

122° 07' 30"

122° 00'

121° 30'

121° 45'



**EVALUATING POLLUTION POTENTIAL OF LAND-BASED WASTE DISPOSAL,  
SANTA CLARA COUNTY, CALIFORNIA**  
AN APPLICATION OF EARTH-SCIENCE DATA FOR PLANNING

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**PREPARATION OF THE MAP**

The discussion below summarizes the selection and preparation of the map and should aid planners who may wish to prepare a similar map for areas other than Santa Clara County.

The original base map chosen for the resources map was a 1:62,500 scale (about 1 inch = 1 mile) map compiled from Geological Survey 7 1/2-minute topographic maps. The 1:62,500 scale offered the dual advantage of detail and compatibility with land-use and land-surface maps which were already available. For final preparation in this report, however, a photo-enlarged 1:62,500 scale section of the recently compiled 1:125,000 scale map of the San Francisco Bay region was used as the base map. This photo-enlarged map was registered to the original base map to facilitate the accurate transfer of information.

Users can consider boundaries for units showing land-use, land-slope, and flood-prone areas as accurate to within 150 feet. Boundaries for other features are taken directly from the base map with little loss in accuracy. The reasons for possible inaccuracies are based upon the multiple-step process necessary for transfer of information to the base map and upon the preliminary and experimental nature of several of the source products.

Compilation of physical information on the base map, including the location of all major fresh and tidal surface water, marshlands, parks, campgrounds, recreational areas, and other cultural features, were already included on the base map and, except for accentuation, did not require any compilation. For the remaining earth-related information, separate compilation and transfer to the base map was accomplished as described below.

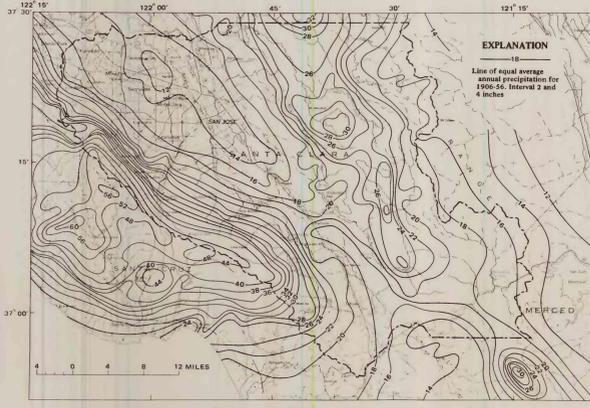
**Land use:** Land-use information was transferred directly to the base map from land-use maps (scale 1:62,500) prepared by the Geological Survey, Washington, D.C., from 1970 NASA aerial photographs of the bay region. These land-use maps showed all distinct land-use types. For this report, however, the classification was simplified for identification of three general types—urban, agricultural, and open space (see glossary in accompanying text for land-use descriptions).

**Floods:** Information on flood-prone areas was compiled from flood maps prepared by the Santa Clara County Flood Control and Water Conservation District (1970) and Limerick, Lee, and Lugo (1973). Flood-prone areas appearing on the resources map are based upon the statistical occurrence of a one-in-100-year flood with 1970 flood-control facilities in place. Put another way, a flood of magnitude illustrated has a 1 percent chance of occurring in any given year.

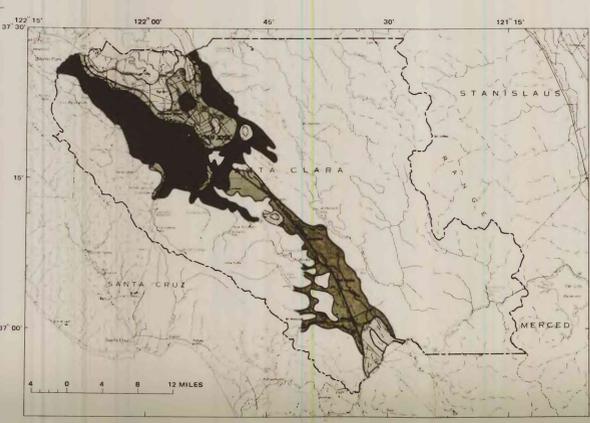
**Land slope:** Information on slope was transferred directly onto the map from a slope map (scale 1:62,500) of Santa Clara County prepared by the Geological Survey in Menlo Park, Calif. This slope map identified land slopes in intervals of 0-5, 5-15, 15-30, 30-50, 50-70, and more than 70 percent. For the present map, slope intervals 0-5, 5-15, and more than 15 percent were identified in all areas except those mapped as urban or flood-prone areas.

**Soil permeability:** Soil-permeability information for Santa Clara County was obtained from the U.S. Soil Conservation Service (1968) and manually transferred to the base map. Besides soil-permeability information, the Soil Conservation Service publication includes detailed soil maps (scale 1:12,000), a description of physical and chemical soil properties, and general land-use suitability interpretations. Similar publications of the Soil Conservation Service are available for most other areas in the bay region.

Map from U.S. Geological Survey  
San Francisco Bay Region 1:125,000, 1970,  
sheet 9



Average annual precipitation in the Santa Clara County and adjacent areas (from Rantz, 1971).

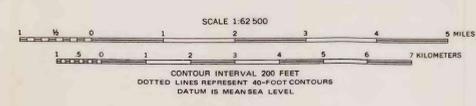


Estimated depth to water table (top of saturated zone) in Santa Clara County.

**MAP EXPLANATION**

Information shown on the map can be identified by the symbols shown below. Note that in many cases symbols overlap one another to show two or more features simultaneously. For example, a symbol depicts an area with agricultural land use, a land-surface slope of 5-15 percent, and a soil permeability of 0.2 to 0.63 inch per hour [2].

Classification	Map symbol	Remarks
Land use		
Urban	[Symbol]	
Agricultural	[Symbol]	
County and State parks, campgrounds recreational areas, and game preserves	MT. MADERA STATE PARK	All land-use units, except urban, which are in areas of 0 to 5 and 5 to 15 percent land-surface slope also have soil permeability and land-surface slope symbols. Some open space will have slope and soil permeability symbols (see below) and will thus not always appear blank as the symbol opposite indicates.
Open space	[Symbol]	
Municipal parks, golf courses, athletic fields, centers	[Symbol]	
Soil permeability		
0.0 to 0.2 inch per hour	1	Soil-permeability symbols appear either in or adjacent to areas identified as having land-surface slope of 0 to 5 or 5 to 15 percent. No soil-permeability symbols are shown for urban land, flood-prone land, or where land-surface slope is greater than 15 percent. Users should consider soil-permeability information depicted on this map as representative of average local conditions. Permeability, particularly where such grade into extremely permeable alluvial deposits along stream channels.
0.2 to 0.63 inch per hour	2	
0.63 to 2.0 inches per hour	3	
>2.0 inches per hour	4	
Land-surface slope		
0 to 5 percent	[Symbol]	Land-surface slope colors are shown for all agricultural, recreational, and open-space land. No symbols are given for urban or flood-prone land. The large, central part of Santa Clara County where land-surface slope is within the 0 to 5 percent range is largely enclosed by the symbol.
5 to 15 percent	[Symbol]	
>15 percent	[Symbol]	
Flood-prone area	[Symbol]	Physical conditions within flood-prone areas are not shown on the map.
Stream and other water bodies	[Symbol]	Major streams, lakes, reservoirs, and tidal sloughs are shown on map by name.
Ground-water recharge basin	R	
Marshlands	[Symbol]	Marshlands occur along the margins of San Francisco Bay. Some marshlands cannot be identified on the map because they are within flood-prone areas.



**MAP SHOWING SELECTED PHYSICAL INFORMATION FOR SANTA CLARA COUNTY, CALIFORNIA**