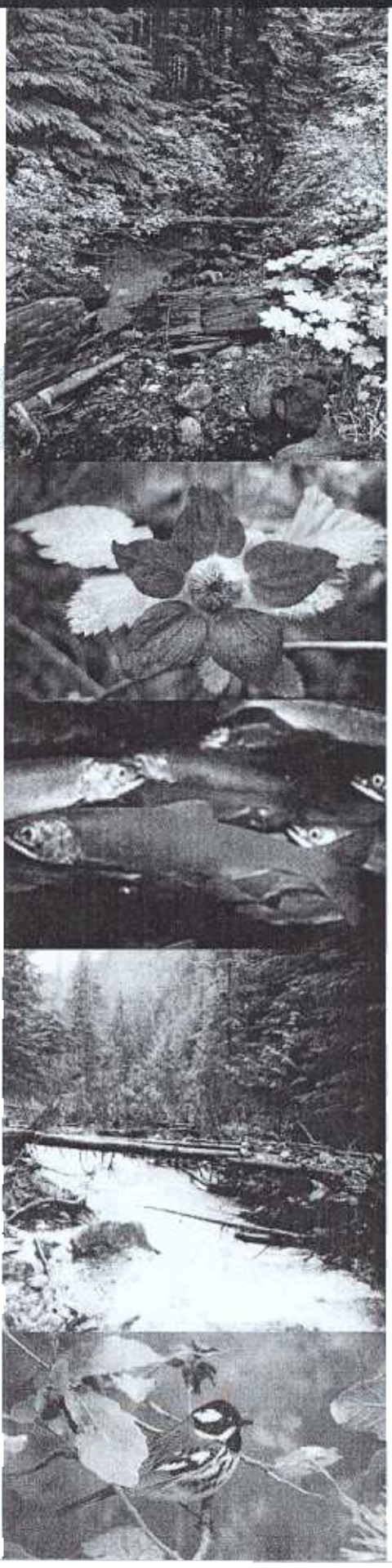
WASHINGTON STATE DEPARTMENT OF
Natural Resources
Doug Sutherland - Commissioner of Public Lands



Keith W. Wood

Protecting Washington State's Aquatic Habitat and Water Quality

A Message from Doug Sutherland, Washington State's Commissioner of Public Lands

Wild salmon and clean water are important to us in the Pacific Northwest. Their protection benefits the citizens of Washington State, and ensures that future generations will have opportunities to enjoy them. Washington residents count on their forests as a source of clean water, wildlife habitat, and a place to recreate. Jobs and our economy also rely on the timber products produced by thousands of workers from more than 10 million acres of non-federal forestland.

Since 1997, several species of Pacific salmon were listed under the federal Endangered Species Act. A growing number of streams were also listed as polluted under the federal Clean Water Act. In response, stakeholder groups, including federal agencies, state agencies, treaty tribes, counties, and small and large private forest landowners, jointly produced a science-based plan for protecting water quality and fish habitat covering non-federal forestland in Washington State.

The plan, known as the Forests and Fish Report, was signed into state law in 1999. As a result, new forest practices rules, effective in 2001, were designed to improve water quality and habitat for aquatic species, including native salmon, and for maintaining viable and responsible forestry in Washington.

The Department of Natural Resources is now actively engaged in a collaborative effort with the U.S. Fish and Wildlife Service, the Environmental Protection Agency, and the Fisheries branch of the National Oceanic and Atmospheric Administration to obtain assurances that these ground breaking rules comply with the Endangered Species Act and the Clean Water Act. The process of securing federal assurances requires action, support, funding, and continued collaboration.

Our state is in a unique position to help make state and federal laws work together to achieve public resource protection while maintaining economic viability. A successful partnership can help preserve healthy forests and clean streams for our wild salmon and other aquatic species, provide jobs, and secure the sustainable and responsible management of our forests, now and for future generations.

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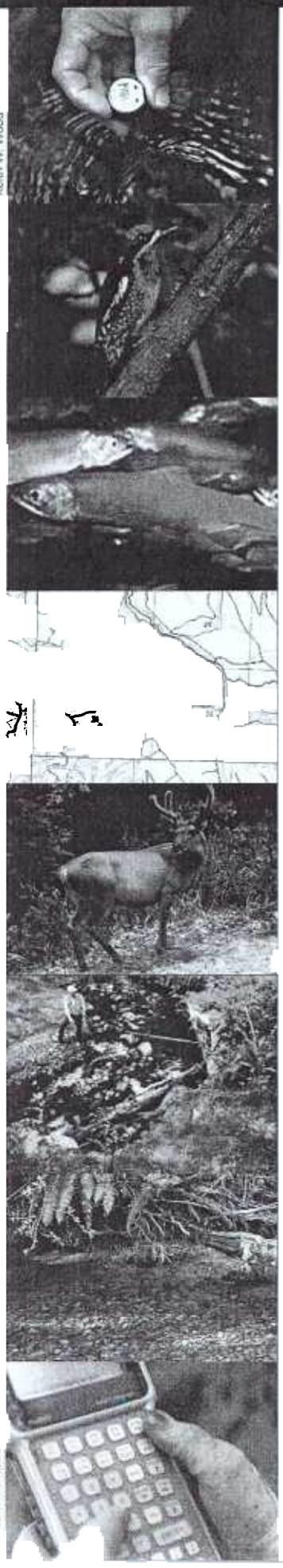
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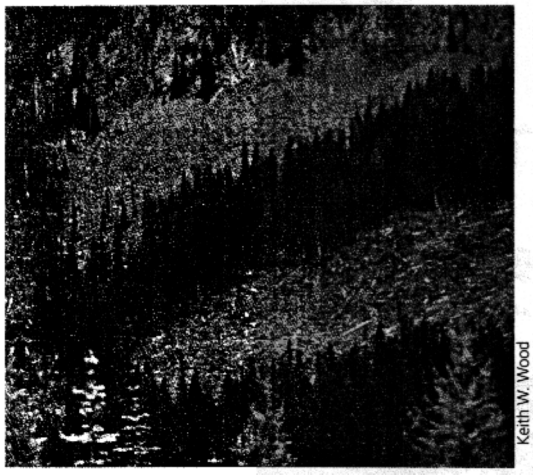
Forests and Fish Report Impacts Forest Practices Activities

Noteworthy progress has been made since the adoption of Washington's Forests and Fish Report. Efforts have concentrated on the development of new forest practices rules, programs, and guidelines to:

- Identify **unstable slopes** and protect streams from slope failure
- Improve the construction and maintenance of **forest roads**
- Improve the management of **riparian areas**
- Activate an **adaptive management** program

Unstable Slopes

Considerable improvements have been made to prevent forest practices activities from contributing sediment to streams, particularly where a timber harvest is proposed near potentially unstable slopes. A timber harvest in areas of unstable slopes requires an in-depth field review and, if needed, mitigation measures which may include restricting activities around the unstable area.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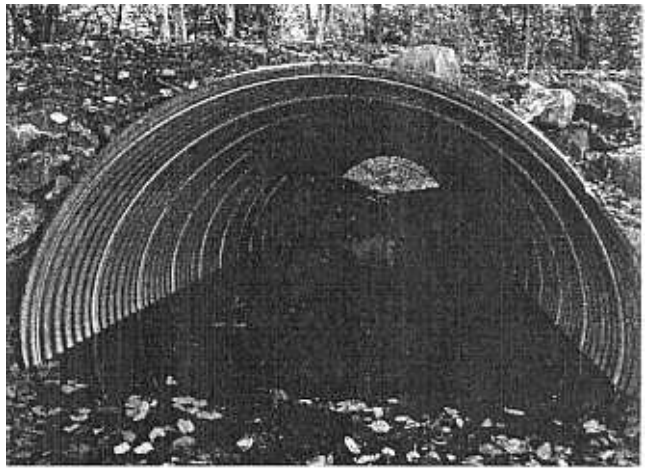
DNR is working with regional Timber, Fish & Wildlife (TFW) groups using field-verified data and the best available science to identify landforms with the potential to be unstable. Resource managers have been trained to recognize potentially unstable slopes and landforms. A Geographic Information System (GIS) screening tool is also in place to help identify unstable slopes. The goal is to avoid or mitigate the unstable areas before forest practices operations begin.

Forest Roads

A well designed, located, constructed and maintained system of forest roads is essential to protect streams and water quality. The goal of the state forest practice: rules is to protect stream banks from erosion, limit the amount of sediment entering streams, ensure fish passage to upstream habitat, minimize the construction of new roads, and remove or abandon thousands of miles of unnecessary roads.

To help achieve these goals, Washington's non-federal forest landowners are required to develop a Road Maintenance and Abandonment Plan which will inventor the forest roads within their ownership, assess current road conditions, and set a timetable for necessary repair or abandonment.



Road repairs are expensive and can place a heavy financia burden on family forest landowners. To mitigate that burden, DNR is actively seeking funding to create a state-led cost-share program to pay a part of the cost of removing fish passage blockages from family owned forestlands.

To Date:

- 98% of larger forest landowners have an approved Road Maintenance and Abandonment Plan for all o part of their ownership.
- More than 4,700 individual landowner plans have been completed.
- 20,322 miles of forest roads are covered under these existing plans.
- 121 miles of streams that were previously blocked b road culverts have been restored for fish use.

Riparian Areas

Taking care of the forest along the stream's edge, called the "riparian area," is essential to protecting water quality and fish habitat. The important roles of a forest's riparian area include:

- Recruiting wood to the stream – to help slow water current and provide resting and feeding places for salmon and other aquatic species.
- Providing shade to keep the water cool for fish and their incubating eggs.
- Protecting water quality by filtering sediment from erosion or run-off before it reaches the stream.
- Preventing erosion of stream banks by maintaining root systems and other vegetation along the stream's edge.

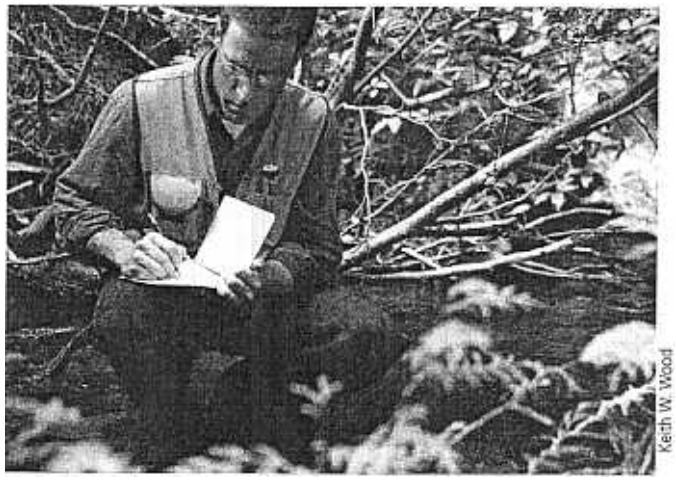
Washington's forest practices rules strive to restore and maintain the critical role the riparian area provides by limiting activities near streams, wetlands, seeps and springs.

Under the Forests and Fish Report and forest practices rules, all streams that provide fish habitat will be protected. In addition, riparian protection will be provided to the channel migration zones associated with fish habitat streams. These migration areas include off-channel habitat, wetlands, and floodplains that are likely to become part of the stream in the future.

Approximately 60,000 stream miles are receiving increased protection under the forest practices rules. These fish-habitat streams in western Washington will be protected with buffers of trees on both sides of the stream for 90-200 feet, depending on the potential size of trees near the stream. Timber management within the buffers is progressively more restrictive closer to the stream. No harvest is allowed within a 50-foot zone adjacent to the stream. Streams in eastern Washington are also protected. Streamside buffers are protected for 75-130 feet, depending on the stream size, site class, and habitat type.

DNR manages the Forestry Riparian Easement Program to assist family forest landowners who meet the riparian requirements of the new forest practices rules. This program reduces the economic impact of complying with the rules by providing compensation to qualifying landowners in exchange for a 50-year easement on timber the landowner is required to leave adjacent to streams. As a result of this new program, to date:

- 22 forestry riparian easements have been completed, protecting 631 streamside acres for the next 50 years.
- 93 family forest landowners have submitted applications for easements, representing an additional 1,250 streamside acres.



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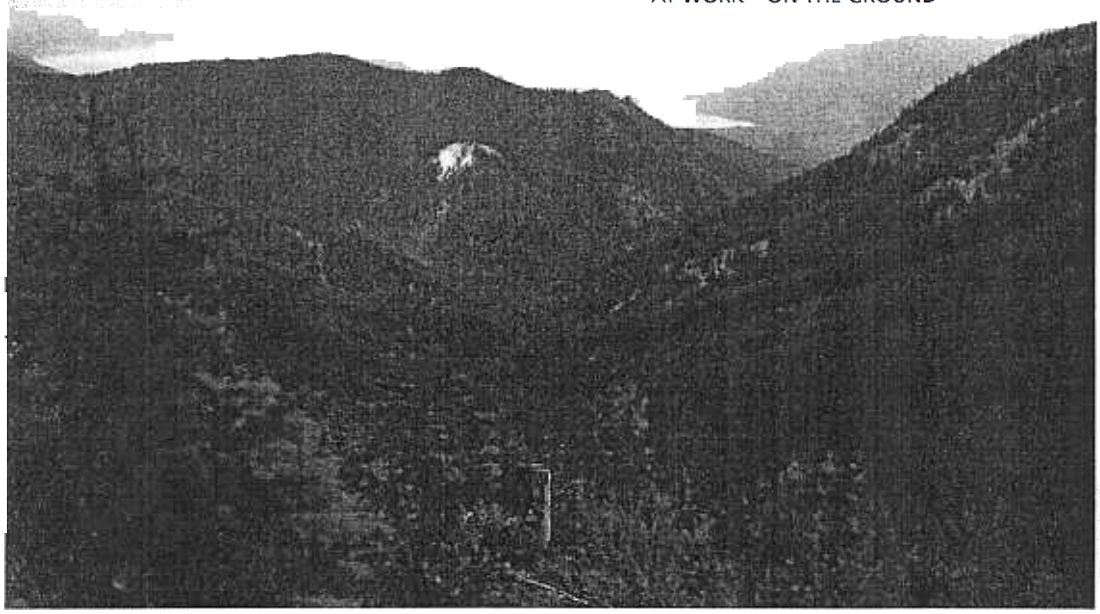
Adaptive Management

The authors of the Forests and Fish Report recognized that scientific knowledge will grow and improve our understanding of water quality and fish habitat issues. Developing a science program to address these issues in a timely manner, and modifying rules to respond to new findings, was a critical element of the report. A science-based process called "adaptive management" was outlined to change the forest practices rules as new information becomes available. The forest practices rules require that any changes made to the rules must be based on peer-reviewed scientific research and field monitoring developed from the Adaptive Management Program.

An Adaptive Management Work Plan is nearly completed that identifies critical scientific questions and issues. A protocol and standards manual is being developed to formally outline procedures within the program. A Scientific Review Committee has been established to ensure objective peer review. Initial research has begun in riparian ecology and management, roads and landslides, fish passage, stream classifications, and wetlands.



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Goal of the Federal Assurances Project

Gaining federal assurances from the Environmental Protection Agency, the Fisheries branch of the National Oceanic and Atmospheric Administration, and the United States Fish and Wildlife Service will ensure that landowners who comply with Washington State's forest practices rules will also meet the requirements of the Endangered Species Act and the Clean Water Act. As a result, the citizens of Washington State and the United States will gain a vigorous, functioning environment that supports clean streams, healthy salmon runs and productive forests.

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For More Information on the
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