Santa Clara River Parkway Restoration Strategy Maps – An Integrated Tool for Managing and Restoring Parkway Parcels

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STILLWATER SCIENCES

Presentation for the
Santa Clara River Parkway Workshop

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WATERSHED IMPACTS

- Agriculture
- Invasion by *Arundo donax*
- Water supply and flood control development
- Levees and urban development

Lower Santa Clara River Riparian Vegetation Mapping
Land Cover within the 500 year floodplain (Sept 2005)

- Riparian vegetation
- Agriculture
- Urban development
- Riverwash (bare river channel)
- Water
- Santa Clara River watershed
ELEMENTS OF THE RESTORATION STRATEGY MAPS

1. Historical flood mapping and fluvial geomorphic analysis
2. Riparian vegetation mapping and classification
3. *Arundo donax* percent cover mapping (also *Tamarix*)
4. Focal species habitat assessment
5. Synthesis to inform restoration strategies and management decisions
6. Strategic plan for arundo control and riparian restoration
7. Levee setback modeling and assessment
RESTORATION STRATEGY MAPS

Santa Clara River Parkway Project Restoration Strategy

Arundo Donax
Percent Cover: 1-19%
Acres: 35.3
In Flood Reset Zone?: yes

rmt.2011

Image: U.S. Geological Survey
Data: CSUMB ESFUL 3AOPC

Santa Clara River Parkway Project Restoration Strategy

- **SWS ID:** 1505
- **APN:** 138006055
- **Status:** Acquired
- **Owner:** SCC
- **Common Name:** McGrath
- **Parcel Acres:** 169.1
INFRASTRUCTURE
FLOOD RESET ZONE
VEGETATION CONSERVATION AREAS

Santa Clara River Parkway Project Restoration Strategy

Habitat type: Mixed riparian forest
Acres: 1.8

swe.2011
ARUNDO PERCENT COVER

Google Earth

Places
- My Places
  - Temporary Places
    - Restoration Strategy Layers
      - Parkway Parcels Status
      - Non-native Invasive Plant Sp... (Click to expand)
        - Arundo Percent Cover
          - Legend
          - 1-19%
          - 20-79%
          - 80-100%
      - Arundo Treatment
        - Legend
        - Arundo Treatment
      - Tamarix
      - Levees
      - Focal Species Habitat
      - Water Quality
      - Parcel Outlines
      - Flood Reset Zone
      - Vegetation Conservation Areas

Layers
- Earth Gallery

Santa Clara River Parkway Project
Restoration Strategy

Arundo Donax
Percent Cover: 80-100%
Acres: 0.4
In Flood Reset Zone?: no

svs.2011
PRESENCE OF TAMARIX

Santa Clara River Parkway Project Restoration Strategy
Tamarix
Acres: 0.8
Santa Clara River Parkway Project
Restoration Strategy

Removal Type: Mixed
Revegetation Type: Passive to limited active (mixed riparian scrub)
Removal priority: Medium
Arundo coverage (%): 30
Map unit (vegetation type): Mixed riparian scrub – Arundo donax
Unit acres: 166.1
Parcel-complex name: McGrath
Parcel name: McGrath
Parcel acres: 166.1
FOCAL SPECIES HABITAT
WATER QUALITY

Santa Clara River Parkway Project
Restoration Strategy

Wastewater
Treatment Plants

Facility name: Todd Road WWTP
sws.2011
RESTORATION STRATEGY MAPS

Santa Clara River Parkway Project Restoration Strategy

Habitat type: Cottonwood-willow forest
Acres: 3.4
NEXT STEPS

- Levee setback modeling results
- Historical ecology components
- Public access components
The Santa Clara River Parkway is a project of the California State Coastal Conservancy, in collaboration with the Nature Conservancy’s LA-Ventura Project, Friends of the Santa Clara River, private landowners and local governments, to acquire and restore floodplain land along the lower Santa Clara River for habitat, flood protection, and recreation. Read more...

Santa Clara River in the news
Read the latest news and information concerning the Santa Clara River watershed. Recent items include the Newhall Ranch development, water diversion, and emerging contaminants.

Search the knowledge base
The watershed knowledge base has been designed as a portal for disseminating science-based information contributing to the conservation, sustainable management, and restoration of natural resources along the Santa Clara River.

regional news
- Historical Ecology of the lower Santa Clara River, Ventura River, and Oxnard Plan
  - September 02, 2011
- Santa Clara River Parkway Workshop
  - September 03, 2011
- Owner of metal recycling plant to pay for study of Santa Clara River estuary pollution
  - January 26, 2011
- Balancing the needs of people and nature - Water diversion on the Santa Clara River
  - January 26, 2011

knowledge base additions
- Historical Ecology of the lower Santa Clara River, Ventura River, and Oxnard Plan
  - September 02, 2011
- Santa Clara River Watershed Feasibility Study
  - June 03, 2011
- Environmental Factors Correlated with Changes in Riparian Plant Composition along the Santa Clara River Floodplain, California
  - June 03, 2011
- BERTY CREEK HYDROLOGY, HYDRAULICS, AND SEDIMENTATION ANALYSER: Watershed Assessment of Hillslope and River Geomorphic Processes
  - January 31, 2011
<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Comprehensive Water Quality Monitoring Plan for the Santa Clara River Watershed</td>
<td>Flood Disturbance and the Distribution of Riparian Species Diversity</td>
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<tr>
<td>Santa Clara River Steelhead Trout: Assessment and Recovery Opportunities.</td>
<td>Santa Paula Creek Watershed Planning Project: Steelhead Habitat and Population Assessment</td>
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<td>Santa Clara River Parkway Floodplain Restoration Feasibility Study; Water Resources Investigations.</td>
<td>Santa Clara River Parkway: Floodplain Restoration Feasibility Study</td>
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<td>Santa Clara River Estuary Macroinvertebrate Bioassessment Monitoring, Annual Report 2003</td>
<td>The influence of valley morphology and coarse sediment distribution on rainbow trout populations in Sespe Creek, California at the landscape scale</td>
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<td>Santa Clara River Estuary Macroinvertebrate Bioassessment Monitoring, Annual Report 2003</td>
<td>Factors Influencing Invasion of Giant Reed (Arundo donax) in Riparian Ecosystems of Mediterranean-type Climate Regions (PhD thesis)</td>
</tr>
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<td>Santa Clara River Estuary Macroinvertebrate Bioassessment Monitoring, Annual Report 2003</td>
<td>Potential Steelhead Over-summering Habitat in the South-Central / Southern California Coast Recovery Domain: Maps Based on the Envelope Method</td>
</tr>
<tr>
<td>Santa Clara River Estuary Macroinvertebrate Bioassessment Monitoring, Annual Report 2003</td>
<td>Viability criteria for steelhead of the south-central and southern California coast (DRAFT)</td>
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Explore the watershed

Google Earth is free software from Google Labs that allows anyone to view spatial data, including satellite imagery and aerial photography of the entire earth. The application has a built-in scripting function that allows users to display their own data as well. Once you've installed Google Earth software, the KML file linked below will allow you to view the Santa Clara River watershed boundary, stream network, dams, levees and other watershed features. Spatial data from Parkway Floodplain Restoration Feasibility Study investigations are also available through the Watershed Knowledge Base.

The view from Google Earth.

To get started: Download and install Google Earth. For best performance, a broadband Internet connection is recommended. To view Google Earth files, click the links below to download and select "open" in the pop-up window (this will launch Google Earth).

Available data sets:
- Santa Clara River Stream and Watershed Boundaries
- Complete Google Earth Data (all of the below)
  - Vegetation Alliances
  - Arroyo Percent Cover
  - Historical Flood Mapping
  - Focal Species Habitat
  - Land Use and Vegetation Types
  - Tamarix Presence
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Stillwater Sciences Website  
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