



**FORESTRY, FIRE & STATE LANDS
REQUEST FOR GRANT APPLICATION
Cover Sheet**



Project Title	Assessing benthic methylmercury production and degradation along salinity, organic and sulfur gradients of dominant aquatic habitats of the Great Salt Lake, Utah		
Lead Project Sponsor	U.S. Geological Survey		
Project Contact	Name	Mark Marvin-DiPasquale	
	Mailing Address	USGS / 345 Middlefield R. / Mailstop 480 Menlo Park, CA 94025	
	Phone Number	650-329-4442	
	Fax Number	650-329-4463	
	E-Mail Address	mmarvin@usgs.gov	
Project Description / Abstract	<p>The threat of mercury (Hg) contamination of wildlife and humans is an issue of global concern. Recent research has shown elevated Hg concentrations in some bird species that depend on the Great Salt Lake (GSL) and it's surrounding watershed as critical habitat. This project will assess benthic Hg speciation (total Hg, MeHg and 'reactive' inorganic Hg), MeHg production and degradation rates, and ancillary sediment geochemistry in a range of sites selected to represent both dominant habitats and a gradient of sediment geochemical conditions associated with salinity, organic carbon, sulfur and iron. Habitat types will include a) freshwater wetlands, b) brackish saltmarshes, c) brackish open water and d) hypersaline open water areas. Specific sampling sites will include wetlands collocated with ongoing USGS research on avian risk due to Hg and Selenium (Se), off-shore of the Gunnison Island White Pelican Rookery (hypersaline open water) and phragmites (saltmarsh) dominated wetlands, the latter two being 'hot topic' areas. We will also explore if total Se in sediment plays a role in mediating MeHg production or degradation in GSL sediment. The proposed research is linked to five of the seven 'hot topics' identified by the GSL Technical Team for the fiscal year 2012 funding cycle.</p>		
Project Funding	Amount Requested	Matching Funds	Total Project Cost
	\$ 42,012	\$ 19,565	\$ 61,576