



### Project Background

This internship will focus on leveraging remote sensing datasets to inform the implementation of rotational grazing, a management practice that involves the frequent movement of livestock between pastures. Unlike continuous grazing where livestock remain on pastures for long periods of time, rotational grazing allows plants to rest, recover, and regrow after being grazed. Rotational grazing can help ranchers build resilience to impacts of climate change such as drought, and reduced forage availability, by improving soil health, water availability and water quality, and increasing pasture biodiversity. Since taking over the stewardship of the 1000-acre Jalama Canyon Ranch (JCR) in August 2021, White Buffalo Land Trust has been managing cattle at the ranch through rotational grazing.

The frequency and length of rotations depend on the amount of forage available in a pasture. Remote sensing datasets such as the [Rangeland Analysis Platform](#) (RAP) and [IrriWatch / Hydrosat](#) (IrriWatch) provide estimates of biomass (lb/acre) that can indicate the amount of forage available in a pasture. The intern will utilize data (from either IrriWatch or RAP), to develop an ESRI dashboard that provides estimated biomass for pastures at JCR. This tool will empower land stewards at JCR to make informed decisions about livestock rotation. The intern will gain valuable experience in data processing, geospatial analysis, and dashboard creation, while contributing to a project with tangible real-world applications in regenerative land management.

### Qualifications

- Interest in using remote sensing data to inform climate change mitigation and adaptation solutions
- Experience in remote sensing
- Experience with Google Earth Engine (preferred but not required)
- Experience in geospatial analysis and workflows in ESRI suite of tools
- Experience in data processing and analysis
- Experience in agriculture, particularly regenerative agriculture (preferred but not required)

### Details

The position is 10 weeks, 35 hours per week, and will begin in late June and run through early September. This internship is remote, with opportunities to interact with WBLT staff in Santa Barbara. The student will receive a \$8500 stipend for full-time work. This position is part of the Bren Environmental Leadership Program – the student will attend mentoring and leadership training during Spring Quarter and mentor an undergraduate student working on the project throughout the summer.

## How to Apply

Please submit applications to [BEL link](#) by February 4, 2025. Applications should include:

- A cover letter describing how your previous experience and qualifications make you a good fit for the position. We are committed to fostering an inclusive environment and supporting diverse students in environmental science, including those from underrepresented, low-income, and first-generation college backgrounds, and/or those active in DEI, environmental justice, or social justice. We welcome insights into how your experiences or perspective might shape your contribution to the BEL community.
- A resume or CV, including any relevant coursework and previous experience