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Standing the Test of Time: EQC Voluntary Forest Management Solution Nears 30-Year Mark

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The small troop of pickups crawls along a bumpy logging road outside of Wolf Creek, sneaking up on the Sleeping Giant from the north. It's a mild morning in early August. The temperature will only flirt with 80 degrees. The 15-mile trip includes stops at every culvert and almost every dip in the road.

"If you get carsick, these are not the trips to go on," says Roger Ziesak, the forest practices program manager for the Department of Natural Resources and Conservation. "We start. We stop. We bounce up and down."

The handful of riders is headed for a 347-acre timber sale on state land that was logged two years before. Seven are members of a best management practices (BMP) audit team that will examine how the logging operation was conducted from beginning to end and give it a grade. The rest are interested observers and representatives of DNRC, which manages the land from which the timber was sold. Road construction and culvert placements are heavily scrutinized. The design and location of skid trails gets a twice over. Were permits obtained

for stream crossings? Was slash handled properly? Most of the examination centers on the variety of ways to log the land while keeping sediment from reaching waterways where it can kill fish and degrade water quality. The goal is to provide feedback to the landowner about what went right, whether anything went wrong, and how to improve.

Three teams visited about 45 sites during summer 2016. The teams usually include a fisheries biologist, a forester, a hydrologist, a conservation group representative, a road engineer, a soil scientist, and possibly a logging professional or a nonindustrial private forest owner. Representatives of the landowner are usually present. Taggers on are welcome. The findings are analyzed and compiled by Ziesak, who will write a final report for presentation in 2017 to the Environmental Quality Council (EQC).

This is how Montana manages the care of watersheds when it comes to harvesting timber. Best management practices are mostly voluntary. Follow-up evaluations conducted by public and private professionals are also voluntary and are meant

to be educational, not punitive. Although other states have more statutory requirements, Montana's results over the last two decades have been pretty darn good, according to the professional opinions of those who have evaluated the practices. After a few years of initial improvement, the compliance with BMPs is solidly 90 percent or even higher.

"There's always room for improvement," says the team leader on this day, Don Kasten, a forester with the Bureau of Indian Affairs in Billings with 40 years of timber management experience. "We are here to nitpick."



Don Kasten, a forester with the Bureau of Indian Affairs, has Roger Ziesak, the forest practices program manager for the Department of Natural Resources and Conservation, stand in a dip in the road so Kasten can measure the depth. Road dips help slow down water runoff and prevent sediment from reaching streams.

These biennial audits of logging operations are just one result of a 1988 interim study by the EQC that undertook a sweeping evaluation of timber harvesting.¹

Forest Management, Refocused

The EQC study was a response to legislation about forest practices that shifted away from the reforestation focus of the 1940s. In the 1970s, Oregon, Idaho, California, Nevada, and Washington passed forest practice legislation focused on water quality, soil conservation, and wildlife habitat. In Montana, DNRC started work in 1972 on the Montana Forest Practices Act, which would allow the agency to set minimum standards for timber harvesting and road construction, reforestation, chemical use, and disposal of logging slash. Senate Bill 405 was considered in the 1973 session but was held over until the 1974 session to allow for more work. Opposition that killed the bill focused on rules that would have protected scenic values, affected existing harvest operations, regulated Christmas tree farms, and established property liens to ensure rehabilitation of land damaged by illegal forest practices.

Another attempt in 1975 jettisoned some of the objectionable provisions of the earlier legislation. Senate Bill 157 was modeled after Oregon and Idaho laws and was supported by the larger industrial timberland owners in Montana, state and federal agencies, and environmental groups. But it too died in the face of opposition from small timber owners and operators and some farm groups who assailed the legislation as an intrusion on property rights.



After a couple of hours of inspecting roads and the timber sale site, members of the team gather in the shade to score the project against the best management practices.

The push for regulation subsided until 1987. In that year, the U.S. Congress passed amendments to the Clean Water Act requiring states to devise plans to control nonpoint sources of water pollution. Simply put, nonpoint sources include all the ways sediment or other pollutants find their way into waterways other than being discharged directly. According to the Montana Department of Environmental Quality, seven land uses in Montana contribute [significantly to nonpoint source pollution](#): agriculture, forestry, hydrologic modification, mining and industry, recreation, transportation, and urban and suburban development.

With implementation of the federal law looming, the Legislature considered House Bill 781 during the 1987 session. The bill would have allowed private forest landowners to voluntarily enter into “binding cooperative agreements” with the state that would include forest practice requirements and monitoring. In return, the landowner would receive a property tax break. The timber industry, private landowners, and loggers opposed the bill, saying that timber operators were already paying more attention to water quality. Cited concerns also included increased costs to the state for implementing the bill and the effect of reducing tax revenue.

¹Historical information for this article was largely gleaned from the EQC’s final interim study report: “[House Joint Resolution 49 Forest Practices and Watershed Effects](#)” (December 1988).



Roger Ziesak talks to the team about evaluating projects.

The bill died in committee, but its members drafted a study resolution that became the project undertaken by the EQC. The study asked the council to examine the following areas:

- How current forest management practices are affecting watersheds in Montana.
- The range of management practices that have proven effective in conserving watersheds while maintaining the economic viability of timber harvest operations.
- The existing administrative framework, including regulatory and voluntary efforts, promoting the use of BMPs in Montana and other states.
- If areas for potential improvement are indicated, what actions would best help to achieve watershed and timber harvesting goals.

Into the Woods

The 1987-1988 EQC study plan included the establishment of a watershed working group and a technical committee. Sen. Mike Halligan (D-Missoula), presiding officer of the council, and vice presiding officer Rep. Bob Gilbert (R-Sidney) appointed 36 people to the two committees, including landowners, state and federal foresters, and representatives of the timber industry and conservation groups. Committee members decided to evaluate management practices at individual timber sales.

Members selected 38 random sales harvested in 1986 that were located within 200 feet of a stream. The sites included land owned by the state and federal governments as well as private industrial and nonindustrial private entities. Three regional teams of five members each took to the woods and evaluated up to 36 management criteria. Overall, the teams found compliance with 82 percent of the BMPs. However, in 16 of the 38 sites, they found major detrimental impacts on soil and water resources, five of which were extensive and long term.

Management of streamside zones had the lowest overall compliance with the best management practices. Controlling erosion from roads also had a high frequency of noncompliance. The application of the BMPs was about the same on private and federal lands. State-owned lands achieved higher compliance. If the findings were representative, the EQC noted there was a need to improve forest management practices.

The council concluded that the existing framework in Montana had some strengths, including voluntary efforts by the timber industry to adhere to and promote BMPs. A law dating to the early 1900s required some mandatory contact between private landowners and the state by requiring state approval of an agreement that [logging slash would be reduced](#) to mitigate fire hazards. And, the Natural Streambed and Land Preservation Act of 1975 required any work on the

bed or banks of a stream to be [approved by a conservation district](#). Although not aimed at logging practices, forest roads that cross streams were also regulated.

But the council noted weaknesses too, including the lack of any government oversight of private forestry operations, limited participation of private landowners with the forestry assistance program, and limited education on watershed effects for landowners and timber operators.

The EQC found that Idaho’s program was an “excellent example of a programmatic approach” to addressing water pollution from forestry practices. The program included mandatory forest practices rules, notification of forestry operations, inspections, training, enforcement, and audits. However, it also came with a price tag of more than half a million dollars annually, raised in part from a tax on private forest land.

“The challenge for Montana is to craft a forest practices watershed program with the appropriate elements to meet forest watershed management goals within realistic funding constraints,” the EQC wrote.

Out of the Woods and Into the Capitol

In 1989, the EQC proposed House Bill 678, carried by Rep. Gilbert. The bill read in part: “To achieve the conservation of natural and watershed resources, the legislature encourages the use of best management practices in timber sale planning, associated road construction and reconstruction, timber harvesting, site preparation, and related activities and establishes a process to ensure that information on best management practices is provided to owners and operators engaged in forest practices on private land.”

However, the bill also required anyone logging on private land or the landowner to notify the state prior to cutting timber, building roads associated with timber harvesting, conducting reforestation activities, or managing

slash. It exempted nurseries, tree farms, and firewood harvesting. The legislation allowed the department to conduct an on-site consultation to review site-specific watershed concerns with the logger. The bill passed the House 98-0 and the Senate 34-14.

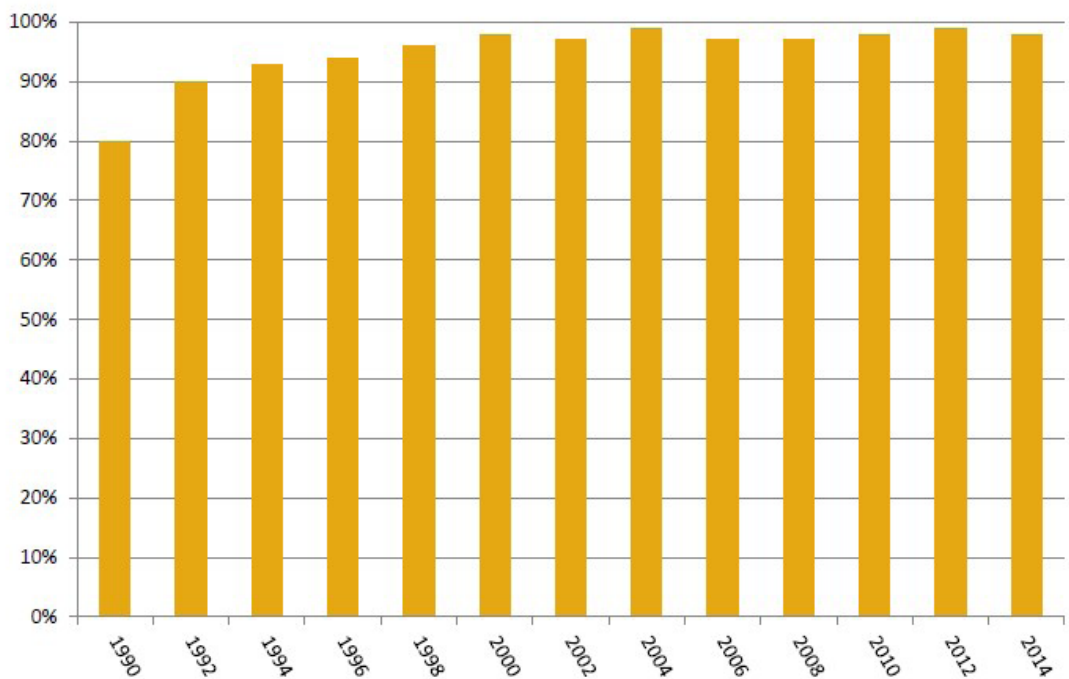
The BMP notification law has changed little since its passage. The [BMPs distributed](#) upon notification detail the following:

- Proper planning, location, construction, and maintenance of roads.
- Design of the harvest, including the evaluation of rainfall, topography, and machinery used.
- Treatment of slash.
- Streamside management and crossings.

DNRC foresters across the state conduct hundreds of consultations each year related to the fire hazard reduction law and the BMP notification requirement. DNRC, the Montana Logging Association, and the Montana State University Extension Service produce information on BMPs and conduct workshops throughout the state.

In addition to the fire hazard reduction law to address slash and the BMP notification law, the third statute that plays a role in forest management is the law for [streamside management zones](#) (SMZs). A version of the law died in 1989, but

Effectiveness Rates of Montana's BMPs
Percentage of Practices Providing Adequate Protection - 1990 to 2014



Summary of 2014 BMP and SMZ Application and Effectiveness, by Ownership Group

Practice	State	Federal	Industry	NIPF	Totals
BMP Application	97.8%	94.2%	97.9%	98.3%	96.9%
BMP Effectiveness	99.6%	96.4%	98.2%	99.0%	98.2%
SMZ Application	96.1%	100%	100%	94.8%	97.7%
SMZ Effectiveness	98.0%	100%	100%	97.4%	98.9%

the law was passed in 1991. The buffer zone along a stream is generally 50 feet but can vary depending on the type of stream and the slope. Logging is allowed within the zone; however, the law prohibits some practices, such as broadcast burning, clear-cutting, road building except to cross a stream, and the deposit of slash in water bodies.

A working group made up of agency representatives, industry foresters, and others meets annually to review the BMPs.

Back Into the Woods

It's been a long morning and it is near midday when the Microwave Timber Sale parcel is finally underfoot. The audit team walks the new road, which is about two-thirds of a mile. They tromp around the draws, looking for unwanted machinery tracks.

Then they gather in the shade of a tree and get down to the business of filling out the five pages of the audit. The grading scale is one to five. A score of one means gross neglect of the BMP that may result in major and prolonged impacts on soil and water. A two indicates major departures from the BMPs with temporary effects. A three connotes minor departures. Meeting the requirements of the BMP earns a four, and a five means the BMP was exceeded and the protection of water and soil was improved.

This site turns out pretty well. Most of the areas score fours, satisfying the BMP requirements. The group dings the project because three of the 16 culverts are plugged. And, of the 48 drain dips in the road, five are too shallow.

“Job well done, it looks good,” says Kasten, the team leader.

Most projects in most years also do pretty well. The effectiveness over the last two decades has been above 90 percent.

To be selected for the review, sites need to meet minimum criteria that include the following:

- The site must be at least 5 acres.
- If the site is in the western part of the state, it must have at least 3,000 board feet per acre removed. If in the eastern part, the minimum is 1,500 board feet per acre.
- A portion of the sale must be located within 200 feet of a stream or have a stream crossing on the road system.

Although the BMP notification law requires private landowners to contact DNRC for best management practices information, the audit teams at times struggle to evaluate as many private logging sites as they would like. Part of the reason may be that few private, nonindustrial logging projects are big enough to meet the minimum criteria or they avoid work near streams. And, even though there are no enforcement provisions within the BMP law, private landowners may be reluctant to allow an audit team to inspect the work.

Still, over the years, private sites have been reviewed, and adherence to the BMPs as well as to the stream management zones has been comparable to the other land ownership categories.

In 1987 and 1988, when the EQC debated a regulatory approach versus a voluntary program, some members worried that Montana's land and water wouldn't be protected as well without some enforcement provisions. However, although comparing regulations between states can be difficult, a July 2007 [performance audit](#) of the program and a [follow-up](#) by the Montana Legislative Audit Division found that Montana's voluntary forest practices program compared well to regulatory programs in Idaho and Washington. “Our audit work did not find any evidence [that] establishing additional statutory requirements, such as a Forest Practices Act, would be any more effective than the administrative structure currently in place,” the audit report said. “Based on audit work conducted, we found Montana's current process to administer forest practices achieves similar results as those in states with more emphasis on regulation.”