

# CAL POLY HUMBOLDT

Department of Environmental Science and Management

1 Harpst Street, Arcata, CA 95521

**Job Title:** *Seed Bank Ecology Research Assistants*  
**Research Mentor:** Dr. Kerry Byrne  
**Department:** Environmental Science and Management  
**No. of Openings:** 2  
**Hours per Week:** 8 hrs/week maximum during spring semester (on campus), with option of additional field work (~40 hrs in one week) at the beginning of the summer in Oregon  
**Wage/Salary:** \$18 per hour  
**Employment Start Date:** on or around Jan 16, 2024

## Job Description:

This past summer, the Byrne lab collected soil samples at a grazing allotment in Oregon that was invaded by medusahead grass, treated with imazapic (a pre-emergent herbicide), then planted with native seeds for restoration. The imazapic was effective at killing medusahead, but what native species remain present in the soil?

For this research project, a student (or two students) will conduct a large seed bank emergence study of soil samples that the Byrne lab collected last summer. The project involves setting up the seed bank study, frequent visits to the greenhouse on campus to track germination of seedlings, transplanting unknown species to grow in their own pots until they have identifiable features, compiling data and conducting data entry, analyzing data, and co-authoring a draft project report.

The opportunity also exists for the student(s) to travel to Oregon in May 2024 (after the spring semester ends) to see the field site and collect additional soil samples for the next years' germination study.

## Job Responsibilities:

- prepare soil trays for planting
- make regular visits to the Cal Poly Experimental Greenhouse to track germination, transplant unknowns, and ensure that the automatic irrigation system is properly functioning
- use dichotomous key and dissection microscope to key unknown species
- place data in an existing spreadsheet. Conduct statistical analyses.
- perform a literature review
- co-author a draft project report

**Minimum qualifications:**

- Completion or current student of plant taxonomy (BOT 350), plant ecology (BOT 330), applied natural history & ecology (ESM 303), or wildland plant communities (RRS 360), or equivalent
- Ability and willingness to work with and learn from others effectively in a team setting
- Good research skills, especially in literature review
- Flexibility to shift focus/pivot
- Ability to work independently, self-motivate, and follow through on assignments
- Communication – especially oral communication skills with the PI and your colleague on the project
- Problem solving skills
- Meet eligibility requirements for the [Learning Aligned Employment Program \(LAEP\)](#)

**Career competencies that will be developed:**

- greenhouse skills
- plant identification skills
- analysis skills
- written communication skills
- potential to learn field skills if they collect field data in May 2024

**Position is most suited for students interested in or majoring in:**

Botany, Ecology, Environmental Science and Management, Rangeland Resource Science

**How to Apply:**

Please submit a resume (1-2 pages) and brief cover letter (1 page). In your cover letter please describe any relevant academic or employment experience, your interest in the position, your work availability on weekdays (Mon-Fri) during typical business hours (especially noting any 2+ hr windows), and contact information for 3 professional references (one must be a Cal Poly Humboldt professor) to Dr. Kerry Byrne, Environmental Science and Management, at [Kerry.Byrne@humboldt.edu](mailto:Kerry.Byrne@humboldt.edu), and title your email “Seed Bank Ecology Position”

*Please submit all application materials to Dr. Byrne by **Fri., Dec. 8 at 5:00 pm**. Finalists will be contacted to interview during finals week via zoom.*