FORESTRY, FIRE & STATE LANDS PROPOSAL

Cover Sheet

Project Title	Mercury Biogeochemistry in Great Salt Lake: Delineating the Microorganisms involved in Methylation and Ecosystem Detoxification
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Project Description / Abstract	Mercury (Hg) contamination of Great Salt Lake is of heightened concern due to the amount of methylated Hg present in the deep brine layers and sediment. The methylation of Hg is mediated by biology, conducted by microorganisms in the ecosystem, and the effect can be amplified up the food chain. We plan to identify the bacteria and archaea that are responsible for Hg methylation and ecosystem detoxification activity by quantifying transcripts as proxies for biochemical pathways and correlating these to activity potentials and environmental measurements. By identifying the processes that lead to methylmercury (MeHg) production and entry in to the food chain, we can then strategize intervention. The ultimate goal is to provide the baseline data needed to design bioremediation systems.

	Amount Requested	Matching Funds	Total Project Cost
Project Funding	$ **39,780**	$ 44,050	$ 83,830