

**APPENDIX 3.9**

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**Soil Types and Characteristics of the City's Planning Area**

## **SOIL TYPES AND CHARACTERISTICS OF THE CITY'S PLANNING AREA**

The following is a short description of each of the soils that are found within the City's boundaries. Additionally, **Table 1, Soil Characteristics of the City's Planning Area** further describes the types of soils and their characteristic types within the City's Planning Area.

### **Castaic-Balcom silty clay loams, 9 to 15 percent slopes (CmD)**

This complex is on toe slopes in Romero Canyon. Runoff is medium, and the erosion hazard is moderate. In most places slopes range from 12 to 14 percent. Included with these soils are a few areas, less than 10 acres in size, where sheet and rill erosion are moderate. Also included are small areas of Saugus loam and Millsholm rocky loam. This complex is used primarily for dryland small grains and pasture and for range. Capability unit IIIe-1 irrigated; range site 1.

### **Castaic-Balcom silty clay loams, 15 to 30 percent slopes (CmE)**

The soils in this complex are less sloping and less eroded than Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded (CmF2), but otherwise they are similar. Slopes are commonly about 25 percent. Runoff is medium to rapid, and the hazard of further erosion is moderate to high. Landslips are common. Included with this soil in mapping areas are some areas, 10 to 20 acres in size, where sheet and rill erosion are moderate. Also included are small areas of Saugus loam, Gazos clay loam, and Millsholm rocky loam. This complex is used for range as wildlife habitat. Capability unit IVe-1 irrigated.

### **Castaic-Balcom silty clay loams, 30 to 50 percent slopes (CmF)**

These soils are slightly eroded, and their surface layer is 10 to 12 inches thick. Included with these soils are areas 10 to 20 acres in size where rill and sheet erosion are moderate. Also included are small areas of Saugus loam. Areas of this complex are used for range, wildlife habitat, and watershed. Capability unit VIe-1 dryland.

### **Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded (CmF2)**

This complex is in the area near Castaic Junction. It is 60 percent Castaic silty clay loam and 40 percent Balcom silty clay loam. Permeability is moderately slow in these soils. Available water-holding capacity is 5 to 7 inches. Fertility is moderate, runoff is rapid, and the hazard of erosion is high. Plant roots generally penetrate to a depth of about 26 to 36 inches; but in places, they may reach a depth of 40 inches. The Balcom soil, not the Castaic soil, contains lime at a depth of 10 to 20 inches. Included with these soils in mapping are small areas of Gazos clay loam, Saugus loam, and Gaviota sandy loam. Also included are narrow areas of soils that have a reddish-brown surface layer. Castaic-Balcom silty clay loams, 30 to

50 percent eroded, are chiefly used for range. They also are used for watershed purposes and for wildlife habitat and recreation. Capability unit VIe-1 dryland.

**Castaic and Saugus soils, 30 to 65 percent slopes, severely eroded (CnG3)**

This undifferentiated group of soils is 35 percent Castaic silty clay loam and 30 percent Saugus loam. Included in mapping this unit are exposed areas of soft shale and conglomerate that make up as much as 10 percent of the unit and areas of Balcom silty clay loam that make up as much as 25 percent. Areas of this unit are cut by many intermittent, very deep drainage channels that have narrow v-shaped valleys and between them sharp, tortuous divides. Soil slipping is common, and geological erosion is active. During heavy rainstorms, much silt is washed away from these soils. Because of repeated burning of brush, the vegetation on these soils now consists mainly of thick stands of chamise. The Castaic soil in this unit is steeper and more eroded than the Castaic soil in Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded (CmF2), but otherwise is similar. Also, depth to soft shale generally is less, or 20 to 30 inches. The Saugus soil is steeper and more eroded than Saugus loam, 30 to 50 percent slopes, eroded (ScF2), but otherwise it is similar. The depth to weakly consolidated sediment is 24 to 44 inches. Slopes are dominantly 45 to 65 percent. Available water-holding capacity is 4 to 6 inches in the Castaic soil, and 4 to 7 inches in the Saugus soil. In both soils fertility is very low, runoff is very rapid, and the hazard of further erosion is very high. Most of this unit is inaccessible to man and livestock because the brush is dense, the soils are steep and very steep, and the valleys are narrow and v-shaped. These soils are used for watershed and for wildlife habitat. Capability unit VIIIe-1 dryland.

**Cortina sandy loam, 0 to 2 percent slopes (CyA)**

This soil occupies narrow alluvial fans in side canyons along tributaries of the Santa Clara River. The surface layer lacks cobblestones, but the soil otherwise is similar to Cortina cobbly sandy loam, 2 to 9 percent slopes (CyC). Thickness of the surface layer ranges from 12 to 16 inches. In most places slopes range from about 3 to 5 percent and are quite long. A few stones and pebbles are in the soil, but they do not interfere with tillage. Runoff is slow, and the hazard of erosion is moderate. Included with this soil are small areas of Cortina cobbly sandy loam, Metz loamy sand, and Sorrento loam. Also included are small areas that have a surface layer of loam, which are mainly the result of land leveling and smoothing. In the past, loamy soil material from adjacent uplands was moved onto the areas to square fields and eliminate point rows. This Cortina soil is used for range and for dryland small grains. It is also used for irrigated alfalfa, small grains, and pasture. Capability unit IVs-0.

### **Cortina sandy loam, 2 to 9 percent slopes (CyC)**

This soil occupies narrow alluvial fans in side canyons along tributaries of the Santa Clara River. The surface layer lacks cobblestones, but the soil is otherwise similar to Cortina cobbly sandy loam, 2 to 9 percent slopes (C2C). Thickness of the surface layer ranges from 12 to 16 inches. In most places slopes range from about 3 to 5 percent and are quite long. A few stones and pebbles are in the soil, but they do not interfere with tillage. Runoff is slow, and the hazard of erosion is moderate. Included with this soil in mapping are small areas of Cortina cobbly sandy loam, Metz loamy sand, and Sorrento loam. Also included are small areas that have a surface layer of loam, which are mainly the result of land leveling and smoothing. In the past, loamy soil material from adjacent uplands was moved onto these areas to square fields and eliminate point rows. This Cortina soil is used for range and for dryland small grains. It is also used for irrigated alfalfa, small grains, and pasture. Capability unit IVs-0.

### **Cortina cobbly sandy loam, 2 to 9 percent slopes (CzC)**

This soil is on narrow alluvial fans along Castaic Creek, in Agua Dulce Canyon, and in Mint Canyon. Permeability is rapid in this Cortina soil. Available water-holding capacity is 2 to 3 inches. Runoff is slow, and the hazard of erosion is slight. Fertility is low. Roots can penetrate to a depth of 60 inches or more. Included with this soil type are small areas of Cortina sandy loam and of Metz sandy loam. This Cortina soil is used for range, as wildlife habitat, and for watershed purposes. The areas are likely to be flooded for a short period after a heavy rain. Capability unit VIIs-7 dryland.

### **Gaviota rocky sandy loam, 30 to 50 percent slopes, eroded (GaF2)**

This soil occurs on mountains. Some areas are fairly large and located south of Castaic Junction. Smaller areas are south of Solemint and northeast of Quail Lake. Slopes commonly are 45 percent. In most places sheet and rill erosion are moderate, and a few areas are cut by deep gullies. Outcrops of rock cover from about 5 to 10 percent of the total area. The dominant vegetation is chamise brush and an understory of annual grasses. Runoff is rapid on this soil, and the hazard of erosion is high. Drainage is somewhat excessive. Included with this soil are small areas of Millsholm rocky loam and of Saugus loam. Also included are about 500 acres of a very rocky Gaviota soil near Vasquez Rocks. This Gaviota soil is used for range, wildlife, and watershed. Capability unit VIIe-1 dryland.

### **Hanford sandy loam, 0 to 2 percent slopes (HcA)**

This soil occurs throughout the area near Fairmont. It is dominantly sandy loam and fine sandy loam throughout, but otherwise it is similar to Hanford coarse sandy loam, 0 to 2 percent slopes. Runoff is slow on this soil, and the hazard of erosion is slight. Available water-holding capacity is 6 to 7.5 inches.

Fertility is moderate. Roots can penetrate to a depth of 60 inches or more. Included with this soil are small areas of Hanford coarse sandy loam and of Greenfield sandy loam. This Hanford soil is used for irrigated crops and pasture and for range. Capability unit IIs-4 irrigated; IVec-1 dryland.

**Hanford sandy loam, 2 to 9 percent slopes (HcC)**

This soil occurs on alluvial fans near Fairmont. It is dominantly sandy loam and fine sandy loam throughout and has stronger slopes, but it is otherwise similar to Hanford coarse sandy loam, 0 to 2 percent slopes. In most places slopes range from 2 to 6 percent. Runoff is slow to medium on this soil, and the hazard of erosion is slight to moderate. Available water-holding capacity is 6 to 7.5 inches. Fertility is moderate. Included with this soil in mapping are small areas of Greenfield coarse sandy loam and Hanford coarse sandy loam. Also included are small areas where rill and sheet erosion are moderate. Other small areas are on fans where slopes range from 10 to 12 percent. This Hanford soil is used for purposes similar to those of Hanford coarse sandy loam, 0 to 2 percent slopes (HcA). Capability unit IIe-1 irrigated, IVec-1 dryland.

**Metz loamy sand, 0 to 2 percent slopes (MfA)**

This soil occurs on alluvial fans near Castaic Junction. Permeability of this soil is rapid. Available water holding capacity is 4 to 5 inches. Fertility is low. Runoff is very slow, and the hazard of water erosion is slight to moderate. Roots can penetrate to a depth of 60 inches or more. Included with this soil are small areas of Sorrento sandy loam and Yolo sandy loam. Also included are a few small areas of Metz soils in lower lying areas that are subject to occasional flooding. This Metz soil is used for irrigated crops, dryland farming, and wildlife habitat. Capability unit IIIs-4 irrigated.

**Metz loamy sand, 2 to 9 percent slopes (MfC)**

This soil occurs on alluvial fans along the Santa Clara River and its major tributaries. In most places slopes range from 2 to 5 percent. Runoff is slow, and the hazard of erosion is slight. Included with this soil in mapping are some areas at the head of narrow canyons that have slopes of 12 to 14 percent. Also included are small areas of Cortina sandy loam, Cortina cobbly sandy loam, and Yolo loam. In many places in Sand Canyon, the soil has been mixed, leveled, and shaped by earthmoving equipment. In these places much of the soil has been roughly bench terraced. This Metz soil is used about the same as Metz loamy sand, 0 to 2 percent slopes (MfA). Capability unit IIIs-4 irrigated.

**Metz loam, 0 to 2 percent slopes (MgA)**

This soil is on flood plains north of Saugus. The surface layer is loam about 8 to 16 inches thick; otherwise, this soil is similar to Metz loamy sand, 0 to 2 percent slopes (MfA). In many places reaction is mildly alkaline. Runoff is very slow on this soil, and the hazard of erosion is slight to none. Available water-holding capacity is 5.0 to 6.0 inches. Fertility is moderate. Included with this soil are small areas of Metz loamy sand. This Metz soil is used mainly for alfalfa and for row crops. Capability unit IIs-4 irrigated.

**Metz loam, 2 to 5 percent slopes (MgB)**

The surface layer of this soil is loam that is about 8 to 10 inches thick. Slopes range from 2 to 3 percent in most places. Sheet and rill erosion are minor. Runoff is slow on this soil, and the hazard of erosion is slight. Fertility is moderate. Included with this soil in mapping are small areas of Metz loamy sand. This Metz soil is used for irrigated alfalfa and small grains. Capability unit IIs-4 irrigated.

**Mocho sandy loam, 0 to 2 percent slopes (MoA)**

This soil is near Castaic Junction. The surface layer is brown sandy loam that generally is massive and slightly hard, and 10 to 12 inches thick. The hazard of erosion is slight on this soil, and runoff is very slow. Available water-holding capacity is 7.5 to 9.5 inches. Included with this soil in mapping are small areas of Metz loamy sand, Sorrento loam, and Yolo loam. This Mocho soil is used about the same as Mocho loam, 0 to 2 percent slopes. Capability unit I-1 irrigated.

**Mocho loam, 0 to 2 percent slopes (MpA)**

This soil is on alluvial fans south of Castaic Junction. This soil is moderately permeable. Available water holding capacity is 8 to 10 inches. Fertility is high. Runoff is very slow, and the hazard of erosion is none to slight. Roots can penetrate to a depth of 60 inches or more. Included with this soil are small areas of Metz loamy sand, Sorrento loam, and Yolo loam. This soil is used for dryland and irrigated crops. Capability unit I-1 irrigated.

**Mocho sandy loam, 2 to 9 percent slopes (MpC)**

This soil occupies fairly narrow alluvial fans near Castaic Junction. In most places slopes range from 2 to 5 percent. In places at the heads of fans, a few pebbles or cobblestones are on the surface. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Included with this soil are small areas of Metz loamy sand, Sorrento loam, and Yolo loam. Also included are areas, 5 to 10 acres in size, where

sheet and rill erosion are moderate. This Mocho soil is used about the same as Mocho loam, 0 to 2 percent slopes (MpA). Capability unit IIe-1 irrigated.

#### **Oak Glen sandy loam, 0 to 2 percent slopes (ObA)**

This soil is on broad smooth alluvial fans near Quail Lake. Runoff is slow, and the hazard of erosion is slight. Included with this soil are small areas of Hanford coarse sandy loam. This soil is used mostly for dryland small grains and for range. A small acreage is in dryland almond orchards. Capability unit IIIc-1 dryland.

#### **Oakdale sandy loam, 2 to 9 percent slopes (OaC)**

This soil only occupies broad terraces northwest of Neenach. Permeability is moderate in this soil. Available water-holding capacity is 7.5 to 9.0 inches. Fertility is moderate. Runoff is slow to medium, and in many places the water cannot readily penetrate the soil. The hazard of water erosion is slight to moderate. Roots can penetrate to a depth of 60 inches. Included with this soil in mapping are some areas, less than 40 acres in size, where slopes are less than 2 percent. Also included are small areas of Greenfield sandy loam and Ramona coarse sandy loam. Other included areas, 10 to 20 acres in size, have a surface layer of loam and coarse sandy loam. Small areas where rill and water erosion are moderate also are included, as well as a few areas at the head of intermittent streams that are cut by deep gullies. Oakdale sandy loam, 2 to 9 percent slopes, is used for dryland small grains, range, and wildlife. Capability unit IVec-1 dryland.

#### **Oak Glen gravelly sandy loam, 2 to 9 percent slopes (OcC)**

Except that this soil is gravelly throughout, it is similar to Oak Glen sandy loam, 2 to 9 percent slopes. The gravel consists of rounded granitic material that is about 2 inches or less in diameter. It makes up from 15 to about 35 percent, by volume, of the mass. Because of the gravel, available water holding capacity is less than in Oak Glen sandy loam, 2 to 9 percent slopes, and tillage is more difficult. Runoff is slow to medium on this soil, and the hazard of erosion is slight to moderate. Available water holding capacity is about 4.0 to 6.0 inches. Included with this soil are small areas of Oak Glen sandy loam. Also included are areas of unnamed soil in which the gravel content ranges from 35 to 65 percent, by volume. This unnamed soil occupies as much as 15 or 20 percent of each soil area. A few areas of a soil that has slopes of 12 to 14 percent are also included. This Oak Glen soil is used for range and as wildlife habitat. Capability unit IIIe-1 dryland.

### **Oak Glen loam, 0 to 2 percent slopes (OdA)**

Most areas of this soil occur in Oso Canyon. The surface layer is dark-gray light loam about 46 inches thick. The substratum is pale brown and ranges from heavy sandy loam to heavy coarse sandy loam and light loam. It is less than 18 percent clay. This soil is moderately permeable. Available water-holding capacity is high, but the growing season is shorter than in other areas of Oak Glen soils. Runoff is very slow, and the hazard of erosion is none to slight. Roots can penetrate to a depth of 60 inches or more. Included with this soil are small areas of Oak Glen sandy loam. Here cattle have trampled the surface, and the soil is hard and massive when dry. This Oak Glen soil is used for range and as wildlife habitat. Capability unit IIIc-1 dryland.

### **Oak Glen loam, 2 to 9 percent slopes (OdC)**

Except that the surface layer is dark-gray loam, this soil is similar to Oak Glen sandy loam, 2 to 9 percent slopes. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Included with this soil are about 700 acres of soil that has a surface layer about 14 to 16 inches thick. The substratum of this included soil is brown loam or clay loam that extends to a depth of 60 inches or more. From 2 to 15 percent, by volume, of this included soil is limestone gravel. Soil reaction is neutral throughout. This Oak Glen soil is used for range. Capability unit IIIe-1 dryland.

### **Ojai loam, 2 to 9 percent slopes (OgC)**

This soil occurs on terraces near Saugus. This soil has moderately slow permeability. Available water-holding capacity is 9 to 11 inches. Fertility is low. Tilth is poor. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Roots can penetrate to a depth of about 60 inches. Included with this soil in mapping are small areas of Ojai loam, 9 to 15 percent slopes. Also included are small areas of Zamora loam. This Ojai soil is used for irrigated alfalfa, row crops, and range. It also is increasingly being used as site for homes and industries. Some areas on terraces northwest of Solemint and south of the Saugus-Ventura Road near the power substation have been shaped and altered by earthmoving equipment. These areas now are occupied by houses or are used as golf courses. Capability unit IIIe-1 irrigated.

### **Ojai loam, 9 to 15 percent slopes (OgD)**

This soil occurs on foothills. Most areas are strongly sloping, but some areas are rolling. Slopes range from 10 to 15 percent in most places. Runoff is medium, and the hazard of erosion is moderate. Included with this soil are small areas where sheet and rill erosion are moderate. Also included are a few deep gullies. Other included small areas consist of Ojai loam, 15 to 30 percent slopes. This Ojai soil is used

mostly for range, but some areas are used for dryland small grains. The areas also provide habitat for wildlife. Capability unit IVe-1 irrigated.

**Ojai loam, 15 to 30 percent slopes (OgE)**

This soil is on foothills near Solemint. Slopes range from 20 to 26 percent in most places. Runoff is medium to rapid, and the hazard of erosion is moderate to high. Included with this soil are some areas, 10 to 20 acres in size, where sheet and rill erosions are moderate. Also included are a few areas of deep loam, thin surface variant, 30 to 50 percent slopes (OhF), and Ojai loam, 30 to 50 percent slopes, eroded (OgF). This Ojai soil is used for range, wildlife habitat, and watershed. The slopes severely limit suitability for cultivation. Capability unit VIe-1 dryland.

**Ojai loam, 30 to 50 percent slopes (OgF)**

This soil is on foothills near Castaic, Saugus, and Solemint. Slopes generally range from 35 to 45 percent. Runoff is rapid, and the hazard of erosion is high. Included with this soil in mapping are small areas of Ojai loam, 15 to 30 percent slopes (OgF). Also included are about 280 acres at the head of Plum Canyon that consist of Ojai soils that have a surface layer of clay loam. Small areas cut by sheet and rill erosion are also included. This Ojai soil is used for range, wildlife habitat, and watershed. Capability unit VIIe-1 dryland.

**Ojai loam, 30 to 50 percent slopes, eroded (OgF2)**

Much of the original surface layer of this soil has been removed through sheet and rill erosion. The present surface layer is 16 to 18 inches thick in most places. Slopes commonly are about 40 percent. The areas are cut by a few deep gullies and by many shallow gullies. Runoff is rapid, and the hazard of further erosion is high. This Ojai soil is suitable for range, wildlife, habitat, and watershed purposes. Capability unit VIIe-1 dryland.

**Ojai loam, thin surface variant, 30 to 50 percent slopes (OhF)**

This is the only variant from this type of the normal Ojai soil series. It is found on terraces. Permeability is moderately slow in this soil. Runoff is rapid, and the hazard of erosion is high. Available water holding capacity is 8.0 to 10.0 inches. Fertility is low. Included with this soil in mapping are some small areas of Agua Dulce stony loam. Ojai loam, thin surface variant, 30 to 50 percent slopes is used only for range. Capability unit VIIe-1 dryland.

### **Riverwash (Rg)**

Riverwash consists of sandy material in the beds of intermittent streams. Narrow stringers of gravelly sand occupy many of the areas. During each flood, fresh deposits of alluvium are laid down and removed as a result of streambank erosion. The hazard of soil blowing is slight to moderate. Little or no vegetation is on the areas. This land type has no value for farming. The areas are used for wildlife and watershed purposes. Capability unit VIIIw-4 dryland.

### **Sandy Alluvial Land (Sa)**

Sandy alluvial land is mostly on flood plains along the Santa Clara River and its larger tributaries. It consists of unconsolidated alluvium that generally is stratified and ranges from sand to loamy sand in texture. The soil material has been recently deposited by streams. Flooding is frequent, and during each flood resorting of the soil material occurs. The plant cover is willows and cottonwoods that have an understory of annual grasses and forbs. Soil blowing is a moderate hazard. This land type is used for grazing, for wildlife habitat, and watershed purposes. Frequent flooding severely limits use for cultivated crops. Protection from flooding is needed. Capability unit VIIw-4.

### **Saugus loam, 15 to 30 percent slopes (ScE)**

In most places this soil has slopes that range from 20 to 24 percent. Runoff is medium, and the hazard of erosion is moderate. Included with this soil are small areas on toe slopes that have slopes of 5 to 15 percent. Also included are areas, 5 to 10 acres in size, where sheet and rill erosion are moderate. Other included small areas consist of Balcom silty clay loams and Saugus loam, 30 to 50 percent slopes (ScF). Thus Saugus soil is used mainly for range. Some areas are used for homesites and subdivisions, though much grading is required. Capability unit VIe-1.

### **Saugus loam, 30 to 50 percent slopes (ScF)**

In most places the slope of this soil is about 45 percent; though on north slopes, the slope may be as steep as 55 percent. Runoff is rapid, and the hazard of erosion is high. Included with this soil in mapping are small areas of Castaic-Balcom silty clay loams, 30 to 50 percent slopes (CmF), and of Castaic and Saugus soils, 30 to 65 percent slopes, eroded (CnG3). Also included are small areas cut by sheet and gully erosion. This Saugus soil is used mainly for range. Many areas, however, have been reshaped and graded by earthmoving equipment for use as homesites and subdivisions. Capability unit VIIe-1 dryland.

**Saugus loam, 30 to 50 percent slopes, eroded (ScF2)**

This soil is on uplands in Romero Canyon and in other places near Castaic Junction. Permeability is moderate in this soil. Available water-holding capacity is 5.0 to 7.5 inches. Fertility is low, runoff is rapid, and the hazard of erosion is high. Included with this soil in mapping are small areas of Castaic-Balcom silty clay loams and of Castaic and Saugus soils. Also included are small areas of Gaviota rocky sandy loam and of Rough broken land. This Saugus soil is used for range wildlife habitat, and watershed. Capability unit VIIe-1 dryland.

**Sorrento loam, 0 to 2 percent slopes (SsA)**

This soil is on alluvial fans along the Santa Clara River and its major tributaries. Runoff is very slow, and the hazard of erosion is slight. Included with this soil in mapping are small areas that have a surface layer of sandy loam. Also included are small areas of Metz loamy sand, Mocho loam, and Yolo loam. This Sorrento soil is used for many kinds of irrigated crops. Capability unit I-1 irrigated.

**Sorrento loam, 2 to 5 percent slopes (SsB)**

This soil is on long, smooth alluvial fans along drainage ways of the Santa Clara River, near Castaic Junction. Permeability of this soil is moderate. Available water-holding capacity is 8.5 to 10.0 inches. Fertility is high. Runoff is slow, and the hazard of erosion is slight. Roots can penetrate to a depth of 60 inches or more. Included with this soil in mapping are small areas of Metz loamy sand, Mocho loam, and Yolo loam. Also included are small areas that have a surface of sandy loam. This Sorrento soil is used for such irrigated crops as alfalfa, green onions, carrots, walnuts, and pasture. Capability unit IIe-1.

**Terrace Escarpments (TsF)**

Terrace escarpments is a type of land that consists of short, moderately steep to steep faces or breaks that separate the terraces from the lower-lying alluvial fans. The surface layer is generally coarse sandy loam. Slopes generally are about 35 percent, but they range from 15 to 45 percent. Vegetation consists of annual grasses and forbs. Runoff is medium to rapid, and the hazard of erosion is moderate to high. Included with this land type are small areas where rill and gully erosion are severe. Also included are a few large, deep gullies that are actively eroding. Terrace escarpments are used only indecently for grazing. The areas are used mainly to provide cover for wildlife. Capability unit VIIe-1 dryland.

### **Vista coarse sandy loam, 30 to 50 percent slopes, eroded (VsF2)**

Much of the original surface layer of this soil has been removed through sheet and rill erosion. Many areas are cut by shallow gullies, and a few areas are cut by deep gullies. The present surface layer is 8 to 12 inches thick. Slopes range from 35 to 45 percent in most places, but they are as steep as 55 percent in a few places. Runoff is rapid, and the hazard of further erosion is high. Included with this soil in mapping are small areas that have a surface layer of sandy loam. Also included are small, slightly eroded areas. Also present are small areas consisting of Amragosa rocky coarse sandy loam. This Vista soil is used for range, wildlife habitat, and watershed. Capability unit VIIe-1 dryland.

### **Yolo loam, 0 to 2 percent slopes (YoA)**

This soil is on alluvial fans near Newhall and Saugus. Permeability is moderate in this soil. Available water-holding capacity is 8.5 to 10.5 inches. Fertility is high. Runoff is very low, and the hazard of erosion is none to slight. Roots can penetrate to a depth of 60 inches or more. Included with this soil in mapping are small areas of Metz loamy sand and Sorrento loam. Also included are small areas that have a surface layer of sandy loam. This Yolo soil is used for irrigated crops. Capability unit I-1 irrigated.

### **Yolo loam, 2 to 9 percent slopes (YoC)**

This soil is on fairly narrow alluvial fans near Newhall and Saugus. Slopes range from 2 to 6 percent in most places. Runoff is slight to moderate, and the hazard of erosion is slow to medium. Included with this soil are areas at the upper edge of the alluvial fans that have slopes as steep as 10 to 12 percent, by volume, with fine gravel throughout. Also included are small areas that have a surface layer of sandy loam or that have a few pebbles and stones on the surface. Other included small areas consist of Metz loamy sand and Sorrento loam. This Yolo soil is used mainly for irrigated crops and for range, but use for homesites is rapidly increasing. Capability unit IIe-1 irrigated.

### **Zamora Loam, 2 to 9 percent slopes (ZaC)**

This soil is on long, smooth, convex terraces near Castaic Junction. Permeability of this soil is moderately slow. Available water-holding capacity is 10 to 11 inches. Fertility is moderate. Runoff is slow to medium, and the hazard of erosion is slight to moderate. Roots can penetrate to a depth of 60 inches more. Included with this soil mapping are small areas that have a surface layer of sandy loam or clay loam. Also included are about 75 acres where slopes are 0 to 2 percent. This Zamora soil is used for dryland grains and range. It also is used for wildlife habitat. Capability unit IIe-1 irrigated.

### **129 – Saugus loam, 30 to 50 percent slopes**

The Saugus component makes up 85 percent of this soil. Slopes are 30 to 50 percent. This component occurs on mountains. The parent material consists of soft residuum weathered sandstone and shale. Depth to a root restrictive layer, bedrock, paralithic, is 40 to 60 inches. The natural drainage class is well drained. Water movement is moderately high. Available water to depth of 60 inches is low. Nonirrigated land capability classification is VIe.

### **143 – Xerorthents – Urban Land-Saugus Complex, 15 to 30 percent slopes**

The Xerorthents component makes up 45 percent of this soil. Slopes are usually 15 to 30 percent and this soil is found on hills. The parent material consists of man-altered residuum. Depth to a root restrictive layer, bedrock, lithic, is 10 to 60 inches. The natural drainage is well drained. Available water depth of 60 inches is very low. Nonirrigated land capability classification is VIII.

The Saugus component makes up 15 percent of this soil. Slopes are 15 to 30 percent. The parent material consists of residuum weathered sandstone and shale. Depth to a root restrictive layer is 40 to 60 inches. The natural drainage is well drained. Water movement is moderately high. Available water to a depth of 60 inches is low. Nonirrigated land capability classification IVe. Irrigated IVe.

### **19 – Trigo family – Calcixerollic Xerochrepts-Vista family complex, 30 to 70 percent slopes**

The Trigo family component makes up to 35 percent of this soil. Slopes are 30 to 70 percent. This component is on mountains. The parent material consists of residuum weathered from sandstone and shale. Depth to a root restrictive layer is 3 to 19 inches. Drainage is excessive. Available water to a depth of 60 inches is very low. Capability unit VIIe nonirrigated.

The Calcixerollic Xerochrepts component of this soil makes up 30 percent. Slopes are 30 to 70 percent. This component is found on mountains. The parent material consists of residuum weathered sandstone and shale. Depth to a restrictive layer is 15 to 42 inches. Water movement is relatively high. Available water to a depth of 60 inches is moderate. Capability unit VIIe nonirrigated.

The Vista family component makes up 20 percent of unit. Slopes are 30 to 70 percent. This component is found on mountains. The parent material consist of residuum weathered sandstone and shale. Depth to a root restrictive layer is 60 inches. Natural drainage is well drained. Water movement is high. Available water to a depth of 60 inches is moderate. Capability unit VIIe nonirrigated.

### **39 – Tujunga-Capistrano families association, 2 to 20 percent slopes**

The Tujunga family component makes up 70 percent of this soil. Slopes are 2 to 20 percent. This component occurs on alluvial fans, and alluvial plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. Natural drainage is excessive. Water movement is high. Available water to a depth of 60 inches is low. Capability unit VIe nonirrigated.

The Capistrano family component makes up 20 percent of this soil. Slopes are 2 to 20 percent. This component is found on alluvial fans and alluvial plains. Parent material is alluvium. Depth to a root restrictive layer is 60 inches. Natural drainage is well drained. Water movement is high. Available water to a depth of 60 inches is moderate. Capability unit VIe nonirrigated.

### **54 – Caperton-Trigo, granitic substratum – Lodo families complex, 50 to 85 percent slopes**

The Caperton family component makes up 45 percent of this soil complex. This component occurs on mountains. The parent material consists of residuum weathered from gneiss. Depth to a root restrictive layer is 4 to 20 inches. Natural drainage is well drained. Water movement is relatively high. Available water to a depth of 60 inches is very low. Capability unit is VIIe nonirrigated.

The Trigo family, granitic substratum component makes up 25 percent of this soil. Slopes are 50 to 85 percent. This component is found on mountains. Parent material consists of residuum weathered from granodiorite. Depth to a root restrictive layer is 3 to 19 inches. Natural drainage is excessively drained. Water movement is high. Available water depth of 60 inches is very low. Capability unit VIIe nonirrigated.

The Lodo family component makes up 15 percent of this soil complex. Slopes are 50 to 85 percent. This component is found on mountains. Parent material consists of residuum weathered from schist. Depth to a root restrictive layer is 6 to 19 inches. Natural drainage is excessively drained. Water movement is moderately high. Available water to a depth of 60 inches is very low. Capability unit VIIe nonirrigated.

**Table 1**  
**Soil Characteristics of the City's Planning Area**

<b>Soil</b>	<b>Association and Series</b>	<b>Runoff</b>	<b>Erosion Hazard</b>	<b>Slope (percent)</b>	<b>Soil Use</b>	<b>Capability Classification</b>	<b>Permeability/ Water-Holding Capacity</b>	<b>Fertility</b>
<b>Soil Survey of the Antelope Valley Area, California<sup>1</sup></b>								
Castaic-Balcom silty clay loams, 9 to 15 percent slopes	Saugus-Castaic-Balcom Association/Castaic Series	medium	moderate	12 to 14	dryland small grains/pasture/range	IIIe-1 irrigated	NA	NA
Castaic-Balcom silty clay loams, 15 to 30 percent slopes	Saugus-Castaic-Balcom Association/Castaic Series	medium to rapid	moderate to high	25	range as wildlife habitat	IVe-1 irrigated	NA	NA
Castaic-Balcom silty clay loams, 20 to 50 percent slopes	Saugus-Castaic-Balcom Association/Castaic Series	NA	moderate	NA	range/wildlife habitat/watershed	VIe-1 dryland	NA	NA
Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded	Saugus-Castaic-Balcom Association/Castaic Series	rapid	high	30 to 50	range/watershed/wildlife habitat/recreation	VIe-1 dryland	Slow/5 to 7 inches	moderate
Castaic and Saugus soils, 30 to 65 percent slopes, severely eroded	Saugus-Castaic-Balcom Association/Castaic Series	rapid	very high	45 to 65	watershed/wildlife habitat	VIIIe-1 dryland	NA / 4 to 6 inches (Castaic soil) and 4 to 7 inches (Saugus soil)	low
Cortina sandy loam, 0 to 2 percent slopes	Yolo-Metz-Cortina Association/Cortina Series	slow	moderate	3 to 5	dryland small grains/irrigated alfalfa/pasture	IVs-0	NA	NA
Cortina sandy loam, 2 to 9 percent slopes	Yolo-Metz-Cortina Association/Cortina Series	slow	moderate	3 to 5	dryland small grains/irrigated alfalfa/pasture	IVs-0	NA	NA

<b>Soil</b>	<b>Association and Series</b>	<b>Runoff</b>	<b>Erosion Hazard</b>	<b>Slope (percent)</b>	<b>Soil Use</b>	<b>Capability Classification</b>	<b>Permeability/ Water-Holding Capacity</b>	<b>Fertility</b>
Cortina cobbly sandy loam, 2 to 9 percent slopes	Yolo-Metz-Cortina Association/ Cortina Series	slow	slight	2 to 9	range/wildlife habitat/watershed	VIIIs-7 dryland	rapid/2 to 3 inches	low
Gaviota rocky sandy loam, 30 to 50 percent slopes, eroded	Gaviota-Millsholm Association/ Gaviota Series	rapid	high	45	range/wildlife/ watershed	VIIe-1 dryland	NA	NA
Hanford sandy loam, 0 to 2 percent slopes	Hanford-Ramona-Greenfield Association/ Hanford Series	slow	slight	0 to 2	irrigated crops/pasture/range	IIs-4 irrigated/ IVec-1 dryland	NA / 6 to 7.5 inches	moderate
Hanford sand loam, 2 to 9 percent slopes	Hanford-Ramona-Greenfield Association/ Hanford Series	slow to medium	slight to moderate	2 to 6	irrigated crops/pasture/range	Ile-1 irrigated/ IVec-1 dryland	NA / 6 to 7.5 inches	moderate
Metz loamy sand, 0 to 2 percent slopes	Yolo-Metz-Cortina Association/Metz Series	slow	slight to moderate	0 to 2	irrigated crops/dryland farming/wildlife habitat	IIIs-4 irrigated	rapid/4 to 5 inches	low
Metz loamy sand, 2 to 9 percent slopes	Yolo-Metz-Cortina Association/Metz Series	slow	slight	2 to 5	irrigated crops	IIIs-4 irrigated	NA / NA	NA
Metz loam, 0 to 2 percent slopes	Yolo-Metz-Cortina Association/Metz Series	slow	slight to none	0 to 2	alfalfa/row crops	IIs-4 irrigated	NA / 5 to 6 inches	moderate
Metz loam, 2 to 5 percent slopes	Yolo-Metz-Cortina Association/Metz Series	slow	slight	2 to 3	irrigated alfalfa/small grains	IIs-4 irrigated	NA / NA	moderate
Mocho sandy loam, 0 to 2 percent slopes	Saugus-Castaic-Balcom Association/Mocho Series	slow	slight	0 to 2	dryland/irrigated crops	I-1 irrigated	NA / 7.5 to 9.5 inches	NA

<b>Soil</b>	<b>Association and Series</b>	<b>Runoff</b>	<b>Erosion Hazard</b>	<b>Slope (percent)</b>	<b>Soil Use</b>	<b>Capability Classification</b>	<b>Permeability/ Water-Holding Capacity</b>	<b>Fertility</b>
Mocho loam, 0 to 2 percent slopes	Saugus-Castaic-Balcom Association/Mocho Series	slow	none to slight	0 to 2	dryland/irrigated crops	I-1 irrigated	moderate/ 8 to 10 inches	high
Mocho sandy loam, 2 to 9 percent slopes	Saugus-Castaic-Balcom Association/Mocho Series	slow to medium	slight to moderate	2 to 5	dryland/irrigated crops	Ile-1 irrigated	NA / NA	NA
Oak Glen sandy loam, 0 to 2 percent slopes	Oak Glen-Gorman Association/Oak Glen Series	slow	slight	0 to 2	dryland small grains/range/almond orchards	IIIc-1 dryland	NA / NA	NA
Oakdale sandy loam, 2 to 9 percent slopes	Hanford-Ramona-Greenfield Association/Oakdale Series	slow to medium	slight to moderate	2 to 9	dryland small grains/range/wildlife habitat	IVec-1 dryland	moderate/ 7.5 to 9 inches	moderate
Oak Glen gravelly sandy loam, 2 to 9 percent slopes	Oak Glen-Gorman Association/Oak Glen Series	slow to medium	slight to moderate	2 to 9	range/wildlife habitat	IIIe-1 dryland	NA / 4 to 6 inches	NA
Oak Glen loam, 0 to 2 percent slopes	Oak Glen-Gorman Association/Oak Glen Series	very slow	none to slight	0 to 2	range/wildlife habitat	IIIc-1 dryland	moderate/ high	NA
Oak Glen loam, 2 to 9 percent slopes	Oak Glen-Gorman Association/Oak Glen Series	slow to medium	slight to moderate	2 to 9	range	IIIe-1 dryland	NA / NA	NA
Ojai loam, 2 to 9 percent slopes	Ojai-Agua Dulce Association/Ojai Series	slow to medium	slight to moderate	2 to 9	irrigated alfalfa/row crops/ range/home sites/industry sites	IIIe-1 irrigated	moderate/ 9 to 11 inches	low
Ojai loam, 9 to 15 percent slopes	Ojai-Agua Dulce Association/Ojai Series	medium	moderate	10 to 15	range/dryland small grains/wildlife habitat	IVe-1 irrigated	NA / NA	NA

<b>Soil</b>	<b>Association and Series</b>	<b>Runoff</b>	<b>Erosion Hazard</b>	<b>Slope (percent)</b>	<b>Soil Use</b>	<b>Capability Classification</b>	<b>Permeability/ Water-Holding Capacity</b>	<b>Fertility</b>
Ojai loam, 15 to 30 percent slopes	Ojai-Agua Dulce Association/Ojai Series	medium to rapid	moderate to high	20 to 26	range/wildlife habitat/watershed/ severely limited suitability for cultivation	VIe-1 dryland	NA / NA	NA
Ojai loam, 30 to 50 percent slopes	Ojai-Agua Dulce Association/Ojai Series	rapid	high	35 to 45	range/wildlife habitat/watershed	VIIe-1 dryland	NA / NA	NA
Ojai loam, 30 to 50 percent slopes, eroded	Ojai-Agua Dulce Association/Ojai Series	rapid	high	40	range/wildlife habitat/watershed	VIIe-1 dryland	NA / NA	NA
Ojai loam, thin surface variant, 30 to 50 percent slopes	Ojai-Agua Dulce Association/Ojai Series	rapid	high	30 to 50	range only	VIIe-1 dryland	moderate/ 8 to 10 inches	low
Riverwash	N/A	NA	moderate	NA	wildlife habitat/watershed/ no value for farming	VIIIw-4 dryland	NA / NA	NA
Sandy Alluvial Land	N/A	NA	moderate	NA	grazing/wildlife habitat/watershed/ limited use for cultivated crops	VIIw-4	NA / NA	NA
Saugus loam, 15 to 30 percent slopes	Saugus-Castaic-Balcom Association/Saugus Series	medium	moderate	20 to 24	range/homesites and subdivisions	VIe-1	NA / NA	NA
Saugus loam, 30 to 50 percent slopes	Saugus-Castaic-Balcom Association/Saugus Series	rapid	high	45 to 55	range/homesites and subdivisions	VIIe-1 dryland	NA / NA	NA
Saugus loam, 30 to 50 percent slopes, eroded	Saugus-Castaic-Balcom Association/Saugus Series	rapid	high	30 to 50	range/wildlife habitat/watershed	VIIe-1 dryland	moderate/ 5 to 7.5 inches	low

<b>Soil</b>	<b>Association and Series</b>	<b>Runoff</b>	<b>Erosion Hazard</b>	<b>Slope (percent)</b>	<b>Soil Use</b>	<b>Capability Classification</b>	<b>Permeability/ Water-Holding Capacity</b>	<b>Fertility</b>
Sorrento loam, 0 to 2 percent slopes	Saugus-Castaic-Balcom Association/Sorrento Series	slow	slight	0 to 2	many kinds of irrigated crops	I-1 irrigated	NA / NA	NA
Sorrento loam, 2 to 5 percent slopes	Saugus-Castaic-Balcom Association/Sorrento Series	slow	slight	2 to 5	irrigated crops such as alfalfa/green onions/carrots/walnuts/pasture	Ile-1	moderate/ 8.5 to 10 inches	high
Terrace Escarpments	N/A	medium to rapid	moderate to high	NA	indecently for grazing/cover for wildlife	VIIe-1 dryland	NA / NA	NA
Vista coarse sandy loam, 30 to 50 percent slopes, eroded	Vista-Amargosa Association/Vista Series	rapid	high	35 to 45	range/wildlife habitat/watershed	VIIe-1 dryland	NA / NA	NA
Yolo loam, 0 to 2 percent slopes	Yolo-Metz-Cortina Association/Yolo Series	very low	none to slight	0 to 2	irrigated crops	I-1 irrigated	moderate/ 8.5 to 10.5 inches	High
Yolo loam, 2 to 9 percent slopes	Yolo-Metz-Cortina Association/Yolo Series	slight to moderate	slow to medium	2 to 6	irrigated crops/range/homesites	Ile-1 irrigated	NA / NA	NA
Zamora loam, 2 to 9 percent slopes	Yolo-Metz-Cortina Association/Zamora Series	slow to medium	slight to moderate	2 to 9	dryland grains/range/wildlife habitat	Ile-1 irrigated	moderate/ 10 to 11 inches	Moderate

Soil	Depth to a Restrictive Layer, Bedrock or Lithic (inches)	Water Movement	Drainage	Available Water Depth of 60 inches	Capability Class	Parent Material	Slopes (Percent)
<b>Soil Survey of Los Angeles County, California, West San Fernando Valley Area<sup>2</sup></b>							
143-Xerorthents – Urban Land-Saugus Complex, 15 to 30 percent slopes	10 to 60 (Xerorthents) 40 to 60 (Saugus)	moderately high (Saugus)	well drained (Xerorthents and Saugus)	very low (Xerorthents) low (Saugus)	VIII non-irrigated (Xerorthents) IVE non-irrigated IVE irrigated (Saugus)	man altered residuum (Xerorthents) residuum weathered sandstone and shale (Saugus)	15 to 30
<b>Soil Survey of the Angeles National Forest Area, California<sup>3</sup></b>							
19-Trigo family – Calcixerollic Xerochrepts – Vista family complex, 30 to 70 percent slopes	3 to 19 (Trigo) 15 to 42 (Calcixerollic Xerochrepts), 60 (Vista)	relatively high (Calcixerollic Xerochrepts) high (Vista)	excessive (Trigo Family), well drained (Vista)	very low (Trigo), moderate (Calcixerollic Xerochrepts), moderate (Vista)	VIIe non-irrigated (Trigo), VIIe non-irrigated (Calcixerollic Xerochrepts) VIIe (Vista)	residuum weathered sandstone and shale (all three components)	30 to 70
39-Tujunga-Capistrano families association, 2 to 20 percent slopes	greater than 60 (Tujunga), 60 (Capistrano)	high (Tujunga), high (Capistrano)	excessive (Tujunga), well drained (Capistrano)	low (Tujunga), moderate (Capistrano)	VIe non-irrigated (Tujunga), VIe non-irrigated (Capistrano)	alluvium (Tujunga), alluvium (Capistrano)	2 to 20
54-Caperton-Trigo, granitic substratum – Lodo families complex, 50 to 85 percent slopes	4 to 20 (Caperton), 3 to 19 (Trigo), 6 to 19 (Lodo)	moderately high (Caperton), high (Trigo), moderately high (Lodo)	well drained (Caperton), excessively drained (Trigo), excessively drained (Lodo)	very low (Caperton), very low (Trigo), very low (Lodo)	VIIe non-irrigated (Caperton), VIIe non-irrigated (Trigo), VIIe non-irrigated (Lodo)	residuum weathered from gneiss (Caperton), residuum weathered from granodiorite (Trigo), residuum weathered from schist (Lodo)	50 to 85

<sup>1</sup> United States Department of Agriculture Soil Conservation Service In Cooperation with University of California Agricultural Experiment Station, Soil Survey Antelope Valley Area, California, January 1970.

<sup>2</sup> United States Department of Agriculture Soil Conservation Service In Cooperation with University of California Agricultural Experiment Station, Soil Survey Los Angeles County, California, West San Fernando Valley Area.

<sup>3</sup> United States Department of Agriculture Soil Conservation Service In Cooperation with University of California Agricultural Experiment Station, Soil Survey Angeles National Forest Area, California.