

Early Planning Tool for Habitat Restoration



and



Cal-IPC Symposium 2013

Early Planning Tool for Habitat Restoration

- On-line, GIS-based mapping tool
- Customizable layers for watershed-specific planning
- Collaboration among government agencies, contractors, and land owners

Purpose

- Improve communication among stakeholders
- Provide the public with a tool for watershed-wide planning
- Improve connectivity of existing project sites
- Provide a source of information on past and present projects
- Provide up-to-date spatial data of existing restoration projects

Who can benefit from an online mapping tool?

- **Government Agencies**
 - Agencies involved in large scale planning, restoration, or mitigation efforts
- **Consulting and Contracting Organizations**
 - Identify existing projects, review information on past projects
- **Universities**
 - Source of watershed-wide restoration project information
- **Private Landowners**
 - Work in partnership with other land owners for management purposes

Planning Ahead

- Identify potential sites for future restoration projects
- Utilize layers to identify ideal locations
- Review status of existing projects
- Improve Project Site Connectivity



Enhancing Continuity of Restoration Projects

- Benefits of site continuity
 - Continue efforts of upstream or nearby restoration projects
 - Increase chances of successful restoration project
- Upstream to downstream restoration approach
- Decrease downstream colonization of non-native invasive species
 - *Arundo donax*
 - *Tamarisk* sp.

Avoiding Costly Overlap of Restoration/Mitigation Projects

- Ideal location for restoration projects
 - Near, but not overlapping
- Location of existing projects is not always known
- Disturbance of existing mitigation sites
 - Can be costly
- Including a buffer space

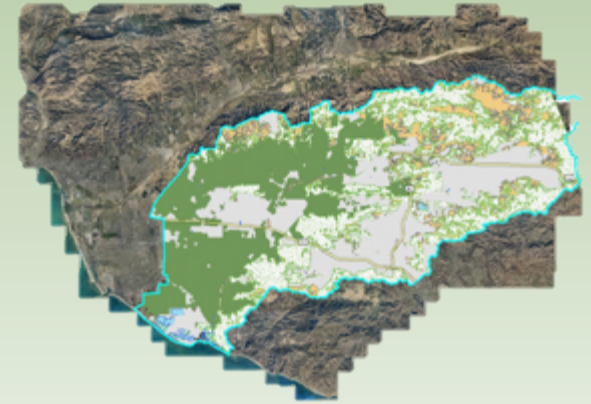
Preparing for the Future

- Rising sea level and changing climate
- Reclaiming land
- Recreating historical habitats
- Discouraging development in high-risk areas

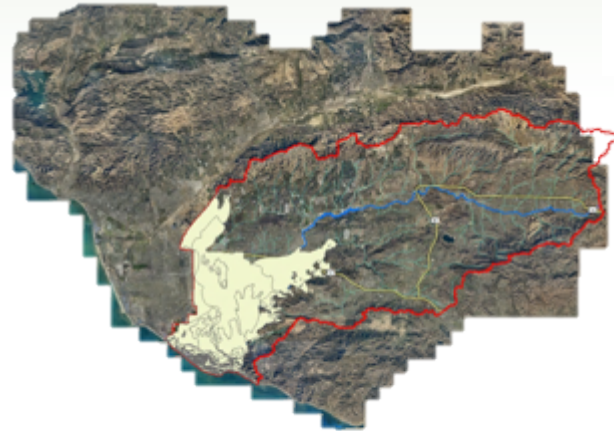
Sea Level Rise Scenario



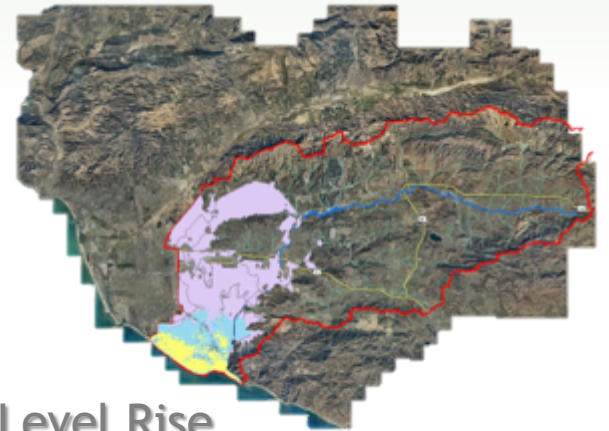
Historical
Habitat Layer



Land Use Layer -
Green= Agricultural



Historical Habitat and
Agriculture

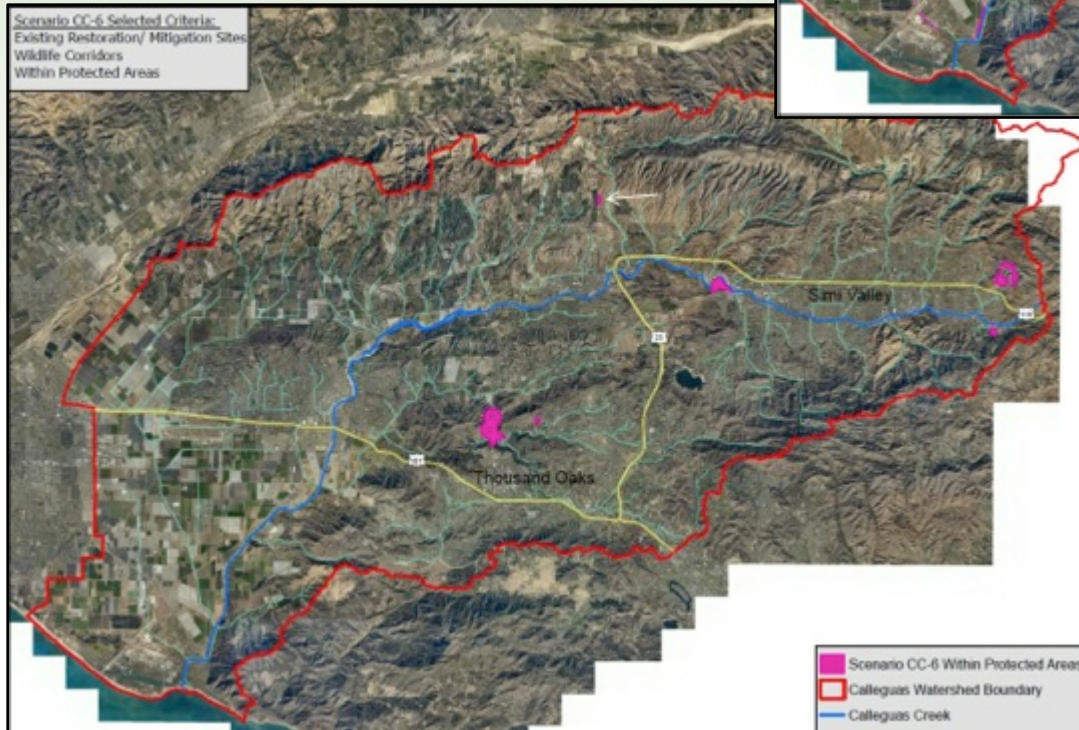
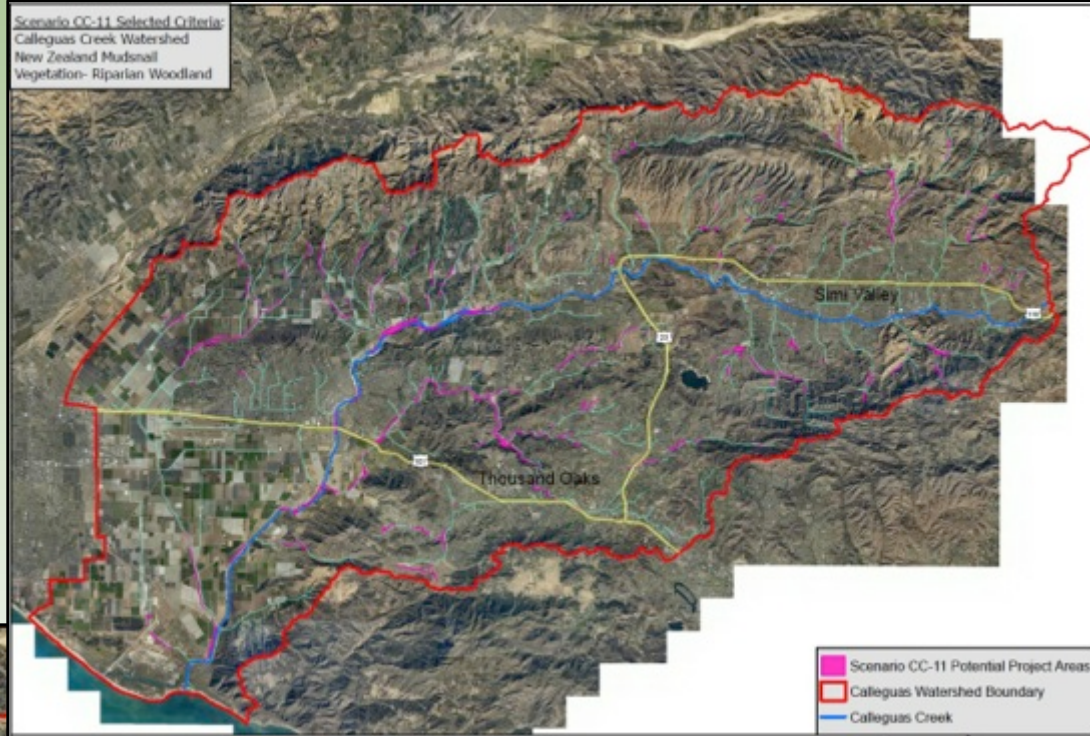
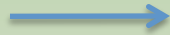


Sea Level Rise
Layer

Analysis of Multiple Variables

- Many factors influence restoration
- Improve chances of restoration project success
- Prepare for potential project problems
- Layers available
 - Watershed
 - Invasive Species
 - Plant
 - Animal
 - Protected Areas
 - Vegetation Communities
 - Land Use Types
 - Floodplains
 - 100 year
 - 500 year
 - Wildlife Corridors
 - Critical Habitats
 - Projected Sea Level Rise

Sample Scenario: Avoid New Zealand Mudsnail



Sample Scenario: Improve project connectivity and wildlife corridor integrity



Accessibility

- Available to the public
- On-line
 - Still in development
- Easy to use
 - Intuitive drop down menus for layers (filters)
- Output is a .kml (Google Earth) format
 - Can be translated in to .shp for use in GIS & drafting programs

Questions



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