

Draft  
CMER Master Schedule  
March 27, 2014

CMER Master Project Schedule									
Recommended FP HCP Adaptive Management Program Priority Projects									
5/29/14 - Draft Suggestions for revision to discuss with CMER and Policy									
Project	Settlement Agreement	Project Priority	Recommend Action	2015	2016	2017	2018	2019	2020
<b>Administrative and Support Staff</b>									
CMER Science Staff				601,000	601,000	601,000	601,000	601,000	601,000
Project Support (includes 100K contingency fund)				487,000	387,000	387,000	387,000	387,000	387,000
Project Administration				267,000	267,000	267,000	267,000	267,000	267,000
<b>MS Prioritized Projects Completed</b>									
Bull Trout Overlay Solar Radiation	Yes	4	delete	0					
Bull Trout Overlay Temperature/Shade	Yes	4	delete	0					
Mass Wasting Effectiveness Monitoring- Westside Type N BCIF	Yes	5	delete	0					
<b>Projects almost finished</b>									
Eastside Type F Riparian Effectiveness (BTO add-on)	Yes	1	(essentially co	0					
Buffer Integrity - Shade effectiveness (amphibian response)	Yes	1	retain	30,000					
Forest Practices and Wetlands Systematic Literature Review	Yes	1	retain	60,000					
Wetlands Program Research Strategy	Yes	2	retain	33,000					
Type F and N Extensive Westside - Temperature (Baseline status)	Yes	1	retain	10,000					
Eastside Type N Forest Hydrology	Yes	1	retain	425,000					
RMZ birds	No		retain	2,000					
Eastern Washington Riparian Assessment (EWRAP)	Yes	1	revisit		50,000				
Riparian Hardwood Conversion	Yes	1	revisit	10,000	73,000				
<b>Projects on the ground and far along</b>									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies	Yes	1	retain	304,000	214,000	100,000			
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Genetics - Post sample	Yes	1	retain	0	200,000	200,000	85,000	40,000	
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Demographics/Channel Metrics	No		retain	0	165,000	231,000	153,000	153,000	75,000
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - Temp/Sediment/Vegetation/Litterfall	No		retain	134,000	320,000	190,000	119,000	0	
Type N Experimental Buffer Treatment Project - Soft Rock Lithologies	Yes	1	retain	344,000	382,000	360,000	216,000	153,000	81,000
<b>Other Projects</b>									
Eastside Type N Riparian Effectiveness - Perennial	Yes	1	revisit	5,000	100,000	250,000	360,000	360,000	360,000
Eastside Type N Riparian Effectiveness - Dry	Yes	?	revisit	80,000	75,000	150,000	330,000	330,000	330,000
<b>Unstable Slopes Criteria Evaluation and Development</b>									
Glacial Deep Seated - Develop Strategy (New as of 4/3/14- Policy) (\$s are committed, but may need to revisit the	Yes	1	retain	150,000	150,000	150,000	150,000	100,000	75,000
Mass Wasting Landscape-Scale Effectiveness Monitoring	No		retain/expand	50,000					
	Yes	2	revisit		80,000				
<b>Forested Wetlands Effectiveness Study</b>									
Wetland/Stream Water Temp Interactions (Subquestion)	Yes	2	retain	25,000	100,000	250,000	360,000	360,000	360,000
Wetland Hydrologic Connectivity (Add On)	Yes	2	retain		50,000	50,000	50,000	50,000	50,000
Wetlands Management Zone Effectiveness Monitoring	Yes	2	retain		50,000	50,000	50,000	50,000	50,000
Wetland/Stream Water Temp Interactions (Add On)	Yes	2	retain						
Wetland Hydrologic Connectivity (Add On)	Yes	2	retain						
<b>Westside Type F Riparian Prescription Monitoring</b>									
Westside Type F Riparian Prescription Monitoring	Yes	2	retain	10,000	100,000	250,000	360,000	360,000	360,000
<b>Road Prescription-Scale Effectiveness Monitoring</b>									
Road Prescription-Scale Effectiveness Monitoring	Yes	2	retain	25,000	100,000	250,000	360,000	360,000	360,000
Road Sub-Basin-Scale Effectiveness Monitoring - Resample	Yes	1	Revisit						
<b>Watershed Scale Assessment of Cumulative Effects (sed and temp) (roads and riparian)</b>									
Watershed Scale Assessment of Cumulative Effects (sed and temp) (roads and riparian)	Yes	2	retain						
Amphibians in Intermittent Streams	Yes	2	retain (d)					40,000	150,000
Wetlands Intensive Monitoring	Yes	6	retain (c)						
Type F Experimental Buffer Treatment (maybe use to address gaps any unanswered F questions)	Yes	Unspecified	revisit						

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Pathways of Riparian Stand Development to Maturity (Westside)	Yes	4	revisit							
Type F Performance Target Validation (Westside)	Yes	6	revisit							
				3,052,000	3,464,000	3,736,000	3,848,000	3,611,000	3,506,000	
<b>MP listed projects with greater questions on need (difference from \$4 million)</b>				948,000	536,000	264,000	152,000	389,000	494,000	
Van Dykes Salamander Project	Yes	Unspecified	No action	56,000	284,000	103,000	266,000	103,000		
Type N Extensive Eastside - Temperature (Baseline status)	Yes	2	Propose subgroup meetin	150,000	150,000	150,000		0		
Type F Extensive East & Westside - Vegetation (Baseline status)	Yes	3	Propose subgr	0	100000	150000	150000	150000	150000	150000
Type F Extensive East & Westside - Temperature (Resample)	Yes	3	Propose subgr	0					150000	350000
Type F Extensive East & Westside - Vegetation (Resample)	Yes	3	Propose subgr	0						
Type N Extensive East & Westside - Vegetation (Baseline status)	Yes	4	Propose subgr	0	150000	150000	150000	150000	150000	100000
Type N Extensive East & Westside - Temperature (Resample)	Yes	4	Propose subgr	0						
Type N Extensive East & Westside - Vegetation (Resample)	Yes	4	Propose subgr	0						
Effectiveness of RMAP Fixes	Yes	4	Hold long term	0	-	-				
Road Surface Erosion Model Validation/ Refinement	Yes	6	Hold long term	0						
Wetlands Overlay Project	Yes	6	Remove	0					10,000	150,000
Wetlands Mitigation Effectiveness (deprioritized by CMER/ Policy)	Yes	6	Revisit short te	0					10,000	150,000
Mass Wasting Buffer Integrity - Windthrow	Yes	6	Replace with s	0					10,000	150,000
Windthrow Frequency, Distribution and Effects	Yes	3	Replace with strategy and "windthrow data synthesis" in intervals after key effect stud							
Eastside Type N BCIF	Yes	3	Remove and r	0						
Type N Experimental Buffer Treatment in Hard Rock	Yes	6	Remove							
<b>Projects on MS "Other Projects" list</b>										
Landslide Classification (deep seated landslides)	Alternate List		Revisit after subgroup		100,000					
Groundwater Recharge Modeling and Model Refinement	Alternate List		Revisit after subgroup		60,000					
Evapo-Transpiration Model Refinement	Alternate List		Revisit after su			60,000				
Shallow Rapid Landslide Screen (Eastside)	Alternate List		Not a CMER Project				10,000	150,000	150,000	
<b>Intensive Watershed-Scale Monitoring to Assess Cumulative Effects (Roads Program)</b>										
Eastside Type F Channel Wood Characterization	Alternate List		Hold							
DFC Aquatic Habitat	Alternate List		Remove							
Eastside Tailed Frog Distribution Study	Alternate List		Hold							
DFC Site Class Map Validation	Alternate List		Hold							
Tailed Frog meta-Analysis	Alternate List		Hold							100,000
Tailed Frogs and Parent Geology	Alternate List		Hold until hard rock then r							
DFC Trajectory Model Validation	Alternate List		Hold pending study design decisions on west precip. Effect study							
Eastside Temperature Nemograph	Alternate List		Hold pending discussion on BTO overlay study findings							
Hydrogeomorphic Wetland Classification System	Alternate List		Hold pending wetland effectiveness studies							
Annotated Bibliography Riparian Hardwood Conversion	Alternate List		Remove							
<b>Appear done or not to be CMER Research</b>										
Red Alder Growth and Yield Model	Alternate List	Completed	Remove	\$0						
Tailed Frog Literature Review	Alternate List	Near Comp	Remove	\$0						
Groundwater Conceptual Model	Alternate List	Attempted	Remove	\$0						
Overlay Project (Wetlands Mapping)	Alternate List	Too Late?	Remove		10,000	150,000	150,000	150,000	150,000	150,000
DFC Plot Width Standardization	Alternate List	Too Late?	Remove	\$0						
Landslide Hazard Zonation (priority 3 watersheds)	Alternate List	DNR task?	Not CMER Task		10,000	150,000	150,000	150,000	150,000	150,000
Board Manual Revision	Alternate List	DNR task?	Not CMER Task	\$0						
DNR GIS Wetlands Data Layer	Alternate List	DNR task?	Not CMER Task	\$0						
Extensive Fish Passage Trend Monitoring	Alternate List	DNR task?	Revisit, before	\$0						
Consistency and Accuracy of CMZ Boundary Delineations	Alternate List	DNR task?	Hold pending strategy		10,000	150,000	150,000	150,000	150,000	150,000
Yakima River Radiotelemetry	Alternate List	WDFW tas	Remove but g	\$0						
CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria	Alternate List	BM Criteria	Hold pending s	\$0						
<b>Program listed without any projects in Master Schedule</b>										
Forest Chemicals Program (Effectiveness)	Alternate List		Revisit - strategic discussion needed							
Fish Passage Effectiveness/Validation Monitoring Program	Alternate List	DNR task?	Hold verifying it is being covered by V							

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Mass Wasting Validation Program (Intensive)	Alternate List		Hold pending mass wasting strategy						
CMZ validation Program (no specific projects suggested)	Alternate List		Hold pending strategy dev	10,000	150,000	150,000	150,000	150,000	150,000
<b>"New" Projects that would appear needed eventually but that are not in workplan:</b>									
Chemical Effects to Forested Wetlands (New study in Wetlands Strategy)	No		Hold - pending wetland strategy						
Eastside Type F Effectiveness (New study for remaining strata)	No		Hold until BTO discussion			40,000	100,000	250,000	
Revise Shallow Rapid Landslide Screen (westside) using LiDAR	No		Hold pending MW Strateg	10,000	150,000	150,000	150,000	150,000	150,000
Wetlands/Roads Interaction study (possible replacement for Wetland Mitigation Effect. study)	No		Hold until Wet Strategy						
				3,052,000	4,074,000	4,996,000	5,098,000	5,091,000	5,806,000

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CMER Master Project Schedule									
Recommended FP HCP Adaptive Management Program Priority Projects									
<i>5/29/14 - Draft Suggestions for revision to discuss with CMER and Policy</i>									
Project	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Administrative and Support Staff</b>									
CMER Science Staff	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000
Project Support (includes 100K contingency fund)	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000
Project Administration	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000
<b>MS Prioritized Projects Completed</b>									
Bull Trout Overlay Solar Radiation									
Bull Trout Overlay Temperature/Shade									
Mass Wasting Effectiveness Monitoring- Westside Type N-BCIF									
<b>Projects almost finished</b>									
Eastside Type F Riparian Effectiveness (BTO add-on)									
Buffer Integrity - Shade effectiveness (amphibian response)									
Forest Practices and Wetlands Systematic Literature Review									
Wetlands Program Research Strategy									
Type F and N Extensive Westside - Temperature (Baseline status)									
Eastside Type N Forest Hydrology									
RMZ birds									
Eastern Washington Riparian Assessment (EWRAP)									
Riparian Hardwood Conversion									
<b>Projects on the ground and far along</b>									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies									
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Genetics - Post sample									
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Demographics/Channel Metrics									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - Temp/Sediment/Vegetation/Litterfall									
Type N Experimental Buffer Treatment Project - Soft Rock Lithologies									
<b>Other Projects</b>									
Eastside Type N Riparian Effectiveness - Perennial	360,000	360,000	250,000	100,000	40,000				
Eastside Type N Riparian Effectiveness - Dry	330,000	330,000	200,000	100,000	40,000				
Unstable Slopes Criteria Evaluation and Development									
Glacial Deep Seated - Develop Strategy (New as of 4/3/14- Policy) (\$s are committed, but may need to revisit the									
Mass Wasting Landscape-Scale Effectiveness Monitoring		10,000	150,000	150,000	150,000	150,000	100,000	75,000	
Forested Wetlands Effectiveness Study	360,000	360,000	250,000	100,000	40,000				
Wetland/Stream Water Temp Interactions (Subquestion)	50,000	50,000	50,000	50,000	25,000				
Wetland Hydrologic Connectivity (Add On)	50,000	50,000	50,000	50,000	25,000				
Wetlands Management Zone Effectiveness Monitoring			25,000	100,000	250,000	360,000	360,000	360,000	360,000
Wetland/Stream Water Temp Interactions (Add On)				50,000	50,000	50,000	50,000	50,000	50,000
Wetland Hydrologic Connectivity (Add On)				50,000	50,000	50,000	50,000	50,000	50,000
Westside Type F Riparian Prescription Monitoring	360,000	360,000	250,000	100,000	40,000				
Road Prescription-Scale Effectiveness Monitoring	360,000	360,000	250,000	100,000	40,000				
Road Sub-Basin-Scale Effectiveness Monitoring - Resample			75,000	350,000	350,000	150,000	75,000		
Watershed Scale Assessment of Cumulative Effects <del>(sed and temp)</del> (roads and riparian)						40,000	100,000	250,000	360,000
Amphibians in Intermittent Streams	250,000	360,000	360,000	360,000	360,000	360,000	250,000	100,000	40,000
Wetlands Intensive Monitoring									
Type F Experimental Buffer Treatment (maybe use to address gaps any unanswered F questions)					40,000	100,000	250,000	360,000	360,000

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Pathways of Riparian Stand Development to Maturity (Westside)						10,000	150,000	150,000	150,000	150,000
Type F Performance Target Validation (Westside)								10,000	150,000	150,000
<b>MP listed projects with greater questions on need (difference from \$4 million)</b>										
	3,375,000	3,495,000	3,165,000	2,915,000	2,765,000	2,665,000	2,650,000	2,800,000	2,775,000	
	625,000	505,000	835,000	1,085,000	1,235,000	1,335,000	1,350,000	1,200,000	1,225,000	
Van Dykes Salamander Project										
Type N Extensive Eastside - Temperature (Baseline status)										
Type F Extensive East & Westside - Vegetation (Baseline status)	400000									
Type F Extensive East & Westside - Temperature (Resample)	350000	150000	75000	75000	350000	350000	150000	75000	75000	
Type F Extensive East & Westside - Vegetation (Resample)										
Type N Extensive East & Westside - Vegetation (Baseline status)										
Type N Extensive East & Westside - Temperature (Resample)			450000	350000	350000	150000	75000	75000	150000	
Type N Extensive East & Westside - Vegetation (Resample)										
Effectiveness of RMAP Fixes										
Road Surface Erosion Model Validation/ Refinement								10,000	150,000	
Wetlands Overlay Project	150,000	150,000	150,000	100,000	75,000					
Wetlands Mitigation Effectiveness (deprioritized by CMER/ Policy)	150,000	150,000	150,000	100,000	75,000					
Mass Wasting Buffer Integrity - Windthrow	150,000	150,000	150,000	100,000	75,000					
Windthrow Frequency, Distribution and Effects			40,000	100,000	250,000	360,000	360,000	360,000	360,000	
Eastside Type N BCIF										
Type N Experimental Buffer Treatment in Hard Rock										
<b>Projects on MS "Other Projects" list</b>										
Landslide Classification (deep seated landslides)										
Groundwater Recharge Modeling and Model Refinement										
Evapo-Transpiration Model Refinement	40,000	100,000	250,000	360,000	360,000	360,000	360,000	360,000	250,000	
Shallow Rapid Landslide Screen (Eastside)	150,000	150,000	100,000	75,000						
<b>Intensive Watershed-Scale Monitoring to Assess Cumulative Effects (Roads Program)</b>										
Eastside Type F Channel Wood Characterization							10,000	150,000	150,000	150,000
DFC Aquatic Habitat									10,000	150,000
Eastside Tailed Frog Distribution Study										10,000
DFC Site Class Map Validation										
Tailed Frog meta-Analysis	40,000									
Tailed Frogs and Parent Geology	40,000	150,000	150,000	150,000	150,000	100,000	75,000			
DFC Trajectory Model Validation										
Eastside Temperature Nomograph										
Hydrogeomorphic Wetland Classification System										
Annotated Bibliography Riparian Hardwood Conversion										
<b>Appear done or not to be CMER Research</b>										
Red Alder Growth and Yield Model										
Tailed Frog Literature Review										
Groundwater Conceptual Model										
Overlay Project (Wetlands Mapping)										
DFC Plot Width Standardization										
Landslide Hazard Zonation (priority 3 watersheds)										
Board Manual Revision										
DNR GIS Wetlands Data Layer										
Extensive Fish Passage Trend Monitoring										
Consistency and Accuracy of CMZ Boundary Delineations										
Yakima River Radiotelemetry										
CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria										
<b>Program listed without any projects in Master Schedule</b>										
Forest Chemicals Program (Effectiveness)										
Fish Passage Effectiveness/Validation Monitoring Program										

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Mass Wasting Validation Program (Intensive)										
CMZ validation Program (no specific projects suggested)										
<b>"New" Projects that would appear needed eventually but that are not in workplan:</b>										
Chemical Effects to Forested Wetlands (New study in Wetlands Strategy)										
Eastside Type F Effectiveness (New study for remaining strata)	360,000	360,000	360,000	360,000	360,000	250,000	100,000	40,000		
Revise Shallow Rapid Landslide Screen (westside) using LiDAR	100,000	75,000								
Wetlands/Roads Interaction study (possible replacement for Wetland Mitigation Effect. study)										
	4,975,000	4,930,000	4,740,000	4,685,000	4,810,000	4,245,000	3,920,000	3,880,000	4,070,000	

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<b>Recommended FP HCP Adaptive Management Program Priority Projects</b>									
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<b>Project</b>									
	2030	2031	2032	2033	2034	2035	2036	2037	2038
<b>Administrative and Support Staff</b>									
CMER Science Staff	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000
Project Support (includes 100K contingency fund)	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000
Project Administration	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000
<b>MS Prioritized Projects Completed</b>									
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Bull Trout Overlay Temperature/Shade									
Mass Wasting Effectiveness Monitoring- Westside Type N-BCIF									
<b>Projects almost finished</b>									
Eastside Type F Riparian Effectiveness (BTO add-on)									
Buffer Integrity - Shade effectiveness (amphibian response)									
Forest Practices and Wetlands Systematic Literature Review									
Wetlands Program Research Strategy									
Type F and N Extensive Westside - Temperature (Baseline status)									
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RMZ birds									
Eastern Washington Riparian Assessment (EWRAP)									
Riparian Hardwood Conversion									
<b>Projects on the ground and far along</b>									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies									
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Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - Temp/Sediment/Vegetation/Litterfall									
Type N Experimental Buffer Treatment Project - Soft Rock Lithologies									
<b>Other Projects</b>									
Eastside Type N Riparian Effectiveness - Perennial									
Eastside Type N Riparian Effectiveness - Dry									
Unstable Slopes Criteria Evaluation and Development									
Glacial Deep Seated - <i>Develop Strategy (New as of 4/3/14- Policy) (\$s are committed, but may need to revisit the</i>									
Mass Wasting Landscape-Scale Effectiveness Monitoring									
Forested Wetlands Effectiveness Study									
Wetland/Stream Water Temp Interactions (Subquestion)									
Wetland Hydrologic Connectivity (Add On)									
Wetlands Management Zone Effectiveness Monitoring	360,000	250,000	100,000	40,000					
Wetland/Stream Water Temp Interactions (Add On)	50,000	50,000	50,000	25,000					
Wetland Hydrologic Connectivity (Add On)	50,000	50,000	50,000	25,000					
Westside Type F Riparian Prescription Monitoring									
Road Prescription-Scale Effectiveness Monitoring									
Road Sub-Basin-Scale Effectiveness Monitoring - Resample									
Watershed Scale Assessment of Cumulative Effects <del>(sed and temp)</del> (roads and riparian)	360,000	360,000	360,000	360,000	250,000	100,000	40,000		
Amphibians in Intermittent Streams									
Wetlands Intensive Monitoring		40,000	100,000	250,000	360,000	360,000	360,000	360,000	360,000
Type F Experimental Buffer Treatment (maybe use to address gaps any unanswered F questions)	360,000	360,000	360,000	250,000	100,000	40,000			

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Pathways of Riparian Stand Development to Maturity (Westside)	100,000	75,000							
Type F Performance Target Validation (Westside)	150,000	150,000	100,000	75,000					
	2,685,000	2,590,000	2,375,000	2,280,000	1,965,000	1,755,000	1,655,000	1,615,000	1,615,000
<b>MP listed projects with greater questions on need (difference from \$4 million)</b>	1,315,000	1,410,000	1,625,000	1,720,000	2,035,000	2,245,000	2,345,000	2,385,000	2,385,000
Van Dykes Salamander Project									
Type N Extensive Eastside - Temperature (Baseline status)									
Type F Extensive East & Westside - Vegetation (Baseline status)									
Type F Extensive East & Westside - Temperature (Resample)									
Type F Extensive East & Westside - Vegetation (Resample)		450,000	450,000	450,000	450,000	750,000	750,000		
Type N Extensive East & Westside - Vegetation (Baseline status)									
Type N Extensive East & Westside - Temperature (Resample)	350,000	350,000	450,000	750,000	750,000				
Type N Extensive East & Westside - Vegetation (Resample)	150,000	150,000	150,000	150,000	750,000	750,000			
Effectiveness of RMAP Fixes	450,000	450,000	150,000	100,000	75,000				
Road Surface Erosion Model Validation/ Refinement	450,000	450,000	150,000	100,000	75,000	350,000	150,000	100,000	
Wetlands Overlay Project									
Wetlands Mitigation Effectiveness (deprioritized by CMER/ Policy)									
Mass Wasting Buffer Integrity - Windthrow									
Windthrow Frequency, Distribution and Effects	360,000	250,000	100,000	40,000					
Eastside Type N BCIF									
Type N Experimental Buffer Treatment in Hard Rock									
<b>Projects on MS "Other Projects" list</b>									
Landslide Classification (deep seated landslides)									
Groundwater Recharge Modeling and Model Refinement									
Evapo-Transpiration Model Refinement	100,000	40,000							
Shallow Rapid Landslide Screen (Eastside)									
<b>Intensive Watershed-Scale Monitoring to Assess Cumulative Effects (Roads Program)</b>									
Eastside Type F Channel Wood Characterization	150,000	100,000	75,000						
DFC Aquatic Habitat	150,000	150,000	150,000	100,000	75,000				
Eastside Tailed Frog Distribution Study	150,000	150,000	150,000	150,000	100,000	75,000			
DFC Site Class Map Validation		40,000	150,000	150,000	150,000	150,000	100,000	75,000	
Tailed Frog meta-Analysis									
Tailed Frogs and Parent Geology									
DFC Trajectory Model Validation			40,000	150,000	150,000	150,000	150,000	100,000	75,000
Eastside Temperature Nomograph			40,000	150,000	150,000	150,000	150,000	100,000	75,000
Hydrogeomorphic Wetland Classification System			40,000	150,000	150,000	150,000	150,000	100,000	75,000
Annotated Bibliography Riparian Hardwood Conversion			40,000	150,000	150,000	150,000	150,000	100,000	75,000
<b>Appear done or not to be CMER Research</b>									
Red Alder Growth and Yield Model									
Tailed Frog Literature Review									
Groundwater Conceptual Model									
Overlay Project (Wetlands Mapping)									
DFC Plot Width Standardization									
Landslide Hazard Zonation (priority 3 watersheds)									
Board Manual Revision									
DNR GIS Wetlands Data Layer									
Extensive Fish Passage Trend Monitoring									
Consistency and Accuracy of CMZ Boundary Delineations									
Yakima River Radiotelemetry									
CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria									
<b>Program listed without any projects in Master Schedule</b>									
Forest Chemicals Program (Effectiveness)									
Fish Passage Effectiveness/Validation Monitoring Program			40,000	100,000	250,000	360,000	360,000	360,000	360,000

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Mass Wasting Validation Program (Intensive)			40,000	100,000	250,000	360,000	360,000	360,000	360,000
CMZ validation Program (no specific projects suggested)									
<b>"New" Projects that would appear needed eventually but that are not in workplan:</b>									
Chemical Effects to Forested Wetlands (New study in Wetlands Strategy)			40,000	100,000	250,000	360,000	360,000	360,000	360,000
Eastside Type F Effectiveness (New study for remaining strata)									
Revise Shallow Rapid Landslide Screen (westside) using LiDAR									
Wetlands/Roads Interaction study (possible replacement for Wetland Mitigation Effect. study)			40,000	100,000	250,000	360,000	360,000	360,000	360,000
	4,245,000	4,240,000	3,950,000	4,295,000	4,340,000	4,520,000	4,020,000	3,630,000	3,355,000

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**CMER Master Schedule**  
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CMER Master Project Schedule								HCP over so all project	
<b>Recommended FP HCP Adaptive Management Program Priority Projects</b>									
<i>5/29/14 - Draft Suggestions for revision to discuss with CMER and Policy</i>									
<b>Project</b>									
	2039	2040	2041	2042	2043	2044	2045	2046	2047
<b>Administrative and Support Staff</b>									
CMER Science Staff	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000	601,000
Project Support (includes 100K contingency fund)	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000	387,000
Project Administration	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000	267,000
<b>MS Prioritized Projects Completed</b>									
Bull Trout Overlay Solar Radiation									
Bull Trout Overlay Temperature/Shade									
Mass Wasting Effectiveness Monitoring- Westside Type N-BCIF									
<b>Projects almost finished</b>									
Eastside Type F Riparian Effectiveness (BTO add-on)									
Buffer Integrity - Shade effectiveness (amphibian response)									
Forest Practices and Wetlands Systematic Literature Review									
Wetlands Program Research Strategy									
Type F and N Extensive Westside - Temperature (Baseline status)									
Eastside Type N Forest Hydrology									
RMZ birds									
Eastern Washington Riparian Assessment (EWRAP)									
Riparian Hardwood Conversion									
<b>Projects on the ground and far along</b>									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies									
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Genetics - Post sample									
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Demographics/Channel Metrics									
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - Temp/Sediment/Vegetation/Litterfall									
Type N Experimental Buffer Treatment Project - Soft Rock Lithologies									
<b>Other Projects</b>									
Eastside Type N Riparian Effectiveness - Perennial									
Eastside Type N Riparian Effectiveness - Dry									
<b>Unstable Slopes Criteria Evaluation and Development</b>									
Glacial Deep Seated - <i>Develop Strategy (New as of 4/3/14- Policy) (\$s are committed, but may need to revisit the</i>									
Mass Wasting Landscape-Scale Effectiveness Monitoring									
<b>Forested Wetlands Effectiveness Study</b>									
Wetland/Stream Water Temp Interactions (Subquestion)									
Wetland Hydrologic Connectivity (Add On)									
Wetlands Management Zone Effectiveness Monitoring									
Wetland/Stream Water Temp Interactions (Add On)									
Wetland Hydrologic Connectivity (Add On)									
<b>Westside Type F Riparian Prescription Monitoring</b>									
Wetland/Stream Water Temp Interactions (Add On)									
Road Prescription-Scale Effectiveness Monitoring									
Road Sub-Basin-Scale Effectiveness Monitoring - Resample									
<b>Watershed Scale Assessment of Cumulative Effects (sed and temp) (roads and riparian)</b>									
Amphibians in Intermittent Streams									
Wetlands Intensive Monitoring	250,000	100,000	40,000						
Type F Experimental Buffer Treatment (maybe use to address gaps any unanswered F questions)									

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Pathways of Riparian Stand Development to Maturity (Westside)									
Type F Performance Target Validation (Westside)									
	1,505,000	1,355,000	1,295,000	1,255,000	1,255,000	1,255,000	1,255,000	1,255,000	
<b>MP listed projects with greater questions on need (difference from \$4 million)</b>	2,495,000	2,645,000	2,705,000	2,745,000	2,745,000	2,745,000	2,745,000	2,745,000	2,745,000
Van Dykes Salamander Project									
Type N Extensive Eastside - Temperature (Baseline status)									
Type F Extensive East & Westside - Vegetation (Baseline status)									
Type F Extensive East & Westside - Temperature (Resample)									
Type F Extensive East & Westside - Vegetation (Resample)									
Type N Extensive East & Westside - Vegetation (Baseline status)									
Type N Extensive East & Westside - Temperature (Resample)									
Type N Extensive East & Westside - Vegetation (Resample)									
Effectiveness of RMAP Fixes									
Road Surface Erosion Model Validation/ Refinement									
Wetlands Overlay Project									
Wetlands Mitigation Effectiveness (deprioritized by CMER/ Policy)									
Mass Wasting Buffer Integrity - Windthrow									
Windthrow Frequency, Distribution and Effects									
Eastside Type N BCIF									
Type N Experimental Buffer Treatment in Hard Rock									
<b>Projects on MS "Other Projects" list</b>									
Landslide Classification (deep seated landslides)									
Groundwater Recharge Modeling and Model Refinement									
Evapo-Transpiration Model Refinement									
Shallow Rapid Landslide Screen (Eastside)									
Intensive Watershed-Scale Monitoring to Assess Cumulative Effects (Roads Program)									
Eastside Type F Channel Wood Characterization									
DFC Aquatic Habitat									
Eastside Tailed Frog Distribution Study									
DFC Site Class Map Validation									
Tailed Frog meta-Analysis									
Tailed Frogs and Parent Geology									
DFC Trajectory Model Validation									
Eastside Temperature Nomograph									
Hydrogeomorphic Wetland Classification System									
Annotated Bibliography Riparian Hardwood Conversion									
<b>Appear done or not to be CMER Research</b>									
Red Alder Growth and Yield Model									
Tailed Frog Literature Review									
Groundwater Conceptual Model									
Overlay Project (Wetlands Mapping)									
DFC Plot Width Standardization									
Landslide Hazard Zonation (priority 3 watersheds)									
Board Manual Revision									
DNR GIS Wetlands Data Layer									
Extensive Fish Passage Trend Monitoring									
Consistency and Accuracy of CMZ Boundary Delineations									
Yakima River Radiotelemetry									
CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria									
<b>Program listed without any projects in Master Schedule</b>									
Forest Chemicals Program (Effectiveness)									
Fish Passage Effectiveness/Validation Monitoring Program	360,000	250,000	100,000	40,000					

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Mass Wasting Validation Program (Intensive)	360,000	250,000	100,000	40,000					
CMZ validation Program (no specific projects suggested)									
<b>"New" Projects that would appear needed eventually but that are not in workplan:</b>									
Chemical Effects to Forested Wetlands (New study in Wetlands Strategy)	360,000	250,000	100,000	40,000					
Eastside Type F Effectiveness (New study for remaining strata)									
Revise Shallow Rapid Landslide Screen (westside) using LiDAR									
Wetlands/Roads Interaction study (possible replacement for Wetland Mitigation Effect. study)	360,000	250,000	100,000	40,000					
	2,945,000	2,355,000	1,695,000	1,415,000	1,255,000	1,255,000	1,255,000	1,255,000	

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**CMER Master Schedule**  
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CMER Master Project Schedule	is to be completed by 2046				
Recommended FP HCP Adaptive Management Program Priority Projects					
<i>5/29/14 - Draft Suggestions for revision to discuss with CMER and Policy</i>					
Project	2048	2049	2050	2051	2052
<b>Administrative and Support Staff</b>					
CMER Science Staff					
Project Support (includes 100K contingency fund)					
Project Administration					
<b>MS Prioritized Projects Completed</b>					
Bull Trout Overlay Solar Radiation					
Bull Trout Overlay Temperature/Shade					
Mass Wasting Effectiveness Monitoring- Westside Type N BCIF					
<b>Projects almost finished</b>					
Eastside Type F Riparian Effectiveness (BTO add-on)					
Buffer Integrity - Shade effectiveness (amphibian response)					
Forest Practices and Wetlands Systematic Literature Review					
Wetlands Program Research Strategy					
Type F and N Extensive Westside - Temperature (Baseline status)					
Eastside Type N Forest Hydrology					
RMZ birds					
Eastern Washington Riparian Assessment (EWRAP)					
Riparian Hardwood Conversion					
<b>Projects on the ground and far along</b>					
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies					
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Genetics - Post sample					
Type N Experimental Buffer Treatment Project - Hard Rock- Amphibian Demographics/Channel Metrics					
Type N Experimental Buffer Treatment Project in Hard Rock Lithologies - Temp/Sediment/Vegetation/Litterfall					
Type N Experimental Buffer Treatment Project - Soft Rock Lithologies					
<b>Other Projects</b>					
Eastside Type N Riparian Effectiveness - Perennial					
Eastside Type N Riparian Effectiveness - Dry					
Unstable Slopes Criteria Evaluation and Development					
Glacial Deep Seated - <i>Develop Strategy (New as of 4/3/14- Policy) (\$s are committed, but may need to revisit the</i>					
Mass Wasting Landscape-Scale Effectiveness Monitoring					
Forested Wetlands Effectiveness Study					
Wetland/Stream Water Temp Interactions (Subquestion)					
Wetland Hydrologic Connectivity (Add On)					
Wetlands Management Zone Effectiveness Monitoring					
Wetland/Stream Water Temp Interactions (Add On)					
Wetland Hydrologic Connectivity (Add On)					
Westside Type F Riparian Prescription Monitoring					
Road Prescription-Scale Effectiveness Monitoring					
Road Sub-Basin-Scale Effectiveness Monitoring - Resample					
Watershed Scale Assessment of Cumulative Effects <i>(sed and temp) (roads and riparian)</i>					
Amphibians in Intermittent Streams					
Wetlands Intensive Monitoring					
Type F Experimental Buffer Treatment <i>(maybe use to address gaps any unanswered F questions)</i>					

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CMER Master Schedule  
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Pathways of Riparian Stand Development to Maturity (Westside)								
Type F Performance Target Validation (Westside)								
								0
<b>MP listed projects with greater questions on need (difference from \$4 million)</b>								
Van Dykes Salamander Project								
Type N Extensive Eastside - Temperature (Baseline status)								
Type F Extensive East & Westside - Vegetation (Baseline status)								
Type F Extensive East & Westside - Temperature (Resample)								
Type F Extensive East & Westside - Vegetation (Resample)								
Type N Extensive East & Westside - Vegetation (Baseline status)								
Type N Extensive East & Westside - Temperature (Resample)								
Type N Extensive East & Westside - Vegetation (Resample)								
Effectiveness of RMAP Fixes								
Road Surface Erosion Model Validation/ Refinement								
Wetlands Overlay Project								
Wetlands Mitigation Effectiveness (deprioritized by CMER/ Policy)								
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Windthrow Frequency, Distribution and Effects								
Eastside Type N BCIF								
Type N Experimental Buffer Treatment in Hard Rock								
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Evapo-Transpiration Model Refinement								
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Eastside Type F Channel Wood Characterization								
DFC Aquatic Habitat								
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Consistency and Accuracy of CMZ Boundary Delineations								
Yakima River Radiotelemetry								
CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria								
<b>Program listed without any projects in Master Schedule</b>								
Forest Chemicals Program (Effectiveness)								
Fish Passage Effectiveness/Validation Monitoring Program								

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**CMER Master Schedule**  
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Mass Wasting Validation Program (Intensive)					
CMZ validation Program (no specific projects suggested)					
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Eastside Type F Effectiveness (New study for remaining strata)					
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Wetlands/Roads Interaction study (possible replacement for Wetland Mitigation Effect. study)					