FORESTRY, FIRE & STATE LANDS
REQUEST FOR PROPOSALS
Cover Sheet

Project Title	Hydrodynamic and Chemodynamic Frameworks to Understand Future Trajectories of Trace Element Concentrations in Water, Sediment and Ecosystem of Great Salt Lake
Lead Project Sponsor	University of Utah
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Project Description / Abstract	Recently-obtained high-frequency chemical and physical data from Great Salt Lake (GSL) across seasons and years spanning causeway closure and re-opening provide an unprecedented window into chemodynamic and hydrodynamic processes in GSL. We propose to capitalize on these recent data, and to perform limited continued sampling, to develop the hydrodynamic and chemodynamic frameworks for GSL. Specific goals include: a) developing a model defining the hydrodynamic framework of GSL conditioned to high frequency chemical and physical data; b) quantify longer-term accumulation of sediment organic carbon and trace elements during the first year following re-establishment of the DBL; c) use combined chemodynamic and hydrodynamic information to determine sources of short-term (seasonal) variation in selenium and other trace elements; d) perform parallel analyses utilizing contrasting analytical preparation methods from Utah Division of Water Quality (UDWQ)-contracted laboratories to resolve discrepancies and determine their implications to the ecosystem. We will capitalize on support provided from external sources for two assisting graduate students to ensure that this work can be completed under the modest requested budget.

	Amount Requested	Matching Funds	Total Project Cost
Project Funding	$57,090	See external support	$57,090