

Timber, Fish, & Wildlife Policy Committee
 June 6, 2019 Approved Meeting Summary
 v.7.11.19

Action	Responsibility
Meet to clarify the intent of the Board’s motion regarding the water typing systems rule and compile relevant materials for the Policy July meeting packet. Publicly notice the meeting through DNR’s existing system.	Steve Barnowe-Meyer, Alec Brown, Marc Engel, Darin Cramer, Jim Peters, Terra Rentz
Update the budget as amended in the June meeting and redistribute for Policy to re-approve at the July 11 meeting.	Terra Rentz
Submit names of suggested participants for the Type Np Workgroup to Howard Haemmerle and Heather Gibbs by June 24, 2019, including the following information: the nominee’s name, their CV, the type of expertise they will provide (see charter for suggested roles within the Workgroup), and a short summary of their expertise.	Policy representatives
Send specific questions for CMER regarding the ENREP project to the Policy Co-Chairs.	Policy representatives

Decision	Notes
Approve the May meeting summary.	The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.
Accept the MPS and budget for the AMP as amended, including: Maintain \$40,000 in the water typing strategy line item for FY20 and funding the contingency fund at \$58,699 for FY20 for reapproval at the July 2019 Policy meeting.	The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.
Accept the amendment to the Type Np Prescriptions charter as presented, integrating the amendment into the charter document.	The Eastside Tribal caucus and Federal caucus were absent; the Conservation caucus voted thumbs sideways, all other caucuses voted thumbs up.
Accept the buffer-shade findings report.	The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Approve the Westside Type F Riparian Effectiveness Study charter, striking the recognition of support signature line and adding an acceptance date in its place.

The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Welcome, Introductions, & Old Business – Policy Co-Chairs Curt Veldhuisen, Skagit River System Cooperative (SRSC), and Terra Rentz, Washington Department of Fish and Wildlife (WDFW), opened the meeting and reviewed the day’s agenda. Curt welcomed guest CMER members.

Decision: Approve the May meeting summary. The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Ken Miller, Washington Farm Forest Association (WFFA), reported that the Small Forest Landowner Template Workgroup met on May 30, 2019 and continued to collaboratively discuss possible alternative solutions. The Workgroup has three more meetings scheduled.

CMER Update – CMER Co-Chair Doug Hooks, WFFA, provided Policy with an update from the May 2019 CMER meeting. Highlights are listed below.

- CMER will be making a co-chair transition. Jenny Knoth, Green Crow, will serve as co-chair through June 2019. Chris Mendoza of the Conservation caucus was nominated and approved as CMER co-chair. He will begin serving as co-chair on July 1. Doug is also soliciting a replacement for himself.
- Harry Bell, WFFA, volunteered to sit on the AMPA interview panel.
- CMER approved the Buffer-Shade Effectiveness Project Findings Report.
- CMER discussed the Forest Practices Board motion related to the revisions requested on the budget. Policy will be informed of any changes following the June CMER meeting.
- A subgroup of CMER members formed to draft revisions CMER’s ground rules, which CMER discussed at its May meeting and will revisit at its June meeting.
- CMER discussed the need for signatures on charters. It concluded that approval dates of each entity within the AMP would suffice.
- CMER received a request from the Riparian Scientific Advisory Group (RSAG) for funding to resurvey sample sites in the Type F Riparian Prescription Monitoring project. The Adaptive Management Program Administrator (AMPA) determined that this budget change would require an update to the project charter. There is concern this process will not leave enough time to complete the work by the end of the season.
- CMER discussed the “CMER/SAG Updates” document and concluded that it does in fact meet the needs for communication among CMER and does not need a format change.

CMER Protocol and Standards Manual Workshop – Ash Roorbach, Northwest Indian Fisheries Commission (NWIFC), presented on the CMER Protocol and Standards Manual (PSM) with a focus on Chapter 7. CMER has updated seven chapters since 2012 and is in the process of updating Chapter 8.

Ash stated that the goal of the workshop was for Policy and CMER to discuss how to use the PSM to help Policy understand the CMER project management process and to improve how the two groups work together. CMER has relied on the PSM as a common written understanding among CMER members. A Policy representative noted that Policy should be familiar with the PSM as it is referenced in the Board Manual Section 22.

Ash gave an overview of the content of the PSM. The PSM provides an organizational framework, guidance, and instructions for CMER participants to bring about consensus. Highlights of the presentation and resulting discussion are listed below. See the summary document provided by Ash for details.

- Sections of the PSM include the following: Introduction; Overview, History, and Context; CMER Organization and Ground Rules; CMER Meetings and Meeting Management; Scientific Advisory Groups (SAGs); CMER Work Plan Process; Project Development and Management; Document Review and Approval (currently in development); Support Services and Requirements; and Information Management.
- CMER roles and responsibilities include furthering the science in the adaptive management process and updating the Forest and Fish key questions, resource objectives, and performance targets.
 - A participant asked about the Schedule L-1. It was clarified that Policy has a role in updating the Schedule L-1 questions, though this task has not been thoroughly undertaken in recent years.
 - Policy also has a role in approving CMER's work plan. A Policy representative stated that it would be helpful for Policy to receive a notice highlighting the changes to each version of the CMER workplan.
 - Policy brought up the Forest Practices compliance monitoring program. The group marked this topic as a "parking lot" item for Policy to discuss at a later meeting (see below for a list of "parking lot" topics).
- The PSM includes a list of the AMPA's responsibilities.
 - The group discussed how the AMPA determines if any CMER-approved decisions warrant additional approval by Policy. It was noted that the PSM does not offer specific guidance on how to determine the need for Policy approval. Policy decided to return to this topic at a later meeting (see below for "parking lot" topics).
- The PSM does not include detail on Policy's role in the AMP.
- A Policy member suggested that the Board receive a presentation on the PSM for clarification of the intended AMP process.
- The Small Forest Landowner caucus asked how the Small Forest Landowner Advisory Committee fits into the AMP program structure.
 - Marc Engel, DNR, explained that according to statute, the Small Forest Landowner Advisory Committee serves as staff to the Board to advise the Board on technical assistance, alternate harvest prescriptions, and other topics. It is not a standing committee of the AMP.
- Policy discussed the proposal initiation process and changes to the workplan. There was concern that not all AMP members have the same understanding of the process. The group added this to the list of "parking lot" topics (see below).

Ash then gave an overview of Chapter 7 of the PSM. Highlights and ensuing discussion are listed below.

- Project charters include problem statements. An effective problem statement explains the issue that the project addresses and provides background on the issue. It identifies the spatial and temporal scale of the project and describes a desired future condition in which the problem is solved. The problem statement should guide the study design by helping to outline specific needs for information.
 - The group discussed when project charters should be brought to Policy. CMER members expressed a desire to discuss this further.

- Policy reviews and approves scoping papers. The scoping paper includes many of the same sections as the charter, but with more information. It also includes alternatives analysis with a review of relevant literature, followed by a recommended approach.
 - A CMER member noted that both the charter and the scoping document are opportunities for Policy and CMER to discuss the project study design, the approach to answering critical questions, and the level of uncertainty.
- The communications plan addresses how the project team will communicate with Policy. It outlines how project management documents are delegated. This document is *not* approved by Policy.
 - A Policy representative asked why the communications plan does not address the project budget. Ash responded that the communications plan does include project updates and progress reports, which include budget information and any related changes. Several participants agreed that it would be helpful for the budget to be its own item in the communications plan.
 - A CMER project manager commented that these documents are extremely useful for keeping projects running smoothly and establishing institutional knowledge, particularly in the case of staff turnover.
 - Currently the AMPA is the main facilitator of project check-ins with Policy.
 - In the past, there were written templates for CMER to make requests to Policy, but they were rarely used.
- The group discussed the following additional ideas for ways to improve the AMP process:
 - A joint Policy/CMER subcommittee to address short- and long-term project prioritization
 - A regularly scheduled work session to draft updates to the workplan and MPS
 - A joint Policy/CMER subcommittee to make the CMER workplan easier to review and update

After the presentation, Policy members presented the following questions and comments.

- The PSM must be written to support a fair process in which the group can return to the larger goal in times of conflict.
- A Policy representative asked whether Policy has a role in requesting an update to the Schedule L-1 questions. It was clarified that yes, Policy has a role as described in the Board Manual.
- It was questioned whether the dispute resolution process is congruent between the PSM and the Board Manual. Ash suggested looking into this further.
- It was suggested that the Board also receive this presentation on the PSM for a review of CMER's process and protocols.
- The group discussed the AMP program structure and the separation between science and policy. Participants suggested that the communications between Policy and CMER should be centered on the critical information needed by each side. Additionally, there should be enough communication between CMER and Policy so that each committee is assured that the other is performing its assigned role.
- A Policy member questioned if the workplan is updated at the appropriate frequency. A CMER project manager expressed that the workplan contains very useful information about all the projects on CMER's list and recommended that the level of detail be preserved, although this does slow down comprehensive updates. Policy decided to revisit the topic of the workplan at a later meeting (see list of "parking lot" topics below).
- Heather Gibbs, DNR, reminded Policy that SAGs can be dissolved if they are not needed at a given time.

The group identified the following topics to be placed in the “parking lot” to be discussed at a future meeting:

- Revision of Schedule L-1 including Performance Targets
- Conducting periodic review of compliance monitoring
- Chapter 3 & 7 AMPA roles and Board Manual Section 22
- Proposal Initiation (PI)/workplan:
 - WAC 222-12-045 PI roles
 - Board Manual 22 (including prospective findings and AMPA role)
- CMER workplan updates and Policy process

Report Out from Board Meeting – Marc Engel, DNR, provided an update to Policy on the quarterly Board meeting on May 8 and 9, 2019 and the special Board meeting on June 4, 2019.

- Marc noted the disrupted schedule of the Board’s work plan because of the cancellation of the February 2019 meeting.
- At the Board’s May 8-9 meeting, the Board accepted Policy’s recommendations regarding the Type N Hard Rock study results and the formation of a workgroup.
- The Board discussed the 2019-2021 biennium AMP budget. The Board approved Policy’s motion regarding the budget, but added the following amendments:
 - Direct Policy to add a line item of \$150,000 for Francine Madden’s AMP principals facilitation; and
 - Move excess funds to a Water Typing Strategy line item.
- The Board held a special meeting on June 4, at which it discussed the water typing system rule. See Attachment 2 for the motions the Board made at the June 4 meeting. Policy discussed the Board’s motion regarding the water typing system rule. The Board moved to create a subcommittee to facilitate staff and Policy discussions on the topic. Terra provided her interpretation of the Board’s intended direction to Policy, which was that Policy was asked to provide recommendations on whether an anadromous floor and road water crossing structures should be included as elements of the water typing systems rule.

Policy discussed how and when to address the Board’s directive on water typing strategy. Terra noted that the recommendation from Policy must be accepted by the Board before the Board’s committee can start working on the issue. Terra recommended that Policy prepare to discuss the topic at its July meeting. It was suggested that Policy form a subgroup to begin working through the Board’s assignments regarding the water typing system rule.

Action: Steve Barnowe-Meyer, Alec Brown, Marc Engel, Darin Cramer, and Jim Peters will work with Terra Rentz to clarify the intent of the Board’s motion regarding the water typing systems rule and compile relevant materials for the Policy July meeting packet.

AMP Budget Update – Terra then reviewed the updated AMP budget and Master Project Schedule (MPS) for the 2019-2021 biennium (see Attachment 3). She shared with Policy the Board’s requested amendments to the budget, including:

- Update and correct revenue numbers
- Update and correct the DNR overhead line item
- Add \$150,000 for Fiscal Year 1 AMP for facilitated principals workshops that will be open to Policy and CMER members

- Allocate all remaining leftover funds to water typing strategy

Terra noted that she also revised the cost of the Administrative Assistant II to reflect the result from DNR's salary calculation and rounded out the contingency fund in order to allocate more money towards the water typing strategy line item.

Steve Barnowe-Meyer, WFFA, motioned to re-approve the amended budget. The motion was seconded. Policy discussed the motion. Darin Cramer, WFFA, stated a preference to direct WDFW to start the proposal initiation for the AMP 20-year review. Policy considered the request but recognized that the item could not be inserted into the current budget.

Darin suggested an amendment to the motion to return \$8,600 to the contingency fund. Steve accepted the amendment.

Decision: Accept the MPS and budget for the AMP as amended, including: Maintain \$40,000 in the water typing strategy line item for FY20 and funding the contingency fund at \$58,699 for FY20 for reapproval at the July 2019 Policy meeting. The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Action: Terra Rentz will update the budget and redistribute to Policy for Policy to re-approve at the July 11 meeting.

Technical Type Np Prescriptions Workgroup – Terra reviewed the Board's response to the Technical Type Np Prescriptions Workgroup charter. The Board accepted the recommendation for the workgroup charter and alternative. The Board asked for an updated timeline to be added to the charter.

Terra noted that the composition of the workgroup must be arrived at through consensus and documented in detail. DNR will then begin the contracting process.

Scott Swanson, Washington Association of Counties (WSAC), moved to accept the amendment to the Type Np Prescriptions Workgroup charter as presented. The motion was seconded. An adjustment to the motion was suggested to specify that the amendment will be integrated into the charter.

Policy representatives expressed concern about the changes made to the project timeline. Terra clarified that this timeline is based on recent status updates from relevant projects. She noted that the Board could have shortened the timeline by removing pieces of the study, but it did not choose to do so.

Decision: Accept the amendment to the Type Np Prescriptions charter as presented, integrating the amendment into the charter document. The Eastside Tribal caucus and Federal caucus were absent; the Conservation caucus voted thumbs sideways, all other caucuses voted thumbs up.

Action: Policy representatives will submit names of suggested participants for the Type Np Workgroup to Howard Haemmerle and Heather Gibbs by June 24, 2019, including the following information: the nominee's name, their CV, the type of expertise they will provide, and a short summary of their expertise.

Buffer-Shade Presentation – Marc Hayes, WDFW, presented the findings report for the Stream-Associated Amphibian Response to Manipulation of Forest Canopy Shading (also referred to as the buffer-shade report). See slides for details. Highlights from the presentation are listed below.

- Sites were in the Olympic, Cascade, and Coast ranges. Each range included a different set of amphibian species.

- The study included three levels of manipulated shade: 77, 61, and 40 percent overhead cover; as well as an unmanipulated control group. Each treatment reach was paired with an unmanipulated reference reach upstream. The team used a spherical densiometer to determine overhead cover.
- Variables measured include light, water temperature, biofilm/periphyton, stream drift, and amphibian conditions (abundance, body condition, and growth).
- Results summary highlights (see slide 31):
 - The achieved shade reduction gradient translated strongly to a light gradient. It also translated into increases in temperature, but with less certainty.
 - The light gradient also translated to a biofilm production gradient.
 - Selected changes or lack thereof among macroinvertebrates and stream-associated amphibians lack a clear explanation directly linked to shade reduction.
 - The shade reduction gradient also translated to declines in Coarse and Fine Particulate Organic Matter, but only in the most severe shade reduction treatment.
 - Several changes in macroinvertebrate production seemed to correlate with aforementioned shade reduction gradient-induced changes.
 - Some stream-associated amphibian responses are also consistent with expectations linked to shade reduction gradient-induced changes.
 - Considering amphibians collectively, the study saw more positive and fewer negative responses in the Intermediate Shade treatment than in either the No or Low Shade treatments.
 - Selected changes or lack thereof among macroinvertebrates and stream-associated amphibians lack a clear explanation directly linked to shade reduction.
 - The project team designed this field experiment to distinguish among levels of shade reduction, not identify the precise basis of the responses. The team has considered various explanations for the variance in responses. These could include variance in stream hydrology, nutrient input patterns, or coarse and fine particulate matter.

A motion was made to accept the buffer-shade findings report. The motion was seconded.

Decision: Accept the buffer-shade findings report. The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Policy then discussed the next steps and whether Policy needed to take an action in order to send the findings report to the Type Np Workgroup. It was clarified that the charter already states that the Workgroup will review the buffer-shade findings report. At its July meeting, Policy will vote to determine whether the findings report warrants action.

Westside Type F Riparian Effectiveness Study Charter – Dave Schuett-Hames, CMER staff presented the Westside Type F Effectiveness study charter. See slides for details. Highlights are listed below.

- The objective of the study is to reduce scientific uncertainty for the Westside Type F riparian prescription package by studying the responses of riparian stand characteristics, physical stream characteristics, and aquatic species to change in riparian functions.
- The approved strategy includes a GIS-FPA analysis, exploratory study (current phase), and an intensive study.
- Site selection, screening and layout is complete. Training and quality assurance are mostly complete. Data collection is in progress by West Fork Environmental, a natural resources consulting company. It is estimated that CMER will approve the findings report in September 2021.
- The current budget for FY19 is \$228,888 (includes site validation and layout of 110 sites and data collection for 55 sites). The budget for FY20 is \$125,000 (includes data collection for 55 sites and

additional request for crew variability testing). Dave noted that the request for additional funding for crew variability testing depends on how many crews West Fork plans to use going forward.

Policy representatives presented the following questions and comments.

- How were the stream reaches selected?
 - Random selection was used.
- Will the study capture the effects of stream reach length to see if there is a correlation to stream function?
 - This study will not capture reach length effects very well because every stream reach is set at 300 feet. The team could, however, review the Forest Practices Applications (FPAs) for the sites.
- Terra noted that Policy would consider recommending use of contingency funding for crew variability testing upon the project team's request if CMER also recommended this use.
- A Policy representative expressed a preference for removing the signature line in the charter.

Decision: Approve the Westside Type F Riparian Effectiveness Study charter, striking the recognition of support signature line and adding an acceptance date in its place. The Eastside Tribal caucus and Federal caucus were absent; all other caucuses voted thumbs up.

Next Steps – Policy reviewed the monthly workload document and the meeting schedule for 2019.

Action: Policy representatives will send specific questions for CMER regarding the ENREP project to the co-chairs.

Next meeting date: The next Policy meeting will occur on Thursday, July 11th, 2019.

The meeting was adjourned at 4:32 p.m.

Attachment 1 – Participants by Caucus at 6/6 Meeting*

Conservation Caucus

*Alec Brown, WEC

County Caucus

Kendra Smith, Skagit County

*Scott Swanson, WSAC

Industrial Timber Landowner Caucus

*Darin Cramer, WFPA

Doug Hooks, WFPA

Martha Wehling, WFPA

Megan Tuttle, Weyerhaeuser

Jason Walter, Weyerhaeuser

Small Forest Landowner Caucus

*Steve Barnowe-Meyer, WFFA

Ken Miller, WFFA

Harry Bell, WFFA

State Caucus – DNR

*Marc Engel, DNR

Emily Hernandez, DNR

Heather Gibbs, DNR

State Caucus – Ecology & WDFW

Mark Hicks, Ecology

*Rich Doenges, Ecology

*Chris Conklin, WDFW

Terra Rentz, WDFW and Co-Chair

Marc Hayes, WDFW

Aimee McIntyre, WDFW

Tribal Caucus – Westside

*Jim Peters, Northwest Indian Fisheries Commission

Ash Roorbach, Northwest Indian Fisheries Commission

Curt Veldhuisen, Skagit River System Cooperative and Co-Chair

Dave Schuett-Hames, CMER Staff

Tribal Caucus – Eastside

*caucus representative

Others

Rachel Aronson, Triangle Associates

Annalise Ritter, Triangle Associates

I move the Forest Practices Board establish a board committee to facilitate staff and Policy caucuses' discussions in order to make recommendations on outstanding issues associated with the proposed water typing system effort, specifically to:

- Priority one is to understand the spatial analysis and work to resolve whether width can be precisely estimated for the purposes of the required economic and environmental analyses;
- Determine how the rule making should be applied in eastern Washington;
- Determine if and when the potential habitat break (PHB) validation study should be done and whether it should be combined with the study to determine physicals; and,
- Determine if rule language, Board resolution, or other non-rule options would suitably encourage moving toward a Lidar modelled map-based water typing rule.
- Board Committee shall work with stakeholders to resolve any outstanding issues regarding the anadromous floor.

Request the board committee to report back to the board on progress at the August 2019 meeting; with recommendations on how to move forward on the water typing system rule at the November 2019 meeting.

The Board directs TFW Policy to address first the anadromous floor and then road water crossing structures to recommend whether these items should be part of the water typing system rule; Policy will report back to the board committee as quickly as possible on each item.

Request the Board chair to ensure that staff continues working toward completing those aspects of the water typing system rulemaking guidance, preliminary cost benefit analysis (CBA)/ small business economic impact statement (SBEIS) and environmental analysis as the Board committee resolves outstanding issues. Board staff will provide an update at the August board meeting.

Attachment 3: Master Project Schedule and Budget for the AMP

	A	B	F	G	H	I	J	K	L	M	N
1	Master Project Schedule and Budget for the Adaptive Management Program										
2	Proposed Adjustment to 20/21 Biennium - 07.11.2019										
3	Approved by the Forest Practices Board 09 May 2019; Approved by Policy 05 April 2019										
4											
5											
6	Expenditure	Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
7	<u>Administration and Program Staff</u>										
8	Program Administration (AMPA and Contract Specialist)		261,500	261,500	269,345	269,345	277,425	277,425	285,748	285,748	294,321
9	Administrative Assistant 2 (supports TFW & CMER)		89,000	89,000	91,670	91,670	94,420	94,420	97,253	97,253	100,170
10	Project Support (3.5 Project Managers)		361,700	361,700	372,551	372,551	383,728	383,728	395,239	395,239	407,097
11	CMER Scientists (4 Scientists at NWFC: Ecologist, Geologist, Riparian, Wetlands)		638,845	597,183	615,098	615,098	633,551	633,551	652,558	652,558	672,135
12	CMER Scientist Eastside (NRS 4)		128,750	128,750	132,613	132,613	136,591	136,591	140,689	140,689	144,909
13	Independent Scientific Peer-Review		67,500	67,500	69,525	69,525	71,611	71,611	73,759	73,759	75,972
14	TFW Policy Committee Facilitation (on-call contract)		30,000	15,000	15,000	15,000	15,450	15,450	15,914	15,914	16,391
16	CMER Conference (Facility, refreshments, programs)		5,000	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000
17	Contingency Fund for Projects		58,699	140,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
18	Technical Editor (on-call contract)		15,000	0	15,000	15,000	15,000	15,000	15,000	15,000	15,000
19	AMP Audits -- Performance & Financial		0	0	0	0	0	0	0	0	0
20	Type Np Workgroup (Collaborative Research Allowance, Direct Buy, & Enhanced Participation Grants)		200,000	0	0	0	0	0	0	0	0
21	AMP Principals Facilitation (Center for Conservation Peacebuilding)		150,000	0	0	0	0	0	0	0	0
22	<u>Implementation Phase</u>										
23	Extensive Riparian Status and Trends Monitoring -- Vegetation, Type F/N - Westside (Remote Sensing)	RSAG	15,000	0	0	0	0	0	0	0	0
24	CWA_Type N Experimental Buffer treatment Project in Soft Rock Lithology -- (1) Monitoring ends fall 2017, 2-yr post-harvest		20,000	0	0	0	0	0	0	0	0
25	Add on_Type N Experimental Buffer Treatment Project in Soft Rock Lithology -- Extended monitoring through 2020 (FY21)		139,000	151,000	0	0	0	0	0	0	0
26	Type N Experimental Buffer Treatment Project in Hard Rock Lithology -- Temperature Monitoring (Report extended data)	RSAG	124,175	28,884	0	0	0	0	0	0	0
27	Type N Experimental Buffer Treatment in Hard Rock Lithologies -- Extended Amphibian (Analysis & Summary Report)	LWAG	51,563	34,848	0	0	0	0	0	0	0
28	CWA_Eastside Type N Riparian Effectiveness (ENREP)	TWIG	907,968	723,434	686,719	626,609	366,695	152,267	0	0	0
29	<u>Field Testing/Pilot Phase</u>										
30	CWA_Westside Type F Riparian Prescription Monitoring	TWIG	125,000	0	35,000	150,000	250,000	150,000	250,000	250,000	40,000
31	<u>Site Selection Phase</u>										
32	CWA_Road Prescription-Scale Effectiveness Monitoring	TWIG	374,500	330,500	403,000	400,500	406,000	291,000	212,000	0	0
33	<u>Study Design Phase</u>										
34	CWA_Unstable Slopes Criteria Evaluation & Development -- Project 2: Object-based Landform Mapping	TWIG	95,000	0	0	0	0	0	0	0	0
35	CWA_Unstable Slopes Criteria Evaluation & Development -- Project 3: Shallow Landslide Susceptibility	TWIG	0	10,000	250,000	150,000	0	0	0	0	0
36	CWA_Unstable Slopes Criteria Evaluation & Development -- Project 4: Shallow Landslide Runout	TWIG	0	10,000	0	90,000	0	0	0	0	0
37	CWA_Unstable Slopes Criteria Evaluation & Development -- Project 5: Management Susceptibility Modeling	TWIG	0	0	0	10,000	150,000	0	0	0	0
38	CWA_Forested Wetlands Effectiveness Study	TWIG	15,000	150,000	232,500	232,500	150,000	150,000	150,000	200,000	200,000
39	Riparian Characteristics and Shade Response	RSAG	10,000	121,445	341,000	330,000	20,000	0	0	0	0
40	<u>Scoping Phase</u>										

	A	B	F	G	H	I	J	K	L	M	N
6	Expenditure	Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
41	CWA_Wetlands Management Zone Effectiveness Monitoring (Study Design in FY20/21 by CMER Sci)	WetSAG	0	0	100,000	0	360,000	360,000	360,000	360,000	100,000
42	Deep Seated Research Strategy	FPB									
43	Deep Seated Research Strategy -- 4.5 Mapping Objectives	UPSAG	75,000	100,000	100,000	25,000	25,000				
44	Deep Seated Research Strategy -- 4.6 Pilot Classification	UPSAG	50,000	65,000	40,000	25,000	50,000				
45	Deep Seated Research Strategy -- 4.7 Toolkit Development	UPSAG	0	10,000	10,000	0	0				
46	Deep Seated Research Strategy -- 4.8 Groundwater Modeling	UPSAG	0	25,000	50,000	50,000	50,000				
47	Deep Seated Research Strategy -- 4.9 Physical Modeling	UPSAG	0	0	0	75,000	50,000				
48	Deep Seated Research Strategy -- 4.10 Landslide Monitoring	UPSAG	0	0	0	25,000	25,000				
49	CWA_Wetlands Intensive Monitoring	WetSAG	0	0	0	0	0	0	50,000	0	0
50	CWA_Amphibians in Intermittent Streams	LWAG	50,000	80,000	250,000	360,000	360,000	360,000			
51	Eastside Timber Harvest Types Evaluation Project (ETHEP)	SAGE	0	0	0	0	0	0			
52	Water Typing Strategy	FPB	40,000	517,456							
53	<u>Approved Resampling</u>										
54	CWA_Road Sub-Basin-Scale Effectiveness Monitoring -- Resample (Re-scoping)	UPSAG	0	0	0	0	0	0	0	75,000	
55	CWA_Watershed Scale Assessment of Cumulative Effects (roads and riparian) -- post Effectiveness Monitoring	RSAG	0	0	0	0	0	0	5,000	50,000	340,000
56	<u>Completed Long-Term Projects (FY18-19)</u>										
57	FPB_LiDAR Based Water Typing Model/Physicals Study Design (combined)	FPB									
58	WFFA Template PI Technical Assessment										
59	AMP Improvement Facilitation (Principal's meeting)										
60	WetSAG_Wetlands Mapping Tool Validation	WetSAG									
61	Riparian Literature Synthesis Project										
62	CWA_LWAG_Type N Experimental Buffer Treatment in Hard Rock Lithology - Genetics (Response to ISPR Comments)	LWAG									
63	Type N Experimental Buffer Treatment Project in Hard Rock Lithology -- (2) Monitoring into 2019 until references lost										
64	Fish/Habitat Detection using eDNA -- re-scoped to pilot project	ISAG									
65	<u>Completed Short-Term Projects (FY18-19)</u>										
66	RMAP checklist survey										
67	Equipment -- Riparian Characteristics and Shade Study										
68	Scoping -- CWA_WetSAG_Wetlands Management Zone Effectiveness Monitoring										
69	Literature Review -- Forested Wetlands (Updated; WetSAG)										
70	Eastside LiDAR Acquisition (Part 1 & 2)										
71	Pilot Project -- Extensive Riparian Monitoring Implementation										
72											
73	AMP Research Expenses		4,098,200	4,018,200	4,189,021	4,115,411	4,000,471	3,091,043	2,798,159	2,611,159	2,515,994
74	Projected Available Funds for Research		4,098,200	4,018,200	4,018,200	4,018,200	4,018,200	4,018,200	4,018,200	4,018,200	4,018,200
75	Rollover funds from previous FY		0	0	0	(170,821)	0	17,729	0	1,220,041	0
76	Balance at the end of Fiscal Year (accounting for Rollover)		0	0	(170,821)	(268,032)	17,729	944,886	1,220,041	2,627,081	1,502,206
77											
78	REVENUE										
79	GF-S - AMP Carry Forward (i.e. base admin funding)		260,700	260,700	260,700	260,700	260,700	260,700	260,700	260,700	260,700
80	GF-S - AMP Research		1,897,000	1,817,000	1,817,000	1,817,000	1,817,000	1,817,000	1,817,000	1,817,000	1,817,000
81	FFSA - AMP (Business and Occupation Tax surcharge)		5,677,000	5,677,000	5,677,000	5,677,000	5,677,000	5,677,000	5,677,000	5,677,000	5,677,000
82	Subtotal of Revenue		7,834,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700
83	EXPENSES										

	A	B	F	G	H	I	J	K	L	M	N
6	Expenditure	Source	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
84	TFW Participation Agreements										
85	Tribal Participation Agreements		2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
86	NGO and County Participation Grants		475,500	475,500	475,500	475,500	475,500	475,500	475,500	475,500	475,500
87	State Agencies		430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000
88	FFSA DAHP (Dept. Archeology & Historic Preservation)		94,500	94,500	94,500	94,500	94,500	94,500	94,500	94,500	94,500
89	FFSA DNR Indirect + unallotted expenditure authority		236,500	236,500	236,500	236,500	236,500	236,500	236,500	236,500	236,500
90	Subtotal of TFW Participation Agreements		3,736,500								
91	PROGRAM TOTALS										
92	Revenue		7,834,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700	7,754,700
93	AMP Research Expenses		4,098,200	4,018,200	4,189,021	4,115,411	4,000,471	3,091,043	2,798,159	2,611,159	2,515,994
94	TFW Participation Agreements		3,736,500	3,736,500	3,736,500	3,736,500	3,736,500	3,736,500	3,736,500	3,736,500	3,736,500
95	Balance at the end of each fiscal year		0	0	(170,821)	(97,211)	17,729	927,157	1,220,041	1,407,041	1,502,206
96	Cumulative Balance at end of Biennium			0		(268,032)		944,886		2,627,081	
97											
98											
99	BELOW THE LINE SHORT TERM -- PRIORITIZED 1/3/2019										
100	Chehalis LiDAR Acquisition										
101	BELOW THE LINE LONG TERM										
102	Extended Monitoring										
103	Add On_Type N Experimental Buffer Treatment Project in Hard Rock Lithology--Extended Monitoring: AMPHIBIANS - 2 years (Moved above for Discussion)	LWAG			111,000	262,000	80,000				
104	Add on_Type N Experimental Buffer Treatment Project - Soft Rock Lithology--Extended monitoring through 2024, FY2025				100,000	150,000	150,000	100,000	50,000		
105	Projects Needing Study Design										
106	Extensive Riparian Status and Trends Monitoring -- Eastside Pilot	RSAG	0	200,000							
107	Extensive Riparian Status and Trends Monitoring -- Study Design	RSAG			75,000						
108	Extensive Riparian Status and Trends Monitoring -- Statewide Study	RSAG				200,000	200,000	200,000	200,000	200,000	200,000
109	Projects Needing Scoping										
110	Van Dykes Salamander	LWAG	262,756	360,000	360,000	360,000	315,538				
111	Literature Synthesis: Default Physical Criteria Assessment Project	ISAG									
112											
113											