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

Project Title	Photo-degradation of methylmercury: An overlooked but major control on methylmercury cycling in the Great Salt Lake		
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Project Description / Abstract	Methylmercury (MeHg) is an environmental contaminant of major concern in the Great Salt Lake (GSL) where it is found at very high concentrations and is biomagnified up food chains to toxic levels. Concentrations of MeHg in waters of the GSL are controlled by the rates of its production and degradation. Previous studies in the GSL have focused on measuring rates and sites of MeHg production. However, rates of MeHg degradation in the GSL are essentially unknown. Photo-degradation represents the most important process for destroying MeHg in most aquatic ecosystems. At salinities lower than those found in the GSL, the photo-degradation of MeHg decreases with increasing salinity. If this decreasing trend continues at higher salinities the rates of MeHg photo-degradation in the hypersaline GSL may be extremely low. The proposed research will test the hypothesis that the very high concentrations of MeHg in waters of the GSL are due at least in part to very low rates of MMHg photo-degradation here because of the high salinity. We will also evaluate what other factors control rates of MeHg photo-degradation in the GSL, and determine the reaction mechanisms so that these rates can be modelled throughout the GSL.		
Project Funding	Amount Requested $19,450	Matching Funds $11,300	Total Project Cost $30,750