



ALPINE

ACADEMICS FOR LAND PROTECTION IN NEW ENGLAND

Welcome! The webinar will begin shortly.

We invite you to engage with our presenters by submitting your questions in the Q&A box at the bottom of your screen. There will be time for questions at the end of the presentation.

Please use the chat to let us know if you are having technical difficulties.



ALPINE is a project of the Lincoln Institute of Land Policy and the Highstead Foundation



LINCOLN INSTITUTE
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Research and Practice: Students and Land Managers Collaborating for Solutions

Mele Wheaton and Caroline Beckman

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Woods Institute for the Environment
Stanford University

2 October 2020





SOCIAL
ECOLOGY
LAB



Photo: Mele Wh



Photo: Rhys Watkin





Uncommon
Dialogue: Local land
trusts and interested
researchers

Practicum
course

Open Space Management Practicum

[About](#)[Student Projects](#)[Our Partners](#)[Contact](#)

EARTH SYSTEMS 176/276

Students in the OSMP work with partner organizations on research projects to inform open space management in the Bay Area.



Woods Institute for the Environment: Realizing Environmental Innovation Program

- Interdisciplinary environmental research-and-practice projects
- Solutions orientation
- Implementable by external stakeholders and partners





Research and Practice: Students and Land Managers Collaborating for Solutions

- Engage students, researchers, and land managers in conservation-focused partnerships

- Provide tools to support the partnerships

- Research the partnerships



Building a Case for Juristac: Environmental Impacts of Sand and Gravel Mining

Amber Roberts

Seasonal Streams and Groundwater



Figure 1: Map of the proposed mine area showing seasonal streams and groundwater.

- Proposal site may affect Uvas/Llagas Watershed and Sargent Creek
 - Runoff may lead to water contamination in streams/drainages
- Ephemeral drainages will be directly altered
 - USACE, RWQCB, and CDFW may have jurisdiction¹

Assessments of streams/groundwater must include both direct impacts onsite, and indirect impacts offsite. Must include the extent of these impacts.

Acknowledgements:

Thank you to Val and Rob from the Amah Mutsun Land Trust, and Sarah and Becky.

Background

Sargent Ranch is proposing a sand and gravel mine on Juristac, a significant cultural landmark for the Amah Mutsun Tribal Band located 4-miles south of Gilroy, CA. The development's Environmental Impact Report (EIR) will be out in Spring 2018, necessitating preparation for the critical comment period. This project aims to compile impacts from related case studies, as well as the development's 2015 Biotic Assessment, and synthesize them into a check-list of impacts that should be included in the EIR.

Environmental Impacts

Mining can lead to a variety of impacts, including, but not limited to, air pollution, noise pollution, climate change, water contamination, loss of habitat for species, and long-lasting legacy impacts. However, two areas are of special concern within the proposed site:

Changing hydrology of seasonal streams and groundwater

Critical species that live and/or forage in the proposed site

Check-List for EIR

- ☐ Impacts on Sargent Creek and Uvas Llagas Watershed
 - ☐ Surface changes and diversion of water
 - ☐ Pit-depth in relation to water table
 - ☐ Nearby aquifers
 - ☐ Extent of water use and water contamination
- ☐ Evaluating impacts in the context of climate change (drought and/or flooding)
- ☐ Assessment of sensitive biotic communities (with thorough methodology and monitoring)
- ☐ Others?

Biotic Communities

Habitats to be affected:

- California annual grasslands
- Coast live oak forest and woodland

Threatened, endangered, and protected species to be potentially affected:

- Bald Eagles
- Golden Eagles
- California Tiger Salamanders
- California Red-Legged Frogs



Figure 2: California Tiger Salamander



Figure 3: Bald eagle

Assessments of biotic communities necessitate thorough monitoring. Must include the extent of impacts on these communities.

References:

- Hopkins, R. & Peterson, P. 2015. "Biotic Evaluation Sargent Ranch Quarry, Santa Clara County, California." *Live Oak Associates, Inc.*
- Figure 1: Hopkins, R., et al. 2015.
- Figure 2: <http://latimesblogs.latimes.com/unleashed/2010/03/winemakers-businesspeople-at-odds-with-wildlife-officials-over-california-tiger-salamander-protection.html>
- Figure 3: <http://rosy-finch.blogspot.com/2014/01/bald-eagle-egg-about-to-hatch.html>



Tools to Support Conservation Partnerships

[Partnership in Conservation](#)

Open Space Management Practicum at Stanford University

This map displays projects from the Open Space Management Practicum from 2015 through 2018.

Overview

Natural Science Research

Social Science Research

Ecological Stewardship Research

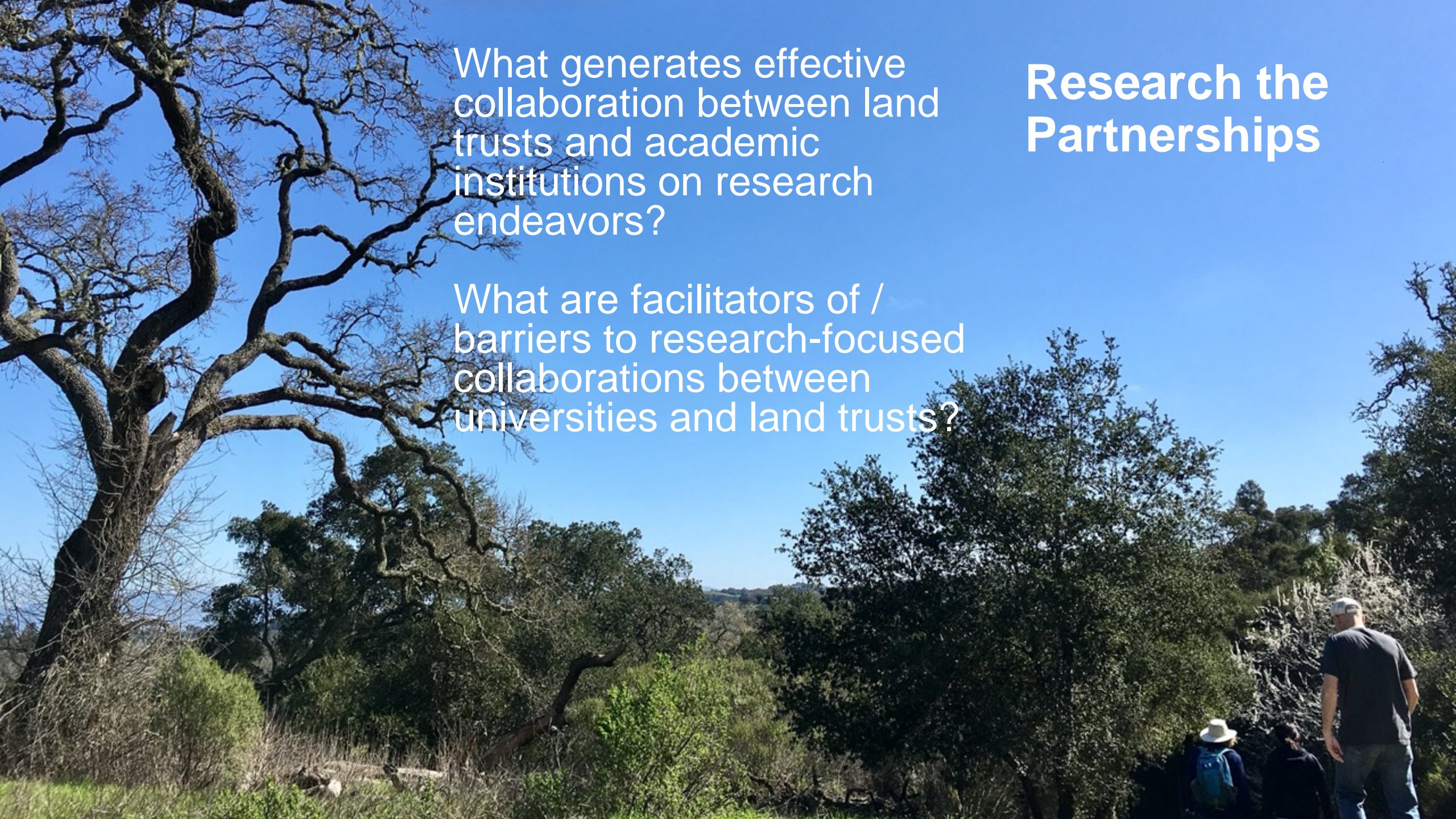


Grassroots Ecology - Nicholas Cody Mascarello

The projects listed on this map are products of the Stanford Open Space Management Practicum (OSMP), a course borne out of a partnership between the Stanford



[OSMP Digital Map](#)



What generates effective collaboration between land trusts and academic institutions on research endeavors?

What are facilitators of / barriers to research-focused collaborations between universities and land trusts?

Research the Partnerships

Elements of Successful Partnerships

Support: Boundary organizations/people; resources

Trust: Personal connection, dedicated time

Communication: Aligned goals, clear and agreed-upon deliverables and timeline, (agreed-upon) opportunities for discussion, shared linguistic understanding



Challenges to Successful Partnerships

Lack of support: Insufficient resources, boundary organizations, and/or people

Erosion and/or lack of trust: Differing timescales; unclear expectations and responsibilities; lack of dedication

Miscommunication: Differing language; different communication practices

Power imbalances: unexposed, not discussed, unquestioned



**Partnership Focal
Areas**

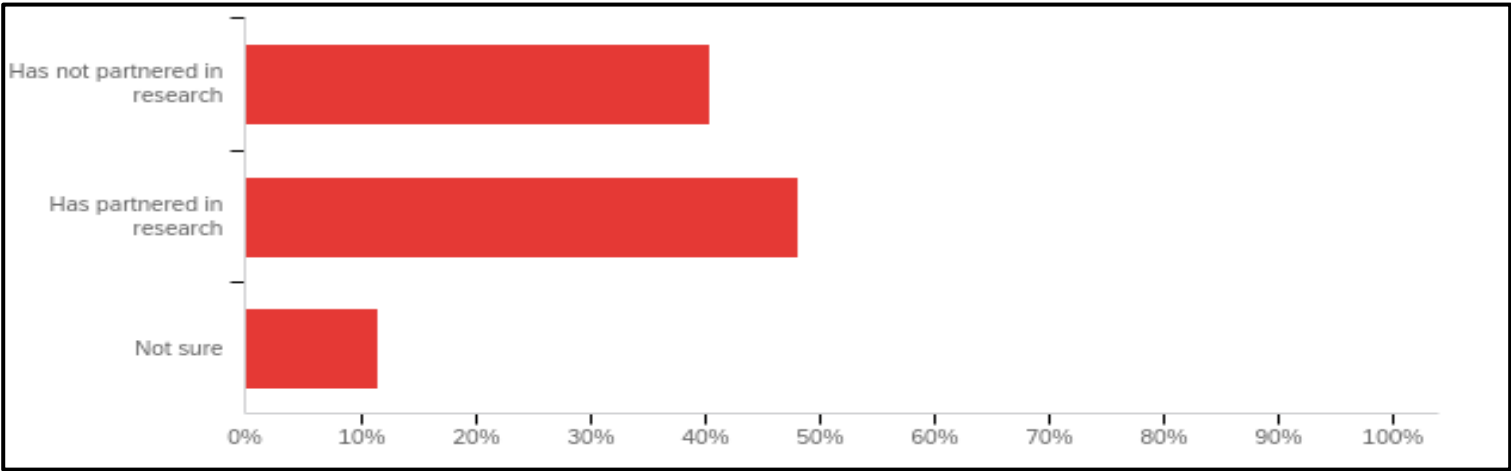
Research Interest

Challenges

**Resources for
Success**



Photo: Mele Wheaton





Thank you!

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Project Team

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All photos by Nicole Ardoin
unless other wise specified



Upcoming ALPINE webinars:

Wednesday, October 14, 12:30-1:30 ET

Faculty collaboration in land conservation initiatives

Presented by June Hammond Rowan, Associate Director, and Research Assistant Professor, Plymouth State University, and Elizabeth Hamin Infield, Professor of Regional Planning, University of Massachusetts, Amherst

Wednesday, December 3, 12:30-1:30 ET

How land conservation affects both environmental and economic outcomes

Presented by Katharine Sims, Associate Professor of Economics, Amherst College.

For more information about ALPINE please visit our website or send us an email:

www.wildlandsandwoodlands.org/ALPINE

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