State and Private Forestry FY 2010 Western Competitive Resource Allocation Single-State Project Proposal

Filename	
OR_Ripstream	
Administration Information	
Dollar Amount Requested:	**$204,143**
Matching Share:	**$220,343**

1	Applicant Information	
	State Forestry Agency:	Oregon Department of Forestry
	Contact Person:	Marganne Allen
	Address:	2600 State St.
	City/State/Zip Code:	Salem, OR 97306
	Phone (Work/Cell):	503-945-7240/503-508-5419
	Email:	mallen@odf.state.or.us
	Fax:	503-945-7490

2	Project Information			
	Descriptive Title of Project:	Riparian Function and Stream Temperature Project		
	Names of Partnering Agencies / Organizations:	Oregon Department of Forestry, Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Forest Industries Council, Oregon State University, National Council for Air and Stream Improvement, Plum Creek Timber Company, Weyerhaeuser Corporation.		
	State(s):	Oregon	**Congressional Districts:**	Districts 1, 4, 5
	Counties:	Clatsop, Tillamook, Washington, Yamhill, Lincoln, Lane, Douglas, Coos	**Forest Service Regions:**	Region 6

3 Total Leverage

Please specify each 3rd party contributor (partnering organizations and agencies, including other Federal) and the dollar value of each contribution. Please DO NOT show grant requested funds in this table.

	Contributors: (Please specify by name)	Oregon State University	PNW Research Station	DEQ 319 Grant	ODF project dedicated funds	Multi agency reviewers		**TOTAL**
	Value of Contributions:	$15,000	$15,000	$35,000	$200,343	$5,000	$0	**$270,343**

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Project Budget				
	Grant Share ($ requested)	**Applicant**	**Non-Federal Contributors**	**TOTAL**
		Cash[1]	**In-Kind[2]**	
Personnel / Labor:	$35,000	$24,264	$12,000	**$71,264**
Fringe Benefits:	$14,000	$10,356	$4,800	**$29,156**
Travel:	$10,500	$0	$3,200	**$13,700**
Equipment:	$0	$0	$0	**$ 0**
Supplies:	$1,500	$0	$0	**$1,500**
Contractual:	$133,508	$151,000	$0	**$284,508**
Construction:	$0	$0	$0	**$ 0**
Other:	$0	$0	$0	**$ 0**
Indirect Costs:	$9,635	$14,723	$0	**$24,358**
TOTAL:	**$204,143**	**$200,343**	**$20,000**	**$424,486**

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Project Duration

What is the duration of this project? ☐ **One Year** ☐ **Two Years** ☒ **Three Years**

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National Relevance

Conserve Working Forest Landscapes ☐ **Protect Forests From Harm** ☐

Enhance Public Benefits From Trees and Forests ☒

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Project Description

Maximum 5500 Characters Including Spaces – Clearly summarize the proposed project, including goals, objectives, measurable outputs, outcomes, and how grant funds will be used towards successful completion of the project.

The Riparian Function and Stream Temperature (Ripstream) Project provides a unique opportunity to better understand the suite of public benefits associated with state and private forest riparian forest management strategies. Specifically, the goal of this phase of the Ripstream project is undertake a coordinated demonstration of how riparian protection measures in the Forest Practices Act (FPA) and Northwest State Forests Management Plan (NWFMP) affect water quality and fish habitat in small and medium fish bearing streams in the north and central Coast Range of Oregon. The objectives are to investigate two key questions: 1) how effective are the riparian strategies in meeting state water quality standards for stream temperature? and 2) how do overstory and understory riparian, channel, and valley characteristics and shade relate to each other and ultimately to stream temperature? This will enhance the ability of the Oregon Department of Forestry (ODF), Oregon State University (OSU), the USFS Pacific Northwest Research Station, and other partners to inform small woodlot, family forestland, large industrial, state forest managers, and other stakeholders of how they can achieve desired outcomes for water quality and riparian stands in alignment with their individual forest management and stewardship plans. Results can be used for evaluating forest practice rules, ODF Sustainability Indicators, Federal salmon recovery plans for coho, the Oregon Plan for Salmon and Watersheds, Total Maximum Daily Load (TMDL) analyses and 303d listings, and other key plans and strategies. The assessment techniques being developed in this study will be nationally

[1] 'Cash' is the value of *any qualifying match* the applicant pays for such as cash, staff time, supplies, or equipment.
[2] 'In-Kind' is the value of *any qualifying match* contributed by a non-federal 3rd party contributor such as donated time, supplies, or equipment.

applicable for evaluating compliance with water temperature standards, particular anti-degradation standards.

ODF has completed 8 years of data collection and initial analyses on this nine-year project. Pre-harvest Ripstream results have already been published in a peer-reviewed journal and outreach on preliminary post-harvest results has been initiated with woodlot, family, and industrial forest landowners and the research community through local and national Society of American Foresters meetings, Association of Oregon Logggers training sessions, the OSU Headwaters Research Cooperative, and other avenues. ODF's monitoring staff was lost to budget cuts, eliminating the resources to conduct the final phase of temperature, channel, and shade data collection and analyses. Ten private landowners (18 sites) and two State Forests (15 sites) have committed to 7 years of site access and have incurred the operational costs of timing their timber harvest to accommodate the study schedule (2-7 year delays). Detailed protocol information can be found at the ODF RipStream webpage (http://egov.oregon.gov/ODF/privateforests/MonitoringRipStream.shtml).

Preliminary results indicate potential issues in meeting the antidegradation temperature standard on some small and medium fish bearing streams (approx 1-3rd order) in Oregon's Coast Range. More in-depth analyses are needed to explore site characteristics and their specific influences on stream temperature. Grant monies will allow this exploration of the direct links between riparian forest management and stream temperature to be shared with a wide audience including woodlot owners, family forestland owners, forest operators, industrial, state, and federal forest managers, policy makers and the research community. Funding will support a post-doctoral student and seasonal field crew to complete data collection, analyses, and publications or reports. Findings will also be used to inform discussions about how to create, adapt, analyze, and implement anti-degradation standards for stream temperature affected by non-point sources. Analysis of site characteristics may reveal patterns useful for tailoring riparian prescriptions on 1-3rd order streams throughout Oregon's Coast Range (4.6 million acres). The wide variety of site conditions encompassed by sample locations will provide valuable demonstration sites for the forestry community.

The following deliverables will be used to disseminate findings to forestry audiences:

•Manuscript/report: Adequacy of timber harvest practices at protecting stream temperatures in the Oregon Coast Range.
•Manuscript: Stream temperature response to timber harvest in relation to site characteristics in the Oregon Coast Range.
•Manuscript: Adequacy of timber harvest practices at protecting Oregon Coast Range stream temperatures five years post-harvest.
•Presentations of findings to landowner groups, watershed councils, and State and Federal agencies (Target events/audiences: Oregon Board of Forestry, Annual Tree Farm Convention, Western Forestry and Conservation Association workshops, Annual Associated Oregon Loggers Meeting, Pacific Northwest Aquatic Monitoring Partnership, Oregon Watershed Enhancement Board, Environmental Quality Commission)
•Presentation of results at two national meetings (Target audiences: Society of American Foresters, American Water Resources Association, North American Benthological Society, American Fisheries Society)
•Development of educational outreach material (target audiences: Oregon Small Woodlands Association, Associated Oregon Loggers, Oregon Forest Industries Council, Oregon Watershed Enhancement Board)

8 Program Integration

Maximum 1250 Characters Including Spaces

The Ripstream project is integrated across ODF's State and Private Forests programs through establishing sites across both ownerships to address issues of common interest. The differences in state and private forest riparian strategies are expected to be helpful in demonstrating the potential range of outcomes for water quality, channel and riparian stand conditions. Project design, site selection, data quality assurance and control, analyses methods, reporting, delivery of outcomes, and general project oversight has been a continual collaborative effort. Integrated program oversight, reporting, and outcome delivery will continue with this next phase of the project.

9 **Collaboration**

Maximum 1250 Characters Including Spaces

The RipStream project has been guided by direction received from partners on an external review team since its inception. Review team meetings have been and will continue to be held at project development, implementation, and analysis milestones. Partners on this team include: Oregon Forest Industries Council, National Council for Air and Stream Improvement, Oregon State University (OSU), USFS Pacific Northwest Research Station, Plum Creek Timber Company, Weyerhaeuser Company, Oregon Department of Fish and Wildlife, and the Department of Environmental Quality.

10 **Leverage**

Maximum 1250 Characters Including Spaces

The 33 RipStream sites are established across 10 private landowners and two ODF State Forests. Project participation is voluntary and required significant commitments on the part of landowners regarding the timing of harvests on treatment reaches to allow for the two-years of pre-harvest data collection, a subsequent five years during which the control reach is to remain unharvested, and continual site access by ODF staff, OSU interns, and consultants for the full project period. In some cases, delaying harvest on the control reaches resulted in significant opportunity costs.

Analyses will occur in cooperation with Oregon State University and the USFS Pacific Northwest Research Station (Corvallis). Furthermore, the DEQ has put forward $35,000 in federal funds from the Environmental Protection Agency to ensure the continuation of this vital project.

11 **Meaningful Scale**

Maximum 1250 Characters Including Spaces

Inferences are applicable to 1st-3rd order streams in the north and central Coast Range of Oregon (approximately 4.6 million acres). Results may apply to other areas of the Pacific Northwest west of the Cascade Mountain Crest (including forested urban and agricultural streams). Exploration of the linkages between riparian forest, channel, and valley characteristics and stream temperature may influence riparian forest prescriptions throughout the entire western Coastal forest region.

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Sphere of Influence

Maximum 1250 Characters Including Spaces

Resulting information is directly applicable to Northwest Oregon and likely applicable to Coastal Washington. Analysis methods, however, are national in scale. The EPA Clean Water Act mandates that all states implement anti-degradation water quality standards. The analyses and procedures employed may assist other states (like Washington which has very similar water quality rules) in determining regulation compliance. Hopefully the analyses will also provide insight for agencies into ways that regulations could be developed or improved to increase their utility.

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Sustainability of Outcomes

Maximum 1250 Characters Including Spaces

Project will provide ODF, OSU, USFS, DEQ, EPA, NOAA and others with directly applicable information on the physical processes effecting forest stream temperatures. The results from this rigourous, quantitative exploration of riparian forests and stream temperatures should provide credible, durable, and practicable outcomes to inform forest management decisions.