



FORESTRY, FIRE & STATE LANDS PROPOSAL



Cover Sheet

Project Title	Mercury Biogeochemistry in Great Salt Lake: The Role of Microorganisms in Methylation		
Lead Project Sponsor	<i>Primary Investigator:</i> Bonnie K. Baxter, Ph.D., Westminster College <i>Co-PI:</i> Eric S. Boyd, Ph.D., Montana State University <i>Co-PI:</i> Tamar Barkay, Ph.D., Rutgers University		
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Project Description / Abstract	<p>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. This methylation is indeed a biological process, conducted by microorganisms in the ecosystem, and the effect can be amplified up the food chain. We plan to identify bacteria and archaea that are capable of this activity by surveying genes for such pathways and correlating this with cultivation data and methylation potential. By identifying the starting point of methylHg in the ecosystem, we can then strategize intervention. The ultimate goal is to provide the baseline data needed to design bioremediation systems.</p>		
Project Funding			
	Amount Requested	Matching Funds	Total Project Cost
	\$ 32,832	\$ 29,250	\$ 62,082