



BOMMER CANYON HABITAT RESTORATION Goat Grazing for Site Preparation

Client

Irvine Ranch Conservancy

Reference

Robert Freese, Ph.D., Project Manager

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Contract: \$14,000

Schedule: May-June 2018 & 2019

Service Area/Region of Impact:

- Orange County, City of Irvine
- Bommer Canyon, Bommer Meadow

Key Personnel

- Alissa Cope, Project Director

Major Work Products:

- Implement goat grazing for site preparation and weed control including invasive black mustard (*Brassica nigra*), non-native grasses (*Bromus* and *Avena*)



Overview

On behalf of the City of Irvine (COI), Irvine Ranch Conservancy (IRC) is testing goat grazing as a site preparation method in Bommer Canyon. The restoration area will link coastal sage scrub habitat on the adjacent hillside with restored riparian habitat along Bommer Canyon. The project area is located within Bommer Meadow, historically part of the Irvine Cattle Camp. Overgrazing and the introduction of non-native plants and weeds degraded the natural habitat, reducing the food, water, and shelter available for native wildlife. Before native plants can be re-introduced into the area, non-native grasses and weeds must be removed.

Scope of Work: A total of four acres was set aside for testing goat grazing as a method for site preparation weed control. IRC has previously examined mechanical removal (mowing), solarization and non-synthetic herbicide application as alternative site preparation activities. The tests will determine the optimal method that will result in long-term control as well as provide a comparison to initial site conditions.

Our scope of work entails deploying our in-house herd of goats to a designated four-acre site at Bommer Meadow. The goats will be targeted to intensively graze heavy spring weed growth for several weeks before seeds are set. This highly degraded area is dominated by non-native grasses (e.g. *Bromus* and *Avena* spp.) and forbs (e.g. *Brassica nigra*).

Adaptive Management: IRC employs an adaptive management approach that entails systematically and empirically testing hypotheses and assumptions, and incorporating lessons learned into a transparent, adaptive, scientific decision-making framework.

Status and Benefit: Sage is currently conducting goat grazing activities during Spring 2019. IRC will use the Baseline Conditions and Monitoring Data to provide Adaptive Management documentation throughout the goat grazing effort in each project year. Information gathered will then be used to reevaluate goals and implementation methods; modify the goat grazing plan; and apply lessons learned to improve future results.