

Forest Practices Board

Legislative Report on the

Adaptive Management Program

October 2020

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Forest Practices Adaptive Management Program FY 2020 Report to the Washington State Legislature October 1, 2020

Purpose of Report

This report is intended to provide information to the Washington State Legislature regarding the Forest Practices Adaptive Management Program. This includes details of expenditures during fiscal year 2020 (FY20), as well as research accomplishments and the use of science in decision-making for the 2019-2021 biennium. The report concludes with a description of funding needs for the 2021-2023 biennium.

This report was requested in a budget proviso within the 2019-2021 biennial operating budget, 2019 <u>Engrossed Substitute House Bill 1109</u> Section 308 (4), stating:

The forest practices board shall submit a report to the legislature following review, approval and solicitation of public comment on the cooperative monitoring, evaluation, and research master project schedule, to include: Cooperative monitoring, evaluation, and research science and related adaptive management expenditure details, accomplishments, the use of cooperative monitoring, evaluation, and research science in decision-making, and funding needs for the coming biennium. The report shall be provided to the appropriate committees of the legislature by October 1, 2020.

Summary

The State's Forest Practices Adaptive Management Program (AMP) was established by legislation to enact the landmark 1999 Forests and Fish agreement. Overseen by the Forest Practices Board (Board), an independent state agency, the AMP is responsible for ensuring forest practices regulations established by the Board meet four major goals: i) support harvestable levels of salmonids; ii) support the long-term viability of other covered species; iii) meet or exceed water quality standards; and, iv) maintain a viable timber industry. During the current biennial reporting period, the AMP has conducted 21 research studies, completing 9 during fiscal year 2020.

The two major funding sources for the AMP are General Fund-State (GF-S) and the Forests & Fish Support Account (FFSA). The FFSA alone cannot meet the program's funding needs, and that recognition has been the basis for past GF-S proviso funding. Over the prior five biennia, the AMP has operated with an average funding level of \$15.2 million. A total of \$15,610,312 will be needed during the 2021-2023 biennium from a combination of GF-S and FFSA funding sources to carry out the 21-23 Master Project Schedule approved by the Board in August 2020.

While the long-term funding needed to operate the program has remained relatively constant, the relative proportions coming from GF-S and FFSA has fluctuated among biennia based primarily on the level of accumulated FFSA fund balance in addition to the \$8.0 million FFSA coming from revenue. The FFSA fund balance is projected to be depleted by the end of the 19-21

biennium. To continue to operate the AMP at the level needed will require a greater commitment of GF-S funding than in the past. Based on the costs to operate the AMP as established in the 21-23 Master Project Schedule, the program needs \$7,008,162 in GF-S in the proviso for the 2021-23 biennium.

Adaptive Management Program

The Salmon Recovery Act of 1999 (ESHB 2091) directed the Forest Practices Board (Board) to adopt rules consistent with the 1999 Forests and Fish Report (FFR), including rules for a scientifically based Adaptive Management Program (AMP) used "... for evaluating the impacts of forest practices on aquatic resources." Revised Forest Practices rules consistent with the FFR and ESHB 2091, including the AMP, were adopted by the Board in 2001 (Washington State Forest Practices Rules, (WAC 222-12-045). In support of the AMP, the Board established the Cooperative Monitoring, Evaluation and Research (CMER) Committee to oversee research necessary to determine the effectiveness of contemporary Forest Practice Rules in meeting aquatic and riparian resource targets.

ESHB 2091 also directed the state to seek "federal assurances" from the appropriate agencies that the revised rules, including the AMP, were adequate to meet Endangered Species Act (ESA) and Clean Water Act (<u>CWA</u>) requirements. The Department of Natural Resources submitted the Forest Practices Habitat Conservation Plan (<u>FP HCP</u>) in late 2005 and received approval in the form of incidental take permits (<u>ITPs</u>) from the National Marine Fisheries Service and the U.S. Fish and Wildlife Service in June 2006. Similarly, the Washington Department of Ecology, through authority delegated by the U.S. Environmental Protection Agency, provided CWA assurances upon adoption of the 1999 FFR by the Legislature. This action was taken with the presumption the revised rules would either meet state water quality standards or put impaired water bodies on a trajectory to meet standards, and it is a key factor for providing landowners with regulatory assurance.

In May 2012, the Washington State Department of Natural Resources, Department of Ecology, Forests and Fish Conservation Caucus, and Washington Forest Protection Association announced that a settlement agreement had been reached to avert litigation over the state's FP HCP before the statute of limitations to challenge the FP HCP under NEPA. The issues addressed in the final agreement revolve primarily around covenants not to sue in exchange for clarification of a minimum program funding level and clearer enforcement language in federal agreements, firm commitments to a schedule of science and adaptive management projects, and an improved collaborative process in evaluating science information for implementation (known as the <u>2012 Settlement Agreement</u>¹).

The Board approved the CMER Master Project Schedule as a strategy to implement research projects through 2030 as a result of the 2012 Settlement Agreement. This schedule contains a comprehensive list of projects with budgets and timelines for completion. The schedule is designed to carry out a long-term research plan developed by the CMER research committee, as

¹ See 2012 Forest Practices Habitat Conservation Plan Annual Report - Appendix 6: the 2012 Settlement Agreement (page 21).

prioritized through recommendations from the TFW Policy committee to the Board. Following public input, the schedule was reviewed and adopted by the Board in May 2015 and is updated annually. The specific areas of research included in the Master Project Schedule are:

- Fish habitat modeling to explore enhancing establishment of the regulatory break between fish- (Type F) and non-fish-bearing (Type N) waters;
- Effectiveness of Type F and Type N riparian prescriptions (at site and landscape scale, for eastern and western Washington);
- Monitoring to evaluate status and trends of indicators of resource condition across lands covered by the Forest Practices Habitat Conservation Plan;
- Evaluation of landforms regulated as unstable slopes;
- Effectiveness of road best management prescriptions to reduce surface erosion; and
- Timber harvest effects on forested wetlands, remote mapping of wetlands, and effectiveness of wetland buffers.

It is important to note that research projects of this complexity take multiple years to complete, often crossing several biennia, particularly if they rely upon study designs requiring monitoring conditions both before and after the implementation of the treatment prescriptions being tested. The *Eastside Type N Riparian Effectiveness Project* is an example of such a study. This study is progressing within the proposed timelines and budgets but will take approximately six years to implement in the field. This level of scientific effort is essential to being able to provide policymakers with the quality of results they can use to confidently assess the effectiveness of the forest practices rules.

CMER Master Project Schedule Progress in 2019-2021 Biennium

A total of 21 unique projects were allocated funding in the 2019-2021 biennium Master Project Schedule adopted by the Board in May 2019, with 20 projects funded in FY20 and 20 projects funded in FY21.

In late FY19, after our October 2018 report was finalized, two projects were completed:

- 1. Response to Fire Literature Review
- 2. Extensive Status and Trends Temperature Monitoring Report

In FY20, seven projects were completed:

- 1. Extensive Vegetation Status and Trends Lidar Model Transferability Study
- 2. Eastside Bull Trout Overlay Add-On Study
- 3. Westside Type N (non-fish bearing) Buffer Characteristics Integrity and Function Project
- 4. Westside Type N Experimental Buffer Treatment Project in Hard Rock Lithology Amphibian Genetics
- 5. Amphibian Buffer Shade Study
- 6. Hardwood Conversion Ten-Year Post-Harvest Case Study
- 7. Forested Wetlands Literature Review and Geospatial Data Base

In FY21, after submission of this report, three additional projects are expected to be completed:

- 1. Wetland Intrinsic Potential Tool
- 2. Fish Habitat Protection using Environmental DNA Pilot Study
- 3. Eastside Modeling Evaluation Project

Project Descriptions

The <u>Extensive Vegetation Status and Trends LiDAR</u> (Light Detection and Ranging) transferability report built upon a prior study by validating the level of accuracy of this remote sensing tool for characterizing riparian forest conditions, and by evaluating how well predictive models created at one site will perform at different sites. Not all parameters of importance to decision-makers can be accurately collected remotely, however, so the <u>Extensive Status Trends</u> <u>Temperature Study</u> was conducted using traditional field methods to obtained an impartial characterization of the thermal health of streams across the managed forest landscape. The <u>Wetland Intrinsic Potential Tool</u> is a remote sensing tool designed to aid in identifying where forested wetlands are located at less cost than using traditional field methods.

Comprehensively examining the literature in advance of designing a study ensures the program is building upon the existing body of knowledge and using the most current and effective monitoring methods. Two literature reviews were completed during this period to support larger applied research efforts. The <u>Forested Wetlands Literature Review</u> was conducted in preparation for a harvest prescription effectiveness monitoring pilot study, which is now ready for implementation. The <u>Response to Fire Literature Review</u> is being used to design a research strategy for eastern Washington that responds to the concerns over wildfire threats and post-fire response actions. The <u>Eastside Modeling Evaluation Project</u> further informs the research strategy by applying fire and disease risk models to characterize the nature of the threats to riparian stands.

To further use the best available science to structure our research and assist decision-makers, the science program partnered in the <u>Fish Habitat Protection using Environmental DNA Pilot Study</u> to examine the ability to use environmental DNA to better identify where fish protection buffers should be applied.

In response to interest by the CMER and Timber, Fish and Wildlife (TFW) Policy committees, the AMP embarked on studies to understand how riparian buffers change after harvest. A key concern was whether the buffers retained along watercourses will blow down at high rates and fail to support healthy stream functions. This concern was translated into research objectives for the Eastside Type F Bull Trout Overlay Add-On and the Westside Buffer Characteristics Integrity and Functions studies. These studies looked at how stands changed during the initial 5 to 10 years after harvest using applicable forest practices regulations. In response to policy concerns about the viability of converting hardwood-dominated riparian stands back to more desirable conifer-dominated stands, the program conducted the <u>Hardwood Conversion Ten Year Post-Harvest Case Study</u>.

Small fishless headwater streams (Type N) receive less stringent protection under the forest practices rules yet make up the majority of stream network in the forest environment. TFW Policy and the Board therefore made testing the effects of the Type N rules a top priority for the

research program. Most of the planned Type N research studies in western Washington are now complete or are expected to be completed before the end of FY22. The next couple of years are thus an important time for decision-makers charged with making recommendations on whether to modify the current regulations.

- Two major long-term studies examining the effectiveness of the Westside Type N rules are also now in their final stages: the <u>Westside Type N Experimental Buffer Treatment</u> <u>Project in Hard Rock Lithology Study</u> (Hard Rock) and its compliment study conducted in more erodible lithology (<u>Soft Rock</u>).
 - The initial two-year post-harvest Hard Rock study report was completed in the 2017-2019 biennium to understand how long it would take elevated temperatures to recover after harvest and to examine the multigenerational effects of harvest on amphibian populations, monitoring continued on these sites.
 - The extended monitoring component of the Westside Type N Hard Rock study and its complementary study in Soft Rock lithology are both in the final stages of Independent Scientific Peer Review.
 - The recently completed <u>Westside Type N Experimental Buffer Treatment Project</u> in <u>Hard Rock Lithology – Amphibian Genetics</u> study, completed in FY20, used genetic markers to assess if breeding populations are being isolated and detrimentally affected after harvests.
 - The tentative results from the extended monitoring study found a delayed and significant adverse effect to amphibians. TFW Policy Committee and the Board thus decided to monitor these sites again in the 21-23 biennium to see the extent of how these populations may have recovered.
- The <u>Amphibian Buffer Shade Study</u> additionally examined the effect of varying shade levels over small fishless headwater streams on stream amphibians, the stream insects and biofilm they use for food, and stream temperature.

2019-2021 AMP Funding Levels

In the 2006 legislative session, a new law was passed that reduced certain business and occupation (B&O) taxes for harvesting timber or manufacturing or processing wood products and added a surcharge to support the FP HCP and the CWA. On July 1, 2007, the proceeds from the surcharge were put into the newly created Forests & Fish Support Account (FFSA), an account dedicated to the implementation of the state's Forests and Fish Report, including adaptive management. The FFSA is one of the major funding sources for the AMP.

In 2019, the Governor and Legislature passed the 2019-2021 biennial operating budget bill (ESHB 1109), which, through a proviso, supplemented the AMP with a General Fund-State (GF-S) appropriation. This approved budget package also included a reduction in Model Toxics Control Account (MTCOA) and an increase in funding authority for the FFSA.

Although overall funding authority was approximately what DNR requested, an effective shortfall resulted due to the removal of the \$5 million of the MTCOA and its replacement with

increased FFSA spending authority. The problem is the actual funding available in FFSA was less than the authorized increased spending authority. DNR's analysis identified a \$4.04 million budget shortfall for the statewide Forest Practices program – approximately 10 percent of the program's biennial operating budget.

After investigating the reason for this change, Office of Financial Management staff and legislative budget staff in both the House and Senate thought this was a technical error as a result of the MTCOA changes. There was agreement that DNR should continue to spend at the carry forward level and that the technical error would be resolved through the supplemental budget process. When the 2020 legislative session closed without providing funding to resolve the shortfall, DNR was faced with reducing the Forest Practices Program budget by \$4.04 million in what amounted to little more than one fiscal year.

The necessary spending reductions were made in both the AMP and the operational forest practices programs, and are being carried out mainly in the second year of the 19-21 biennium. A reduction of about \$1.9 million was made within the AMP, including \$477,000 FFSA for research projects in FY20 and \$1.434 million in FFSA for research projects in FY21 (Table 1). This reduction plan was approved at the May 2020 Forest Practices Board meeting after the TFW Policy committee provided a consensus budget reduction plan. The reduction plan consisted primarily of delays in research projects and delays in hiring CMER staff scientists who play critical roles in developing and carrying out and the research. In total, the research project budget originally approved by the Forest Practices Board for the 19-21 biennium was reduced by about 31 percent.

Fiscal Year 2020 Research Project Expenditures

The FFSA and GF-S are the two funding sources for AMP funding for research projects, research project management and program administration in the 19-21 biennium (Table 1). After making the adjustments described above, \$2.57 million was available in FY20 for research projects: \$1.86 million in GF-S and \$709,500 in FFSA (Table 1). The program spent \$2.40 million of this in FY20 (93%): All of the GF-S allocation was expended, while the allocated FFSA funding for research projects was underspent by \$169,420 million (Table 2).

The fact that FFSA funding allocated to FY20 research projects was underspent is fortuitous, because those funds will be used to partially address a known \$345,500 deficit of FFSA available for FY21 research projects (Table 1). This underspending effectively reduces the initial FY21 FFSA research project deficit to about \$176,000 (Table 2).

For FY21, \$1.86 million of GF-S funding is earmarked for research projects (Table 1), and the program anticipates spending all of that on research projects included in the adjusted MPS that the FPB approved in May 2020. The program will monitor the FFSA available across the entire program to avoid over-expenditure from that funding source.

Research Projects, Project Management, and Program Administration				
(all figures reported in dollars)				
Funding Source		FY20	FY21	Total
	Forests & Fish Support Account (FFSA)	1,186,500	1,088,600	2,275,100
cts	Reduced FFSA Allotments (implementing			
oje	ESHB 1109 and ESSB 6168) – as described	(477,000)	(1, 434, 100)	(1.011.100)
Pr	in text	(477,000)	(1,434,100)	(1,911,100)
ch	Total FFSA	709,500	(345,500)	364,000
ear				
les	Total GF-S Proviso (ESHB 1109)	1,857,000	1,857,000	3,714,000
R				
	Research Projects Subtotal	2,566,500	1,511,500	4,078,000
&				
	Forests & Fish Support Account	625,400	710,000	1.335.400
pp				-,,
				_,,
tra Su				
nistra ect Su	General Fund–State	277,100	284,400	561,500
ministra roject Su	General Fund–State	277,100	284,400	561,500
Administra Project Su	General Fund–State	277,100	284,400	561,500
Administra Project Su	General Fund–State Administration & Project Support Subtotal	277,100 902,500	284,400 994,400	561,500 <i>1,896,900</i>
Administra Project Su	General Fund–State Administration & Project Support Subtotal	277,100 902,500	284,400 994,400	561,500 1,896,900

Table 1: 2019-2021 Biennium Funding Levels and Sources for AMP Research

CMER Science Used in Decision-making

Two forest practices rule changes have been approved by the Forest Practices Board based on scientific information generated through the AMP since 2006. The first one, regarding Perennial Initiation Points, <u>WAC 222-16-030 (3)</u> and <u>WAC 222-16-031 (4)</u>, became effective December 16, 2006. The second rule change, regarding desired future conditions for stream riparian management zones, <u>WAC 222-30-021</u>, became effective September 25, 2009.

No specific decisions were made in FY20 regarding rule changes. However, as described previously, numerous research projects related to the Type N (non-fish-bearing stream) rules have recently been completed or are underway which together are expected to inform discussions and decision-making at TFW Policy and the Board during the 2021-2023 biennium. The focus of these deliberations will be determining if potential rule changes may be needed. These, in addition with the other ongoing research occurring within the program, will inform rule groups associated with the Type N (non-fish-bearing waters) and Type F (fish-bearing waters) riparian prescriptions, unstable slopes, wetland protection, road prescriptions, and stream typing.

	(all figures reported in dollars)				
	Funding Source and Projects	FY20 Expenditures	FY20 Variance	Remaining Biennial Total	
	Forests and Fish Support Account (FFSA):				
	Roads Rule Group	58,287			
	Type NP (non-fish-bearing) Work Group	32,575			
	Type N Soft Rock Lithology	49,569			
	Type N Hard Rock Lithology	24,593			
	Eastside Type N Riparian Effectiveness Project (ENREP)	87,079			
	Non-Rule Group Related Science	156,917			
	AMP Principles Facilitation	55,983			
	Independent Scientific Peer Review	75,076			
	Research Projects FFSA Expenditure Subtotal	540,080	169,420	(176,080)	
s	General Fund – AMP State Proviso:				
ect	Roads Rule Group	249,338			
ŗoj	Type NP (non-fish-bearing) Work Group	96,765			
P	Riparian Status & Trends Monitoring	15,504			
rcł	Type N Soft Rock Lithology	226,149			
sea	Type N Hard Rock Lithology	121,708			
Re	Eastside Type N Riparian Effectiveness Project (ENREP)	333,810			
	Type F (fish-bearing) Westside Riparian Prescription	208,964			
	Unstable Slopes Criteria Evaluation & Development	26,164			
	Forested Wetlands Effectiveness Study	20,535			
	Riparian Characteristics & Shade Study	8,569			
	Unstable Slopes Criteria Development & Evaluation	7,685			
	Non-Rule Group Related Science	219,448			
	AMP Principles Facilitation	116,545			
	CMER Scientific Advisory Groups	171,469			
	Independent Scientific Peer Review	34,347			
	Research Projects GF-S Proviso Expenditure Subtotal	1,857,000	0	1,857,000	
, &	Forests and Fish Support Account (FFSA):				
no	Project Support/Management (3.91 FTEs)	613,020	12,380	722,380	
atic upj	General Fund-State:				
str it S	Program Administration (2 FTEs)	289,352	(12,252)	272,148	
Admini Projec	Administration and Project Support Subtotal	902,372	128	<i>994</i> ,528	
	TOTAL EXPENDITURE	3,299,452	169,548		
	BIENNIAL BALANCE AVAILABLE FOR FY21			2,675,448	

Table 2: FY20 Actual Adaptive Management Program Research Expenditures

Funding Needs for 2021-2023 Biennium

The two major funding sources for the Adaptive Management Program (AMP) are General Fund-State (GF-S) and the Forests & Fish Support Account (FFSA). The FFSA alone cannot meet the MPS funding needs as articulated in the 2012 settlement agreement, and that recognition has been the basis for the AMP GF-S proviso funding over the past three biennia. The need to carry out the MPS, coupled with the funding cap, requires the FFSA to be supplemented with GF-S.

The GF-S proviso request for the next biennium is articulated in this report each biennium. The size of the request is based on three factors: (1) the anticipated revenue from FFSA; (2) the predicted size of a FFSA fund balance at the end of a biennium; and, (3) the overall program funding needs to carry out \$3 million to \$4 million per year of research and monitoring in order to meet timelines in the FP HCP.

The FFSA funding component

The amount of FFSA appropriated by the Legislature to the AMP has historically come from two sources: new proceeds deposited into the account, and a fund balance that has been carried from one biennium and appropriated in the next.

New revenues into the FFSA account

Since its inception in 2006, FFSA has been governed by a cap to the revenue of \$8.0 million per biennium. In addition, a tribal funding proviso has been embedded in every biennial FFSA appropriation. This had been \$5.0 million for the four biennia ending with the 17-19 biennium. With the passage of E3SHB 1324 during the 2019 legislative session, until July 1, 2024, this surcharge cap is raised to \$8.5 million. When revenue reaches \$8.5 million, the tribal funding proviso increases to \$5.5 million. The intent and effect is to provide all additional funding above \$8.0 million exclusively to support tribal participation.

The FFSA account is also a major source of funding for non-governmental organizations and state agency participation in the implementation of the Forests and Fish rules (FFR) and for research. (This need was shifted from GF-S to FFSA during the recession.) The nuance of the revenue limit and the tribal participation proviso creates a balancing act for the research funding level in the AMP. In practical terms, a maximum of \$3.0 million FFSA per biennium is available for purposes other than supporting tribal participation. The following example illustrates this using 21-23 biennium FFSA projections:

\$8.5 million Revenue cap

(\$5.5) million Proviso for tribal participation

\$3.0 million Research/state agency/NGO Participation Grants/Project Management

FFSA fund balance

Over the past 10 fiscal years, the year-end FFSA fund balance has ranged from about \$3.0 million to \$5.7 million. During the 17-19 biennium, the balance was reduced from \$5.7 million at the end of FY18 to about \$3.8 million at the end of FY19. This \$3.8 million balance was available for use in the 19-21 biennium.

Prior to the 19-21 biennium, all of the FFSA fund balance was applied for use specifically within the AMP. In the 19-21 biennium, following legislative guidance², the FFSA fund balance was used in both the AMP and operational forest practices programs. This was a significant change, and the anticipated result is that virtually no FFSA fund balance will remain at the end of the 19-21 biennium.

Overview of Forest Practices					
Adaptive Management Program					
Two Biennia Budgets AND					
2021-2023BN Funding Need					
				Farrata & Fish	
Biennium	Activity	GF-State	GF-State Proviso	Forests & Fish Support Account (FFSA)	Total
2017-2019	All other AMP Purposes	521,400	3,280,000	7,009,800	10,811,200
2011 2010	Tribal Participation Proviso			5,000,000	5,000,000
	Total	521,400	3,280,000	12,009,800	15,811,200
2010-2021	All other AMP Purposes	561,500	3,714,000	3,560,400	7,835,900
2019-2021	Tribal Participation Proviso			5,000,000	5,000,000
	Total	561,500	3,714,000	8,560,400	12,835,900
2021-2022	All other AMP Purposes	602,150	7,008,162	3,000,000	10,610,312
2021-2025	Tribal Participation Proviso			5,000,000	5,000,000
	Total	602,150	7,008,162	8,000,000	15,610,312

Table 3: Overview of Overall Appropriated AMP Funding Between Two Biennia and 2021-2023 Funding Need

Total funding need for 21-23 biennium and the requested GF-S proviso

A total of \$15,610,312 will be needed during the 2021-2023 biennium from a combination of GF-S and FFSA funding sources. This is close to the overall funding appropriated by the Legislature for the 2017-19 biennium (Tables 3 and 4), and would essentially restore the research reductions that have been enacted during the 19-21 biennium and put the research and monitoring program back on schedule.

Over the prior five biennia, the AMP has operated on an average total funding level of \$15.2 million per biennium. While the long-term funding needed to operate the program has remained relatively constant, the relative proportion that came from GF-S and FFSA has fluctuated among biennia based primarily on the level of accumulated FFSA fund balance in addition to the \$8.0

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² Reference per <u>RCW 76.09.405</u> and budget proviso in ESHB 1109-S.PL: Section 982 (page 441).

million FFSA coming from new revenues. The FFSA fund balance is projected to be depleted by the end of the 19-21 biennium. To continue to operate the AMP at the level needed to implement the Master Project Schedule will therefore require a greater commitment of GF-S funding than in the past. Based on the costs to operate the AMP as established in the 21-23 Master Project Schedule approved by the Forest Practices Board in August 2020, **the program needs \$7,008,162 in GF-S in the proviso for the 2021-23 biennium.**

(all values are reported in dollars)				
Expenditures	FY22	FY23	TOTAL	
Research Project Contracts	2,073,545	2,409,205	4,482,751	
CMER Staff Scientists	1,111,326	1,137,201	2,248,527	
Administration & Program Staff	709,125	856,285	1,565,410	
NGO Participation Grants	537,332	518,093	1,055,425	
State Agencies Participation Grants ³	367,990	367,990	735,980	
DAHP and Indirect DNR overhead expenses	261,110	261,110	522,219	
Tribal Participation Grants (Proviso)	2,500,000	2,500,000	5,000,000	
Expenditures Subtotal	7,560,428	8,049,884	15,610,312	
Funding Sources	FY22	FY23	TOTAL	
GF-S (DNR Base Support for Admin.)	262,200	339,950	602,150	
Forest and Fish Support Account	4,000,000	4,000,000	8,000,000	
GF-S (Biennial Appropriation Request)	3,542,956	3,465,206	7,008,162	
Funding Subtotal	7,805,156	8,049,884	15,610,312	

 Table 4: 2021-2023 Biennium Funding Needs for the Overall Adaptive Management

 Program

³ Agency grants used primarily to conduct research and assist in applying the forest practices rules.