FORESTRY, FIRE & STATE LANDS
REQUEST FOR PROPOSALS
Cover Sheet

Project Title	Quantifying Subsurface Flux Between the North and South Arms of the Great Salt Lake: Solving the Causeway Puzzle
Lead Project Sponsor	University of Utah
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Project Description / Abstract	Construction of the railroad causeway across the Great Salt Lake in the 1950s has produced two separate and distinct water bodies. While flux of water and solutes through the causeway breach and (until recently) two culverts have been regularly monitored, precise understanding of the nature and magnitude of subsurface flow through the causeway itself is poorly understood and until now has not been quantified. Furthermore, water from the more saline North Arm is believed to be the source of the deep brine layer (DBL), a ubiquitous feature of deep water in the South Arm of the lake. The anoxic DBL contains some of the highest concentrations of methyl mercury ever reported in the United States as well a number of additional chemical constituents of concern. Thus, understanding the origin of this feature and its relationship to the causeway is important for the State of Utah and many GSL stakeholders. The proposed research leverages the expertise of several investigators to produce quantifiable estimates of water and solute flux through the causeway for the very first time. In addition, the work should begin to document the relationship between causeway flux, dispersion of solutes in the north arm of the lake, and the origins of the DBL.

Project Funding	Amount Requested	Matching Funds	Total Project Cost
	$74,690	$38,500	$113,190