

**Title:** Sandhills Restoration Intern

**Reports to:** Jodi McGraw Consulting- Jodi McGraw, Ecologist and Jim Velzy, UCSC Greenhouses

**Stipend:** \$300.00 will be provided by Jodi McGraw Consulting upon completion of 60 hours of work for a 2-unit internship; \$600 will be provided for 120 hours of work completed for a 5-unit internship.

### **Basic Function of the Intern**

The Sandhills Restoration Intern (Intern) will assist ecologist Dr. Jodi McGraw and Assistant Ecologists at Jodi McGraw Consulting (JMc) with work to restore Sandhills habitat. The Intern will participate in revegetation efforts including seed sowing, planting, transplanting and plant propagation in coordination with the UCSC greenhouses, Jim Velzy, UCSC Greenhouse Director, Division of Physical and Biological Sciences. The Intern will also participate in on-site restoration management including seed collecting, seed cleaning, controlling exotic plants, maintaining outplanted container stock, irrigating, and collecting data as part of restoration monitoring.

### **Project Overview**

Jodi McGraw Consulting implements a wide range of Sandhills habitat restoration projects, including a multi-year project to restore mined Sandhills habitat within the approximately 114-acre restoration area of the Olympia Quarry in Felton, CA. The work done by interns in Spring 2018 will be folded into the overall restoration treatments which includes controlling invasive plants, correcting drainage issues to stabilize soil, and establishing native plant species from the sandhills communities, including rare native plant species, to promote recovery of four federally-listed endangered species. The native plants used in revegetation come from site-collected seed sources, to incorporate locally adapted genetic complexes as well as prevent genetic erosion. Interns will also assist with sandhills conservation and restoration projects at other sites.

### **Outcome of Internship**

Upon completing this internship with JMc, the intern will gain insight into and experience working as a restoration ecologist. They will get behind the scenes of a large-scale restoration effort, and learn in depth about the different steps and agencies that are involved in planning and implementing this project. The intern will be educated on the unique Sandhills environment and its diversity of plant and animal species, as well as the challenges of restoring this type of habitat.

### **Internship Preparation**

Prior to the first day of the internship, the intern should identify their goals and expectations for the internship. Jodi McGraw Consulting would like to get to know their interests and support them in getting the most out of their internship experience.

As time allows, interns should read about the sandhills ecosystem in advance of our first meeting, or at any time during the internship, at the Sandhills website:

<http://www.santacruzsandhills.com/overview.html>

Additionally, the *Sandhills Conservation and Management Plan* contains more detailed information about the ecology of the unique system and steps to conserve and restore it:

<http://www.santacruzsandhills.com/articles/Sandhills%20Conservation%20and%20Management%20Plan%20June%202004.pdf>

## Evaluation

Upon completion of the internship, the intern will receive a written evaluation. Criteria used to evaluate intern performance will include:

- Willingness to participate in and learn about the tasks and projects, and to follow procedures and protocols; including:
  - Staying focused and on task;
  - Following Instructions fully, to ensure the work is done correctly and safely;
  - Working in an efficient and time-effective manner, including by limiting down-time; and
  - Staying busy and engaged in the work, including by offering to help out where needed throughout the work session.
- Effective and timely communication, regarding all aspects of the internship including:
  - Checking and responding to all internship-related email (copying Jodi McGraw and JMc Assistant Ecologists on all messages);
  - Notifying JMc of any anticipated schedule conflicts at least one-week in advance; and
  - Immediately notifying JMc of any unanticipated situations that preclude participation (e.g., illness).
- Punctuality, preparedness for work, and completion of the time commitment over the course of the quarter. This includes;
  - Arriving on time and ready to work;
  - Notifying JMc by telephone or text if you are going to be more than 5 minutes late;
  - Reading any assigned materials prior to the meeting;
  - bringing water, snacks, sun-protection and anything else necessary for a productive work day; and
  - Dressing in layers necessary for the variable weather and wearing appropriate clothing including pants, long-sleeved shirts, and close-toed shoes.

## Structure of Internship

Interns will attend a weekly four-hour work session Mondays from 12 - 4 p.m., with the 5-unit interns (only) also attending a work day on Thursdays from 8 - 4:30 pm. Interns will also attend two weekend work days from 8 - 4:30 pm, the first of which is scheduled for Saturday April 28; the second will be scheduled some time in May.

Intern work will primarily occur at field sites locations in the San Lorenzo Valley:

1. the Olympia Quarry in Felton;

2. the Quail Hollow Quarry in Felton; and
3. the Ben Lomond Sandhills Preserve in Ben Lomond.

Interns will also complete one, 4-hour session at the UCSC Greenhouses on the roof of Thimann Labs. Additional work may occur at other Sandhills sites in central Santa Cruz County (i.e. near Felton or Scotts Valley). A car or arranging a carpool will be needed to participate in this internship.

### Working at the Field Sites

While working at the Olympia Quarry, the intern must be prepared for fieldwork in a mostly exposed environment with large daily temperature fluctuations.

#### The following is a list of required items for fieldwork:

- Layered clothing that is protective for walking through heavy vegetation;
- Protective, sturdy footwear (no open-toed shoes);
- At least 2 liters of water to drink (**there is no potable water on site**);
- Sun protection, including a hat with a brim, sunscreen and sunglasses;
- Lunch and/or snacks;
- A notebook and writing utensil for taking notes and data; and
- A backpack for carrying water, personal items, as well as some field gear issued by the AE.
- Rain gear when necessary, including a jacket and umbrella;

The intern may wish to also bring the following:

- Camera
- Binoculars
- Field guides.

### Directions to Olympia Quarry

The Olympia Quarry is located off Mt. Hermon Rd. between Scott's Valley and Felton. From Santa Cruz: Take Highway 17 north and exit at Mt. Hermon Rd. Continue west through Scott's Valley toward Felton. After the Lockhart Gulch Rd. stoplight, the road will ascend a hill. As the incline levels off, be in the right lane and then make a right turn into a driveway where there is a large CEMEX sign and a gate.

### Contact information

Internship meetings will be coordinated directly with the following JMc staff:

Jodi M. McGraw, Ph.D.  
Ecologist and Principal  
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