

Location	Applicant	Proposal Title	Description/Justification
Washington	WA Dept of Ecology	Bacteria Monitoring for Accelerating TMDL Development in Irrigated Agricultural Watersheds	Tests out new, cheaper bacteria data collection method that would allow extensive monitoring of bacterial pollution throughout a large, agricultural watershed in eastern WA, accelerate the development of TMDLs and improve the watershed's water quality more efficiently. Will provide the exact sources of PS and NPS pollution within the Sulphur Creek watershed and will distribute final report to various conservation districts throughout WA. Innovative approach to data collection. Provides a very clear and specific process to reduce labor in collecting TMDL data for TMDL development.
Washington	Tri State Water Quality Council	Pend Oreille River Interstate and Tribal Temperature TMDL/Ecology	Improves state and tribal TMDL programs by providing a successful model on how to complete interstate and tribal TMDLs with different report templates and water quality standards and an example on how to use contractors to help complete complex TMDLs. Amendment to existing grant, competed in earlier competition as well.
Washington	WA Dept of Ecology	Innovative Temperature TMDL Pilot/Ecology	Will develop an efficient, low cost temperature TMDL approach that relies on shade curves to define the shade needed for meeting water quality standards and defines the process for setting waste load allocations for point sources. Uses pilot projects in two very different ecoregions in Washington--one of the eastside and on on the westside. Includes writing guidance and conducting training for applying this method to other basins in WA. Provides an approach to improve the capacity of WA's TMDL program to develop temperature TMDLs faster and get to implementation faster and includes training to advance the state of knowledge among Ecology staff on how to determine system potential vegetation. Contributes to the program's ability to address temperature TMDLs, scientifically and reasonably.
Idaho	Idaho Dept of Env. Quality	South Fork Salmon River Green Lidar Project/IDEQ	Idaho developed a TMDL on the SF Salmon River. Last year, fires burned throughout this watershed. This project supports Idaho's TMDL implementation on this watershed through the use of green lidar technology. The green lidar technology is a full waveform lidar, operating at 532 nm, with the potential to seamlessly map riparian vegetation, floodplain topography, and channel banks and bedforms over whole stream networks. Use of this technology will help Idaho more accurately describe stream morphology, identify problem areas and prioritize TMDL implementation efforts in concert with aquatic restoration goals and attainment of water quality standards in this watershed. This project has applicability to other watersheds to determine and quantify changes in the system and more easily identify places to do restoration activities. This technology can be used in TMDL development and post-TMDL implementation monitoring and is cost efficient and not staff intensive. Additionally this study helps in describing natural background loads and characterizing loading related to fire disturbance.

Oregon	Oregon Dept of Env Quality	Remote Sensing of Chlorophyll a Concentrations to Support the Deschutes Basin Lake and Reservoir TMDLs	<p>The Deschutes Basin includes four lakes on the 303(d) list for eutrophication related parameters which degrade recreation and fisheries. Beyond being a parameter of concern, chlorophyll a is also a surrogate for biological activity which causes the dissolved oxygen and pH impairments. Given the spatial and temporal variability of chlorophyll a in lakes, it is difficult to collect representative samples and construct water quality models. This project will help assess the eutrophication status of all lakes in the Deschutes Basin to determine the magnitude, frequency and duration of impairment and provide valuable input for TMDL water quality models that are used to set nutrient allocations. Will be using remote sensing data to estimate chlorophyll a concentrations necessary to calibrate and corroborate water quality models and will also provide baseline data to judge the effectiveness of the TMDL. This would be a new technology that has not been used in EPA Region 10.</p>
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