

APPENDIX A: CMER PROJECTS, OBJECTIVES, AND TARGETS						Direct or Indirect Measurement ⁽¹⁾ of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)													Other Important Issues				
Rule Group/ Program	CMER Projects	Status	Task Type	CWA	Direct Measure of FFR Goals			Direct or Indirect Measurement ⁽¹⁾ of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)													Other Important Issues		
					Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand ⁽²⁾	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab ⁽³⁾	Strm Bnk ELZ ⁽⁴⁾	Mass Wast- ing	Rd Sed Runoff	Peak Flow	Wet- land	Fish Passage	Wind- throw	Ground- water	Intermit- Flow ⁽⁵⁾	
Stream Typing Rule Group																							
Stream Typing Program (Rule Tool)																							
	Last Fish/Habitat Prediction Model Development	complete	RIT	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---			
	Annual/Seasonal Variability	complete	R&D	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---			
	Last Fish/Habitat Prediction Model Field Performance	complete	RIT	yes	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---			
	Default Physicals Criteria Assessment	in prog	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Fish/Habitat Detection Using Environmental DNA (eDNA)	complete	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Evaluation of physical features that define fish habitat in forested landscapes (PHB)	in prog	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Anadromous Fish Floor	in prog	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
Stream Typing Program (Extensive Status and Trends Monitoring)																							
	Recoverable/Restorable Fish Habitat	delayed	EXT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
Type N Riparian Prescriptions Rule Group																							
Type N Delineation Program (Rule Tool)																							
	Perennial Initiation Point Survey: Pilot Study	complete	RIT	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D			
Sensitive Site Program (Rule Tool)																							
	SAA Sensitive Sites Identification Methods	complete	RIT	---	yes	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---			
	SAA Sensitive Sites Characterization	complete	RIT	---	yes	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D			
Type N Riparian Effectiveness Program																							
	Westside Type N Buffer Characteristics, Integrity, and Function (BCIF)	complete	EFF	---	---	---	---	---	---	---	I	D	D	D	---	I	D	---	---	D			
	Type N Exp Buffer Treatment Feasibility Study	complete	R&D	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Type N Exp Buffer Treatment in Hard Rock Lithologies- Phase 1	complete	EFF	1	yes	yes	yes	yes	yes	yes	D	D	D	D	D	D	D	---	---	D			
	Type N Exp Buffer Treatment in Hard Rock Lithologies (Extended Monitoring: Amphibian Demographics/Channel Metrics)- Phase 2	complete	EFF	1	yes	yes	yes	yes	yes	yes	D	D	D	D	D	---	D	D	---	D			
	Type N Exp Buffer Treatment in Hard Rock Lithologies (Extended Monitoring: Temperature, Sediment, Vegetation, Litterfall)- Phase 2	complete	EFF	1	yes	yes	yes	yes	yes	yes	D	D	D	D	D	---	D	D	---	D			
	Type N Exp Buffer Treatment in Hard Rock Lithologies (Extended Monitoring: Amphibian Demographics and responses of interest)- Phase 3	complete	EFF	1	---	yes	---	---	---	---	?	?	?	?	---	---	---	?	---	?			
	Type N Exp Buffer Study in Soft Rock Lithologies	complete	EFF	x	---	---	yes	---	---	---	D?	D?	D?	?	?	?	D?	D?	---	D?			
	Windthrow Frequency, Distribution, and Effects	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	D?			
	Eastside Type N Buffer Characteristics, Integrity, and Function (BCIF)	delayed	EFF	---	---	yes	---	---	---	---	D?	D?	D?	D?	---	---	---	---	---	D?			
	Eastside Type N Forest Hydrology	complete	RIT	1	---	yes	yes	yes	yes	yes	I	---	I	---	---	---	---	---	---	I			
	Eastside Type N Riparian Effectiveness	in prog	EFF	x	---	yes	yes	---	---	---	D	D	D	D?	D?	---	---	---	---	D			
	Eastside Ns Effectiveness	delayed	EFF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Literature Review and Synthesis Related to the Salvage of Fire Damaged Timber	complete	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Sensitive Sites and Amphibian Project	delayed	RIT	---	yes	---	---	---	---	---	?	?	---	D	---	---	---	---	---	D			
	Slash in Type N Streams	delayed	EFF	---	yes	---	---	---	---	---	?	D	I	D	D	---	---	---	---	I			
Type N Amphibian Response Program (Effectiveness)																							
	SAA Detection/Relative Abundance Methodology	complete	R&D	---	yes	---	---	---	---	---	D	---	---	---	---	---	---	---	---	D			
	Type N Exp Buffer Treatment in Hard Rock Lithologies ⁽⁶⁾	complete	EFF	yes	yes	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Tailed Frog Literature Review	complete	R&D	---	yes	---	---	---	---	---	L	L	L	L	L	L	L	L	---	L			
	Tailed Frog Meta-Analysis	complete	R&D	---	yes	---	---	---	---	---	---	---	---	I	---	---	---	---	---	I			
	Tailed Frogs and Parent Geology	delayed	R&D	---	yes	---	---	---	---	---	---	---	---	D?	?	?	---	---	---	?			
	Dunn's Salamander	complete	R&D	---	yes	---	---	---	---	---	D	D	D	D	---	---	---	---	---	---			
	Buffer Integrity - Shade Effectiveness	complete	EFF	x	---	yes	yes	yes	yes	yes	D	D	---	---	---	---	---	---	---	I			
	Amphibian Recovery	complete	EFF	---	yes	yes	yes	yes	yes	yes	D	D	D	D	I	---	---	---	---	D			
	Water Temperature and Amphibian use in Type Np Waters with Discontinuous Surface Flow	delayed	R&D	x	---	yes	---	---	---	---	?	?	---	?	---	---	---	?	---	?			
	Van Dyke's Salamander Literature Review	complete	R&D	---	yes	---	---	---	---	---	?	?	?	?	?	?	?	?	?	D?			
	Van Dyke's Salamander	add	R&D	---	yes	---	---	---	---	---	?	?	?	?	?	?	?	?	?	D?			
	Eastside Amphibian Evaluation	delayed	R&D	---	yes	---	---	---	---	---	?	?	?	?	?	?	?	?	?	D?			
	Type N Hard Rock Phase III Amphibian Demographics	in prog	R&D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Type N Hard Rock Phase III Amphibian Demographics	add	R&D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
Extensive Riparian Status and Trends Monitoring Program																							
Extensive Riparian Status and Trends Monitoring- Temperature, Type F/N																							
	Westside	in prog	EXT	---	---	yes	---	---	---	---	D	D	I	D	---	D	D	---	---	---			
	Eastside	in prog	EXT	---	---	yes	---	---	---	---	D	D	I	D	---	D	D	---	---	---			
Extensive Riparian Status and Trends Monitoring- Vegetation, Type F/N Westside and Eastside																							
	Riparian Characteristics and Shade Response Study	in prog	INT	---	---	---	---	---	---	---	?	?	?	---	?	---	---	---	---	?			
	Wood Recruitment Volume and Source Distances from Riparian Buffers	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
Rule Group/ Program	CMER Projects	Status	Task Type	CWA	Direct Measure of FFR Goals			Direct or Indirect Measurement ⁽¹⁾ of Objectives & Targets (D = direct; I = indirect; L = literature; ? = probable if implemented in future)													Other Important Issues		
					Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand ⁽²⁾	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab ⁽³⁾	Strm Bnk ELZ ⁽⁴⁾	Mass Wast- ing	Rd Sed Runoff	Peak Flow	Wet- land	Fish Passage	Wind- throw	Ground- water	Intermit- Flow ⁽⁵⁾	
Type F Riparian Prescriptions Rule Group																							
DFC Validation Program (Rule Tool)																							
	DFC Target Validation	complete	RIT	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---	---		
	DFC Plot-Width Standardization (scoping)-	withdrawn	R&D	---	---	---	---	---	---	---	?	?	---	?	---	---	---	---	---	---			
	FPA Desktop Analysis (includes field analysis)	complete	RIT	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---	---			
	DFC Site Class Map Validation (scoping)	delayed	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	DFC Trajectory Model Validation	delayed	R&D	---	---	---	---	---	---	---	?	?	---	?	---	---	---	---	---	---			
	DFC Aquatic Habitat	delayed	R&D	---	---	---	---	---	---	---	?	?	---	?	---	---	---	---	---	---			
	Pathways of Riparian Stand Development to Maturity	delayed	R&D	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Red Alder Growth and Yield Model (coop. contribution)	complete	R&D	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	---			
Eastside Type F Riparian Rule Tool Program																							
	Eastside Disturbance Regime Literature Review	complete	R&D	---	---	---	---	---	---	---	L	L	L	L	L	---	L	---	---	L			
	Eastside LWD Literature Review	complete	R&D	---	---	---	---	---	---	---	L	L	L	L	L	---	L	---	---	L			
	Eastside Temperature Nomograph	incomplete	RIT	---	---	yes	---	---	---	---	D	D	---	---	---	---	---	---	---	---			
	Eastern WA Riparian Assessment (EWRAP)	complete	R&D	1	---	---	---	---	---	---	D	D	D	D	D	---	---	---	---	D			
	Eastside Modeling Evaluation (EMEP)	complete	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Eastside Timber Habitat Evaluation (ETHEP)	in prog	RIT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Eastside Type F Channel Wood Characterization	delayed	R&D	---	---	---	---	---	---	---	D	I	D	I	D	---	---	---	---	D			
Bull Trout Habitat Identification Program (Rule Tool)																							
	Bull Trout Presence/Absence Protocols	complete	RIT	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Bull Trout Habitat Prediction Models	complete	RIT	yes	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Yakima River Radiotelemetry	complete	R&D	yes	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---			
Westside Type F Riparian Effectiveness Program																							
	Westside Type F Riparian Prescription Monitoring	in prog	EFF	x	---	---	---	---	---	---	?	?	?	?	---	?	?	?	?	?			
	Westside Type F Experimental Buffer Treatment	delayed	EFF	x	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---			
	Type F Performance Target Validation	delayed	EFF	---	---	---	---	---	---	---	---	?	?	---	?	?	---	---	---	---			
Eastside Type F Riparian Effectiveness Program																							
	BTO Temperature (Eastside Riparian Shade/Temperature)	complete	EFF	x	---	---	yes	---	---	---	D	D	D	---	---	---	---	---	---	D			
	Solar Radiation/Effective Shade	complete	EFF	x	---	---	---	---	---	---	I	D	---	---	---	---	---	---	---	---			
	Eastside Type F Riparian Effectiveness Monitoring (BTO add-on)	in prog	EFF	1	---	---	---	---	---	---	---	D	D	---	I	D	---	---	---	D			
	Groundwater Conceptual Model	withdrawn	R&D	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---	---	I			
Hardwood Conversion Program (Effectiveness)																							
	Riparian Hardwood Conversion	complete	EFF	1	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---	?			
	Riparian Hardwood Conversion - Temperature Component	complete	EFF	x	---	---	yes	---	---	---	D	D	---	---	I	---	---	---	---	---			
	Annotated Bibliography- Riparian Hardwood Conversion	withdrawn	R&D	---	---	---	---	---	---	---	---	L	---	---	---	---	---	---	---	---			
	WDOE Water Temperature Modeling	complete	R&D	---	---	---	---	---	---	---	I	I	I	---	---	---	---	---	---	---			
Intensive Monitoring/Cumulative Effects Program: No projects yet identified.																							

Rule Group/ Program	CMER Projects	Status	Task Type	Fish	Amphib	WQ	In-Str Temp	Rip/ Wet Shade	Rip/ Wet Stand ⁽²⁾	In-Str/ Wet LWD	Rip/ Wet Litter	In-Str/ Wet Hab ⁽³⁾	Strm Bnk ELZ ⁽⁴⁾	Mass Wast- ing	Rd Sed Runoff	Peak Flow	Wet- land	Fish Passage	Wind- throw	Ground- water	Intermitt Flow ⁽⁵⁾																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	CMZ Screen and Aerial Photo Catalog and CMZ Boundary Identification Criteria	withdrawn	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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CMZ Validation Program: No projects yet identified.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	Shallow Rapid Landslide Screen for GIS (Westside)	complete	RT	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	Technical Guidelines for Geotechnical Reports	complete	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Regional Unstable Landforms Identification (Deep-Seated Screen)	complete	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Landform Hazard Classification System and Mapping Protocols	complete	R&D	---	---	---	---	---	---	---	---	---	---	I	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Landslide Hazard Zonation (priority 1 and 2 watersheds)	complete	RT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Landslide Hazard Zonation (priority 3 watersheds)	withdrawn	RT	---	---	---	---	---	---	---	---	---	---	D	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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	Model Evapo-Transpiration in Deep-Seated Landslide Recharge Areas	complete	RT	---	---	---	---	---	---	---	---	---	---	I	I	---	---	---	---	---	I																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Evapo-Transpiration Model Refinement	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Glacial Deep-Seated Landslides and Groundwater Recharge Literature Synthesis	complete	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Groundwater Recharge Modeling	delayed	R&D	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	---	D																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Glacial Deep-Seated Landslide Map	in prog	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	I																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Landslide Classification	in prog	RT	---	---	---	---	---	---	---	---	---	---	I?	---	---	---	---	---	---	I																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Board Manual Revision	complete	RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	I																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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<p>NOTES:</p> <p>Status:</p> <p>In Progress: Site selection, data collection, analysis, or report writing (in prog)</p> <p>Complete: Final CMER approved report (complete)</p> <p>Scoping: Currently being scoped (scoping)</p> <p>Delayed: Planned, but not yet scoped; or delayed due to funding, prioritization, etc. (delayed)</p> <p>Add: Projects that are under consideration for adding to the work plan</p> <p>Withdrawn: Project is not currently a priority for CMER.</p> <p>Task Type:</p> <p>Monitoring Type: Effectiveness (EFF); Intensive/Cumulative Effects (INT); Extensive Status and Trends (EXT)</p> <p>Rule and Project Tools: Rule Implementation Tools (RIT) needed to correctly implement the rules; includes accurately delineating prescription boundaries</p> <p>Research & Development (R&D) includes literature reviews and development of research protocols</p> <p>⁽¹⁾ Direct or Indirect Measurement: Direct = actual field measurement; Indirect = modeling/correlations, etc.</p> <p>⁽²⁾ Riparian/Wetland Stand Objectives/Targets include windthrow, potential LWD recruitment, DFC basal area targets, and other stand conditions, etc.</p> <p>⁽³⁾ In-Stream/Wetland Habitat Objectives/Targets include fish and amphibian habitat ID, substrate, flow, etc.</p> <p>⁽⁴⁾ Stream Bank/Equipment Limitation Zone (ELZ) includes bank erosion, delivery of sediment from the ELZ</p> <p>⁽⁵⁾ Intermitt Flow refers to spatially intermittent flow below the uppermost point of perennial flow in Type Np streams.</p> <p>⁽⁶⁾ Type N Exp Buffer Treatment in Hard Rock Lithologies: This project is repeated in two programs (Type N Effectiveness and Amphibian Response); however, the designation of functions is shown only once in order to not overdesignate projects that address those functions. The functions are designated under the Type N Effectiveness Program.</p> <p>CWA:</p> <p>Clean Water Act related project.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						