



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



<b>Project Title</b>	<b>Why phragmites is spreading in the GSL wetlands and what is happening in their root zone?</b>		
<b>Lead Project Sponsor</b>	<i>University of Utah</i>		
<b>Project Contact</b>	<i>Name: Dr. Ramesh Goel</i>		
	<i>Mailing Address: 110 S Central Campus Drive, 2000 MCE</i>		
	<i>Phone Number: 801-581-6110</i>		
	<i>Fax Number: 801-585-5477</i>		
	<i>E-Mail Address: ram.goel@utah.edu</i>		
<b>Project Description / Abstract</b>	<p>The invasion leading to spread of phragmites in the GSL ecosystem is a great concern for the local regulatory and other agencies including Utah DNR. The phragmites can change ecological health status of the ecosystem by interfering with wetland hydrology, nutrient dynamics and habitats. In this research, we propose to understand the fundamental science behind the spread of these invasive species by understanding the biogeochemistry in the root zone. We will also demonstrate what microbial community resides in phragmites root zone with more emphasis on nitrogen cycling bacteria and sulfate reducers participating in mercury methylation. We will use innovative techniques to study biogeochemistry and microbial ecology in the root zone. A summer workshop is proposed with national and international wetland experts. The project deliverables will include complete quality assurance plan, experimental protocols, analyzed data with future recommendations in the form of a final project report. We will closely work with the cohorts of people who have are concerned about GSL wetland health.</p>		
<b>Project Funding</b>	<i>Amount Requested</i>	<i>Matching Funds</i>	<i>Total Project Cost</i>
	\$52,848	\$13,580	\$66,428