

UTAH DIVISION OF WATER QUALITY

195 North 1950 West

PO Box 144870

Salt Lake City, Utah 84114-4870

Willard Bay Project Proposal Form

**NOTE: Proposal must be no longer than 6 pages. Supplemental documents such as letters of support, information to demonstrate previous project implementation and other relative supportive documents may be submitted in addition to this form.**

Applicant Name: Sheida Hajarian

Co-Applicant Name(s) (if applicable): Desert Water Gardens

Project Title: North Marina Restoration

Agency or Business Name (if applicable): Desert Water Gardens

Mailing Address: 3674 S. 900 E. City: S.L.C. State: UT Zip: 84106

Phone: (801) 270-0939 E-mail: desertwatergarden@gmail.com

Individual  Non-Profit  Govt. Agency  Academic  Commercial  Other

1. Estimated Project Costs:

Labor	\$ <u>600,000</u>
Materials	\$ <u>300,000</u>
Equipment	\$ <u>150,000</u>
Administration	\$ <u>200,000</u>
Miscellaneous	\$ <u>200,000</u>
TOTAL	\$ <u>1,650,000</u>

Other sources of project funding:

<u>          </u>	\$ <u>          </u>	<u>          </u>	\$ <u>          </u>
Source	Amount	Source	Amount
<u>          </u>	\$ <u>          </u>	<u>          </u>	\$ <u>          </u>
Source	Amount	Source	Amount
<u>          </u>	\$ <u>          </u>	<u>          </u>	\$ <u>          </u>
Source	Amount	Source	Amount
<u>          </u>	\$ <u>          </u>	<u>          </u>	\$ <u>          </u>
Source	Amount	Source	Amount

Total project cost including other sources of funding: \$ 1,650,000  
(please include bids for labor, equipment, rentals, etc.)

- Describe the purpose and need of the project: \_\_\_\_\_
- Estimated time frame of the project with significant milestones (Note: Project must be completed with final reports filed by January 1, 2018): \_\_\_\_\_

4. Describe the location of the project with attached location map, including details on the total area that will be directly enhanced by the project: \_\_\_\_\_
5. Describe how the project will specifically enhance and protect waterways affected by the Willard Bay diesel release and improve the conditions of one or more of the following: wildlife, habitat, natural vegetation, water quality or emergency response:
6. Describe project's connectivity to other natural areas or projects that further enhance wildlife, habitat, natural vegetation, water quality or emergency response:
7. Describe any additional social benefits of implementing this project:
8. Project plans and details, including rights to work on specified piece of land:
9. Describe your experience in implementing projects of similar scope and magnitude:
10. Describe how ongoing maintenance of the project will be funded and carried out:
11. List consultants or agency partners that have participated in project development (below):

Blake Wellard m.s. /  
 Utah Native Plant Society S.L.C., UT (801) 721-3385  
 Name/Company Address Phone

\_\_\_\_\_  
 Name/Company Address Phone

\_\_\_\_\_  
 Name/Company Address Phone

Signature Shelba JL Date 5/5/14  
 Applicant

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Co-Applicant (if applicable)

Willard Bay Project Proposal  
Project Title: North Marina Restoration  
Sheida Hajarian B.S.

The purpose and the need of this project are to mitigate the affects of the March 2013 Chevron diesel fuel spill that occurred on the North Marina of Willard Bay. The Willard Bay is a man made reservoir that supports recreation, wildlife and water resource management. The pollution released into the water way will need to be cleaned using wetland plant that are native to surrounding areas and can detoxify and oxygenate the water column.

The estimated time frame of the project is 3 years. Significant milestones: 2014-2015 season when plants cuttings are collected and grown out to mature size, 2015-2016 season when plants are introduced to North Marina and monitored, and 2016-2017 season when final planting and data on plant survival is collected, 2018 when reports are written and project is finalized.

The project location is the North Marina and consists of roughly one mile of shore line and the total area that will be directly impacted by this project will be the greater half of North Willard Bay. The project will enhance and protect waterways affected by the Willard Bay diesel release and improve the conditions to the wildlife that rely on Willard Bay, its natural vegetation, the surrounding habitat and water quality. Wetland plants filter out toxins in the water and are native to Utah. Grasses and grass-like plants, wetland forbs, shrubs, and trees will be planted along the North Marina to improve water quality. Improved water quality will support all types of wildlife, soil quality, and recreation for the public.

This project's connectivity to other natural areas including the greater Willard Bay will enhance the habitat, natural vegetation and water quality as water columns are continuous ecosystems. The health of one ecosystem directly related to surrounding ecosystems. This project will be handled and carried out by a team of scientists familiar with Utah's native plants and wetlands. This project will have great benefits to the scientific community by being monitored using accurate tools and techniques. The further impact of this project will be scientific awareness of what protocols and methods work best in mitigation situations. This project could contribute and inform how we handle future pollution releases in our water ways.

My experience as a Botanist is the native plants of Utah, specifically our wetlands and marsh communities. I've worked for multiple agencies including SWCA were I carried out wetland delineations and vegetation monitoring for UDOT Mountain View Corridor project. I currently work at Desert Water Gardens as Lead Botanist and Manager. I grow native wetland and marsh plants and collaborate with the Utah Native Plant Society to restore habitats that have been damaged. Though I have not worked on a project of this scope before, as a scientist, I believe that I can conduct and carry out this project to completion with the help of my fellow scientist from Weber State University and University of Utah. My interest is scientific and recreational. I was born here in Utah and

I want to see Utah's ecosystems preserved and conserved for mine and future generations.

Wetland delineations will be carried out according to Army Corp of Engineer standards. Total project site transects will be performed with GPS units and monitored over the course of the projects 3 year implementation. Plants will be collected from neighboring ecosystems and documented thoroughly. Plants will be grown out to maturity in a greenhouse and over-wintered in out door troughs to ensure winter hardy root stocks. All vegetation will be collected and monitored by certified botanists. Desert Water Gardens, working with Scientists and The Utah Native Plant society will oversee the project from start to finish. Further oversight will be provided from Professors of Biology, including Dr. Ty Harris and Pat Shea.

Ongoing maintenance of the project will be funded and carried out by Desert Water Gardens in collaboration with botanists that have graduated from Weber State University. Consultants to the project will be Utah Native Plant Society, specifically Blake Wellard M.S. I have included the cost of on going maintenance in the budget.

# Sheida Hajarian

**E-mail:** sheidahajarian@mail.weber.edu  
**Phone:** 801-272-3302 **Cell:** 801-718-6336  
4068 S 1500 E Salt Lake City Utah, 84124

## Education

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**Botany** (Botany Major, Geology Minor)

Bachelors of Science

Weber State University - Ogden, UT

**Relevant Coursework:** Horticulture, Plant Taxonomy, Wasatch Flora, Meteorology, Ethnobotany, Chemistry, Mycology, Soils, Natural Resource Management and Plant Ecology, Geology, Climate Change Seminar

**Awards:** McKell Cy College of Science Scholarship, Botany Department Scholarship, College of Science Private Foundation Scholarship, Botany Service Award, Red Butte Garden Three-Year Volunteer award. Americorp Education Award

**Research:** Recipient of Independent Undergraduate Research Grant Spring 2011

## Related Work Experience

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**Lead Botanist- Desert Water Gardens** Salt Lake City, Utah January 2013-Current

- Managing and propagating large aquatic plant collection. IPM and water quality assessments. Educate consumers on plant site selection, nutrient deficiency, water column health, and diversity of water feature ecosystems. Landscape design using plants.

**Americorp Intern- TreeUtah** Salt Lake City, Utah April 2012-April 2013

- Planting and Education Intern. Plant native trees at schools, parks and public spaces, working with volunteers of all ages. Visit elementary schools to teach 2<sup>nd</sup> graders about trees. Participate and help manage plant workshops for the community.

**Botany Research Aid – WSU Botany Dept.** Ogden, UT August 2011-April 2012

- Mount and Catalogue Plant specimens in the Herbarium. Assist professors and students with specimen identification. Document inventory of all plant specimens.

**Field Botanist– Red Butte Gardens** Salt Lake City, Utah May 2009-May 2012

- 415 hours volunteered in Conservation Department. Travel the state collecting native plant germplasm for the BLM Seeds of Success Program.

**Botany Laboratory Assistant -WSU Botany Dept.** Ogden, UT Aug. 2006-May 2010

- Maintained greenhouses and plant collections, propagated plants for annual plant sale. Assisted in laboratory preps in Physiology Lab. Created Excel plant inventory list.

**Range Technician GS-04 -U.S.D.A. Forest Service.** Ogden, UT May-Sept. 2009

- Conducted range assessments, rare plant and invasive species surveys. Used GPS equipment to identify, survey and inventory rare plant habitats in remote terrain.

**Biological Plant Technician- SWCA Consulting Agency** Salt Lake City, UT  
April-August 2008

- Conducted Wetland surveys determining types of plant, soil, and habitat. Used Trimble GPS units and various types of equipment to collect scientific data.

### **Professional References**

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Dr. Barbara Wachocki	WSU Botany Chair	801-626-7223
Blake Wellard	M.S Botany	801-721-3385
Thomas Sharp	SWCA Biologist	801-898-7514

**Interests:** I hike year round and enjoy camping in every season. I'm a passionate gardener and devote my academic and personal attention towards stewardship of the Utah's natural environments.