PERFORMANCE AUDIT

Office of the Washington State Auditor
Pat McCarthy

Adaptive Management Program:

Improving Decision-Making and Accountability

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Executive Summary

Background (page 7)

Washington has long struggled with balancing the state's $28 billion timber industry, which employs some 42,000 workers, and its effect on the environmental health of millions of acres of private forests and their associated watersheds. In the mid-1980s, different groups working to balance industry with the environment recognized that litigating for change was costly and produced little payoff.

Tribal leader and environmentalist Billy Frank, Jr., observed in an article in the Whatcom Watch, "Timber companies, environmental groups, tribes, state and federal agencies, and others were battling each other in court over the effect of timber harvests on fish and wildlife." A conference organized by the Northwest Renewable Resources Center in 1986 brought together conservationists and members of the Washington Forest Protection Agency – a trade association representing private forest landowners – to seek alternative ways to resolve disputes around forest management practices. Months of negotiations followed, during which time the state halted further rule-making.

The group's efforts resulted in the 1987 Timber Fish Wildlife Agreement which, as Frank went on, "put an end to the war in the woods with a cooperative science-based management approach that ensure(d) a healthy timber industry while also protecting fish and wildlife."

In 1997, the state was faced with the possible listing of several salmon species under the Endangered Species Act. In response, some of the same groups who created the Timber Fish Wildlife Agreement came together to create the Forests and Fish Report, the platform to today's Adaptive Management Program.

Adaptive management was formally incorporated into Washington's forest policy-setting processes in 1999 to balance all these competing interests. The "cooperative science-based management approach" underpinning the Timber Fish Wildlife Agreement is also known as adaptive forest management. According to the U.S. Department of the Interior and Fish & Wildlife Service, adaptive management is a collaborative process led by a partnership of policy managers, scientists and other stakeholders. It relies on learning by scientific experimentation, then adapting practices and policies based on the results of experiments and tests. The ultimate goal is to create and maintain sustainable natural resource systems – such as forests or watersheds.

Today's Adaptive Management Program, administratively housed in the Department of Natural Resources and managed by the Forest Practices Board, is an extension of the 1987 Timber Fish Wildlife Agreement. The program's participants are drawn from many of the same caucuses, including state government, logging companies and landowners, local and tribal governments, and other organizations (listed in sidebar). Voting caucus representatives are either appointed and board-approved or assigned to the program by the groups representing their particular interests.

Nine caucuses represent a diverse array of business, governmental and environmental interests

- Industrial private timber landowners
- Nonindustrial private timber landowners
- Western Washington tribal governments
- Eastern Washington tribal governments
- County governments – one representative from the Washington Association of Counties
- State Department of Natural Resources
- State departments of Ecology and Fish & Wildlife
- Federal departments of Fish and Wildlife, Marine Fisheries Service, and Environmental Protection
- Environmental community

The Adaptive Management Program is not operating as intended (page 12)

Members of the Forest Practices Board were concerned about persistent and significant delays in receiving advice for rule-making. The board asked the State Auditor to audit the program, particularly to identify ways the program could become more efficient and effective in its decision-making.

Although designed to allow nimble changes to forest practices rules, the program has produced only two science-based rule revisions since 2006. The requirement for unanimous voting, paired with the members' reluctance to use the dispute resolution process, results in little action by the board. A single veto can halt the process. The dispute resolution process was designed to allow the process to move forward when there is not consensus. However, caucus representatives are reluctant to use the dispute resolution process. Furthermore, when members have used dispute resolution, the board has been reluctant to follow the outcome.

In addition to the issues created by the unanimous voting requirement, most studies are delayed. Projects can stray from schedules in part because the program has no consistent or centralized way to track them. Prompt decision making is also undermined because committee members do not adhere to roles and responsibilities assigned in the program manual.

The program rules and guidance are not set up to ensure all requirements in the Washington Administrative Code (WAC) are followed. The program is not following three important rules that could help it function more efficiently. Neither the program rules nor the manual make anyone responsible for holding

participants accountable for their actions. Additionally, the program lacks an onboarding process to help new caucus representatives understand their responsibilities.

Participants cited an overall lack of trust within the program. Most say the original vision of the Timber Fish Wildlife Agreement has failed, which has led to discouragement among the people involved.

Leading practices from similar adaptive management programs could be applied to the program (page 22)

We identified six leading practices that could help the board reach decisions while improving accountability and transparency.

Practice 1: Use a "net gains" approach to decision making to help caucuses see a "win" from compromising on a project package (described in more detail on page 23).
Practice 2: Develop decision criteria up front to eliminate indecision by having participants agree to what results mean.
Practice 3: Switch to an alternative to consensus decision making to ensure decisions are made more quickly.
Practice 4: Institute a comprehensive monitoring and tracking system to help the program avoid delays.
Practice 5: Provide a public-facing dashboard to help establish a monitoring system and increase transparency.
Practice 6: Report regularly to the state legislature, as similar programs already do, to increase transparency.

Without change, the program will continue to languish, putting Washington at risk for litigation

(page 30)

The Adaptive Management Program was created to facilitate cooperative solutions and avoid costly litigation. However, if the program does not improve its processes, the state risks penalties for failing to meet federal requirements. The program is falling behind on meeting Clean Water Act milestones. Furthermore, a representative from a federal oversight agency says the program is not meeting requirements of the Habitat Conservation Plan. In addition, participants agree lawsuits are a likely consequence of program failure.

State Auditor's Conclusions (page 32)

Washington's forest ecosystem is one of our state's most important natural resources. For years, various groups with competing interests in how the forests should be managed relied on contentious litigation to settle those differences. The state's Adaptive Management Program was created by the legislature more than 20 years ago as a way to update forest practices rules and guidance through a science-based approach and avoid costly legal cases.

After adopting a number of science-based rules in its early years, the program is not operating as intended. Two key causes are the unanimous voting requirement and participants' reluctance to make use of the dispute resolution process when consensus cannot be achieved. In this audit, we offer recommendations to move the process forward, including adopting an alternative to the 100 percent consensus decision model, a net-gains approach to decision making, and mandatory dispute resolution. Without these types of changes, the very mechanisms that were put into place to prevent legal battles will continue to impede the decision-making process and put the state at risk of ending up back in court.

Recommendations (page 33)

To reflect legal requirements, we made a series of recommendations to the Forest Practices Board to update the board manual and implement those requirements. We also recommended that the board integrate leading practices and update its operating manual and WAC accordingly. Applicable leading practices include not requiring 100 percent consensus for decision-making, incorporating a public-facing dashboard to show progress, and considering packages of projects that meet the needs of multiple caucuses instead of considering projects one by one. Finally, we made recommendations to the Legislature to address accountability and possibly consensus voting.

Next steps

Our performance audits of state programs and services are reviewed by the Joint Legislative Audit and Review Committee (JLARC) and/or by other legislative committees whose members wish to consider findings and recommendations on specific topics. Representatives of the Office of the State Auditor will review this audit with JLARC's Initiative 900 Subcommittee in Olympia. The public will have the opportunity to comment at this hearing. Please check the JLARC website for the exact date, time and location (www.leg.wa.gov/JLARC). The Office conducts periodic follow-up evaluations to assess the status of recommendations and may conduct follow-up audits at its discretion. See **Appendix A**, which addresses the I-900 areas covered in the audit. **Appendix B** contains information about our methodology.

Background

Groups with competing interests in Washington's forest management practices established an agreement to work through their differences

Washington has long struggled with balancing the state's $28 billion timber industry, which employs some 42,000 workers, and its effect on the environmental health of millions of acres of private forests and their associated watersheds.

Environmental protection laws – particularly the 1972 Clean Water Act and the 1973 Endangered Species Act– sought to curb harmful industry practices. (The Acts are briefly described in Appendix C.) Washington's 1974 Forest Practices Act assigned the Forest Practices Board the task of developing regulations that affected about 11 million acres, two-thirds of the state's commercial forests. However, its processes placed competing interests in adversarial positions. Groups focused on preserving wildlife or expanding habitat resorted to lawsuits to force changes in industrial behavior and compliance with protective laws or to introduce new environmental protections. The following decade saw competitive lobbying and contentious legal cases on the part of the timber industry, tribes and environmentalists. The resulting legal battles were expensive for all parties, including the state agencies charged with monitoring and enforcing the law and related rules.

Eventually, the different groups recognized that litigating for change was costly and produced little payoff. Tribal leader and environmentalist Billy Frank, Jr., observed at/of this time, "Timber companies, environmental groups, tribes, state and federal agencies, and others were battling each other in court over the effect of timber harvests on fish and wildlife." A conference organized by the Northwest Renewable Resources Center in 1986 brought together conservationists and members of the Washington Forest Protection Agency – a trade association representing private forest landowners – to seek alternative ways to resolve disputes around forest management practices. Months of negotiations followed, during which time the Forest Practices Board halted further rule-making.

The group's efforts resulted in the 1987 Timber Fish Wildlife Agreement, which "put an end to the war in the woods with a cooperative science-based management approach that ensure(d) a healthy timber industry while also protecting fish and wildlife."

Adaptive management was formally incorporated into Washington's forest policy-setting processes in 1999 to balance these competing interests

The "cooperative science-based management approach" underpinning the Timber Fish Wildlife Agreement is also known as adaptive forest management. According to the U.S. Department of the Interior and Fish & Wildlife Service, adaptive management is a collaborative process led by a partnership of state resource managers, scientists and other stakeholders. It relies on learning by scientific experimentation, then adapting practices and policies based on the results of experiments and tests.

The ultimate goal is to create and maintain sustainable natural resource systems – such as forests or watersheds. These experiments compare different ways of managing resources with specific biological goals in mind – for example, increasing the number of salmon present in a stream. Scientists monitor the results to see which option works best and pass their results on to policy-makers to update management rules.

Washington was prompted to formalize the use of adaptive management in the late 1990s. In 1997, the state was faced with the possible listing of several salmon species under the Endangered Species Act. Participants from the Timber Fish Wildlife Agreement and representatives from the federal government developed a comprehensive plan called the Forests and Fish Report to conserve salmon and other aquatic species on forested lands. By adopting a formal approach of adaptive management, the state hoped to set forest management through negotiation rather than litigation, developing rules that would ensure healthy ecosystems, protecting both the fish-bearing streams and the upland watersheds that supported them, while allowing the timber industry to thrive.

Today's Adaptive Management Program assigns various roles to many of the same parties who established the Timber Fish Wildlife Agreement

The Adaptive Management Program, administratively housed in the Department of Natural Resources and managed by the Forest Practices Board, is an extension of the 1987 Timber Fish Wildlife Agreement. The program's participants are drawn from many of the same caucuses, including state government, logging companies

and landowners, local and tribal governments, and other organizations (listed in **Exhibit 1**). Voting caucus representatives are either appointed and board-approved or assigned to the program by the groups representing their particular interests.

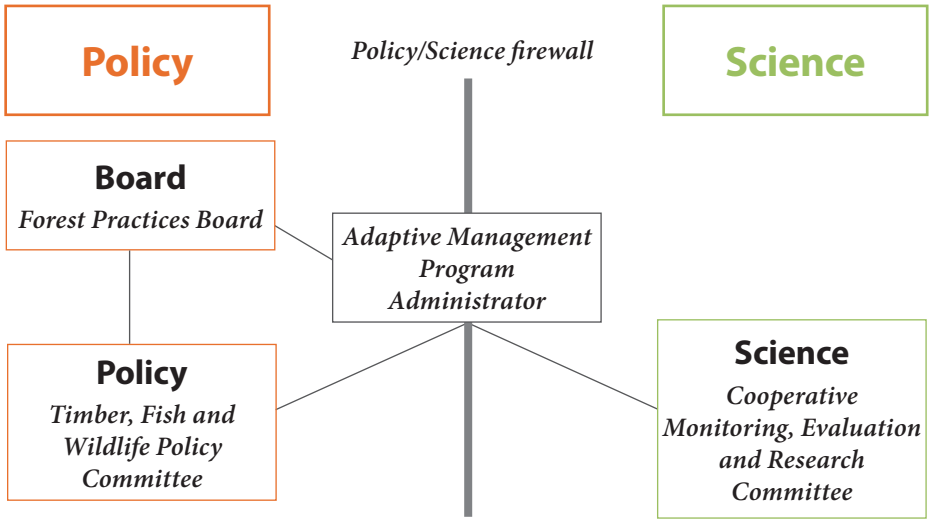
Exhibit 1 – Nine caucuses represent a diverse array of business, governmental and environmental interests

Industrial private timber landowners	Eastern Washington tribal governments
Nonindustrial private timber landowners	State Department of Natural Resources
County governments – one representative from the Washington Association of Counties	State departments of Ecology and Fish & Wildlife
Western Washington tribal governments	Federal departments of Fish and Wildlife, Marine Fisheries Service, and Environmental Protection
	Environmental community

Caucus members are seated on one of the program's two committees: the Cooperative Monitoring, Evaluation and Research Committee (referred to in this report as the Science committee) and the Timber, Fish and Wildlife Policy Committee (referred to as the Policy committee). The program's Science committee conducts scientific projects and monitors forest practice rules to determine if they work as intended: test results provide the data to revise rules, if necessary. The Science committee then writes consensus-based recommendations to retain or revise rules accordingly. The Policy committee is responsible for reviewing the Science committee's findings and for submitting recommendations to the board.

Voting members of the Science committee are voted on by the board. Voting members of the Policy Committee are appointed by their respective caucuses. **Exhibit 2** shows the relationship between the two committees, the Forest Practices Board and the Adaptive Management Program's administrative staff, and the firewall between their activities. Even though they are appointed by the same caucus, caucus members on the two committees are not to attempt to influence each other or interfere with each other's work and projects.

Exhibit 2 – The structure of the Adaptive Management Program



Source: Auditor created from Adaptive Management Program manual.

The committees are empowered to recommend science-based rule changes to the board. Each committee must have a unanimous vote on the results before the Policy committee may send the recommendation to the board. The recommendation may take one of three positions regarding the existing forest practice rule the Science committee has tested:

1. Revise it to be more protective of the resource in question
2. Revise it to relax protections around the resource
3. Do nothing either because the scientific study shows the rule is working as it should or because it is not clear if the rule is effective

There are exceptions for rules based on a legal decision or another law.

The board does not have the authority to make additions or changes to aquatic species rules without first receiving a recommendation through the Adaptive Management Program. Additionally, water-quality rules must also be approved by the Department of Ecology. Success for the program is not determined by rule changes alone, but also by confirming that the current rules are working as intended.

Sluggish progress on rule-evaluating projects and unmade decisions have prompted concerns

It is important to remember that the rules the Adaptive Management Program tests and evaluates were developed more than 20 years ago. These rules, in 11 groups (see **Exhibit 3**), were in place when the program was established in 1999, and were based on the best science at the time. Each group has multiple rules within it, and complex rules may in turn have a dozen or more elements to test and prove before a conclusion can be made about the success or failure of any element. Furthermore, testing environmental issues in an industry such as timber, where growth of the product is measured in years, can involve long and complicated project plans.

Exhibit 3 – Projects are developed to test the rules under the following rule groups

Bull Trout	Type N Riparian Prescriptions
Channel Migration Zone	Type F Riparian Prescriptions
Fish Passage	Unstable Slopes
Pesticides	Wetland Protection
Roads	Wildlife
Stream Typing	

Nonetheless, the Adaptive Management Program does have deadlines for important elements of its work, with many set by compliance agreements involving federal laws. For example, the Department of Ecology issued a waiver for certain rules, stating they were accepted under the Clean Water Act and Endangered Species Act pending testing through the state's adaptive management program. In particular, a method for identifying types of water (fish-bearing or not fish-bearing) and mapping Washington's waters is still pending. However, over the program's 22 years, relatively few tests have produced revisions to any rules.

This audit sought ways to improve the program's decision-making process

Members of the Forest Practices Board are concerned about persistent and significant delays in receiving advice for rule-making. The board asked the State Auditor to audit the program, particularly to identify ways the program could become more efficient and effective in its decision-making.

This audit answered the following questions:

1. Does the program use procedures that meet state and federal process requirements?
2. Compared to similar programs, has the program applied leading practices in its processes?
3. Are there delays in the process that prevent the board from making timely decisions? If so, where are the delays and can they be mitigated?
4. Has the program implemented process-related recommendations from previous evaluations?

We interviewed participants from all aspects of the program, including staff members, all voting members from each committee from all nine caucuses, and five board members. We also reviewed the many process steps within the program. We examined practices at other similar organizations for techniques that could lead to quicker decision-making by the two committees and the board. This report organizes our results into three broad areas:

- **Functionality:** Is the program operating as intended?
- **Improvements:** Can leading practices and the experience of other organizations help the program improve?
- **Consequences:** What risks does the state face if the program does not improve its decision-making and recommendation processes?

Audit Results

The Adaptive Management Program is not operating as intended

Answer in brief

Although designed to allow nimble changes to forest practices rules, the program has produced only two science-based rule revisions since 2006. The requirement for unanimous voting, paired with the members' reluctance to use the dispute resolution process, results in little action by the board. A single veto can halt the process. The dispute resolution process was designed to allow the process to move forward when there is not consensus. However, caucus representatives are reluctant to use the dispute resolution process. Furthermore, when members have used dispute resolution, the board has been reluctant to follow the outcome.

In addition to the issues created by the unanimous voting requirement, most studies are delayed. Projects can stray from schedules in part because the program has no consistent or centralized way to track them. Prompt decision making is also undermined because committee members do not adhere to roles and responsibilities assigned in the program manual.

The program rules and guidance are not set up to ensure all requirements in the Washington Administrative Code (WAC) are followed. The program is not following three important rules that could help it function more efficiently. Neither the program rules nor the manual make anyone responsible for holding participants accountable for their actions. Additionally, the program lacks an onboarding process to help new caucus representatives understand their responsibilities. Finally, participants cited an overall lack of trust within the program.

Although designed to allow nimble changes to forest practices rules, the program has produced only two science-based rule revisions since 2006

The Adaptive Management Program is responsible for testing and evaluating dozens of forest practices rules over time. If the Science committee's results show the rule is fulfilling its purpose, the program's Policy committee may make a recommendation to the Forest Practices Board that the rule remain as written. If research and testing demonstrates it is not, the Policy committee must propose

revisions to the rule to reflect their results. Within the parameters of the tests – which may take months or years to complete – the program was intended to allow nimble decision-making in a collegial atmosphere of cooperation between groups with sometimes divergent goals and measures of success.

However, over time, the program has struggled to deliver on both rule-making and collegial cooperation. Participants said the program – and their colleagues on the committees – failed to follow both the letter of the laws governing it and the spirit of the underlying Timber Fish Wildlife Agreement composed in 1987. The issues they described have contributed to bottlenecks in decision-making and a general atmosphere of distrust among members. As a consequence, the program and board have only issued two revisions to forest practices rules since 2006.

The requirement for unanimous voting, paired with the members' reluctance to use the dispute resolution process, results in little action by the board

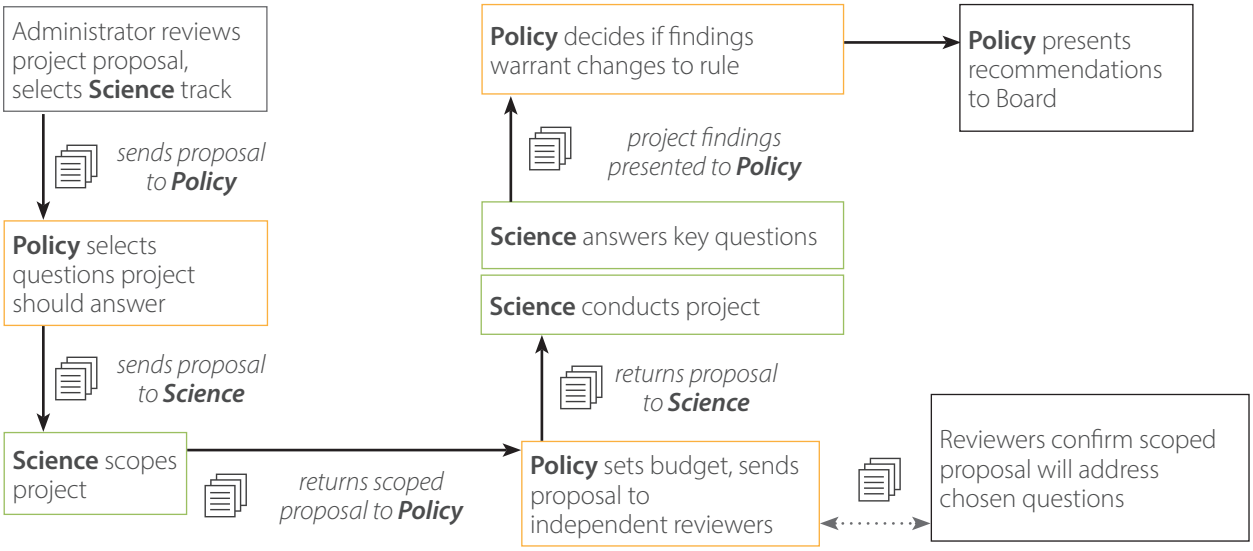
The rules (WAC 222-12-045) governing the program state: "The program will strive to use a consensus-based approach to make decisions at all stages of the process." Consensus in this context means 100 percent agreement in both committees. The program was designed to ensure the concerns of the diverse caucuses were heard and all members had an equal vote, but the unanimous vote requirement has inadvertently erected a barrier to transforming projects into decisions and actions. This decision-making model effectively allows each caucus to have veto power. One dissenting vote can stop a project from moving forward or from drawing conclusions about project results, thus delaying any potential decision regarding rule changes.

While the board can make decisions based on minority/majority reports without waiting for 100 percent agreement, at times it has chosen not to. Instead, the board has waited for the members to reach unanimity. Representatives from three different caucuses said that waiting for full consensus contributes to the delays and lack of decision-making that hamper the program.

A single veto can halt the process

A project's path to a recommendation can be blocked at many points. In the simplified example of a project's path, outlined in **Exhibit 4**, arrows mark steps requiring a consensus decision before the Policy committee can send a recommendation to the board. One participant said a committee could have a study completely written up, yet the results could be halted or shelved if one caucus representative wanted to stop it. "No" votes can also stop projects within an activity shown in a box in the graphic.

Exhibit 4 – Decisions can be blocked at many points in a research project's difficult path to the board: Each arrow marks a voting decision step



Source: Auditor created.

The dispute resolution process was designed to allow the process to move forward when there is no consensus

The dispute resolution process is meant to offer caucuses a way to reach consensus and produce a unanimous vote within a committee. WAC requires it to be used whenever committee members cannot agree. The program manual, however, says it is optional: the Science committee and Policy committee "may utilize mediation or arbitration" during dispute resolution. This contradiction between the rule's "must" and the manual's "may" has led some caucus representatives to treat dispute resolution as an option, a choice that carries penalties and risks rather than an extension of cooperative decision-making. Dispute resolution could be requested by an embattled caucus wishing to uphold its position or an exasperated caucus wishing to end a stalemate. The dispute resolution process delays any project while the issue is worked out, which may diminish or invalidate the results of the delayed project.

Caucus representatives are reluctant to use the dispute resolution process

Caucus representatives offered two reasons why they choose not to use dispute resolution in an atmosphere where it is viewed as a choice. First, Science committee members may fear inadequate knowledge may produce inaccurate resolutions. The program's manual says a dispute originating in the Science committee must be escalated first to the Policy committee for review and resolution. This occurs after the Science committee has exhausted all internal attempts to agree. If the Policy committee cannot resolve the issue, a mediator is brought in to lead negotiations among the caucuses. Whether negotiated by Policy or by a mediator, some of those interviewed said they were reluctant to use dispute resolution because members of the Policy committee and the mediator are not sufficiently knowledgeable about the intricacies of the scientific work to make an educated decision.

Second, some committee members view dispute resolution as a weapon that a caucus may wield to delay a particular part of the process, instead of making a good-faith effort to negotiate. For example, some caucuses believe that others choose to invoke dispute resolution rather than trying to achieve consensus in order to achieve their desired outcome without compromising on a recommendation. Because this belief is common, other members worry their intentions will be misunderstood even if using dispute resolution is the most reasonable recourse.

For example, the small-forest landowner caucus has made a proposal that the Policy committee has considered for five years without taking a formal vote on whether it should move forward as a recommendation. Members of this caucus have been hesitant to call for dispute resolution because they are concerned about harming relationships with other committee members.

When members have used dispute resolution, the board has been reluctant to follow the outcome

If consensus still cannot be reached, the Policy committee may send the board a minority/majority report outlining both sides of the issue, although it does so very rarely. The board has legal authority to make a final decision about a rule change based on such reports. One board member described personal liability risks members face, while some caucus representatives explained that board members are likely afraid of litigation. However, declining to act after receiving a minority/majority report can itself become problematic, as one example – concerning a draft rule update for certain perennial streams to make sure prescriptions meet water quality standards – demonstrates.

In this case, the program committees had been working on the water typing rule for many months, with sometimes contradictory or conflicting efforts. In November 2016, the Policy committee gave the board a recommendation assembled without full consensus. The board directed Policy to try again, and present a consensus report in February 2017 or initiate dispute resolution by May 2017. The committee's efforts failed to find consensus, and instead, Policy submitted a minority/majority report. Rather than taking action on the material presented to it, the board chose to employ its own panel of internal and external technical experts to evaluate the matter further.

The goal of water typing is to determine where fish habitat begins and ends.

In another situation, the Policy Committee's efforts have not resolved conflicts related to Type N water rulemaking. These conflicts concern the need to update prescriptions around these rules. Ecology has issued an ultimatum because of the inaction. The program must solve this problem by the end of November 2021, or risk losing federal Clean Water Act assurances.

Both paths out of deadlocked votes – dispute resolution and minority/majority reports – suffer from the same failing

Both processes virtually guarantee serious delays before the board can make a decision about rule changes. If dispute resolution is requested in the Science committee, the process takes at least six months before the committee's report is delivered to the Policy committee. If Policy's deliberations also end in a deadlock, and it decides to take the dispute resolution route, another six months is added to the overall path of a potential rule revision. In total, resolving deadlocks through dispute resolution can delay a project's path to the board for at least year.

The alternatives are for a caucus to compromise in committee, or take its chances with a minority/majority report presented to the board. And as previously explained, such reports are no guarantee that decisions will be made either more promptly or more effectively.

In addition to the issues created by the unanimous voting requirement, most studies are delayed

State law clearly states that results of the Science committee's studies are supposed to produce any needed rule changes "as quickly as possible". However, nearly all participants reported that delays are common in both committees and the board once the board receives results. Projects set up to test certain interim rules – such as those pertaining to the Clean Water Act assurances – are supposed to be prioritized and accomplished within strict timelines, but participants reported even these projects have seen delays. Project management literature indicates that projects

require a schedule to monitor progression. Board meeting minutes, board work plans, science work plans and specific project charters all show delays in meeting initial schedules. Of the 35 ongoing projects listed in the Science committee's 2017-2019 work plan, 28 were listed as delayed, some for longer than a year. Contracted work for 2018-2020 has also been delayed.

Projects can stray from schedules in part because the program has no consistent or centralized way to track them

The program lacks one comprehensive tracking tool, which may contribute to program staff and the board's inability to see or follow up on apparent delays to project schedules against established deadlines. Staff reported that the program's committees and project teams use multiple, usually unrelated, tracking systems. Staff had difficulty showing us detailed schedules for individual projects: some projects only listed an expected year of completion. Of the work plans we could review, very few included projected completion dates which could be used to compare any accomplishments to the original deadline.

Prompt decision making is also undermined because committee members do not adhere to roles and responsibilities assigned in the program manual

The program's manual outlines expectations for more than how projects are to be conducted and voted upon. It also contains guidelines on caucus interactions and expectations on participant engagement. Yet representatives from most caucuses reported there are others who do not follow the guidelines outlined in the manual, particularly concerning roles and expectations. These lapses contribute to project delays.

Almost half of all those interviewed said that caucuses do not adhere to the firewall between science and policy. The manual instructs members of the Science committee to abstain from policy discussions and Policy members to avoid influencing scientific work. Trespassing on the firewall can contribute to delays. For example, the Policy committee might receive study results from the Science committee and waste time debating whether the scientific work was sufficient. A two-year delay resulted from one such actual case. Similarly, a trespass onto policy territory in the Science committee might prompt members to repeatedly vote against a study design because its results might hurt their caucus's interests. An actual case led to a six-year delay.

Interviewees also said that other caucuses have recently circumvented the processes described in both the manual and in program rules altogether, either by making proposals directly to the board or turning to the Legislature to make legal changes rather than going through the adaptive management process.

The program rules and guidance are not set up to ensure all requirements in WAC are followed

State law and federal requirements state the program must follow a specific WAC, which the board has formalized in the Forest Practices Board Manual, Section 22. Some participants have said the program would work "just fine" if caucus members, program staff and board members simply followed all of the required process steps outlined in the manual. But the manual does not include all of the required steps listed in rule, and it contradicts the WAC in two prominent areas: dispute resolution and peer review of science.

The program is not following three important rules that could help it function more efficiently

Dispute resolution is ***required*** in program rules whenever there is a stalemate in negotiations. However, the language in the manual describes dispute resolution as ***optional***. Since it is the one tool available to get beyond a consensus stalemate, it is important that the program and the participants allow dispute resolution to work as envisioned. Those who do not wish to use it, possibly because the negative connotations described in interviews, could point to the "optional" paragraph in the manual and decline to employ it. If dispute resolution was required in the manual as in WAC, invoking it would be less of a concern and would likely help address the reluctance previously discussed.

A **regular peer review of the Science committee** is ***required*** every five years by program rules. However, it is ***missing completely*** from the manual. While there has been one review of the Science committee, conducted by the Stillwater group in 2009, this does not meet the required every-five-years time frame outlined in WAC. Part of this requirement also ensures an opportunity for the public to comment on that five-year comprehensive review.

If the program manual clearly stated this review as a requirement, program administrators would more likely work toward having the review completed regularly. Ensuring this consistent review would help to bolster the quality of the processes within Science, as reviews would expose deficiencies and propose remedies.

Biennial performance audits of the program are ***required*** but have not been regularly completed. The board has asked our Office to conduct one several times, but the board did not pursue other options, such as engaging a contractor or working with an internal auditor from Natural Resources. The board has arranged for other focused evaluations of the program over the years, which have produced a number of recommendations, but relatively few of them were acted upon. Most participants are unaware of those recommendations or why previous recommendations from earlier assessments were not implemented.

The program has acted on a little over a third of process related recommendations. Board minutes show board members asked the program staff and committee members to address some recommendations, but we found no evidence in the minutes that the board followed up to confirm any action was taken. Since board members did not confirm their instructions were followed, they could not ensure that the recommendations were acted upon.

Previous recommendations not implemented include:

- Caucus leaders should follow the ground rules and show commitment
- Policy should follow the ground rules
- Science should follow the ground rules
- Adhere to the policy and science roles
- More deliberate use of dispute resolution
- Discuss intensive and extensive monitoring approaches in the Adaptive Management Program
- Make process time more efficient

Caucus leaders and board members have been working with a consultant to address some of these recommendations, but more work remains to be done. Had these recommendations been implemented soon after they were made, at least some progress towards more efficient and timely decision making could have been achieved across the program.

Neither the program rules nor the manual make anyone responsible for holding participants accountable for their actions

Neither WAC nor the manual assign any person or entity responsibility for holding members accountable for their failure to work together and move rule recommendations forward as they are supposed to do. That includes not following the manual, not adhering to deadlines, or attending meetings unprepared. Further, neither WAC nor manual describe enforcement tools or consequences for failing to participate in the program as outlined in the manual.

While program rules assign management of the program to the board, they do not grant the board authority to force caucus representatives and program staff to adhere to the rules outlined either in WAC or the manual. The manual does outline duties for the program administrator to coordinate and oversee the projects, but this role also lacks authority to keep caucus representatives on task and follow procedures.

When asked who had the authority to enforce rules, participants offered many different responses, indicating a lack of common understanding about program accountability. When asked who ensures accountability, responses included:

- The program administrator
- The board
- Individual caucuses
- Committee co-chairs
- Each participant
- No one

When anyone could be responsible for ensuring processes are followed, it is likely no one is actually responsible.

The program lacks an onboarding process to help new caucus representatives understand their responsibilities

Turnover within the program – at both committees and on the board – results in a loss of program understanding, historical significance, and purpose, thereby decreasing discipline and accountability. Few program rules will be implemented with fidelity if participants are unaware of them. When asked about whether there was an onboarding process, most interviewees said there was not, but it would be a good idea to have one. At present, however, the program relies on the caucuses to educate their new representatives, while Natural Resources provides a half-day training to new board members.

Beyond the nuts and bolts of participating in the Science or Policy committees, some participants believe members' understanding of the foundational Timber Fish Wildlife Agreement has eroded over time. If new participants are not trained to fully understand the original agreement and goals, it is likely that understanding will be lost or interpreted differently.

Participants cited an overall lack of trust within the program

When the program was created, its intent was to bring together diverse interests to take on each other's problems as their own, to reach compromises that ensured the viability of the timber industry while protecting natural resources and endangered species. In one way or another, most participants say the original vision of the Timber Fish Wildlife Agreement has failed.

> "… everyone wins by addressing the needs and goals of ALL participants."
>
> From the *Timber Fish Wildlife Agreement*, 1986

Trust among the caucuses has eroded over the years, created what some people described as a difficult work environment. This has led certain caucuses to decide not to participate fully in the Policy committee. Furthermore, the original spirit of cooperation that underpinned the formation of the Timber Fish Wildlife Agreement and the Adaptive Management Program has dissipated. Now, without that cooperation, distrust permeates the program and caucus representatives are not eager to work with each other.

Feeding the distrust is the fact that high-level caucus members, known as principals, are no longer part of the process – they send lower-level representatives who, in most cases, have little to no authority to make decisions.

Interviewees complained that the members of various caucuses do not consider the needs and concerns of the other caucuses. A few interviewees said they believe it is common for some caucuses to come to meetings to employ delay tactics. They accused others of not following the manual's guidelines concerning participant roles or attempting to circumvent established processes.

While intent cannot be determined, caucus representatives genuinely believe that there is ill intent being practiced by others, indicating a breakdown of trust. The lack of trust among the caucuses, combined with the failure to follow processes outlined in program rules or the manual, significantly contributes to the program's dysfunction.

Leading practices from similar adaptive management programs could be applied to the program

Answer in brief

We identified six leading practices that could help the board reach decisions while improving accountability and transparency.

Practice 1: Use a "net gains" approach to decision making to help caucuses see a "win" from compromising on a project package.

Practice 2: Develop decision criteria up front to eliminate indecision by having participants agree to what results mean.

Practice 3: Switch to an alternative to consensus decision making to ensure decisions are made more quickly.

Practice 4: Institute a comprehensive monitoring and tracking system to help the program avoid delays.

Practice 5: Provide a public-facing dashboard to help establish a monitoring system and increase transparency.

Practice 6: Report regularly to the state legislature, as similar programs already do, to increase transparency.

Leading practices could help the board reach decisions while improving accountability and transparency

The program would benefit by implementing additional leading practices. Our sources for these leading practices include research papers and other similar adaptive management programs, listed in the sidebar and described briefly in **Appendix D**. The six leading practices we identified fall into two broad categories:

- **Addressing decision-making and voting** – These three practices could help the committees resolve "stuck" decisions while still allowing all voices at the table to be heard
- **Promoting accountability and transparency** – These three practices address both internal and external project reporting and increase accountability to the public

Natural resource management programs referred to in this report:

- Chesapeake Bay Program
- Puget Sound Partnership
- Snohomish Sustainable Lands Strategy
- Yakima Basin Integrated Plan

Practice 1. Use a "net gains" approach to decision making to help caucuses see a "win" from compromising on a project package

The "net gains" approach in negotiations considers multiple projects in a package rather than evaluating and voting on them individually. In this method, each caucus is likely to see a benefit for itself among the multiple projects included in the package. If one project may not seem to benefit a particular caucus, there is likely another that furthers its goals. When each caucus can see a win of some sort in the package, it has less of a reason to vote "no" when deciding whether to move the group of projects forward. We found two examples of this approach in action.

- The **Yakima Basin Integrated Plan** program pursues a net-gain approach by outlining seven key elements of its overall plan. Each element aligns with the goals of at least one stakeholder group. Every project put forward by its program participants aligns with at least one element. A report by the Environmental Protection Agency on the program said "In this way, all stakeholder needs are met in an egalitarian fashion, and all participants have reasons to advocate for working group partners."
- The **Snohomish Sustainable Lands Strategy** develops net gains packages that allow the group to take a multi-benefit planning approach. The program calls this practice "reach-scale plans." By focusing on both the reach – length of a stream or river – as a whole and on the mutual benefits, the participants achieve agreement and success.

Conversely, the Adaptive Management program considers each project individually. This increases the likelihood that only one or two caucuses will benefit. For example, a project that investigates leaving wider buffer areas of timber alongside streams could – hypothetically – benefit caucuses interested in preserving trees and protecting aquatic resources, but is unlikely to benefit the timber industry or small forest landowners. And because the program applies a consensus-driven decision making process, it is possible either of those caucuses will vote "no" and halt the entire project. However, if the buffer area project is added to a package of multiple projects, including one that benefits these caucuses, a "yes" vote becomes more palatable, and the package has a better chance of passing. Adopting a net-gains approach would help program caucus members more willingly adhere to the program's original spirit and make decisions more collaboratively.

Practice 2. Develop decision criteria up front to eliminate indecision by having participants agree to what results mean

Incorporating decision criteria at the beginning of a scientific project allows an organization to agree up front what a certain result means. For example, if test results are above a particular threshold, program participants will consider that the rule is delivering its designed purpose. If results are below that threshold, they will recommend the board revise the rule. One program participant called the principle of incorporating decision criteria at the outset "a fundamental concept in science." The federal government agrees:

- The **U.S. Department of the Interior** issues guidance that agreeing to decision criteria or pre-determined thresholds is a "critical element" of adaptive management. Deciding on thresholds beforehand allows groups to know whether the research will warrant a change. Establishing decision criteria at the outset reduces disagreement on whether there should be an adjustment to the rule.

The Adaptive Management program does not establish decision criteria during project design or initiation. For example, one participant described a study examining how harvesting trees along streams affected stream temperatures. The study found that removing even small amounts of tree shade produced a measurable difference in stream temperature. The study design did not, however, set criteria for what difference in temperature was significant enough to warrant a rule change. Upon receiving the results, the Policy committee debated at length whether the *measured* difference was indeed a *meaningful* difference, at which one point one participant went on to say, "which is not a question they should be having at the end of a study when receiving the results."

The Science committee could complete a project successfully and agree on the results of that project, but because they lack criteria on which to base their decision, Policy and the board would find it difficult to develop a decision based on that science. Not setting decision criteria up front can turn a transparent scientific process into a cross-caucus debate. However, following federal guidance and setting criteria up front removes the debatable points and helps guide decision-makers to a speedier conclusion.

Practice 3. Switch to an alternative to consensus decision-making to ensure decisions are made more quickly

Adaptive management experts and other similar programs promote a super-majority decision-making model to ensure decisions are made quickly and reflect the best available science. Some experts even conclude that decision-making based on unanimity more often than not leads to inaction. We found many examples of arguments against consensus and in favor of other voting and decision-making models. Here are just a few, drawn from both research and the examples of other adaptive management programs.

- The **University of Colorado Boulder: Natural Resources Law Center** published the article "Arguing about Consensus," by Douglas S. Kenney, which concluded it is naïve to think that consensus is always possible given differences in communication and education, as well as what different groups consider reasonable or of similar value.
- The **Center for Progressive Reform**, an advocacy group, in an article titled "Making Good Use of Adaptive Management", said bluntly that consensus in adaptive management is a "potentially insurmountable barrier to changing management direction in response to new information."
- The **Chesapeake Bay Program** uses two-thirds agreement to override the need for unanimity, and employs what it calls a "consensus continuum." If a workgroup cannot reach consensus, the decision is bumped up to a "goal team;" if the goal team cannot reach consensus, the decision moves up to management. The management board is also able to use a two-thirds majority to override the need for consensus. The continuum ensures that if one caucus stops negotiating, the blockage will be addressed – and likely overridden – at a higher level.
- The **Snohomish Sustainable Lands Strategy** uses "consensus minus one." A representative said that the group has found it helpful to allow the parties that do not agree to state their reasons on the record. At that point, they are given time to lobby other groups in hopes of coaxing them to move the decision a little more in their favor.

Practice 4. Institute a comprehensive monitoring and tracking system to help the program avoid delays

Comprehensive tracking tools for adaptive management programs are designed to help the program's managers identify and address issues before these escalate into serious delays. Other similar programs have a variety of methods to incorporate measurable goals, schedules and deadlines, and a system to monitor progress towards overall goals.

- The **Chesapeake Bay Program** has developed 10 goal areas; each area has specific outcomes which are measurable and include deadlines. The program has a strategy in place to reach the numeric outcomes attached to each goal. It also employs what it calls a "logic and action plan" that looks at the program process as a whole to ensure individual projects are on track.
- The **Yakima Basin Integrated Plan** has implemented many performance goals to measure internal progress. It has a management plan for the program, with goals and benchmarks, which breaks down activities into 10-year plans. Program management reviews those goals and progress on them annually.
- The **Puget Sound Partnership** completes some of its products in compliance with deadlines set in state law. A program representative credited some of its success to having deadlines it is legally bound to and adheres to.
- The **U.S. Department of the Interior** guidance says that groups working on adaptive management should agree on objectives representative of all interests and then introduce quantifiable, measureable attributes for monitoring purposes.

The lack of a comprehensive tracking system has made it difficult for the program administrator to identify where a project has gone astray in time to make corrections. Program staff considered this a serious problem (see page 17). Furthermore, the program does not employ performance goals to measure project success.

The program administrator said that while the administrative team is developing a comprehensive tracking tool, capable of following all projects, it has yet to be completed. One of the challenges he identified is designing a tool that will be appropriate for the various projects the team works on.

Practice 5. Provide a public-facing dashboard to help establish a monitoring system and increase transparency

Building on the idea of monitoring overall program progress, creating a publicly available dashboard that tracks progress toward shared goals would improve accountability and transparency. A dashboard that is easily understood by the lay person would also help frame what success looks like for the program. By providing a clear way to identify this information, other natural resource management organizations have made it easier for those interested to learn more about the work they do and the progress they are making.

- The **Chesapeake Bay Program's** website displays the "Chesapeake Progress" graphic to show progress on the program's goals and outcomes. Clicking on an icons allows the viewer to see the latest progress review, which is updated regularly. A representative of the program says public accountability is a big part of program accountability – making this available for people to see that they are doing what they said they would and how the ecosystem is responding.
- The **Puget Sound Partnership** maintains a public dashboard on its Vital Signs partner website (illustrated in **Exhibit 6**) that is regularly updated to show how well the program is doing on specific indicators. Each indicator button is linked to web pages or documents containing additional information on the work that has been done.

Exhibit 6 – The Puget Sound Partnership's online dashboard makes progress easily visible

Source: vitalsigns.pugetsoundinfo.wa.gov/VitalSignIndicator/ViewAll

- The **Snohomish Sustainable Lands Strategy** places "story maps" on its website as a tool to describe individual projects and the progress made on each. For example, the story map for Snohomish Salmon explains the importance of estuaries for the survival of salmon. It describes how the program has monitored conditions from temperature to salinity in the estuaries so that estuary restoration can take place, and how many acres of estuaries have been restored as a result of the program.

The Adaptive Management program has dedicated pages on the Department of Natural Resources website, but it is not easy to navigate. It does not have a public-facing dashboard where the public can obtain information about program progress, member voting records, and the status of particular projects. Without a publicly available dashboard, the public cannot easily scrutinize the progress of the board and the committees.

Ideally, program dashboards show progress within the context of program goals. While these program goals would have to be defined by the board and the caucuses, an example would include multiple objectives that correspond to water quality, fish habitat, and tree harvesting. Performance measures to reach those objectives must be measurable. These goals could also correspond to the rule groups that already exist.

Having a method to measure and show success by what has been decided will help both the participants and the public understand the work being done. Some people have cited that the fact that only two rules have been changed in 15 years is an indicator that the program is not successful. However, rule changes are not the only measure of success. If Science carries out studies to test the rules and finds they are effective as they are, then the Policy recommendation to the board would be for no change to the rule. That is also a measure of success.

This is the type of information that, if included within a dashboard, would help observers better understand the progress being made in forest practices because of the program. Going through the adaptive management process and having a decision made by the board one way or another on each rule is how the program is successful.

Practice 6. Report regularly to the state legislature, as similar programs already do, to increase transparency

The benefits of making a regular report to the Legislature are two-fold. First, it increases accountability for program participants, and second, it offers legislators an opportunity to understand the program's progress. Ideally, reporting expectations would stress accountability for program decisions and explanations for project and rule-making delays. If projects or recommendations were delayed, caucus members and program staff would need to articulate the reasons for those delays. Understanding that their decisions would be recorded and reported would help ensure caucus members and program staff were clearer in project workplan documentation and would likely reduce delaying tactics that were previously invisible.

We identified two programs that are also required by law to produce reports for government leadership.

- The **Yakima Basin Integrated Plan** reports to the Legislature and the governor every two years. This report must describe measures implemented and their effectiveness, a project funding list, and a description of progress toward the plan's goals.
- The **Puget Sound Partnership** produces a biennial "State of the Sound" report. The report goes to the governor's office and the Legislature, with legislators setting the reporting schedule to help ensure program accountability.

The Adaptive Management Program currently reports to the Legislature every biennium as part of fulfilling requirements of its budget provisos. This report's primary focus is on financial matters: how much money was spent and on what. This report requirement does not address issues such as success toward achieving goals and following important processes. Having a legislative committee regularly hear about the program would provide a more thorough oversight.

Without change, the program will continue to languish, putting Washington at risk for litigation

Answer in brief

If the Adaptive Management Program does not improve its processes, the state risks penalties for failing to meet federal requirements. The program is falling behind on meeting Clean Water Act milestones. Furthermore, the program is not meeting requirements of the Habitat Conservation Plan. In addition, participants agree lawsuits are a likely consequence of program failure.

If the Adaptive Management Program does not improve its processes, the state risks penalties for failing to meet federal requirements

There are serious consequences for the state – as well as for many stakeholders in forestry activities, including the Department of Natural Resources – concerning a draft rule update for certain perennial streams to make sure prescriptions meet water quality standards. These include federal environmental protections in the Clean Water Act and the Habitat Conservation Plan.

The program is falling behind on meeting Clean Water Act milestones

The Department of Ecology has indicated that if the program does not put forward language for science-based, updated rules related to Type N Riparian prescriptions, it could remove federal assurances that the state is in compliance with the Clean Water Act. (This issue is also discussed on pages 7, 10 and 16; the Act is briefly described in Appendix C.) Losing these assurances at the state level could impose significant costs on landowners, as they could be forced to conduct lengthy monitoring measures to ensure they comply individually.

Ecology has established a series of milestones marking the progress the program should make:

a) To gather the information it needs to assess whether current rules are effective at protecting water quality to federal standards

b) To adjust the rules in a manner consistent with adaptive management

According to a representative from a federal oversight agency and the Department of Ecology, if the program fails to hit the milestones and loses the assurances, Ecology can levy fees and penalties, particularly if the program's inaction leads to environmental harm. Ecology could also assume responsibility for regulatory work, including devising and imposing cleanup plans, on privately held forest lands. Such work is likely to be costly.

Ecology says the program has failed to meet its milestones for many reasons, including stakeholder conflict, delays driven by consensus-based decision making, and overall program inefficiency.

The program is not meeting requirements of the Habitat Conservation Plan

The program also tests rules related to another federal assurance within the 2006 Habitat Conservation Plan (see the sidebar) that generates Washington's "incidental take" permit. This permit gives the timber industry certain flexibility within Endangered Species Act requirements. Without the Habitat Conservation Plan, the potential for third-party lawsuits would increase. A federal agency charged with implementing the Endangered Species Act sees the program's goal largely as carrying out the Plan, and told auditors that Adaptive Management Program activities have not, to date, resulted in anticipated changes (for example, the permanent water-typing rule).

One participant said that the Habitat Conservation Plan explained how to do water-typing to produce a map of streams and rivers that are habitat to protected aquatic species. Once identified, these bodies of water are managed under different rules than non-habitat waters. Yet water-typing is a source of major disagreement within the program, and participants have spent the 14 years since the Plan was issued arguing about how to conduct water-typing – causing delays in meeting federal expectations associated with the Plan.

Habitat Conservation Plan

An ecosystem-based forest management plan that helps non-federal and non-tribal forest owners protect habitat for at-risk species while carrying out forest management and other activities by following state forest practices regulations. It is designed to fully comply with both the federal Endangered Species Act and the Clean Water Act.

In addition, participants agree lawsuits are a likely consequence of program failure

When asked about what might happen if the Adaptive Management Program fails, many caucus members described a breakdown of process, and several said there would be "chaos." At the start of the audit, two caucuses had left the Policy committee out of frustration; one said it is seriously considering litigation as the next step. One person explained that the caucus preferred working within existing negotiations but it simply does not know what else to do to prompt change.

State Auditor's Conclusions

Washington's forest ecosystem is one of our state's most important natural resources. For years, various groups with competing interests in how the forests should be managed relied on contentious litigation to settle those differences. The state's Adaptive Management Program was created more than 20 years ago as a way to update forest management through a science-based approach and avoid costly legal cases.

After adopting a number of science-based rules in its early years, the program is not operating as intended. Two key causes are the unanimous voting requirement and participants' reluctance to make use of the dispute resolution process when consensus cannot be achieved. In this audit, we offer recommendations to move the process forward, including adopting an alternative to the 100 percent consensus decision model, a net-gains approach to decision making, and mandatory dispute resolution. Without these types of changes, the very mechanisms that were put into place to prevent legal battles will continue to impede the decision-making process and put the state at risk of ending up back in court.

Recommendations

For the Forest Practices Board

To help alleviate delays, as described on pages 13-17 and 23-26, we recommend it:

1. Adopt an alternative to the consensus decision-making model currently in rule (WAC 222-12-045) and the manual. Consider using alternative models such as those used in the Chesapeake Bay Program and the Yakima Basin Integrated Plan. Changing this rule would require a vote at the Forest Practices Board. See recommendation #13 for additional information.
2. Require participation from high-level principals in each individual caucus on the Policy committee and on the board instead of designees who have no decision-making authority.
3. Update language in the board manual to reflect WAC which says dispute resolution process is required to occur when consensus cannot be achieved within either the Science committee or the Policy committee.
4. The board should set a trigger for dispute resolution. It should work with the Adaptive Management Program Administrator and the chairs of the committees to determine the appropriate amount of time.
5. Implement a "net gains" approach to each proposal, project, and decision that benefits more than one caucus by considering packages of projects instead of individual projects.
6. Adopt decision criteria for determining actions that will occur depending on project results before those results have been found, such as the ones promoted in *Adaptive Management: The U.S. Department of the Interior Technical Guide*.

To create accountability, as described on pages 18-20 and 26, we recommend it:

7. Ensure a peer review of the entire science program is conducted every five years. Opportunities for public comment on those five years should also be given, as stated in WAC. Update the manual to reflect this requirement.
8. Create an on-boarding or training process so new members will have the necessary understanding of roles and responsibilities as well as ground rules.
9. Develop procedures to ensure required biennial performance audits are conducted on the program by DNR or an appropriate state agency or contractor. These audits can be conducted by a contracted private entity, another state agency, or an internal auditor with performance audit expertise.

10. Implement a tracking system that follows each stage of a project and continuously shows how that work and the results of that work align with the goals of the program.

To increase transparency, as described on page 27, we recommend it:

11. Create a public-facing dashboard that provides real-time information. Items that should be considered for inclusion in the dashboard include:
    - A list of all rules the program is expected to address
    - A list of current and past projects with their budgets and schedules, including reasons for any delays
    - A list of future projects with timelines and dependencies, such as deadlines imposed by other agencies

For the Legislature

To create accountability and increase transparency, as described on pages 18-20 and 26, we recommend it:

12. Require the Forest Practices Board give the appropriate natural resource committees periodic updates on the Adaptive Management Program's progress on its projects and reaching its program mandates.
13. If the board cannot vote to make the necessary change to the rule (WAC 222-12-045) governing consensus decision-making to an alternative method of voting, we recommend the Legislature change the program voting structure in RCW. (See recommendation #1 for more detail.)

Agency Response

STATE OF WASHINGTON
FOREST PRACTICES BOARD

PO Box 47012
Olympia, WA 98504-7012

February 10, 2021

The Honorable Pat McCarthy, State Auditor
Office of the State Auditor
Insurance Building
P.O. Box 40021
Olympia, WA 98504-0021

Honorable Auditor McCarthy:

Thank you for the opportunity to review and respond to the State Auditor's Office (SAO) performance audit report, "Adaptive Management Program: Improving Decision-Making and Accountability." Having requested the SAO to perform this work, the Forest Practices Board (Board) appreciates the thoughtful approach and significant effort that went into SAO's audit of the Board's Adaptive Management Program (AMP). We are particularly grateful for the recommendations described in the report and view them as an opportunity to bring about improvements.

The Board is committed to carefully considering each of the eleven recommendations directed to us in the report. Subject to changes as more detailed evaluations are conducted, we view the set of recommendations as fitting into three categories:

- Recommendations to be considered and acted upon by caucus principals that may be aided by third-party neutral assistance focusing on conflict transformation. Recommendations is this category include alternatives to the consensus-based decision-making model (recommendation 1), participation of principals (recommendation 2), and decision criteria for determining actions (recommendation 6).

- Recommendations involving changes to AMP processes to be evaluated mainly through the appropriate AMP committees and brought to the Board with recommendations for action. These include setting a trigger for dispute resolution (recommendation 4), "net gains" approach (recommendation 5), and decision criteria for determining actions (recommendation 6).

- Recommendations that are administrative in nature to be evaluated primarily by Board and AMP staff and brought to the Board for decisions and action. These are the remaining six recommendations that are not listed above for caucus principal or AMP committees.

Board staff is in the process of understanding the report and its recommendations. At the Board's May 2021 meeting, staff will provide suggestions for relative priorities among the recommendations and timelines for evaluating and acting on them.

The Board will ensure that appropriate assessments are made to determine whether additional resources are needed to do what is necessary to make and sustain changes to address the challenges identified in this report, and we will provide oversight to establish priorities for action in the context of established work plans for the Board, the two AMP committees, and Board and AMP staff.

In addition, the Board will be available to report on implementation progress to legislative natural resources committees upon request.

In closing, the Board again thanks you and your team for the thorough work on this performance audit and report.

Sincerely,

Stephen Bernath, Chairman

cc: Bob Guenther
Brent Davies
Carmen Smith
David Herrera
Jeff Davis
Rich Doenges
Kelly McLain
Benjamin Serr
Tom Nelson
Vickie Raines

Appendix A: Initiative 900 and Auditing Standards

Initiative 900 requirements

Initiative 900, approved by Washington voters in 2005 and enacted into state law in 2006, authorized the State Auditor's Office to conduct independent, comprehensive performance audits of state and local governments.

Specifically, the law directs the Auditor's Office to "review and analyze the economy, efficiency, and effectiveness of the policies, management, fiscal affairs, and operations of state and local governments, agencies, programs, and accounts." Performance audits are to be conducted according to U.S. Government Accountability Office government auditing standards.

In addition, the law identifies nine elements that are to be considered within the scope of each performance audit. The State Auditor's Office evaluates the relevance of all nine elements to each audit. The table below indicates which elements are addressed in the audit. Specific issues are discussed in the Results and Recommendations sections of this report.

I-900 element	Addressed in the audit
1. Identify cost savings	**No.** The Adaptive Management Program has spent part of its budget on scientific studies that were later put on hold or deprioritized. The audit aimed to improve efficiency in the program so that studies lead to recommendations to the Forest Practices Board. However, the audit's recommendations could potentially help the state avoid costly litigation.
2. Identify services that can be reduced or eliminated	**No.** The audit evaluated process steps within the program, and whether they could be more efficient and effective. It did not identify services or operations that could be reduced or eliminated.
3. Identify programs or services that can be transferred to the private sector	**No.** The audit focused on how to improve the program's processes. Our audit did not review how services could be transferred to the private sector.
4. Analyze gaps or overlaps in programs or services and provide recommendations to correct them	**No.** The audit did not identify gaps or overlaps in situations where several programs are cobbled together, leaving some programs covering the same populations while other populations are not served.

I-900 element	Addressed in the audit
5. Assess feasibility of pooling information technology systems within the department	**No.** The audit did not review the program's information technology systems.
6. Analyze departmental roles and functions, and provide recommendations to change or eliminate them	**Yes.** The audit evaluated the roles and functions of the board and the program administrator and recommended improvements to increase overall accountability for program participants and for management of scientific projects.
7. Provide recommendations for statutory or regulatory changes that may be necessary for the department to properly carry out its functions	**Yes.** The audit made recommendations for statutory changes to help the program operate more efficiently.
8. Analyze departmental performance data, performance measures and self-assessment systems	**Yes.** The audit analyzed program performance measures such as tracking tools for individual projects and program work plans, and made recommendations to improve them.
9. Identify relevant best practices	**Yes.** The audit identified best practices related to decision-making processes in natural resources management programs, systems to track progress of projects and the program as a whole, and ways to make information about the program's progress publicly available..

Compliance with generally accepted government auditing standards

We conducted this performance audit under the authority of state law (RCW 43.09.470), approved as Initiative 900 by Washington voters in 2005, and in accordance with generally accepted government auditing standards as published in *Government Auditing Standards* (July 2018 revision) issued by the U.S. Government Accountability Office. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The mission of the Office of the Washington State Auditor

To provide citizens with independent and transparent examinations of how state and local governments use public funds, and develop strategies that make government more efficient and effective. The results of our work are widely distributed through a variety of reports, which are available on our website and through our free, electronic subscription service. We take our role as partners in accountability seriously. We provide training and technical assistance to governments and have an extensive quality assurance program. For more information about the State Auditor's Office, visit www.sao.wa.gov.

Appendix B: Scope, Objectives and Methodology

Scope

This audit looked at the process of the Adaptive Management Program within the Department of Natural Resources' Forest Practices Division and whether it could be carried out more efficiently and effectively. It did not look at other programs within the Forest Practices Division. The audit focused specifically on process steps within the Adaptive Management Program's three arms – the Cooperative Monitoring, Evaluation, and Research Committee (CMER – the Science committee), the Timber Fish and Wildlife Policy Committee (TFW – the Policy committee), and the Forest Practices Board – which manages the program. This audit looked at process steps within the program and whether they could be improved and made more efficient to avoid delays.

The audit was limited in some cases by the fact that the program did not have overall tracking tools to show whether projects were completed within the planned timelines.

While the audit looked at timelines within the science arm of the program, this audit did not evaluate the scientific studies and their value or relevance to the program because auditors do not have that expertise and these topics were not the focus of review. The audit also did not look at whether such studies were done correctly or whether the timelines of the studies were appropriate.

While interviewees did talk about 'people-problems' during the scoping phase of the audit, we did not look at interpersonal issues in depth because another evaluation was taking place concurrently with our audit that did focus on those issues.

Objectives

The purpose of this performance audit is to evaluate ways the program could improve decision-making and reduce delays in the overall process. The audit addresses the following objectives:

1. Does the program use procedures that meet state and federal process requirements?
2. Compared to similar programs, has the program applied leading practices in its processes?
3. Are there delays in the process that prevent the board from making timely decisions? If so, where are the delays and can they be mitigated?
4. Has the program implemented recommendations from previous evaluations?

For reporting purposes, the answers to these objectives are found in multiple areas throughout the results section of the audit.

Methodology

We obtained the evidence used to support the findings, conclusions, and recommendations in this audit report during our fieldwork period (January – August 2020), with some additional follow-up work afterward. We have summarized the work we performed to address each of the audit objectives in the following sections.

Objective 1: Does the program use procedures that meet state and federal process requirements?

To address this objective, auditors examined laws and rules governing the program, reviewed program guidance, and interviewed program staff.

Identified and reviewed state RCW and WAC governing the program:

- 1974 Forest Practices Act (RCW 76.09)
- Creation of the Forest Practices Board (RCW 76.09.030)
- Forest Practices Rules (RCW 76.09.040)
- Forests and Fish Report (RCW 76.09.370)
- Salmon Recovery – Forests and Fish Rules (RCW 77.85.180)
- Authority of the Forest Practices Board (WAC 222-12-010)
- Adaptive Management Program (WAC 222-12-045)

Identified and reviewed federal laws governing the program:

- Endangered Species Act (16 U.S.C. Sec. 1531 et seq.)
- Clean Water Act (33 U.S.C. Sec. 1251 et seq.)

Reviewed the program's policies and procedures

Auditors examined the program's manual, *Guidelines for Adaptive Management Program* (Board Manual) to see if its guidance complied with state and federal laws and rules governing the program. Auditors also reviewed the Science committee's manual, *CMER Protocols and Standards Manual*, to identify gaps or conflicts with state and federal laws.

Interviewed program participants

We sought the perspectives of caucus members, program staff and board members regarding the program's process steps and how they were carried out and compared those to laws and rules governing the program. Auditors also interviewed other staff and former staff including the current program administrator and the previous program administrator. These interview notes were analyzed to verify what we found in the Board Manual as it related to process steps to see if the program participants followed those steps or not. They were also used to verify whether the program followed the applicable state and federal laws.

Objective 2: Compared to similar programs, has the program applied leading practices in its processes?

To address this objective, we asked program participants during interviews if they knew of other similar programs that were conducting adaptive management successfully, carried out independent research to identify similar programs doing it well, identified relevant scholarly articles about leading practices in adaptive management, reviewed federal guidance on adaptive management, and interviewed facilitators and other staff of programs identified as similar and having leading practices that could be applied to the program.

Interviewed program participants and others

During scoping interviews, auditors asked program participants if they knew of other similar programs in adaptive management that might offer possible leading practices. We then researched those programs to see if they were successful and whether they applied leading practices that could help alleviate the delays and lack of decision-making present in the Adaptive Management Program.

Researched and identified similar programs

In addition to the recommendations from program participants, auditors independently researched other adaptive management programs in the United States. We identified programs that were similar, using the following criteria:

- Used an adaptive management process
- Natural resources management
- Diverse stakeholders with different interests

If the programs were similar, then auditors determined whether they had practices that could be applied to the audited program. If they did, auditors included these programs as similar programs to look for leading practices.

Interviewed staff from similar programs

Auditors interviewed staff from similar programs identified as potentially having leading practices that could be applied to the Adaptive Management Program. The notes from these interviews were analyzed to find leading practices related to decision-making and avoiding delays and disagreements.

Reviewed scholarly research

We found several scholarly articles that researched adaptive management and identified successful ways of carrying out these programs so that decision-making was efficient and effective. Our sources are listed in the Bibliography in this report. These articles were used to identify leading practices related to:

- Decision-making
- Consensus
- Avoiding delays and disagreements

Reviewed federal guidance

The U.S. Department of Interior has issued guidance for adaptive management programs overseeing the management of natural resources. Auditors reviewed this guidance and identified potential leading practices related to decision-making and avoiding delays and disagreements.

Identified top leading practices

After carrying out these interviews and research, auditors identified several leading practices that could be applied to the program to help it function more efficiently and effectively. These top leading practices were identified after auditors collected all potentially relevant leading practices in a qualitative analysis. The analysis was used to identify which leading practices were mentioned more often and were most relevant to the issues auditors identified as causing delays and disagreements at the program. The leading practices were also those related to process steps.

Objective 3: Are there delays in the process that prevent the board from making timely decisions? If so, where are the delays and can they be mitigated?

To address this objective, we reviewed process steps in the program, requested staff send us tracking tools they use for projects as well as any timelines or work plans, and reviewed those tracking tools, timelines and work plans to identify delays and sources of those delays. Auditors also interviewed staff to see where those delays originated and whether they could be mitigated. Additionally, auditors reviewed board meeting minutes from 2016 – 2019. At the time of review, minutes for 2020 had not yet been posted.

Requested and reviewed tracking tools, timelines, meeting minutes and work plans

Auditors reviewed those timelines and tracking tools that were available. Auditors also reviewed Forest Practices Board meeting minutes as well as Policy group meeting minutes. We looked at CMER work plans as well as Board annual work plans and accompanying accomplishments documents for those years when they were available.

Interviewed program participants

Auditors interviewed staff, analyzing the results to identify potential areas and sources of delays.

Objective 4: Has the program implemented recommendations from previous evaluations?

Auditors requested and reviewed documentation from previous evaluations to identify process related recommendations. Auditors also interviewed program participants and program guidance, as well as documentation received from program staff to determine which recommendations were implemented. Auditors also reviewed meeting minutes to find evidence of recommendations being implemented.

Work on internal controls to ensure processes are working as intended

In this audit, we determined internal controls are significant to the audit objectives. We determined if the Forest Practices Board has internal controls in place to ensure the Adaptive Management Program process is followed according to federal and state law and regulation, as well as leading practices. We did not evaluate scientific work but focused on processes. Our recommendations have been designed to address control weaknesses. To do this, we conducted the following tasks.

- Reviewed the Forest Practices Board Manual, section 22, which applies to the Adaptive Management Program, to see whether it addressed all elements in WAC. Auditors read both and compared content to see if program guidance contained all required process steps. The manual did not contain all requirements.
- Assessed project management tools used to help the program track and monitor deadlines for research projects and rule revisions to see if they were sufficient. Auditors asked the Adaptive Management Program Administrator for project and program tracking materials. He acknowledged he was unable to provide every single tracking tool used, in part because he had only recently been hired in this position and in part due to COVID-19 office restrictions. However, auditors received enough tracking tools to determine that there were not adequate deadlines and tracking mechanisms for the tools to be sufficient.
- Determined whether the program had assigned responsibility for holding committee members accountable for following the requirements in its manual. Auditors asked questions about this in fieldwork interviews with program participants. Neither rule nor manual assign responsibility for accountability measures.
- Reviewed interview responses which indicate caucus members do not trust one another's motives. They see other caucus members as more interested in furthering their own interests than fulfilling the program's purpose and requirements.
- Identified whether the new committee members received training on the program's purpose and the requirements in its manual. Auditors asked about this in fieldwork interviews with program participants. There is no formal training for members on the Policy committee or the Science committee.

Appendix C: Endangered Species Act and Clean Water Act

The Adaptive Management Program is subject to two federal laws – the Endangered Species Act and the Clean Water Act. Here are brief descriptions of those laws and how they interact with the program:

Endangered Species Act

The Endangered Species Act of 1973 was created to protect and recover imperiled species and the ecosystems they depend on. It protects species by prohibiting the "take" of animals listed as endangered or threatened except under federal permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." One example of a federal permit for the take of listed animals is Washington's Habitat Conservation Plan.

Clean Water Act

The Clean Water Act of 1972 established the basic structure for regulating pollution of U.S. waters and regulates quality standards for surface waters. Under the act, the federal Environmental Protection Agency (EPA) has implemented pollution control programs including setting wastewater standards for industry. It has also developed national water quality criteria recommendations for pollutants in surface waters.

How the adaptive management program interacts with these federal laws

The Forests and Fish Report of 1999 set up the Adaptive Management Program and the rules for forest practices that the program is now testing. The rules and program are meant to satisfy the requirements of the Clean Water Act with respect to water quality on non-federal forest lands, as well as the Endangered Species Act with respect to the incidental take of salmon and other aquatic resources covered by the Habitat Conservation Plan. By doing this, the program was designed to help with salmon recovery and water quality enhancement efforts in areas affected by forest practices.

Under the Clean Water Act, assurances were originally granted in 1999 as part of the Forests and Fish Report; they spell out how the Act will be applied to lands subject to the Forests and Fish Report. The assurances established how the state's forest practices rules – as updated through the Adaptive Management Program – would be used to bring forested watersheds into compliance with state water quality standards and then maintain compliance. The assurances were a kind of roadmap to how the program would test the forest practices rules' effectiveness.

The Department of Ecology would like to see the program prioritize testing effectiveness of rules related to water quality and update them if necessary. Ecology had granted the assurances for 10 years in 1999, and extended them for another ten years when that period was over and the effectiveness of the rules remained largely untested. The 2009 extension was conditioned upon the program meeting a list of milestones including process improvements and performance objectives. In 2019, Ecology saw that the program was not meeting its milestones but granted two more years to the program for it to show it can make progress on those performance measures and translate science into rulemaking.

The program must compose and prepare for public comment a draft rule on riparian buffers for non-fish-bearing perennial streams in 2021. If it misses this deadline, Ecology could decide not to extend the assurances which in turn could result in Ecology performing the relevant regulatory work on forest lands. Doing so means Ecology could create cleanup plans and tell landowners what they need to do on their lands. If the assurances are withdrawn, it would leave landowners vulnerable to Clean Water Act lawsuits. Fees are also possible if the EPA is able to prove direct causation between land management and environmental impacts.

The assurances are also part of the Habitat Conservation Plan – under which the state received its take permit under the Endangered Species Act. The Habitat Conservation Plan was developed by Department of Natural Resources on behalf of the state of Washington in response to the federal listing of certain threatened and endangered fish species. The plan describes how those listed fish species would be protected. It ensures landowners who conduct forest practices activities in compliance with the Forest Practices Act and rules will also be following the requirements of the Act.

Appendix D: Similar Natural Resource Management Programs

This audit speaks to multiple programs that were explored to gain insight into those programs and determine best practices for adaptive management. Here are brief descriptions of those programs:

Chesapeake Bay Program

The Chesapeake Bay program is a regional partnership based in Maryland that works to protect and restore the Chesapeake Bay. It is led by the Chesapeake Executive Council - governors from six Bay states, mayor of the District of Columbia, chair of the Chesapeake Bay Commission, and administrator of the U.S. Environmental Protection Agency. It is advised by citizens, scientists and local officials and they work with government agencies, academic institutions and watershed organizations. The program uses adaptive management in its efforts to restore the Bay, its tributaries and the lands that surround them. Priorities include water quality, healthier fish and shellfish, conservation of lands, habitat for wildlife, boost in environmental literacy and rise of stewardship of the Bay's resources.

Puget Sound Partnership

The Puget Sound Partnership is the Washington state agency leading the region's collective effort to restore and protect the Puget Sound. The partnership brings together hundreds of partners to mobilize action around a common vision called the Puget Sound Action Agenda. It's a science-driven system that uses adaptive management to ensure decision-makers are well-informed and have the information they need to advance these priorities and recovery goals. There are six recovery goals, which include: healthy human population, vibrant quality of life, thriving species and food web, protect and restored habitat, abundant water quality, and healthy water quality.

Yakima Basin Integrated Plan

The Yakima Basin Integrated Plan is aimed at protecting fish passage, groundwater storage and habitat in central Washington. It consists of multiple stakeholders with diverse interests, and has been successful in part because every project aims to align with at least one interest of each stakeholder. The plan uses adaptive management to determine new projects to bring to the plan or adjust the plan. It has workgroups that develop the plans, an executive committee which focuses on implementing projects, a committee for funding and lobbying, and technical committees that review their respective responsibilities.

Snohomish Sustainable Lands Strategy

The Sustainable Lands Strategy of Snohomish County is committed to finding net gains for farm, fish and flood management interests. It was launched in 2010 by Snohomish County, the Tulalip and Stillaguamish tribes, state and federal agencies, and agricultural and environmental stakeholders. Reach-scale plans were developed to create a coordinated set of multi-benefit projects. The program consists of an executive committee, partners and the local integration and implementation teams. The program makes decisions using adaptive management.

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