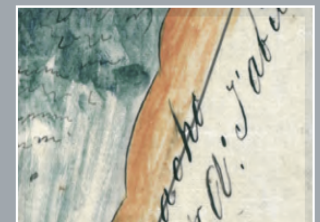
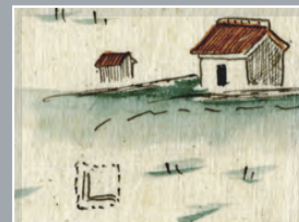
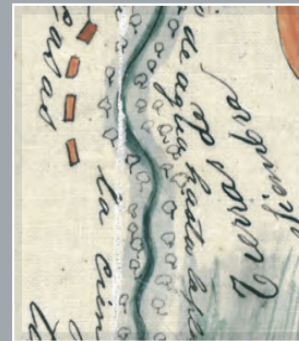


Historic Ecology of the Ballona Creek Watershed 2011

HISTORICAL ECOLOGY OF THE

Ballona Creek Watershed

SHAWNA DARK
ERIC D. STEIN
DANIELLE BRAM
JOEL OSUNA
JOSEPH MONTEFERANTE



CLASSIFICATION OF CALIFORNIA ESTUARIES BASED ON NATURAL CLOSURE PATTERNS: TEMPLATES FOR RESTORATION AND MANAGEMENT

Revised

David Jacobs

Eric D. Stein

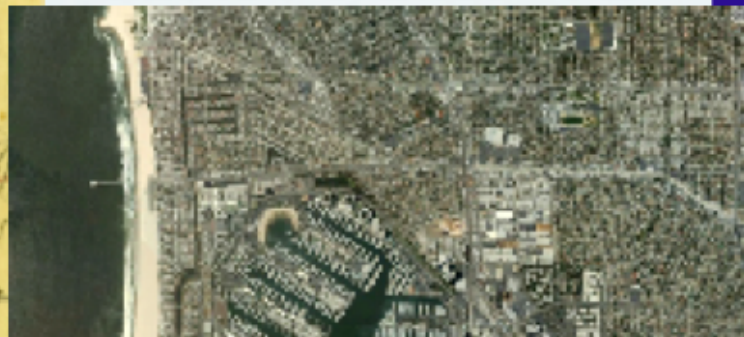
Travis Longcore



UCLA

USC
spatial
science

Sea Grant
University of Southern California





DEFINITIONS

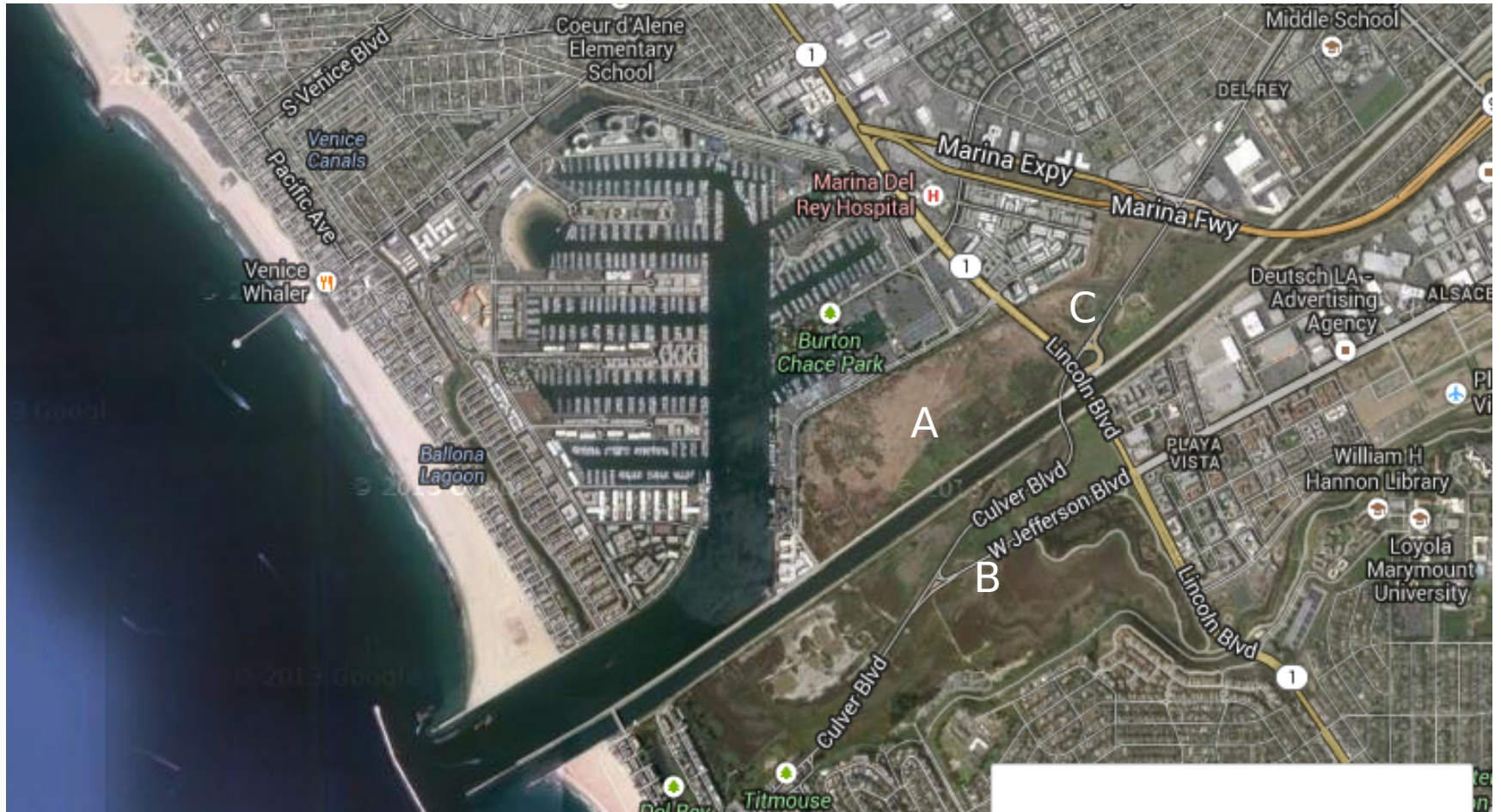
- Restoration is the process of intentionally altering a site to establish a defined, indigenous, historic ecosystem. The goal of restoration is to emulate the structure, function, diversity, and dynamics of the specified ecosystem.
- Creation establishes a historical ecosystem on lands that did not previously support that ecosystem.

(from California Society for Ecological Restoration)

DEFINITIONS

- Restoration can be divided into two activities, re-establishment and rehabilitation.
- Re-establishment returns historic/natural functions to a site as previously existed.
- Rehabilitation improves the general suite of functions of degraded site. Usually, this activity results in less disturbance to a site.

AREAS OF CURRENTLY PRESERVED BALLONA WETLANDS



CHANGE IN LAGOON HABITAT TYPES

NORTH SAN DIEGO COUNTY

	Historical (acres)	Contemporary (acres)	% Change
Salt marsh	1,330	1,170	-12%
Salt flat (seasonally flooded)	1,230	120	-90%
Open water/mud flat	140	980	615%
Freshwater/brackish wetland	1,650	760	-54%
Developed		1,440	

