.g., ‘rule tools’ vs. monitoring. Finally, projects in the [CMER Work Plan](#) were initially prioritized according to uncertainty and risk— uncertainty in the science behind the rules and risk to aquatic resources if the science or assumptions underlying the rules were incorrect. Projects were re-prioritized by Policy in 2009 according to whether or not they were answering critical questions associated with meeting the [Clean Water Act Assurances](#).

During the last few years the Policy Committee recommended various changes to the Forest Practices Rules and board manual, which the Forest Practices Board subsequently adopted. Included among them were a change in the basal area performance target for Type Np and F streams; a deadline extension for implementing Road Maintenance and Abandonment Plans (RMAPs); a rule to better ensure that watershed analysis prescriptions continue to be protective

enough over time to warrant an exemption from Class IV-special classification; a small forest landowner fixed-width riparian buffer template; and adoption of 15-year Forest Practices Permits for small forest landowners.

Challenges

Early in this five-year period, the Policy Committee developed an Adaptive Management Program Strategic Plan. Factors contributing to the need for a strategic plan included:

- Several years of experience implementing the Adaptive Management Program and the need to review—and improve as necessary—the rules, procedures, standards and structure;
- The need for Policy to be more engaged in prioritizing the work of the CMER Committee and securing supplemental, long-term funding; and
- Reaffirmation of caucus commitment to the collaborative process.

The Policy Committee's strategic plan contained four main goals:

- Secure adequate program funding and raise the public profile of the Adaptive Management Program through enhanced communication;
- Assess and improve Adaptive Management Program efficiency and effectiveness by continually assessing the efficiency and effectiveness of the program in meeting the program's mission and vision and obtaining an independent review of the structure, process and performance;
- Reestablish and maintain productive, collaborative caucus relationships; and
- Increase research capabilities and scientific knowledge by strengthening and developing partnerships with other research organizations.

A top priority for the Policy Committee and caucus principals is the establishment of a long-term source of program funding. As the last of the \$25 million Forests and Fish Agreement implementation funding (through the federal Pacific Coastal Salmon Recovery Fund) was being spent in 2010-2011, the Adaptive Management Program became concerned about future funding of the program. The program has been able to secure temporary, partial funding through the Forests and Fish Support Account created by the 2007 Washington State Legislature and one-year budget provisos; however, funding through budget provisos and the Forests and Fish Account is neither stable nor sufficient.

Challenges to the ability of the CMER Committee to complete research and monitoring projects in an efficient and effective manner include:

- The rigorous review and approval process through consensus decision-making associated with development of study designs, data analyses, and final reports.
- Availability of study sites; and

- Human resource capacity.

Consensus decision-making process: The Adaptive Management Program operates under a collaborative, full consensus decision-making process. For any decision, all participants have to agree. This is a challenge for the CMER Committee's ability to efficiently develop, implement, and report on research and monitoring projects. This process results in high quality studies and reports.

Availability of study sites: Finding study sites is challenging. Program experience shows that it takes at least two years to find study sites meeting selection criteria. This is true of both the complex experimental before-after/control-impact (BACI) studies as well as the simpler extensive status and trends studies. Of particular challenge is getting small forest landowners interested in participating in the studies. Evaluating the effectiveness of Forest Practices Rules related to aquatic resources will be difficult on a large part of the forest land base regulated under the [Forest Practices Habitat Conservation Plan](#) without the participation of this landowner group, particularly those in Eastern Washington.

Human resource capacity: Few new CMER research and monitoring projects have been implemented on the ground in the last few years, in large part due to the lack of scientific capacity in the Adaptive Management Program to develop and implement study designs. Most participants are already heavily involved in current projects, many of which are in the latter stages of analysis or report writing. Consequently, few new research and monitoring projects are being developed and implemented in the field.

Finding research partners is a potential alternative to resolving the scientific resource capacity issue; however, deterrents to this include the research and monitoring focus and collaborative nature of the program. For example, the critical research questions and hypotheses addressed in the program are singularly focused on evaluating the Forest Practices Rules. Many potential partners are interested in broader set of questions and hypotheses. Finally, dealing with the consensus decision-making process and associated time it takes to design, implement, and report on a study tests the patience of potential partners.

Future Direction

One of the four goals of the Adaptive Management Strategic Plan mentioned above was to improve program efficiency and effectiveness, both in the Policy and CMER committees. Four avenues of program improvement have been pursued recently and are expected to help the Adaptive Management Program achieve that goal:

- Revisions to CMER's Protocols and Standards Manual,
- Conductance of a LEAN program on a CMER process,
- A Settlement Agreement between three caucuses—conservation, large forest landowners and the State, and

- Focused discussion on development of a Type N water strategy.

The first three items above primarily focus on process improvements. Recently, the CMER Committee began reviewing and revising its Protocols and Standards Manual. The manual provides information and guidelines concerning the role, structure, governance, and activities of CMER. It is intended to be a living document that will be revised as the CMER program develops and changes. The manual is particularly important as a set of guidelines on review and approval procedures for study designs and reports. The CMER Committee recently approved revisions to Chapter 3, which included a decision-making process that sends issues into dispute resolution much quicker, rather than letting issues linger for many months, often without satisfactory resolution.

The CMER program recently went through a LEAN process related to the development of scoping documents and study designs. LEAN (not an acronym) is a set of principles and methods that focus on identification and elimination of non-value-added activity involved in producing a product or delivering a service to customers. Through the facilitated LEAN program, the CMER Committee agreed to try a new, streamlined process for developing study designs. The expectation is that study designs will be completed in significantly less time than is currently experienced. The new process will be piloted in the near future to evaluate its potential.

Three caucuses (large forest landowners, conservation, the State) signed a Settlement Agreement to head off a prospective lawsuit related to the *Forest Practices Habitat Conservation Plan* that would result in process improvements and a master schedule of CMER projects, if implemented. Since decisions in the Adaptive Management Program are based on consensus, provisions in the Settlement Agreement related to the program must go through the Adaptive Management Program proposal process and be approved by all the caucuses before agreed-upon changes to the program can occur. The Policy Committee recently agreed to accept a formal proposal from the three caucuses to discuss and consider the recommended changes, along with any other recommended changes that might result from the discussion.

The fourth bullet listed above focuses on protective measures for Type N waters. Policy is currently developing a strategy that will ensure the Type N rules are designed and applied in a manner that would effectively protect water quality. In particular, Policy will rank and fund Type N studies as highest priorities for research and monitoring, resolving issues involving identifying the uppermost point of perennial flow, and completing a comprehensive literature review examining the effects of buffering headwater streams. The Policy Committee will examine CMER effectiveness monitoring projects and determine if they are likely to provide the timely information needed to make Policy determinations on Type Np water rule effectiveness.

Small Forest Landowner Office



Over the past five years, the Small Forest Landowner Office (SFLO) has had many accomplishments and successes, however, much more work needs to be done in order to fulfill the SFLO legislative mandates. Below is a summary of the SFLO program accomplishments and challenges during the first five years of Forest Practices HCP implementation.

Forestry Riparian Easement Program

The [Forestry Riparian Easement Program](#) (FREP) compensates eligible small forest landowners for retaining riparian trees in exchange for a 50-year conservation easement on those lands with “qualifying timber.”

From 2006 to 2010, the legislature appropriated between \$8 million and \$10 million per biennium to the Forestry Riparian Easement Program. However, the 2010 Legislature did not appropriate any funds to the FREP, causing the program to cease any easement acquisitions during that year. In 2011 the state supplemental budget allotted \$1 million for easement acquisition.

Forestry Riparian Easement Program Summary

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Amount Appropriated	\$8,000,000		\$10,300,000		\$0	\$1,000,000
Easements Purchased	43	40	42	75	0	12
Amount Requested	\$13,050,000		\$13,800,000		\$10,000,000	
Acres Purchased	602	857	804	1,049	0	148
Average Value of Easement	\$82,557	\$91,909	\$92,987	\$73,333	0	\$77,417
Total Applicants on List	125	150	154	140	75	91

From FY2006 to FY2011, the Forestry Riparian Easement Program purchased 212 easements which totaled 3,460 acres at an average value of \$83,640.

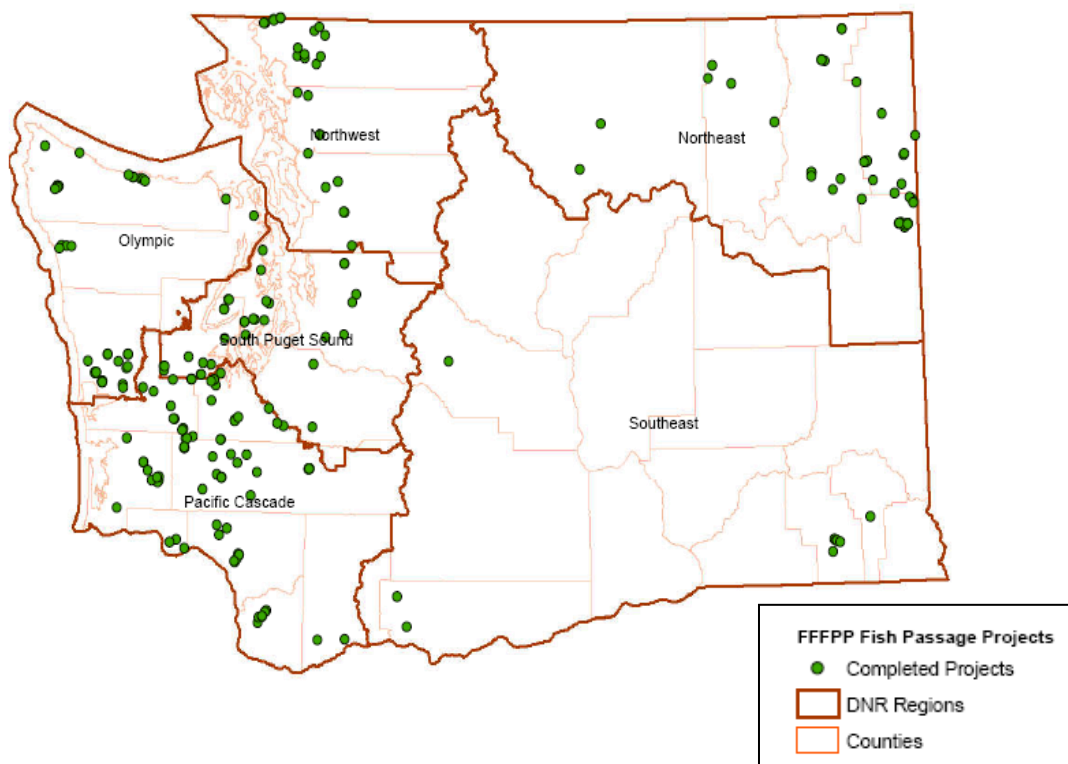
The FREP is funded through capital appropriations, and with the state budget shortfall in 2012, the program is seriously underfunded. The total number of applicants on the waiting list increases every year. At the rate the FREP is currently funded, and considering the number of small forest landowners applying for the program from FY 2006 to FY 2011 (an average of 45 applicants per year) the program will not be able to compensate all of the small forest landowners on the waiting list.

Family Forest Fish Passage Program

The Family Forest Fish Passage Program (FFFPP) is extremely efficient, and has provided important contributions to small forest landowners toward removing fish passage barriers on their land during the first five years of Forest Practices HCP implementation. The program continues to be a success and is a model for assisting landowners and interagency cooperation. Three state agencies and a stakeholder group cooperate to manage and fund the FFFPP.

Challenges include program funding, filling data gaps in the inventory information, and reaching out to small forest landowners about the availability of this program. DNR and cooperating partners continue to pursue funding for stream inventory-related work. The Small Forest Landowner Office continues successfully obtaining grants to help offset the small state capital fund allocation for the program.

FFFPP Fish Passage Projects Completed through 2011



Family Forest Fish Passage Program Projects Completed or Funded through 2011		
DNR Region	Sites	Miles of Habitat Opened
Northeast Region	38	133
Northwest Region	19	27
Olympic Region	44	60
Pacific Cascade Region	62	193
Southeast Region	10	39
South Puget Sound Region	20	48
Totals	193	500

Rivers and Habitat Open Space Program

The [Rivers and Habitat Open Space Program](#) (formerly known as the Riparian Open Space Program) ensures the long-term conservation of aquatic resources and upland habitats by acquiring conservation easements on lands and timber within a specific type of channel migration zone (CMZ) known as an ‘unconfined channel migration zone’ and habitat of threatened and endangered species. During this five year reporting period, 458 acres within CMZs have been placed into easement.

Forest Stewardship Program

DNR’s [Forest Stewardship Program](#), supported by USDA Forest Service funds, provides outreach, education, and technical assistance to family forest owners including wildlife habitat protection and enhancement information. During this five year reporting period, DNR Stewardship Foresters and the Forest Stewardship Program Wildlife Biologist have provided individual on-site forest management advice to over 6,000 landowners. Additionally, more than 18,000 family forest

landowners have attended educational programs, including Regional Forest Owners Field Days and Forest Stewardship Coached Planning Short Courses, conducted by Washington State University Extension in partnership with DNR and other collaborators.



Small Forest Landowner Office Outreach Efforts

Accomplishments in the Small Forest Landowner Office Outreach

Goals For Reporting Period	Outcomes For Reporting Period
1. Presentation to groups around the state	TFW Meetings District Meetings WFFA Meetings WCLA Training Events Society of American Foresters Meetings Regional Forest Owner Field Days Small Acreage Expo
2. On-line Survey	546 landowners surveyed
3. Small Forest Landowner News	3,500 subscribers
4. Family Forest Fish Passage Program (FFPP) Outreach	FFFPP on-line application
5. Alternate Plan Outreach	Created an Alternate Plan Assistance Guide
6. Brochures	Created a Forestry Riparian Easement Program (FREP) brochure Created initial FFFPP brochure Updated the FFFPP brochure
7. SFLO Website	Complete re-design of the SFLO website
8. Fact Sheets	Created a FFFPP Fact Sheet Created a FREP Fact Sheet Created a Rivers and Habitat Open Space Program (SHOSP) Fact Sheet
9. Media Outreach	Multiple Media Advisories on FFFPP Media Advisory on RHOSP Numerous Blogs on FREP and FFFPP
10. Social Media Outreach	The SFLO now has a Facebook page SFLO pictures are posted on Flickr

Exempt 20-Acre Forest Practices Applications

Washington’s Legislature exempted certain forestland parcels from some of the new riparian protection measures outlined in the [1999 Salmon Recovery Act](#). The intent was to alleviate the financial burden the environmental protection rules placed on very small forest landowners. Exempt parcels include those that are 20 contiguous acres or less and are owned by individuals whose total ownership is less than 80 forested acres statewide. These parcels are referred to as “exempt 20-acre parcels.” While not subject to some Forests and Fish riparian rule protection requirements, exempt 20-acre parcels must provide protection for public resources in accordance with the Forest Practices Act.

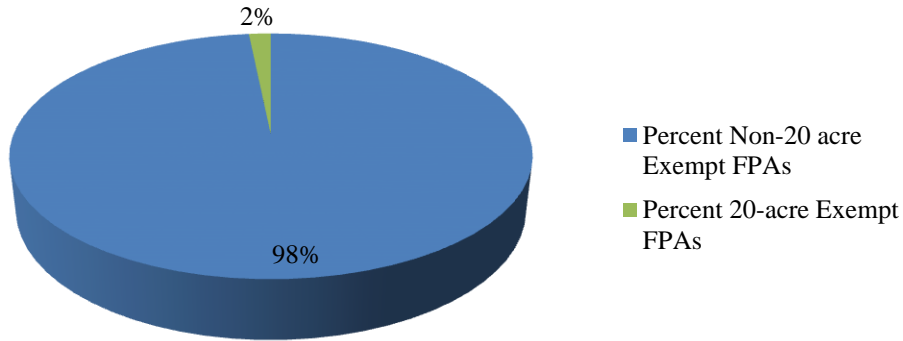
At the time of the Forest Practices HCP and Incidental Take Permit signing, the unknown frequency of future Exempt 20-Acre applications with less protective Forest Practices Rules led to concern about increased risk to listed species. Consequently, tracking systems were established, once the Incidental Take Permits were signed, to help understand the status of Exempt 20-Acre Forest Practices Applications, and how ITP conditions, including a ‘grandfathering provision’ for exempt 20-acre parcels, were being met. Following is information generated over the first five years of the permits.

Extent of Exempt 20-acre Forest Practices Applications

One measure of impact is the relative number of Exempt 20-Acre FPAs to all applications in the state. The following table provides FPA numbers showing overall and Exempt 20-Acre applications. The reader will note that a very low percentage of Forest Practices Applications are associated with Exempt 20-Acre parcels. This implies that the less restrictive riparian rules allowed for Exempt 20-acre parcels will likely have a very low impact on habitat.

Forest Practices Applications (FPAs)	2007	2008	2009	2010	2011	Total for 5 Years
Number of approved, non-renewal FPAs	6,533	5,396	4,849	3,594	3,576	23,948
Number of Exempt 20-Acre FPAs with fish-bearing water	130	90	47	63	97	427
Number of Exempt 20-Acre FPAs that were conversions with fish-bearing water	19	12	7	3	5	46
Number of Exempt 20-Acre FPAs with fish-bearing water that were not conversions	111	78	40	60	92	381
Percent of approved non-conversion Exempt 20-Acre FPAs with fish bearing water	1.7%	1.4%	.82%	1.7%	2.6%	1.6%

**Percent Non-Conversion 20-acre Exempt
FPAs Near Fish Bearing Streams
FY 2007-2011**



Type Np Water Leave Tree Requirement

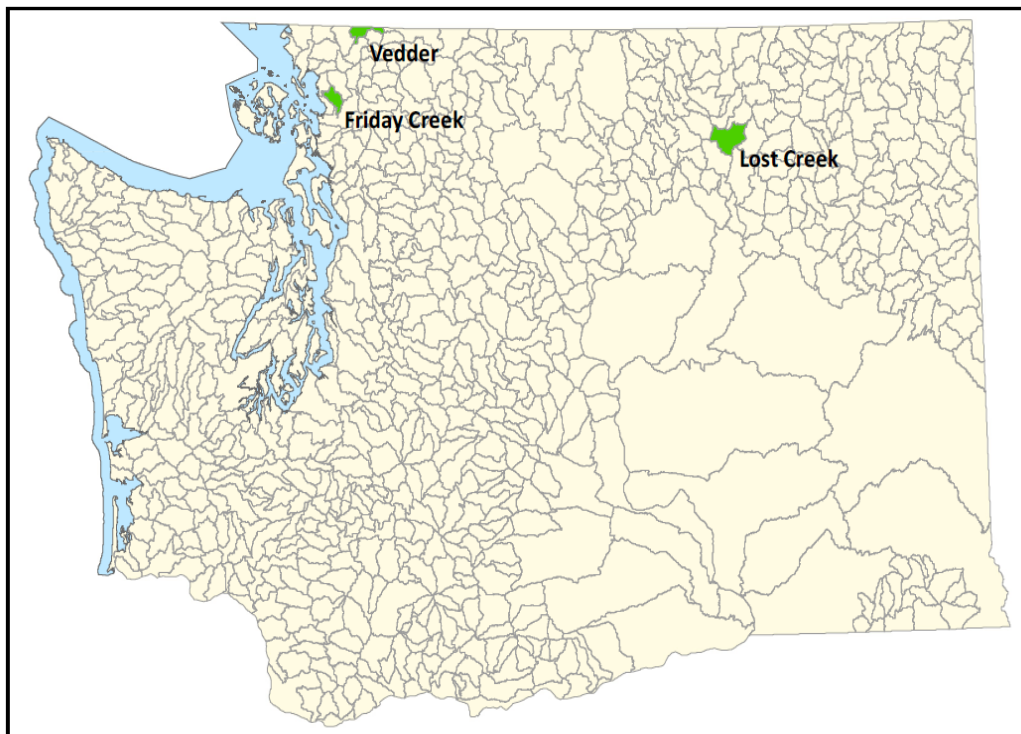
Forest Practices Applications that are associated with Exempt 20-Acre parcels do not have to leave the same leave trees along Type Np streams as non-20-Acre Exempt applications. The federal Services conditioned the Incidental Take Permits (ITP) to require leave trees to be left according to WAC 222-30-023(3) as protection along these non-fish bearing Np waters. In 2006, DNR wrote guidance requiring a statement be placed on FPAs with Np streams (that leave trees be left adjacent to the Type Np water). Tracking for this ITP condition involves checking FPAs for the leave tree statement required by the guidance. Following is a table showing annual status:

Year	Number of FPA with Np Streams	Number of FPA Conditioned	Percent (%) Conditioned
2006-2007	6	0	0%
2007-2008	13	6	46%
2008-2009	3	2	66%
2009-2010	12	8	66%
2010-2011	11	9	82%

While Exempt 20-Acre parcels associated with Forest Practices Applications are only 1.6 percent of total applications, an even smaller portion of FPAs are Exempt 20-Acre parcels with Type Np streams—only 0.19 percent of total applications submitted over the last five years. In order to ensure that all applications associated with Exempt 20-Acre parcels with Type Np streams are conditioned where needed, the State intends to incorporate a reminder into annual Forest Practices forester training.

Large Woody Debris Recruitment Potential by Watershed Administrative Unit

Tables can be found in each year's Annual Report for the *Forest Practices Habitat Conservation Plan* regarding large woody debris recruitment potential. The tables show the in-office cumulative estimates of potential reduction in this riparian function as a result of Forest Practices Applications associated with Exempt 20-Acre parcels, by watershed administrative unit (WAU), each year. There are a total of 846 watershed administrative units in the state. At the end of the first five years of HCP implementation (see FY 2011 Forest Practices HCP Annual Report), only 140 WAUs had the potential of some measure of reduction in potential large woody debris recruitment function. All potentially affected WAUs showed less than 1 percent potential loss of large woody debris recruitment potential. Of these, only three watershed administrative units had the potential of between 0.5 percent and 1 percent while all others were less than 0.5 percent potential loss. The three WAUs between 0.5 percent and 1 percent loss are shown on the map below.



Bull Trout Areas of Concern

During the first five years of the Forest Practices HCP, there was only one occurrence of an Exempt 20-Acre FPA in the bull trout areas of concern. It was determined that the FPA did not measurably diminish function as no harvest occurred within 86 feet of the fish-bearing stream. This seems to indicate a trend that landowners choose not to harvest near fish bearing streams in the bull trout areas of concern.

Compliance Monitoring Program



Accomplishments

The five year period, ending June 30, 2011, amassed a broad set of accomplishments for the Compliance Monitoring Program. The program:

- Advanced the organizational structure and communication with stakeholders.
- Designed and completed five annual samples and subsequent reports.
- Worked with agencies and landowners on ways to improve compliance.
- Completed four Clean Water Act assurances milestones prescribed by the Department of Ecology to maintain the compliance of the Forest Practices HCP with the Clean Water Act.

The Compliance Monitoring Program established a chartered stakeholder committee in 2009. It includes agencies, tribes and interest groups. This committee is familiar with the Forest Practices Rules, and compliance monitoring issues. It functions to provide advice for sampling objectives, changes in protocols, field forms, program structure, and reviews program reports prior to publication. The committee recently advised the program to adopt a sampling strategy change. The result has improved sampling confidence yet reduces total number of activities which need to be reviewed. The committee promoted the current field team structure in which DNR, Washington Department of Fish and Wildlife and Washington Department of Ecology have dedicated staff for Compliance Monitoring, which provides more consistency in sampling efforts. In addition, the three agencies meet as a caucus more frequently to review and resolve staffing issues and rule interpretation.

The last five years saw the completion of five annual samples with more than 100 FPAs field reviewed each year. Each typically contains several activity types. In the past two biennia, from 2008 to 2011, the program reviewed 654 water or wetland prescriptions and 194 road construction or haul route activities. Focused emphasis samples also reviewed the following prescriptions during this time:

- Wetland management zones
- 20-Acre exempt riparian prescriptions
- Alternate plans

- Water and wetland classifications

This emphasis sampling included site reviews of an additional 201 activities. The Compliance Monitoring Program analyzed all these samples and published the findings in two biennial reports, 2008 - 2009 and 2010 - 2011.

The Department of Ecology prescribed 22 milestones to be achieved by DNR's Forest Practices Program in order to maintain the clean water assurances under the *Forest Practices Habitat Conservation Plan*. The Compliance Monitoring program was assigned four milestones and all have been completed. The milestones were to:

- Adopt a charter for the Compliance Monitoring stakeholder committee. This document that describes the scope and objectives of the committee was developed and adopted by the committee.
- Explore options and data collection methods for assessing compliance with rules such as: water typing; shade; wetlands; haul roads; and channel migration zones. This milestone was described in the Rule Element Sampling Plan describing how the program would carry out the work.
- Develop under the Dispute Resolution milestone a “process that will identify the basis for the dispute and to put in place revised guidance, training, reporting pathways, other measures that will minimize the reoccurrence of similar disputes in the future” ([2009 Clean Water Act Assurances Review of Washington's Forest Practices Program](#))
 - The effort resulted in a multistep process with well documented communication channels and expectations that engage both the regions and division to resolve disputes regarding Forest Practices in a timely manner.
- Resolve Riparian Noncompliance with the objective: “assess the primary issues associated with riparian noncompliance (using the Compliance Monitoring Program data) and formulate a program of training, guidance, and enforcement believed capable of substantially increasing the compliance rate” ([2009 Clean Water Act Assurances Review of Washington's Forest Practices Program](#)) The assessment summarized the site conditions and features where noncompliance frequently occurred. It also described five strategies implemented to improve compliance which address:
 - water typing
 - RMZ length measurement
 - 48 hours notification prior to commencing exempt 20- acre riparian harvest
 - Emphasis on providing additional training for Type A wetland identification.

Data results

The sampling in the past five years focused on compliance of timber harvest adjacent to riparian areas, and road construction and maintenance. The initial planning of the Compliance

Monitoring Program emphasized these areas as being important for water quality and fisheries. The sampling strategy evaluated whether the prescription, as implemented, was compliant with the rule and, if not, the severity rating of the non-compliance. The severity ratings are as follows:

- **Minor** —*Impacts of short duration over a small area, such as a few trees harvested in the core, inner or outer zones of a RMZ or evidence of small amounts of sediment having entered typed perennial waters.*
- **Moderate** —*Apparent and potentially longer-term impacts to public resources such as the complete removal of outer zone RMZ trees or significant under-stocking of leave trees in the inner zone. Also, undersized culverts cut and fill slopes and small but visible sediment plumes in typed waters.*
- **Major**— *Evident or high potential impact such as harvest in the RMZ core zone, or cut or fill slopes directly contributing visible volumes of sediment to typed waters.*

Riparian Harvest Compliance

The table below lists and briefly describes the various riparian prescriptions allowed by Forest Practices Rule by water types and geographic regions. These are the prescriptions that were sampled for compliance monitoring.

Riparian prescriptions with geographic zone, Water type and Description

Prescription	Geographic Zone	Water Type	Brief Description of Prescription Activity
No Entry RMZ	Western WA	Fish bearing	No harvest in any portion of RMZ
No Inner Zone Harvest RMZ	Western WA	Fish bearing	Harvest in the outer zone only
DFC Option 1 Harvest	Western WA	Fish bearing	Harvest in the outer zone and thinning from below in the Inner zone.
DFC Option 2 Harvest	Western WA	Fish bearing	Harvest in the outer zone and harvest of a portion of the inner zone.
No Entry RMZ	Eastern WA	Fish bearing	No harvest in any portion of RMZ
No Inner Zone Harvest RMZ	Eastern WA	Fish bearing	Harvest in the outer zone only
Type Np	Western WA	Non-Fish bearing	No harvest in any portion of RMZ
Type Np	Eastern WA	Non-Fish bearing	No harvest in any portion of RMZ
Type Ns	Western WA	Non-Fish bearing	Equipment limitations in the RMZ
Type Ns	Eastern WA	Non-Fish bearing	Equipment limitations in the RMZ
Type A Wetlands	Statewide	Wetland	Required leave trees in the RMZ
Type B Wetlands	Statewide	Wetland	Required leave trees in the RMZ
Forested Wetlands	Statewide	Wetland	Equipment limitations in the WMZ

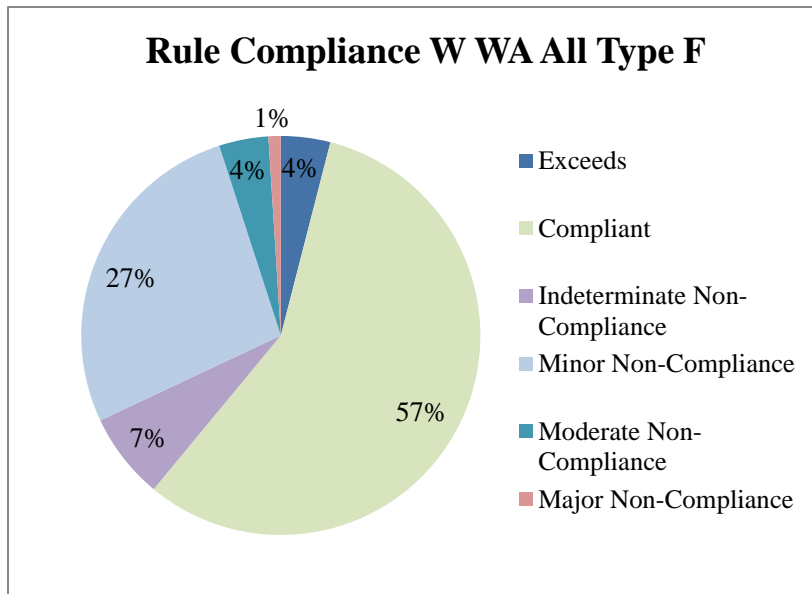
The compliance results for 2008–2009 and 2010–2011 are shown below by prescription. There is no significant difference between biennia except for the increase in compliance in the perennial non-fish bearing stream RMZs highlighted in teal blue in the table below.

Riparian Rule Compliance Comparison between Biennia 2008-2009 and 2010-2011

	Compliance with rule							
	Western Washington				Eastern Washington		Statewide	
Combined Landowner groups	No Inner Zone	No Entry RMZ	DFC Option 1	DFC Option 2	No Inner Zone	No Entry RMZ	Type Ns	Type Np
Out of Compliance	16	5	4	10	2	1	6	9
Compliant	28	9	3	15	7	2	65	60
Sample size n	44	14	7	25	9	3	71	69
2010-2011 Percent Compliant	64%	64%	43%	60%	78%	67%	92%	87%
Out of Compliance	19	6	5	5	3	4	4	24
Compliant	29	8	5	20	9	8	79	66
Total	48	14	10	25	12	12	83	90
2008-2009 Percent Compliant	60%	57%	50%	80%	75%	67%	95%	73%
p-value*	0.831	1.000	1.000	0.217	1.000	1.000	0.515	0.048

*Fisher's Exact Test Two-Tailed p-value on difference between proportions

Compliance rates are lower than desired, particularly in the more complex fish-bearing stream riparian management zones. However, of the non-compliant prescriptions, most received a minor rating. The Rule Compliance for Western Washington chart below shows the breakout of combined Westside Type F compliance ratings. Even though this is the most challenged category for compliance, only 12 percent of the total non-compliant observations were rated worse than minor.



Water classification

A 2011 emphasis sample compared the water typing reported on the FPA to Compliance Monitoring field observations, as shown in the table below.

Water Classification Emphasis Sample with Type F physicals

Water or Wetland as classified on the FPA	Number of Waters Sampled	Number of Waters that met F physical criteria in a portion of the Stream Reach*	Number of Waters that met Type F physical criteria and had Water Type Modification Form or ID Team documents confirming FPA Typing	Number of Waters considered to be rule based Type F waters
Ns	20	4	0	4
Np	18	10	4	6
Undifferentiated N	2	0	0	0
Water deleted by applicant	7	1	0	1
A Wetland	3 ¹	1	0	1
B Wetland	2	0	0	0
Total	55	16	4	12

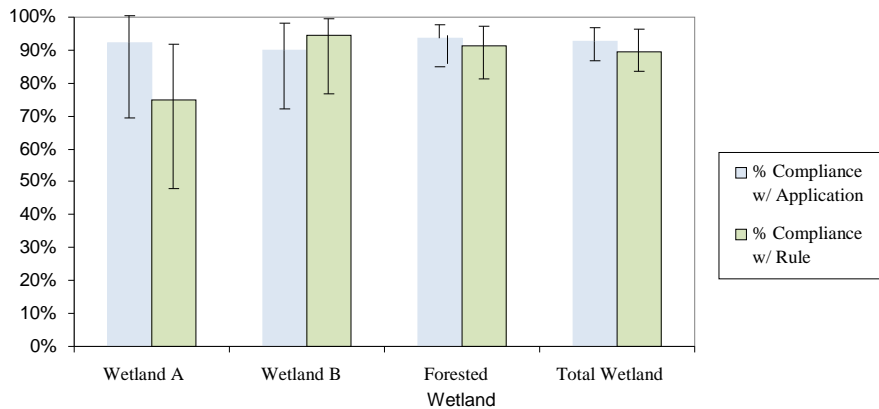
*Features may meet Type F physicals within the reach observed but still meet "as on FPA" due to a previously approved water type modification form (WTMF) which included the feature ¹ Includes only Type A wetlands which were not listed as Type F associated on the FPA

The water classification results indicated 22 percent of stream types reported as non-fish bearing were observed to have fish stream characteristics and considered to be rule based Type F waters.

Wetlands

A 2008 - 2009 wetland emphasis sample showed that compliance approached or exceeded 90 percent for all except Type A wetlands.

Percent Compliant for Wetland Activities with 95% Error Bars



Road Construction, Abandonment, and Haul Route Compliance

The standard samples of 2008 through 2011 assessed road construction and abandonment. The results are summarized below for 2010-2011. These compliance rates are lower than the agency target of 90 percent for the biennium. Small forest landowner road activities need the most improvement.

Statewide Road Construction and Abandonment		
	Status of Compliance	Road activities rule compliance
Small Forest Landowners	Percent Compliant	60%
	95% Confidence Interval	(16, 94)
	Activity Totals	5
Industrial Landowners	Percent Compliant	88%
	95% Confidence Intervals	(77,95)
	Activity Totals	57
All Landowner Types	Percent Compliant	85%
	95% Confidence Intervals	(75, 93)
	Grand Totals	62

The table below displays results of the haul route survey added in 2011. It shows both industrial and small forest landowners combined because haul routes may cross multiple forest ownerships.

Haul Route Compliance Summary				
No Delivery	De minimis	Low	Medium	High
89.8%	5.8%	3.7%	0.7%	0.00%
Compliant		Non-Compliant		
95.6%		4.4%		
Confidence interval				
(92%, 98%)				

The haul route results scored well above 90 percent, indicating the rules are well understood and applied by the forest landowners.

Challenges

The data above reveal that high compliance levels (90 percent or greater) have not been achieved consistently. The Westside Type F riparian prescriptions show consistently lower rates. The data are sufficient enough to inform what on-the-ground action caused the non-compliance, but do not explain why the non-compliance action occurred. Applicants would be better able to avoid future non-compliant occurrences if they understood why.

Submitted Forest Practices Applications too frequently report inaccurate water typing. The applicant may implement the required protections for the water type as reported on the application but may not leave the adequate protection required for the water type. Water typing and resultant habitat protection is a focus area for improvement.

Sample sizes for some prescriptions are very small, which can lead to wide confidence intervals. This makes comparison from year to year difficult because the results, represented by ‘wide confidence intervals’ may mask significant differences. Because the sample sizes may be extremely small (ex. 2 samples) this can mislead people to believe that overall compliance for that activity is low. The goal of the Compliance Monitoring Program is to maintain a sample of sufficient size to produce a 12% confidence interval for each prescription type—even for prescriptions that occur rarely in the sample population. This will lead to a better understanding of non-compliant activities that routinely occur, allowing a more focused compliance effort within the regions.

The high number of minor non-compliant activities frustrates applicants who diligently work to apply the rules. The protocol requires a non-compliant activity assessment with the harvest of even one tree beyond that allowed by rule. In these cases, well over 90 percent of rule conditions in the minor non-compliant prescriptions were implemented as prescribed remained – fully intact, but the applicant still received the non-compliant assessment. The challenge is how to give recognition where the prescription implementation, though not perfect, largely met the conditions of the rule.

Another challenge is identifying the most effective technical and regulatory responses to differences in compliance rates between industrial and non-industrial landowners. The mean compliance rates for road activity are considerably lower for non-industrial FPAs.

Future Direction

Beginning in the 2012 sampling year, the program instituted a new sample design that increases the sample size for the more rarely occurring prescriptions. The Compliance Monitoring Program expects to improve the confidence interval to 10 percent for each prescription type. This allows a better comparison between biennia and more confidence in the means reported. Basing sample size on the frequency the prescription occurs in the population achieves this improvement. Additionally in 2012, the program collected information to assist in determining why a non-compliant situation occurred.

The Forest Practices Division established a compliance improvement plan in mid-2011 requiring additional information to verify water typing on submitted FPAs. The program intends to continue follow up emphasis samples to see if there is improvement in the water typing.

The program will continue to implement the plans resulting from the Clean Water Assurance Milestones. This includes considering assessments of how well elements of the plans are working and what adjustments need consideration. These include:

- Water type classification verification.
- Accurate RMZ length reporting and assessment (affecting trees-per-acre counts of RMZs).
- Shade requirement documentation within FPAs and assessment methods.
- Channel Migration Zone (CMZ) – Engage key technical experts and compliance monitoring field team members and policy staff to achieve a common understanding of the factors and identification criteria for regulatory CMZs.

The Forest Practices Program will continue to improve its Compliance Monitoring Program by educating and informing other sections in the division and DNR regions regarding compliance findings and issues.

Up to now, the program has focused exclusively on HCP prescriptions that affect water quality and fish habitat. The program will investigate methods to assess other aspects of the Forest Practices Rules, such as:

- Prescriptions protecting Northern Spotted owl habitat.
- Prescriptions protecting upland wildlife habitat.
- Reforestation requirements ensuring well stocked, functional forests.

Road Maintenance and Abandonment Plans

Forest Practices Rules require that landowners construct and maintain roads to minimize damage to public resources, such as water quality and fish habitat. A Road Maintenance and Abandonment Plan (RMAP) is a forest road inventory and schedule for any needed road work. All large forest landowners have submitted and are working to complete the implementation of their RMAPs. Within each plan, road maintenance and abandonment work is prioritized as follows:

1. Remove blockages to fish passage
2. Prevent or limit sediment delivery
3. Correct drainage or unstable sidecast in areas with evidence of instability that could adversely affect public resources
4. Repair or maintain roads that run adjacent to streams
5. Minimize road interception of surface and ground water

Large forest landowners have made substantial progress in meeting their RMAP commitments. Because of the financial hardship forest landowners have experienced since the 2008 economic downturn, the Forest Practices Board extended the deadline for completing the road work. The Forest Practices Rules allow for an extension of the deadline for up to five years, or until 2021.


RMAP Accomplishments for Large Landowners

RMAP Accomplishments for Large Landowners	2001-2007	By 2008	By 2009	By 2010	By 2011
Miles of Road Improved	13,140	15,019	16,195	18,475	18,738
Miles of Road Abandoned	2,153	2,431	2,621	2,915	3,090
Miles of Orphaned Roads	2,293	2,305	2,305	2,333	2,393
Number of fish passage barriers corrected	2,248	2,871	3,141	3,769	4,258
Approximate miles of fish habitat opened	1,221	1,448	1,569	1,772	2,189

Approximately 18,738 miles of forest roads have been improved through RMAPs as of the end of 2011. This reporting element has proved difficult to determine over the years. In addition to

earlier inconsistencies in how road improvement miles were measured, the greatest challenge was the lack of a clear, working definition as to what an “improved” road is. However, over the past two years, the Forest Practices Program has evaluated how RMAP data is collected, evaluated, and reported. A definition of road improvement was established and includes actions taken to correct fish passage, prevent or eliminate the delivery of sediment to typed water, and repair roads or road ditch lines that intercept ground water or deliver surface water to typed waters.



 Private forest road improvement project completed in DNR Olympic Region.

Summary of Program Improvements in RMAP Data Collection, Evaluation and Reporting

- Consistent interpretation of accomplishment reporting elements
- Standard data collection methods
- Creation of statewide Geographic Information System (GIS) database for RMAP information, tracking, and reporting
- Improved data sharing and transparency
- Improved even-flow and worst-first assessment and tracking by adding two additional accomplishment reporting elements (to be included in the 2012 reporting cycle):
 - Total number of fish passage barriers identified
 - Total number of forest road miles identified needing improvement

Fish Passage Culvert Replacement

A major key to restoring fish populations is removing barriers to fish passage. A single man-made structure, such as an undersized culvert that blocks fish can keep fish from reaching many miles of habitat upstream. To help protect fish, RMAP requirements include removing these blockages. The project below is located on Cusick Creek in the DNR Northeast Region. The original culverts were undersized and perched above the stream which can concentrate water in high flow periods creating a velocity barrier to fish. Removing the culverts and installing a bridge allows the stream to function naturally.



❖ **7,070 fish passage barriers have been identified as of 2011. Of these, 4,258 (60%) barriers have been corrected, opening 2,189 miles of fish habitat.**



Photos: DNR

Tribal Relations



Pictograph known as “She Who Watches”, Tsagaglialal, located on basalt outcrop overlooking the Columbia River.

Summarized here are process improvements completed by the State over the first 5 years of implementing the Forest Practices HCP’s reporting requirement on WAC 222-20-120 *Notice of forest practices to affected Indian tribes*, specifically the rule required landowner - tribe meetings when a forest practice involves a cultural resource. The work of the Timber/Fish/Wildlife Cultural Resources Roundtable is also summarized.

Landowner – Tribe Meetings, WAC 222-20-120 Implementation

During the first five years of implementing the HCP, several measures have been put in to place that are associated with process improvements regarding implementing this rule and tracking landowner - tribe meetings.

- An audit of procedures used by DNR region offices regarding documentation of landowner - tribe meetings, along with further discussion with the federal Services, resulted in updated guidance on region tracking of landowner -tribe meetings. The guidance included implementation of a new tracking method to record which Forest Practices Applications required a meeting and which of those meetings took place. Since September 2008, when DNR implemented a new tracking method for landowner -tribe

meetings, the regions have recorded that all of the required meetings have taken place except for two. In both cases, multiple tribes were involved and the landowner requested a meeting with the tribes but was unsuccessful in soliciting a response from one of the tribes involved.

- The State's Forest Practices Program conducted training for DNR region staff following the finalizing of two Board amendments of cultural resources rules (described below). Both trainings included new guidance and tracking documents.
 - The first training concentrated on implementing the 2008 Historic sites rule changes in WACs 222-16-010 and 050 for forest practices involving a cultural resource, as well as [WAC 222-20-120](#).
 - The second training focused on implementing the 2012 rule amendments to [WAC 222-20-120](#), now titled *Notice of forest practice applications that may contain cultural resources to affected Indian tribes*.
- In preparation for implementing amended [WAC 222-20-120](#), the State executed a sweeping communication effort and technical data update in summer and fall of 2011.
 - The State contacted each of the 29 federally recognized tribes in Washington, five of the federally recognized tribes in Oregon and Idaho, and five of the tribal organizations that are active in forest practices issues in the state. This outreach was carried out to obtain updated contact information and/or designated geographic areas of interest for cultural resources.
 - The State then updated its automatic notification system, Forest Practices Application Review System with the new contact information received from the tribes. DNR also updated its risk assessment GIS information in the Forest Practices Risk Assessment Tool (FPRAT) with each tribe's designated geographic areas of interest regarding forest practices involving cultural resources, and their designated cultural resources staff contacts.
 - In addition, DNR added a "Cultural Resources" data folder to the risk assessment tool. This folder contains links to U.S. Geological Survey maps, U.S. Army Mapping Service maps, and Government Land Office historical maps. These historical maps can be used to assist in the investigation of possible cultural resources in the vicinity of proposed forest practices.

Timber/Fish/Wildlife Cultural Resources Roundtable

During the first five years of Forest Practices HCP implementation, the Timber/Fish/Wildlife Cultural Resources Roundtable (Roundtable) completed a number of projects that support the

ongoing implementation of the Board's *Cultural Resource Protection and Management Plan*, as well as other work to improve communication and understanding of cultural resources issues.

In 2007, the Roundtable presented consensus recommendations to the Board to clarify which forest practices are to be classified as Class IV-special requiring State Environmental Policy Act (SEPA) review when a cultural resource is involved. The clarifications deleted the forest practices definition of historic sites so to not be in conflict with the definition in state law, and addressed the overlap between Class III and Class IV-special cultural resources by recognizing historic sites eligible for the National Register of Historic Places and all archaeological sites as Class IV-special. The Board adopted the Roundtable's recommendations in 2008.

In May 2010, the Roundtable alerted the Board about implementation issues with WAC 222-20-120 *Notice of forest practices to affected Indian tribes*, announcing it intended to bring a recommendation to the Board. In February 2012, the Board adopted the Roundtable's consensus recommendations into rule. The revised rule established an improved process for forest landowners and affected Indian tribes to meet the rule's landowner - tribe meeting requirement when landowners' proposed forest practices involve cultural resources. The rule title was also amended to *Notice of forest practices that may contain cultural resources to affected Indian tribes* to call attention to the fact that the rule includes requirements for applications that involve cultural resources.

In May 2011, after working with the Board and DNR's Tribal Relations Manager, the Timber/Fish/Wildlife Cultural Resources Roundtable presented its charter to the Forest Practices Board. The Board formally accepted the charter that established the name Timber/Fish/Wildlife Cultural Resources Roundtable (originally the Cultural Resources Committee of the 1987 Timber/Fish/Wildlife collaboration). The charter also established direct reporting to the Board, and set the Roundtable's responsibilities and deliverables.

Cultural Resource Protection and Management Plan

The *Cultural Resource Protection and Management Plan*, approved by the Board in 2005, is a living document. In October 2008, the Roundtable updated it to formally recognize the adoption and approval of Appendices A, B, and D into the watershed analysis rules, board manual, and the Forest Practices Application/Notification form, respectively.

As agreed to in the plan, the Roundtable and the Forest Practices Program continued their work on guidance 'tools,' small forest landowner education, affective notice to tribes, and funding for the Department of Archaeology and Historic Preservation. The Roundtable is finalizing guidance documents and tools in the form of written documents, website links, and video. The Roundtable's cultural resources educational efforts for the state's small forest landowners continue through the assistance of the Washington State University Extension Service which has held numerous workshops for hundreds of people around the state.

As agreed to in the plan, the Forest Practices Program continued to provide automatic and ongoing notice to affected Indian tribes of applications and notifications via the Forest Practices Application Review System, and actively reached out to tribes for updated tribal information. The Forest Practices Program continued to specifically fund the Department of Archaeology and Historic Preservation (DAHP) to update its archaeological and historic sites database which Forest Practices staff use to properly classify forest practices that involve cultural resources. Funding has averaged about \$33,000 each year, which provides a half-time position at DAHP. The Roundtable continues to advocate for a full time position at the Department of Archaeology and Historic Preservation.



Other Ongoing and Current Work

Over the last five years the Roundtable has reported annually to the Board, on behalf of the State, on how the Cultural Resources Protection and Management Plan is working, as required by WAC 222-08-160. The Roundtable has reported quarterly on its work plan as part of staff reports at regular Board meetings.

Forest Practices Program Budget

2006-2011 Funding Overview

The funding patterns for the Forest Practices Program have fluctuated since the *Forest Practices Habitat Conservation Plan* was approved in 2006. The program's primary funding sources have been state accounts—General Fund State, Water Quality Account, Forest & Fish Support Account, and Aquatics Land Enhancement Account. The General Fund State refers to the basic account that receives revenue from Washington's sales, property, business and occupation, and other general taxes. General Fund monies are spent for state operations, and are governed by specific state accounting rules. The Water Quality Account specifically provides financial assistance to help achieve state and federal water pollution control requirements to protect state waters. The Forest & Fish Support Account (FFSA) became law in 2006. The law reduced certain business and occupation (B&O) taxes for harvesting timber or manufacturing or processing wood products, and taxpayers taking advantage of the reduced tax rate began paying a surcharge in 2007. The proceeds from the surcharge are put in the Forest & Fish Support Account, dedicated to the implementation of the state's *Forests and Fish Law*. The Aquatics Land Enhancement Account (ALEA) revenue comes from the sale of valuable aquatic material (such as wild geoduck) and the lease of state-owned aquatic lands, and it helps fund restoration and public access projects, and some aquatic-related state programs.

These funding sources provided continued support for the Forest Practices Program to implement the state's *Forest Practices Habitat Conservation Plan* (Forest Practices HCP) and sustain Clean Water Act (CWA) Assurances.

During the first six years of Forest Practices HCP implementation:

- Water Quality Account funds financed the Small Forest Landowner Office forester positions until the shift to capital funding occurred in the 2007-2009 biennium;
- In the same biennium the Small Forest Landowners' Office received a one-time state enhancement from the General Fund to develop a program that assists landowners with long-term forest stewardship management plans;
- The compliance monitoring program was fully integrated into the Forest Practices Program base budget in the 2005-2007 biennium;
- The Forest and Fish Support Account was added to the Forest Practices operating budget in fiscal year 2008; and

- The last of the \$25 million through the federal Pacific Coastal Salmon Recovery Fund was spent in 2011 for the Adaptive Management Program.¹

During the 2009-2011 biennium, Washington State faced a severe budget deficit of \$9 Billion, which required reductions in staff and operations across all of state government. The Department of Natural Resources operating budget was cut by \$21 Million. The Forest Practices Program’s share of the agency’s reduction was \$4 Million (19 percent of the entire agency’s budget cut). However, the Forest Practices Program was awarded supplemental funding² for the Adaptive Management Program from the Aquatics Land Enhancement Account and Forest & Fish Support Account in fiscal year 2011.

Since 2006, approximately two-thirds of the Forest Practices Program operating budget has been allocated to the six DNR administrative regions. This is where field work occurs in the form of assistance, enforcement and compliance of the Forest Practices Rules. The remaining one-third of the operating budget has been allocated to the Forest Practices Division. The division operates similar to an agency “headquarters concept” in Olympia, Washington.

The operating budget has three functional areas: 1) Forest Practices Act and rule implementation; 2) Adaptive Management research and monitoring; and 3) Small Forest Landowner Office.

Forest Practices Act and rule implementation is allocated approximately 90 percent of the program’s operating budget and the remaining 10 percent is distributed between the two other functional areas. Following is a list of what has been funded under the three functional areas:

Forest Practices Act & Rules (Operations)	Adaptive Management Program	Small Forest Landowner Office
Application Processing	Adaptive Management Staff	SFLO Program and Operations
Compliance Monitoring	Adaptive Management Projects	Forest Stewardship and Landowner Assistance
Enforcement	Forest and Fish Support Account	
RMAPS	Participation grants to tribes/tribal organization	
IT/GIS Development & Support	Participation grants to non-profits	
Program Development		
Stakeholder Assistance		

¹ Historically, we have not reported on the federal PCSR funding. This text reference illustrates the loss of one of the major sources of funding for the Adaptive Management Program.

² The detail of supplemental funding is noted in the Budget Table 1. Overview of Allotments & Supplemental Funding

The following explanations are provided as a guideline for understanding these terms referenced in the following tables.

- ‘Allotments’ are an agency’s plan of estimated expenditures based on the legislature’s approved allocation.
- ‘Supplemental budget’ denotes any legislative change to the original budget appropriations.
- ‘Actual expenditures’ means authorized charges made against the appropriated budget.
- ‘Appropriation’ indicates legal authorization to make expenditures and incur obligations for specific purposes from a specific account over a specific time period.

Only the Legislature can make appropriations in Washington State. The following tables provide an overview of the Forest Practices allotments, supplemental budget, and actual expenditures over the last six years.

Forest Practices Program

1. Overview of Allotments & Supplemental Funding & Full-Time Equivalents (FTEs)

Biennium	Activity	Total	General Fund State/Water Quality /ALEA	Forest & Fish Support Account (FFSA)	Full Time Equivalents (FTEs)
2005-2007	Act and Rules	17,882,714	17,882,714		119.3
	Adaptive Management	2,048,500	2,048,500		2.6
	Small Forest Landowner	664,786	664,786		4.7
	Forest Practices Total	20,596,000	20,596,000		126.6
2007-2009	Act and Rules	20,297,236	20,297,236		126.6
	Adaptive Management	8,519,000	2,519,000	6,000,000	5.0
	Small Forest Landowner	2,514,586	2,514,586		11.7
	Forest Practices Total	31,330,822	25,330,822	6,000,000	143.3
2009-2011	Act and Rules	18,391,566	18,391,566		109.0
	Adaptive Management*	10,405,834	2,427,234	7,978,600	4.0
	Small Forest Landowner	320,000	320,000		5.0
	Forest Practices Total	29,117,400	21,138,800	7,978,600	118.0

***Note:**

1. The 2009-11 Adaptive Management General Fund State /Water Quality amount includes one-time ALEA of \$1,530,000.
2. The Adaptive Management Program received supplemental funding through Forest & Fish Support Account of \$800,000.

Forest Practices Program

2. Overview of Actual Expenditures & Actual Full-Time Equivalents (FTEs)

Biennium	Activity	Total	General Fund State Water Quality ALEA	Forest & Fish Support Account (FFSA)	Full Time Equivalents (FTEs)
2005-2007	Act and Rules	17,008,689	17,008,689		119.09
	Adaptive Management	1,074,600	1,074,600		1.75
	Small Forest Landowner	1,374,645	1,374,645		3.16
	Forest Practices Total	\$19,457,934	\$19,457,934		124
2007-2009	Act and Rules	17,579,819	17,579,819		118.59
	Adaptive Management	7,100,746	2,128,303	4,972,443	2.61
	Small Forest Landowner	2,169,980	2,169,980		10.71
	Forest Practices Total	\$26,850,545	\$21,878,102		131.91
2009-2011	Act and Rules	17,653,640	17,653,640		107.45
	Adaptive Management*	8,470,701	2,631,702	5,838,999	4.45
	Small Forest Landowner	381,860	381,860		2.28
	Forest Practices Total	\$26,506,201	\$20,667,202		114.18

Full Time Employees

More than 25 full time equivalent positions have been lost in the Forest Practices program since 2006; 14.5 Full Time Equivalent (FTEs) positions at the division and 12 FTEs across DNR's six regions. The Forest Practices Program ended the 2009-2011 biennium with about 114 FTEs; down from about 143 in the 2007-2009 biennium. The program has attempted to insulate field foresters from those cuts as much as possible in order to maintain resource protection on the ground. While some region office and field staff positions have been eliminated, most of the reductions over the last two biennia were absorbed by the Small Forest Landowner Office, technical and scientific staff, and Forest Practices Board support.

Accomplishments & Trends

The State preserved forest practices field staffing levels essential for compliance and enforcement despite the budget crisis and hiring freeze. When the Incidental Take Permits were signed in 2006, 54% of forest practices positions were field positions that accomplish compliance and enforcement on forest practices applications. Over the first 6 years of implementation, even in the face of the budget crisis, the State maintained on average, 50 percent of forest practices positions in field positions.

Challenges & Future Direction

Given the ongoing state budget challenges and the impact to the Forest Practices Program, the DNR has been developing and implementing strategies to reduce the programs' reliance on the general fund through legislative, budgetary, and administrative actions:

1. Identifying efficiencies and savings (e.g. technological solutions, permit streamlining, regulatory reform)
2. Identifying possible delays or deferrals on important but less time-sensitive work (e.g. identifying work that can wait for economic recovery)
3. Working to obtain dedicated funding (e.g. cost recovery, fee for service, surcharges, etc.)

For each of the last two fiscal years, the Forest Practices Program has received supplemental funding to bridge critical funding gaps. The main sources of supplemental funding came from Aquatics Land Enhancement Account (ALEA) and the Forest & Fish Support Account (FFSA).

The 2012 Legislature established dedicated funding to the Forest Practices Program through Second Engrossed Substitute Senate Bill 6406. This legislation increased fees for Forest Practices Applications (FPAs), dedicated the revenue to the program and streamlined regulatory permitting for forest landowners. This dedicated revenue assists DNR in accomplishing the new work associated with the legislation and helps meet our goal of reducing reliance on the State General Fund and stabilizing the operating budget.

The Department of Natural Resources is working with the Department of Ecology and other Forests and Fish cooperators on a funding strategy for the 2013-2015 Biennium and a long-term funding plan for 2015-2017. This strategy is aimed at restoring some of the resources and capacity lost to recent budget reductions, and will help fully implement the Forest Practices HCP, and sustain Clean Water Act assurances—all to protect public resources.

List of Acronyms

Agencies and Organizations

the Board	Washington Forest Practices Board
DAHP	Department of Archaeology and Historic Preservation
DNR	Washington State Department of Natural Resources
RCO	Recreation and Conservation Office
SFLO	Small Forest Landowner Office
SRFB	Salmon Recovery Funding Board
USFWS	United States Fish and Wildlife Service
WCLA	Washington Contract Loggers Association
WDFW	Washington Department of Fish and Wildlife
WDOT	Washington Department of Transportation
WFFA	Washington Farm Forestry Association
WFPA	Washington Forest Protection Association
Ecology	Washington State Department of Ecology

Technical Terms

CMZ	Channel Migration Zone
DFC	Desired Future Condition
EBAI	Equivalent Area Buffer Index
GF-State	General Fund - State
GIS	Geographic Information System
FTE	Full Time Equivalent
FY	Fiscal Year
FPA/N	Forest Practices Application/Notification
FPRAT	Forest Practices Risk Assessment Tool
ICN	Informal Conference Note
LGE	Local Government Entity
LHZ	Landslide Hazard Zonation
LWD	Large Woody Debris
NTC	Notice to Comply
RMZ	Riparian Management Zone
SWO	Stop Work Order
Type F	Fish-bearing stream
Type Np	Non fish-bearing, perennial stream
Type Ns	Non fish-bearing, seasonal stream
WAU	Watershed Administrative Unit
WRIA	Water Resource Inventory Area

Personnel, Programs, Plans and Reports

AMP	Adaptive Management Program
AMPA	Adaptive Management Program Administrator
CMER	Cooperative Monitoring, Evaluation, and Research Committee
CMP	Compliance Monitoring Program
FFFPP	Family Forest Fish Passage Program
FFSA	Forests and Fish Support Account
FPARS	Forest Practices Application Review System
FPF	Forest Practices Forester
FPHCP	Forest Practices Habitat Conservation Plan
FREP	Forestry Riparian Easement Program
FFR	Forests and Fish Report
HCP	Habitat Conservation Plan
IDT	Interdisciplinary Team
RMAP	Road Maintenance and Abandonment Plan
ROSP	Riparian Open Space Program
RP&S	Resource Protection and Services
SRC	Scientific Review Committee
TFW	Timber/Fish /Wildlife

Regulations, Acts and Permits

CWA	Clean Water Act
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ITP	Incidental Take Permit
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
WAC	Washington Administrative Code