

FY07 TMDL Funding for Grants			
State	Title	Applicant	Justification
Idaho	Monumental Cr Road Sediment Analysis (GRAIP)	Idaho Department of Environmental Quality	Proposes to use Geomorphic Road Analysis and Inventory Package (GRAIP), a GIS model, to assess sediment delivery and quantify sediment loads from forest roads to Monumental Creek, including quantifying the impacts of forest roads on the aquatic system, incorporating the risks of mass movement, gullyng and stream capture, and demarcating patches of contiguous aquatic habitat. Also will provide an updated map of the extent of road network, inventory and condition of road assets such as culvert pipes and road closures and determine load allocations as daily loads. Use of GRAIP will provide information that not only leads to higher quality TMDLs by providing more accurate load allocations but it also will help target and drive implementation and restoration efforts. This approach can be applied to other TMDLs where a significant sediment load comes from forestry roads in other states and tribal lands. The project will improve state/tribal capacity to develop high quality TMDLs and TMDL implementation plans where the impairment is sediment coming primarily from forest roads.
Idaho	Thermal Infrared (TIR) Remote Sensing study Hydrologic Understanding of Lolo Creek in North Central Idaho	Nez Perce Tribe	Proposes to conduct develop a comprehensive low water/summer thermal profile, identification of sources of pollutants and gaining/losing stream reaches for Lolo Creek, a waterbody culturally and ecologically significant to the Nez Perce Tribe due to the watershed's abundance of wildlife, fish and plant resources. Because the comprehensive, digital model of the watershed will provide unique insights into the total dydologic system of Lolo Creek watershed, the future restoration and water quality improvements can be more effectively targeted. Results could be used by state of Idaho, federal agencies and the tribe to establish a watershed scale baseline summer low flow temperature profiles more accurately and efficiently than with instruments placed intermittently in the stream channel. Better definition of the hydrologic framework of the basin will increase the capacity of watershed managers to protect and improve water quality at the watershed scale. The Tribe is taking the lead in developing this TMDL.
Idaho	Road Sediment Analysis Modeling (RSAM) for Upper Lolo Creek Watershed in North Central Idaho	Nez Perce Tribe	Nez Perce Tribe will use the Road Sediment Analysis Module (RSAM) of the GRAIP tool to develop a road sediment budget for Lolo Creek sediment TMDL. Geomorphic Roads Analysis and Inventory Protocol (GRAIP) is a state of the art approach for evaluating road & related sediment sources & offers ability to identify specific implementation activities while developing sediment loadings. Thus, GRAIP helps land managers make cost effective restoration decisions. INNOVATIVE ASPECTS: 1) Use of RSAM and GRAIP will provide information that not only leads to higher quality TMDLs by providing more accurate load allocations but it also will help target and drive implementation and restoration efforts. 2) This approach can be applied to other TMDLs where a significant sediment load comes from forestry roads in other states and tribal lands. 3) Improve state/tribal capacity to develop high quality TMDLs and TMDL implementation plans where the impairment is sediment coming primarily from forest roads.
Idaho	Pend Oreille Watershed WAG Facilitation	Tri-State Water Quality Council	This grant amendment is to provide facilitation for Idaho, Washington, the Kalispel Tribe and EPA to develop an interstate, multi-jurisdictional temperature TMDL for temperature in the Pend Oreille River. This is one ofn the first Watershed Advisory Groups (WAG) convened under Idaho's new rules with specific requirements for WAG participation and input into TMDLs. This project works to meet the detailed requirements of both states' and the Kalispel Tribe's needs for participation and input under a fixed timeline. The use of interstate, multi-jurisdictional approach will lead to higher quality TMDLs and increase the likelihood of success for implementation and restoration efforts. This facilitative approach with third party leadership (the Tri-State Water Quality Council) can be applied to other TMDLs and will improve state/tribal capacity to develop interstate, multi-jurisdictional TMDLs with the new public participation requirements.

Oregon	South Fork John Day River Temperature Analysis	Oregon Department of Environmental Quality (grant amendment)	This modeling effort will utilize LiDAR for temperature TMDL development. This will be the first TMDL in Oregon and perhaps the first in the nation to utilize LiDAR. By using LiDAR the state will dramatically increase resolution and decrease the time needed to develop model inputs for morphologic characterization and land cover density and mapping. This project will assist in the timely completion of a Basin wide TMDL project (140 total TMDLs). The project is innovative because it addresses stream flow and channel interactions on stream temperature response. The resulting methods developed during this effort will provide a valuable tool to assist ODEQ with this and future TMDL development.
Washington	Statewide Assessment of PCB & Dioxin Background Levels in WA Freshwater Fish	Washington Department of Ecology	There are over 100 listings for PCB / dioxin on Washington's 303(d) list. Forty of these impairments are from areas in which no known dioxin / PCB sources exist. Washington Department of Ecology will collect 2-3 fish species from approximately 15 of those reference waterbodies, and the results will be used to determine the reference condition for PCB and Dioxin fish tissue levels in Washington. This reference condition information will be used, in turn, to develop a state-wide or regional approach to prioritizing and implementing PCB and dioxin TMDLs. (This will be the first reference condition study for PCBs & dioxin in the Pacific Northwest. The results of this study will be used to develop innovative approaches to PCB and dioxin TMDL development and implementation in Washington, and can potentially be applied to other areas of the Pacific Northwest.
Oregon	Water Quality Modeling to Support Streamflow Restoration and TMDL Development	Oregon Department of Environmental Quality	ODEQ is proposing to use the Heat Source model to develop in-stream flow targets for key streams and rivers in the Upper & Little Deschutes Subbasins. Stream flows in the Upper and Little Deschutes Subbasins are highly managed for irrigation and municipal water supplies with irrigation districts legally having the right to completely de-water portions of many of the streams in this area during the summer. Flow restoration has been identified locally as one of the most important mechanisms for improving water quality and fish habitat in these Subbasins. Despite the importance of stream flow, there are currently no well documented stream flow targets and no good modeling results available to help set stream flow restoration targets. This project models the specific water quality effects of a range of different stream flows with the data analysis & modeling effort resulting in important new information about the in-stream flow necessary to improve water quality & fish habitat and guide ongoing stream flow restoration efforts. It also addresses the response of flow & stream temperatures accurately in this system. It is innovative to address flow issues associated with TMDL development.