



**FORESTRY, FIRE & STATE LANDS
REQUEST FOR PROPOSALS
Cover Sheet**



Project Title	Microbial Assessment of Mercury and Methylmercury Toxicity in the Great Salt Lake		
Lead Project Sponsor	Utah State University, Center for Integrated BioSystems		
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Project Description / Abstract	<p>Methylmercury concentrations in the Great Salt Lake have recently become a priority concern both for public interest as well as for management and regulatory agencies throughout the state. Inorganic mercury is converted to a much more toxic form by bacteria within the lake. Our cursory examination of the lake demonstrates some specific linkages between sulfate reduction and mercury degradation with the cycling of methylmercury. In order to establish management strategies for the GSL, information is needed regarding the potential for methylation and demethylation within the system. Here we propose methods to determine the rates of sulfate reduction, methylation and demethylation of mercury within the GSL. The outcome of this project will be rate models for potential mercury methylation throughout the lake and simple assays for determining status of methylation (by measuring mercury and detoxification genes).</p>		
Project Funding	Amount Requested	Matching Funds	Total Project Cost
	\$ 42,165.07	\$	\$ 42,165.07