FORESTRY, FIRE & STATE LANDS
REQUEST FOR PROPOSALS
Cover Sheet

Project Title	A snapshot of salt balance and dynamic salt movement during water year 2013 in Great Salt Lake, Utah
Lead Project Sponsor	U.S. Geological Survey/Utah Water Science Center
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Project Description / Abstract	Although the recent focus of trace-element research on Great Salt Lake has been important, the annual salinity balance and dynamic internal cycling of salinity in the lake is of equal or higher importance because of potential ecosystem impacts. As noted in the 2012 GSL Comprehensive Management Plan final draft, future human activities on GSL could impact the salinity balance of the lake. For example, two projects currently in the preliminary planning phase could have significant impacts to the salt balance in the GSL ecosystem: (1) construction of a second railroad causeway breach and (2) the addition of evaporation ponds for increased mineral extraction from the lake. The proposed project will include two objectives to better understand current salinity conditions and dynamic mixing processes in GSL: (1) determination of the water year 2013 salt balance of the Great Salt Lake and (2) quantification of salinity exchange between Gunnison and Gilbert Bays and dynamic mixing of deep and upper brine layers in Gilbert Bay. Successful execution of the proposed objectives will provide regulators with an updated and more quantitative salt balance for the lake and will also provide detailed hydraulic and salinity data with respect to dynamic interactions between the upper (less saline) and deep (more saline) brine layers. While the focus of the proposed research will be on salinity, results will also be pertinent to three additional "hot topics": (1) planning horizon for mineral extraction; (2) mercury methylation; and (3) climate change.

	Amount Requested	Matching Funds	Total Project Cost
Project Funding	$ 96,023	$ 84,016	$ 180,039