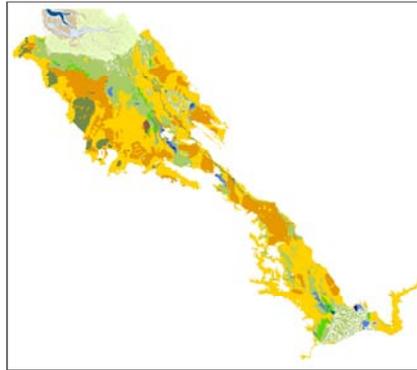


## Historical\_Habitats

### File Geodatabase Feature Class



### Tags

Historical ecology, San Francisco Bay, San Jose, Santa Clara, Sunnyvale, Mountain View, Cupertino, Palo Alto, Campbell, Saratoga, Los Gatos, Alviso, Morgan Hill, Gilroy, Almaden, Guadalupe River, Pajaro River, Coyote Creek, Guadalupe Creek, Llagas Creek, Uvas Creek, Carnadero Creek, Pacheco Creek, Los Gatos Creek, Penitencia Creek, Calabazas Creek, Canoas Creek, Stevens Creek, Saratoga Creek, San Tomas Aquino Creek, San Francisquito Creek, Permanente Creek, Adobe Creek, Arroyo Los Coches, Silver Creek, Fisher Creek, Tequisquita Slough, Coyote Slough, Corkscrew Slough, Soap Lake, San Felipe Lake, Laguna Seca, Laguna Socayre, Santa Clara County, San Benito County, California, USA, bay, creek, channel, river, slough, tidal, habitat, meadow, savanna, willow, riparian, pond, panne, marsh, alkali, lake, wetland, salt flat, cienega, oak, sycamore, cottonwood, woodland, grassland, historical condition, ecology, landscape ecology, pre Euro-American

### Summary

Geospatial data describing historical (circa early 1800s) characteristics of the Santa Clara Valley and adjacent baylands were developed to provide information for flood protection, watershed management, habitat restoration, local education, and research. This dataset combines and synthesizes GIS datasets that were developed in several historical ecology studies dated 2001-2011.

### Description

This dataset represents a reconstruction of the historical landscape patterns (including channel and habitat distribution) of the Santa Clara Valley and adjacent baylands prior to extensive Euro-American modification. It integrates many sources of data describing the historical features of the study area. Extensive supporting information, including bibliographic references and research methods, can be found in these project reports:

Beller, EE, MN Salomon Grossinger, RM, 2010. *Historical Vegetation and Drainage Patterns of Western Santa Clara Valley: A technical memorandum describing landscape ecology in Lower Peninsula, West Valley, and Guadalupe Watershed Management Areas*. Prepared for the Santa Clara Valley Water District and The Silicon Valley Pollution Prevention Center. A Report of SFEI's Historical Ecology Program, SFEI Publication #622, San Francisco Estuary Institute, Oakland, CA. <http://www.sfei.org/scvhproject>

Grossinger, RM, EE Beller, MN Salomon, AA Whipple, RA Askevold, CJ Striplen, E Brewster, and RA Leidy, 2008. *South Santa Clara Valley Historical Ecology Study, including Soap Lake, the Upper Pajaro River, and Llagas, Uvas-Carnadero, and Pacheco Creeks*. Prepared for the Santa Clara Valley Water District and The Nature Conservancy. A Report of SFEI's Historical Ecology Program, SFEI Publication #558, San Francisco Estuary Institute, Oakland, CA. <http://www.sfei.org/SouthStaClaraValleyHEStudy>

Grossinger, RM, RA Askevold, CJ Striplen, E Brewster, S Pearce, KN Larned, LJ McKee, and JN Collins, 2006. *Coyote Creek Watershed Historical Ecology Study: Historical Condition, Landscape*

*Change, and Restoration Potential in the Eastern Santa Clara Valley, California.* Prepared for the Santa Clara Valley Water District. A Report of SFEI's Historical Ecology, Watersheds, and Wetlands Science Programs, SFEI Publication #426, San Francisco Estuary Institute, Oakland, CA. <http://www.sfei.org/coyotecreek> . See also [http://www.sfei.org/UpperPen\\_HE](http://www.sfei.org/UpperPen_HE)

Grossinger, RM, RA Askevold, and JN Collins, 2005. *T-sheet User Guide.* A Report of SFEI's Historical Ecology, Watersheds, and Wetlands Science Programs, SFEI Publication #427, San Francisco Estuary Institute, Oakland, CA. <http://www.sfei.org/TSheetUserGuide>

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Paired with the reports, this dataset provides detailed information about early geomorphic and ecological characteristics of this region. A geographic information system (GIS) was used to collect, catalog, and analyze the spatial components of the study area. Historical maps and aerial photography were georeferenced, allowing us to compare historical layers to each other and to contemporary aerial photography and maps. Additionally, the georeferenced maps were used as means to geographically locate information gathered from surveyor notes, early explorers' journals, travelers' accounts, and newspaper articles. The GIS was used to capture a synthesis of the historical landscape.

By integrating hundreds of georeferenced maps and photographs combined with narrative sources, we constructed a synthesis layer representing the historical landscape. Polygon and line layers were developed to depict features in the historical landscape. These layers include **Historical Habitats**, **Historical Channels**, and **Historical Distributaries**. Our classification system is described in further detail below.

**Historical Habitats** mapped as polygons include:

- Alkali Meadow (high concentration)
- Alkali Meadow (low concentration)
- Box Elder Grove
- Chaparral
- Coyote Riparian: Bar with Riparian Woodland
- Coyote Riparian: Island with Riparian Woodland
- Coyote Riparian: Low Flow Channel
- Deep Bay
- Floodplain Slough
- Oak Savanna / Grassland
- Oak Woodland
- Perennial Freshwater Pond
- Salt Flat / Salina
- Seasonal Lake / Pond

- Shallow Bay
- Shallow Tidal Channel
- Sycamore Grove
- Tidal Flat / Channel
- Seasonally Tidal Marsh
- Tidal Flat / Channel
- Tidal Marsh
- Tidal Marsh Panne
- Valley Freshwater Marsh
- Wet Meadow
- Wild Rose Thicket
- Willow Grove

**Historical Channels** and **Distributaries** were mapped as polyline features. River and creek names were included in the attribute table. Channels were coded as follows:

- Creek
- Minor Tidal Channel / Flat
- Side Channel
- Slough
- Swale

**Historical Distributary** points were mapped to mark the endpoints of historically discontinuous channels.

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Because this GIS dataset integrates four separate GIS datasets, there are some idiosyncracies in the way certain types of features were mapped:

- Channels are typically mapped as lines, but are mapped as polygons in a few cases:
  1. Coyote Creek mainstem (also mapped as lines in Historical Channel dataset)
  2. wide floodplain sloughs adjacent to San Felipe Lake in south Santa Clara Valley (also mapped as lines in Historical Channel dataset)
  3. wide tidal channels depicted on the T-sheets (NOT mapped as lines in Historical Channel dataset)

- Riparian habitats were mapped as polygons along the Coyote Creek mainstem. While many other streams had adjacent riparian habitats, only Coyote Creek's is mapped explicitly.
- Two small thickets of Wild Roses were mapped in West Santa Clara Valley only
- In the Historical Channels dataset, swales were only mapped in south Santa Clara Valley.

Modifications to earlier datasets have been integrated into this synthesis. Major examples of these modifications include:

1. the remapping and reclassification of the few anthropogenic features depicted on the early T-sheets
2. remapping of Penitencia Creek and nearby wetlands
3. remapping of sloughs near the mouth of Calabazas
4. reclassification of Grassland, Oak Savanna, and Oak Woodland habitats
5. classification (splitting) of Alkali Meadows into high/low alkali concentrations
6. remapping of Historical Distributaries in the Coyote Creek study to conform with current historical ecology GIS methods

\* \* \*

This geodatabase provides direct information about **historical data sources, certainty levels, and notes** pertaining to different areas and features. These allow the user to intelligently assess the applicability of the data for the chosen technical question. Refer to Grossinger et al. 2007 for detailed descriptions of these attributes.

**Primary and Secondary Source** (Primary\_Source, Secondary\_Source):

The major source materials used to map the feature are listed using, to the extent possible, standard textual citation form. Full bibliographic information can be obtained from the corresponding record in the Endnote bibliographic database and/or report bibliography. When a source directly contributed to the location of a feature, it was listed as a Primary Source; when it indirectly helped locate a feature, it was listed as a Secondary Source. Not all features have secondary sources.

**Certainty Attributes**(InterpCert, Shape\_Cert, Loc\_Cert):

Three distinct kinds of certainty are recorded: the certainty of our **interpretation** of the feature, its **size/shape**, and **its location**.

### **Certainty of Interpretation**

The following certainty level codes are used in the feature class attribute (InterpCert):

- High (H): Feature definitely representative of conditions circa 1769-1850.
- Medium (M): Feature probably representative of conditions circa 1769-1850.
- Low (L): Feature possibly representative of conditions circa 1769-1850.

### **Certainty of Size and Shape**

The following certainty level codes are used in the feature class attribute (Shape\_Cert):

- High (H): Accurate source material that probably closely follows actual shape; estimated to be within  $\pm 10\%$  of actual area.
- Medium (M): Less accurate source material that probably generally follows actual shape; estimated to be between 50%-200% of actual area.
- Low (L): Inaccurate source material that may not follow actual shape; estimated to be between 25%-400% of actual area.

### **Certainty of Location**

The following certainty level codes are used in the feature class attribute (Loc\_Cert):

- High (H): Expected maximum horizontal displacement less than 50 meters.
- Medium (M): Expected maximum horizontal displacement less than 150 meters.
- Low (L): Expected maximum horizontal displacement less than 500 meters.

### **Notes**

Direct and indirect quotes from data sources are included in this field when they were available. Other clarifying notes relating to evidence and methodology are included in this field as well

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As with any map or GIS layer, confidence or certainty varies geographically due to differences in source data or methods. For more detail about methods refer to:

Grossinger, RM, Striplen CJ, Askevold R, Brewster E, Beller EE. 2007. Historical landscape ecology of an urbanized California valley: wetlands and woodlands in the Santa Clara Valley. *Landscape Ecology*.: 103-120.

Technical users are strongly encouraged to read Grossinger et al. 2007 and the SFEI reports listed above (Beller et al. 2010, Grossinger et al. 2008, 2006, 2005) to gain a stronger understanding of the strengths and limitations of the dataset.

### **Credits**

San Francisco Estuary Institute 2011

### **Access and use limitations**

Confidence or certainty varies geographically due to differences in source data or methods. For more detail about methods refer to: Grossinger, RM, Striplen CJ, Askevold R, Brewster E, Beller EE. 2007. Historical landscape ecology of an urbanized California valley: wetlands and woodlands in the Santa Clara Valley. *Landscape Ecology*:103-120. Technical users are strongly encouraged to read Grossinger et al. 2007 and the SFEI reports listed in the description section (Beller et al. 2010, Grossinger et al. 2008, 2006, 2005) ) to gain a stronger understanding of the strengths and limitations of the dataset. In no event shall the creators, custodians, or distributors of this information be liable for any damages arising out of its use (or the inability to use it). These data are not legal documents or of survey quality and are not intended to be used as such. Although extensive effort has been made to produce error-free and complete data, all geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. Users should consult available data documentation (metadata) for these particular data to determine limitations and the precision to which the data depict distance, direction, location or other geographic characteristics. Data may be subject to change without prior notification. If this data is modified, changes should be documented in a metadata record that should accompany all

redistributed data. If data is transmitted or provided in any form to another user, the data must be accompanied by a copy of this disclaimer and all documentation provided with the original data set, including the full metadata record. SFEI requests that the use of these data in any map, publication, or report should cite the data source(s) used and give proper attribution and credit to the originators of the data.

**ArcGIS Metadata ▼**

**FGDC Metadata ▼**