

Sources: ESRI World Topo, WRA | Prepared By: SGillespie, 11/19/2019

Figure 1. Study Area Location Map

City of Pleasanton
 Stream Maintenance Program
 Alameda County, California

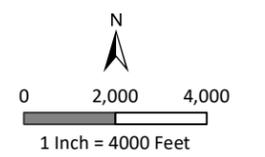


Appendix B-1. Potential Section 404 Jurisdictional Features (Overview)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Appendix Index



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**Appendix B-2.
Potential Section 404
Jurisdictional Features
(C-01)**

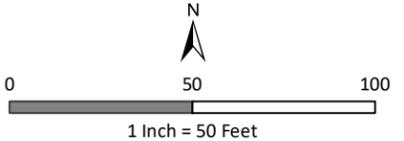
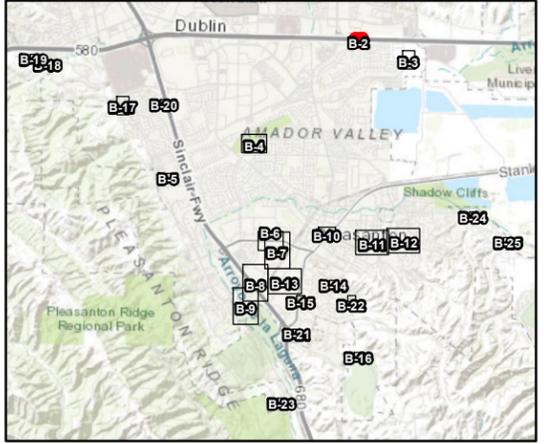
City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area

Potential Waters of the U.S.

Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-01	Pimlico Canal	0.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-01	Drainage Ditch	0.11	10	495

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



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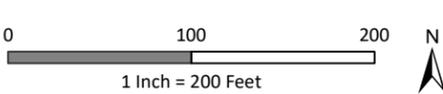


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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-3. Potential Section 404 Jurisdictional Features (P-01)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Appendix B-4. Potential Section 404 Jurisdictional Features (C-02)

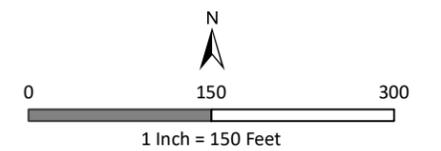
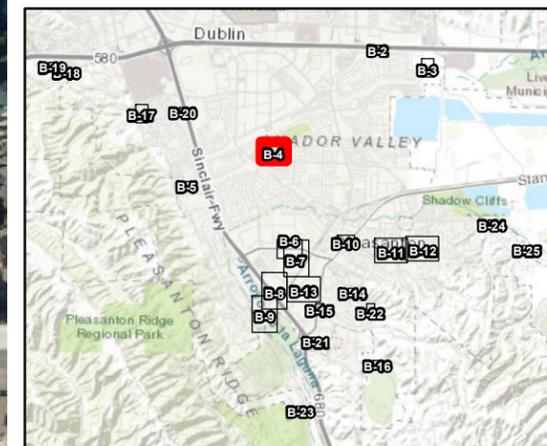
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-02	Pleasanton Canal	3.42		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-02	Drainage Ditch	0.71	15	2060

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



**Appendix B-5.
Potential Section 404
Jurisdictional Features
(C-03)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California

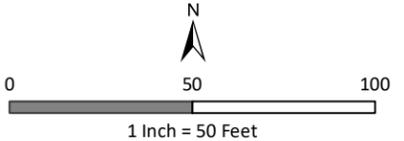
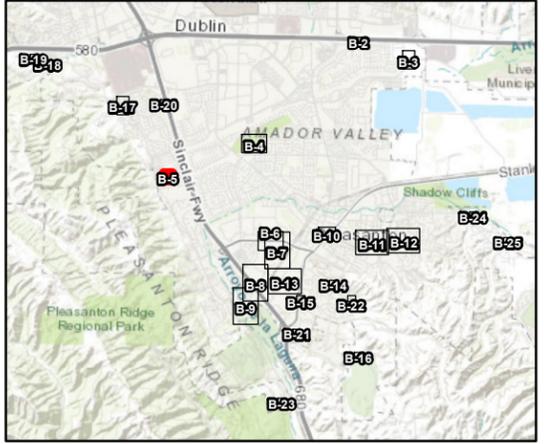


Study Area

Potential Waters of the U.S.



Ephemeral Stream



Study Area ID	Study Area Name	Acres		
C-03	Foothill High School Trash Rack	0.30		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-03	Ephemeral Stream	0.03	12	92

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



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**Appendix B-6.
Potential Section 404
Jurisdictional Features
(C-04, C-05)**

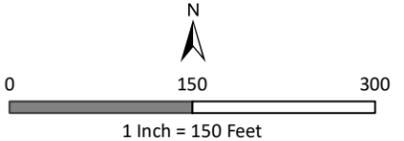
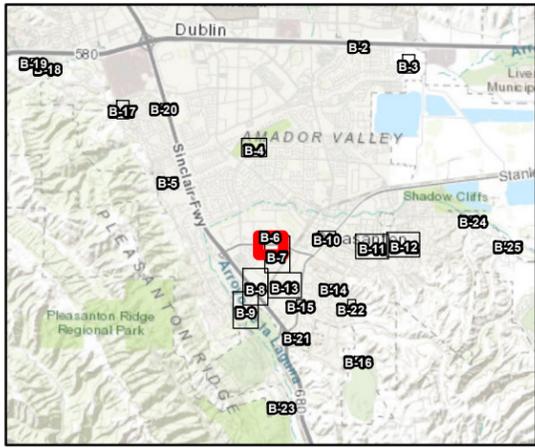
City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area

Potential Waters of the U.S.

Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-04	Bernal V-ditch	1.17		
C-05	Bernal North/South V-Ditch	3.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-04	Drainage Ditch	0.24	7	1468
C-05	Drainage Ditch	0.22	8	1169

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



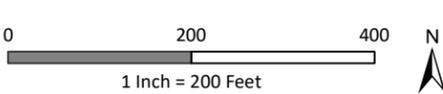


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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/26/2019

Appendix B-7. Potential Section 404 Jurisdictional Features (C-04, C-05, C-06)

City of Pleasanton
Stream Maintenance Program
Alameda County, California





Study Area ID	Study Area Name	Acres		
C-06	Mission Creek Restoration Project	31.29		
P-02	Bernal Detention Pond Central	9.86		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-06B	Ephemeral Stream	0.26	8	1408
C-06C	Perennial Stream	0.02	7	141
C-06D	Perennial Stream	0.07	15	206
C-06E	Perennial Stream	0.52	15	1520
C-06F	Perennial Stream	0.77	30	1128
P-02	Detention Pond	4.08	N/A	N/A

Study Area

Potential Waters of the U.S.

- Ephemeral Stream
- Perennial Stream

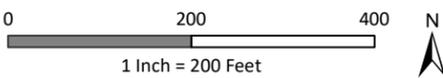
Exempt Features

- Detention Pond

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/26/2019

Appendix B-8. Potential Section 404 Jurisdictional Features (C-06, P-02)

City of Pleasanton
Stream Maintenance Program
Alameda County, California

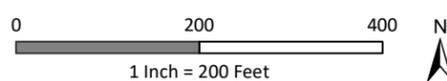




Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

Appendix B-9. Potential Section 404 Jurisdictional Features (C-06, P-03)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Appendix B-10. Potential Section 404 Jurisdictional Features (C-07)

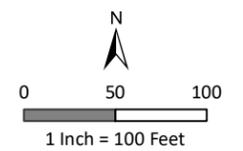
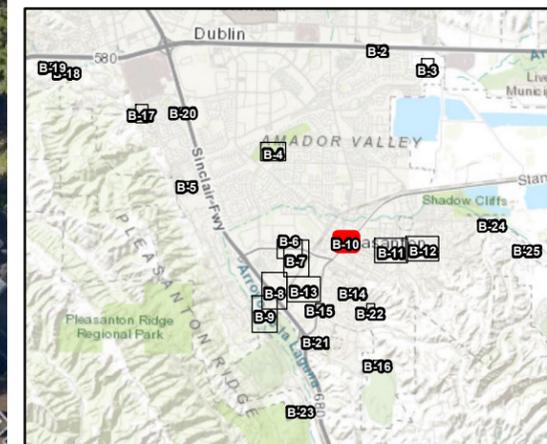
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

-  Ephemeral Stream
-  Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-07	Lower Kottinger Creek	0.92		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-07A	Ephemeral Stream	0.10	8	542
C-07B	Intermittent Stream	0.16	8	328

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-11. Potential Section 404 Jurisdictional Features (C-08)

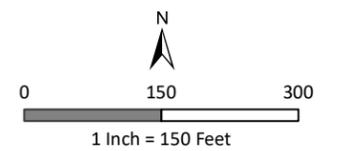
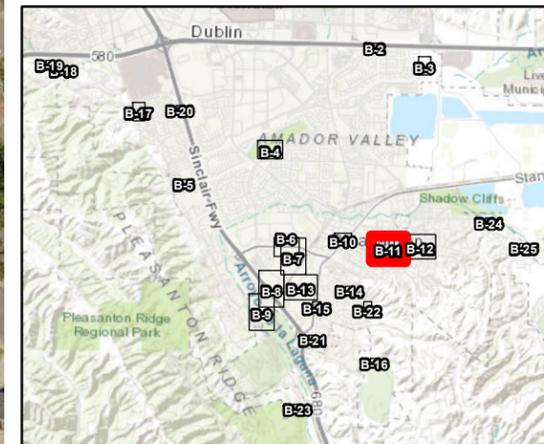
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-08	Upper Kottinger Creek	8.01		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-08	Intermittent Stream	0.34	6	2450

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-12. Potential Section 404 Jurisdictional Features (C-09)

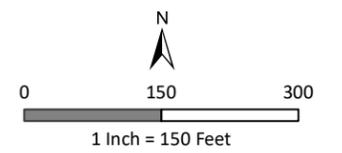
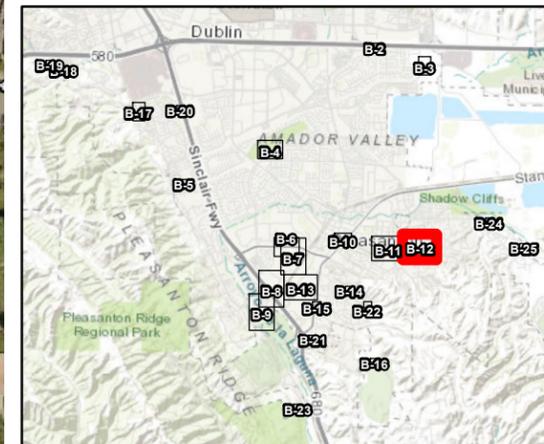
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-09	Touriga Creek	6.63		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-09	Intermittent Stream	0.58	10	2537

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

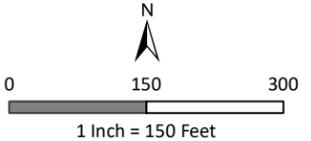
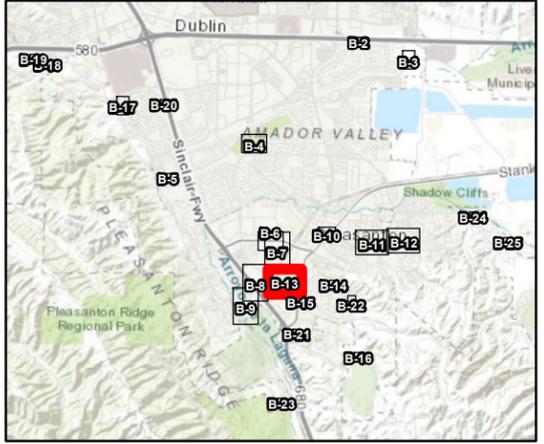


**Appendix B-13.
Potential Section 404
Jurisdictional Features
(C-10, P-03)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Potential Waters of the U.S.**
- Drainage Ditch
- Exempt Features**
- Detention Pond



Study Area ID	Study Area Name	Acres		
C-10	Junipero Canal	5.18		
P-03	Canyon Oaks Detention Pond	3.43		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-10A	Drainage Ditch	0.89	25	1577
C-10B	Drainage Ditch	0.27	15	795
P-03	Detention Pond	1.36	N/A	N/A

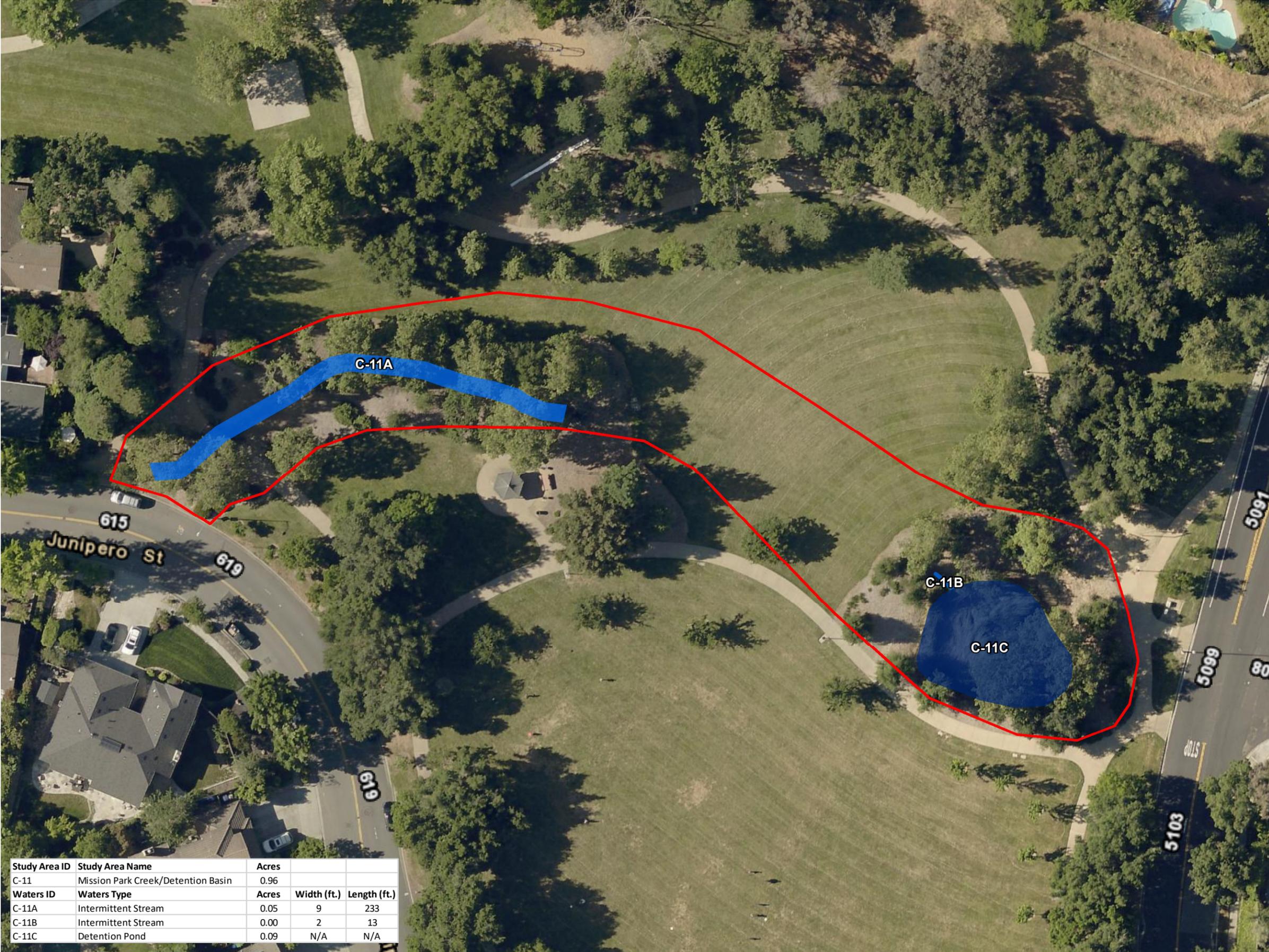
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



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**Appendix B-14.
Potential Section 404
Jurisdictional Features
(C-11)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California

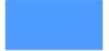


Study Area

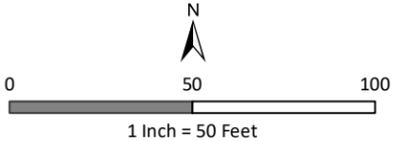
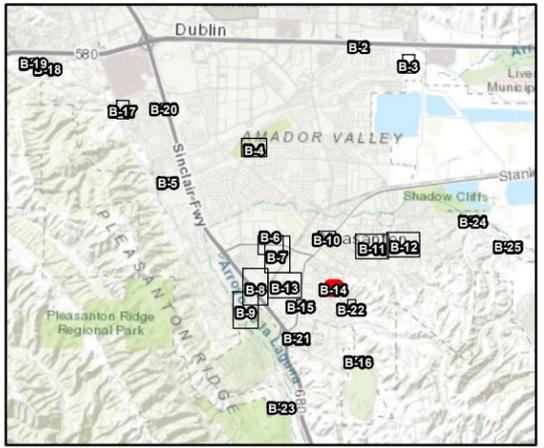
Potential Waters of the U.S.



Detention Pond



Intermittent Stream



Study Area ID	Study Area Name	Acres		
C-11	Mission Park Creek/Detention Basin	0.96		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-11A	Intermittent Stream	0.05	9	233
C-11B	Intermittent Stream	0.00	2	13
C-11C	Detention Pond	0.09	N/A	N/A

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Appendix B-15. Potential Section 404 Jurisdictional Features (C-12)

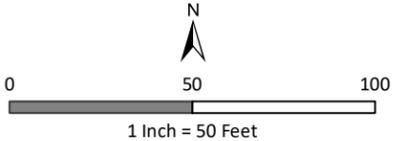
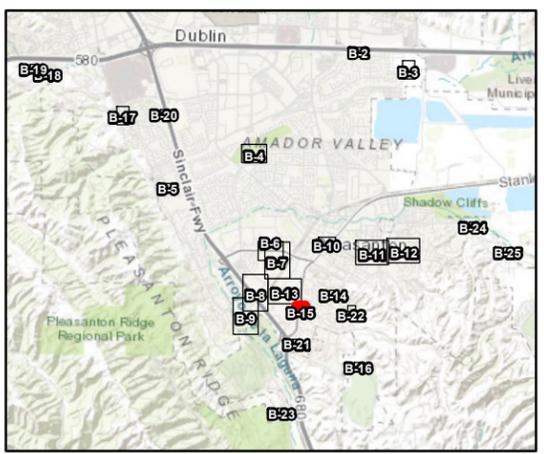
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Ephemeral Stream



Study Area ID	Study Area Name	Acres		
C-12	Cemetery Creek	0.81		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-12	Ephemeral Stream	0.05	6	365

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



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Appendix B-16. Potential Section 404 Jurisdictional Features (P-05)

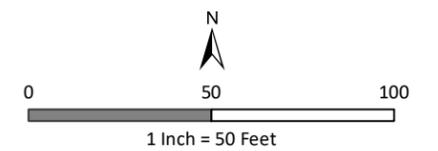
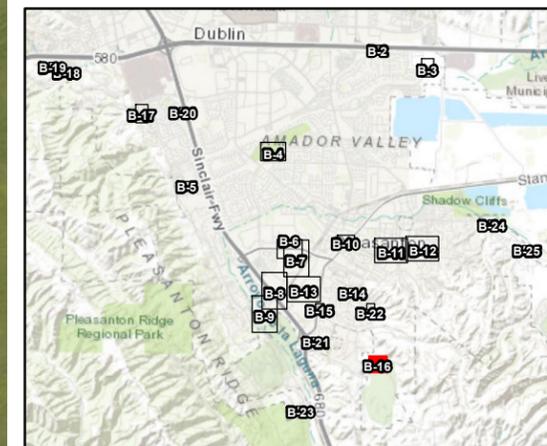
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Exempt Features

 Detention Pond



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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

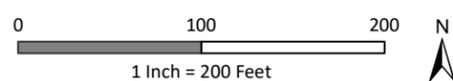


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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

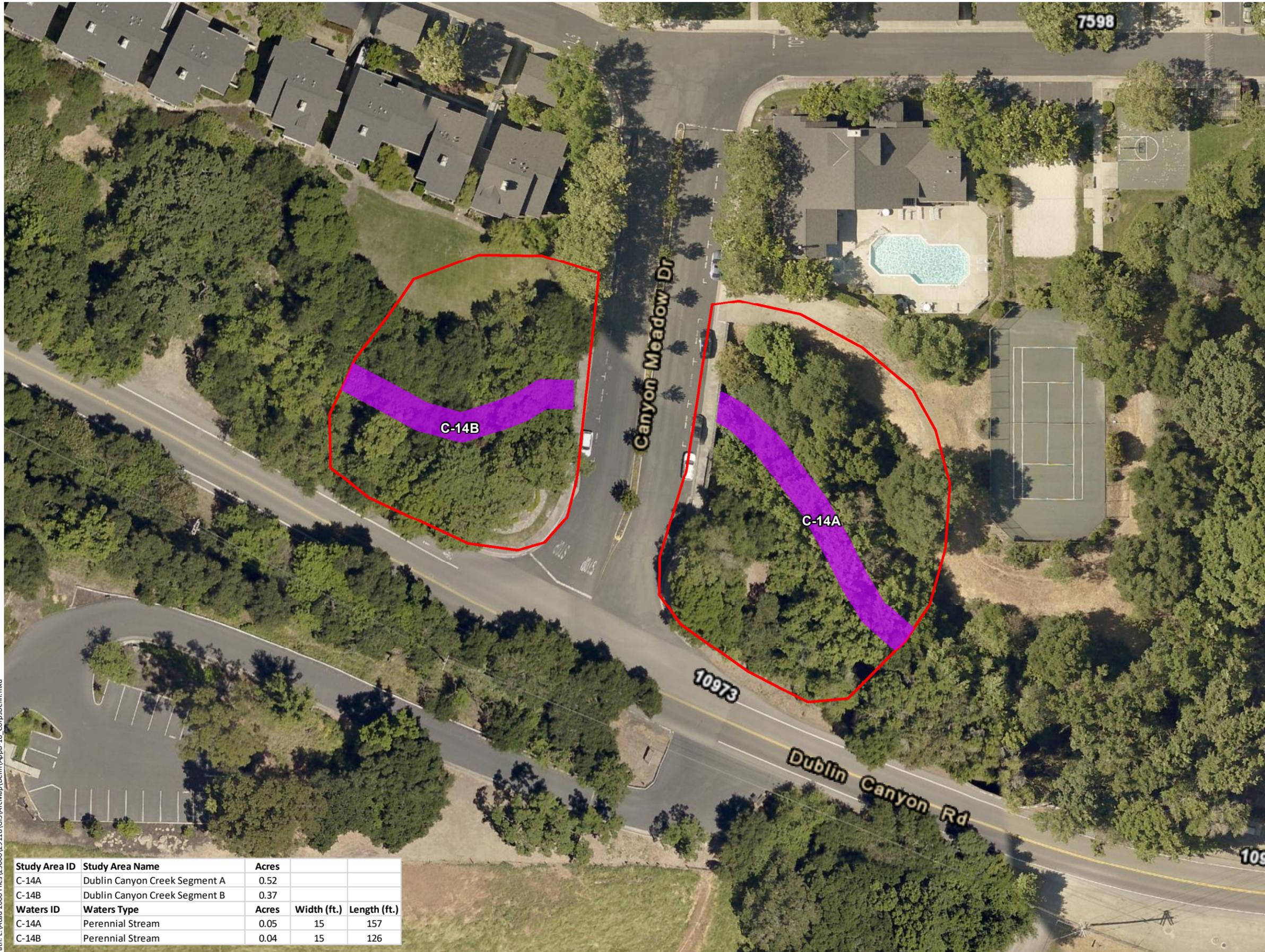
Appendix B-17. Potential Section 404 Jurisdictional Features (C-13)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Appendix B-18. Potential Section 404 Jurisdictional Features (C-14A, C-14B)

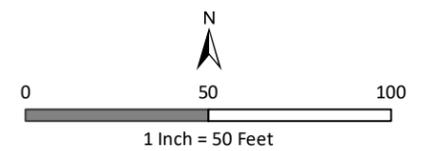
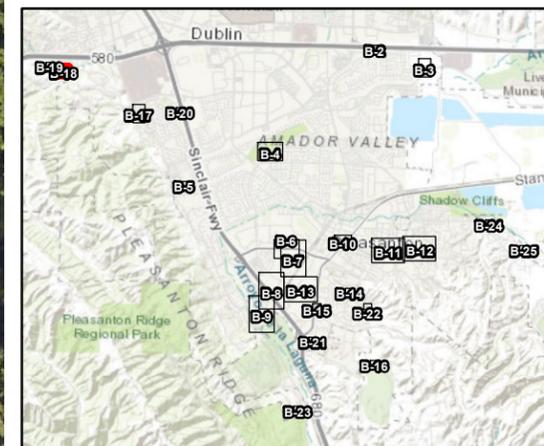
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Perennial Stream



Study Area ID	Study Area Name	Acres		
C-14A	Dublin Canyon Creek Segment A	0.52		
C-14B	Dublin Canyon Creek Segment B	0.37		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-14A	Perennial Stream	0.05	15	157
C-14B	Perennial Stream	0.04	15	126

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



**Appendix B-19.
Potential Section 404
Jurisdictional Features
(C-14C, C-14D)**

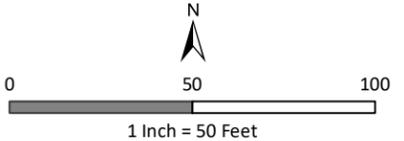
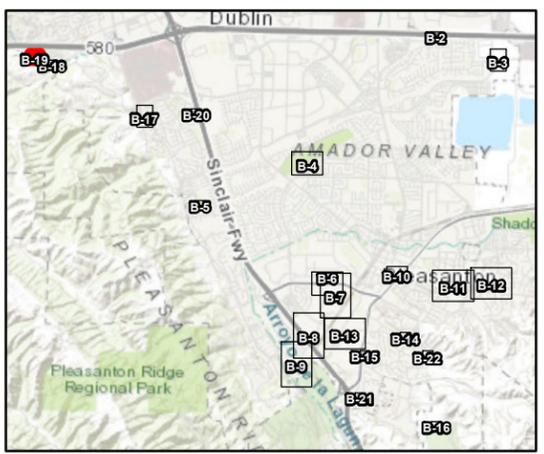
City of Pleasanton
Stream Maintenance Program
Alameda County, California



 Study Area

Potential Waters of the U.S.

 Perennial Stream



Study Area ID	Study Area Name	Acres		
C-14C	Dublin Canyon Creek Segment C	0.42		
C-14D	Dublin Canyon Creek Segment D	0.36		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-14C	Perennial Stream	0.04	15	119
C-14D	Perennial Stream	0.03	10	107

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Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



**Appendix B-20.
Potential Section 404
Jurisdictional Features
(C-15)**

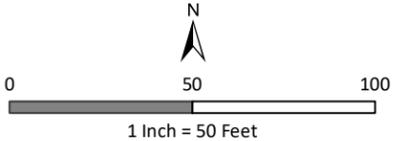
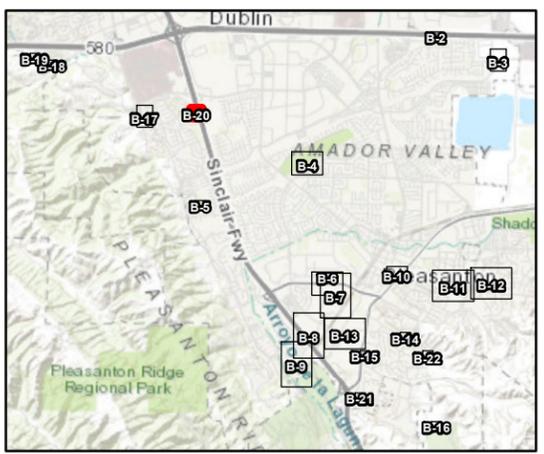
City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area

Potential Waters of the U.S.

Drainage Ditch



Study Area ID	Study Area Name	Acres		
C-15	Stonedale Channel	0.08		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-15	Drainage Ditch	0.01	6	67

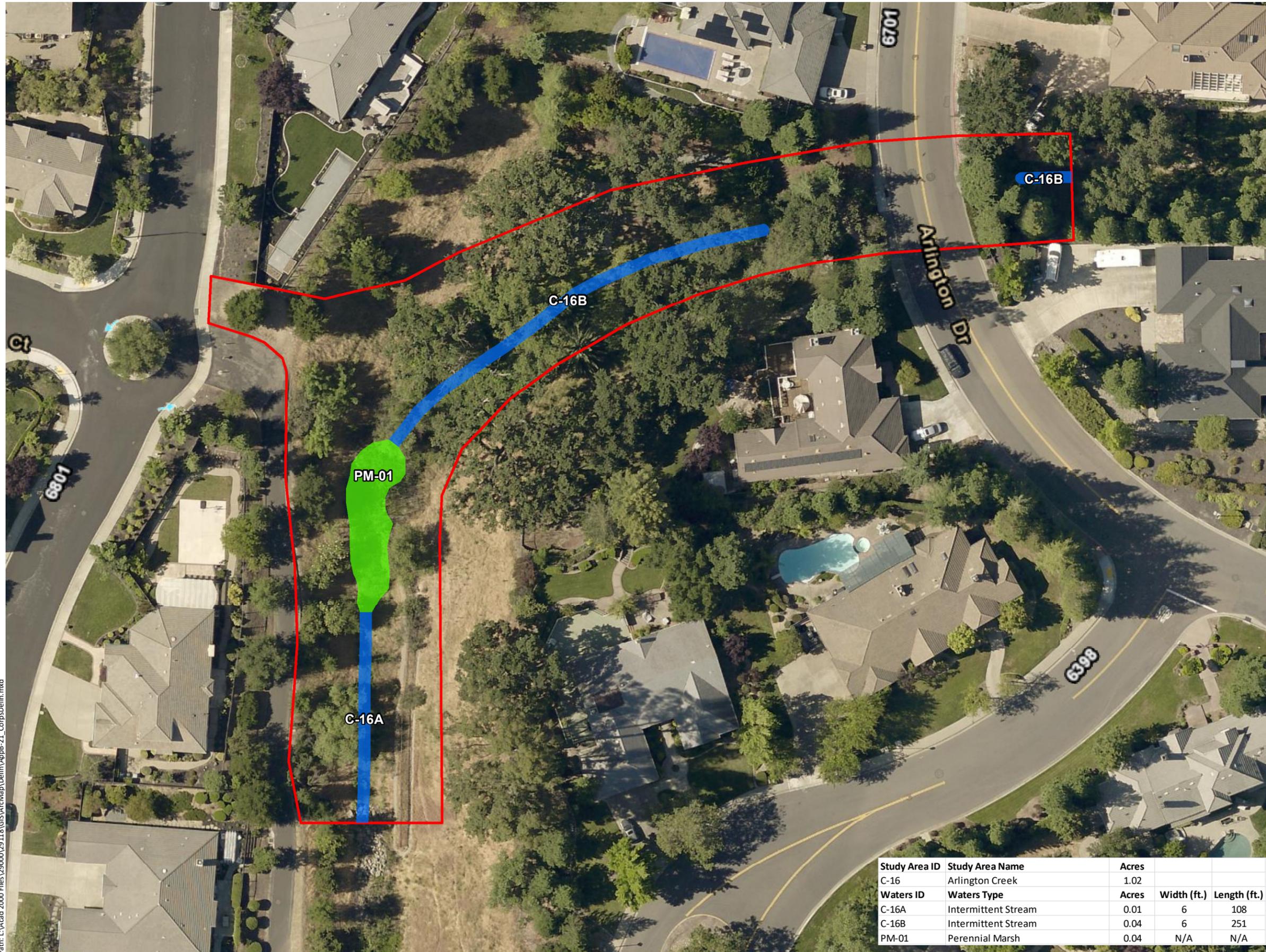
Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



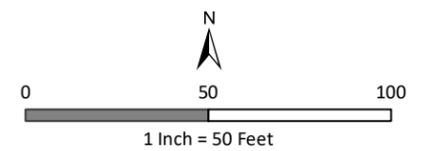
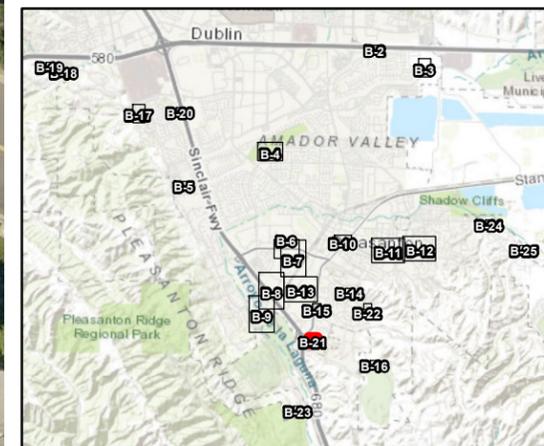
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Appendix B-21. Potential Section 404 Jurisdictional Features (C-16)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Potential Waters of the U.S.**
- Perennial Marsh
- Intermittent Stream

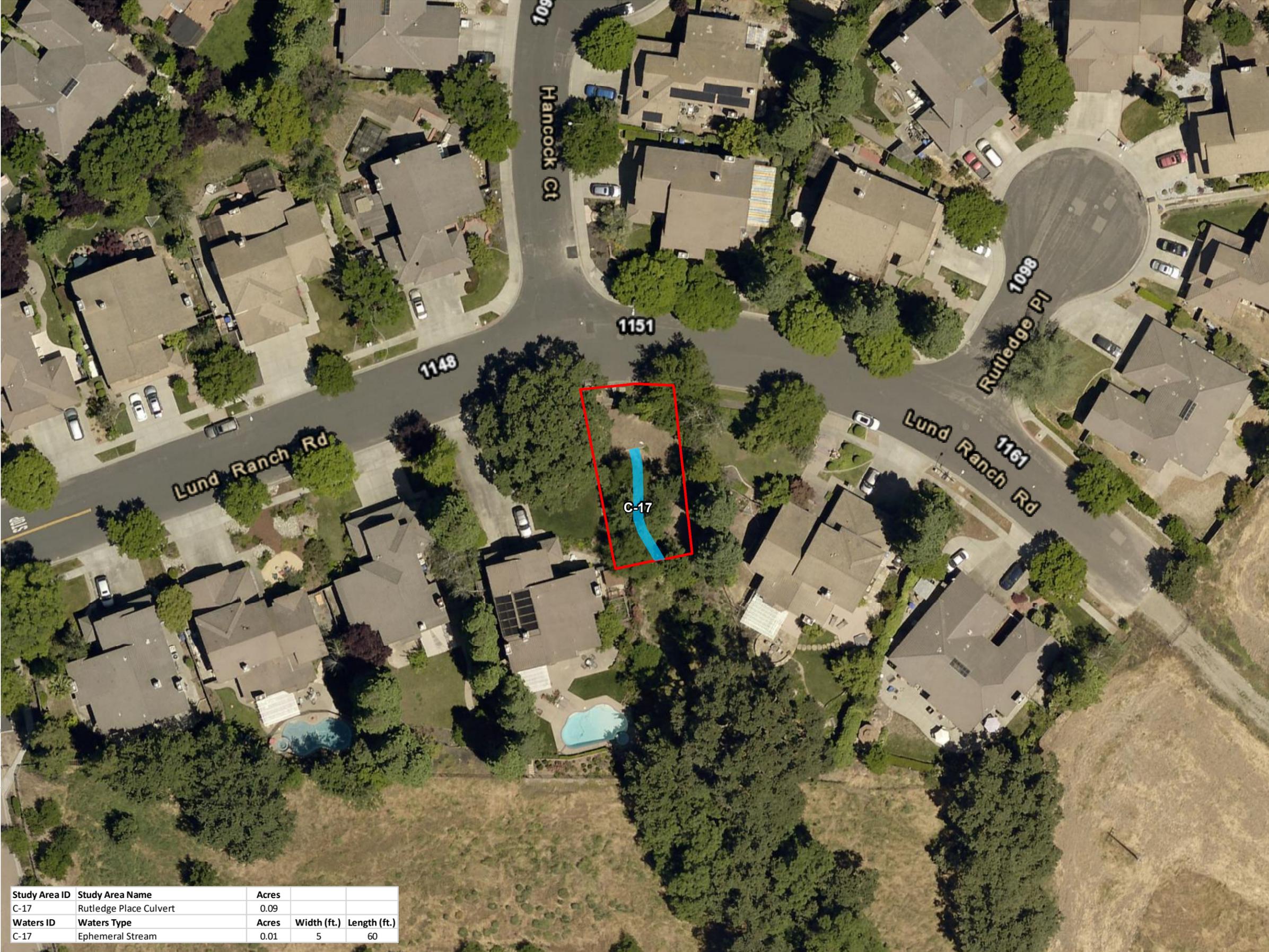


Study Area ID	Study Area Name	Acres			
C-16	Arlington Creek	1.02			
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)	
C-16A	Intermittent Stream	0.01	6	108	
C-16B	Intermittent Stream	0.04	6	251	
PM-01	Perennial Marsh	0.04	N/A	N/A	

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**Appendix B-22.
Potential Section 404
Jurisdictional Features
(C-17)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California

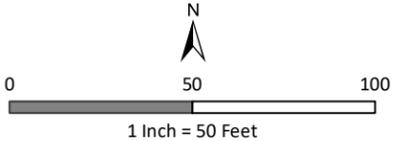
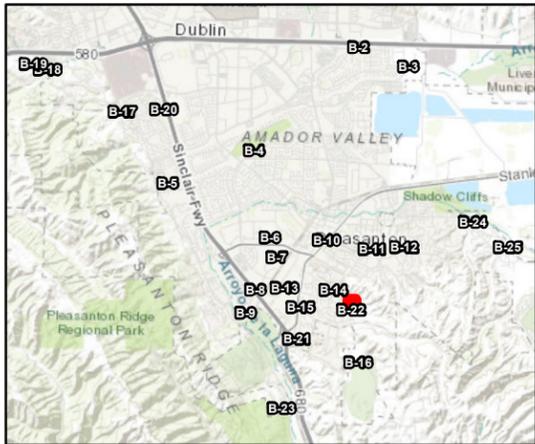


Study Area

Potential Waters of the U.S.



Ephemeral Stream



Study Area ID	Study Area Name	Acres		
C-17	Rutledge Place Culvert	0.09		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-17	Ephemeral Stream	0.01	5	60

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



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**Appendix B-23.
Potential Section 404
Jurisdictional Features
(P-06)**

City of Pleasanton
Stream Maintenance Program
Alameda County, California



Study Area

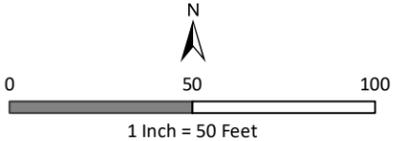
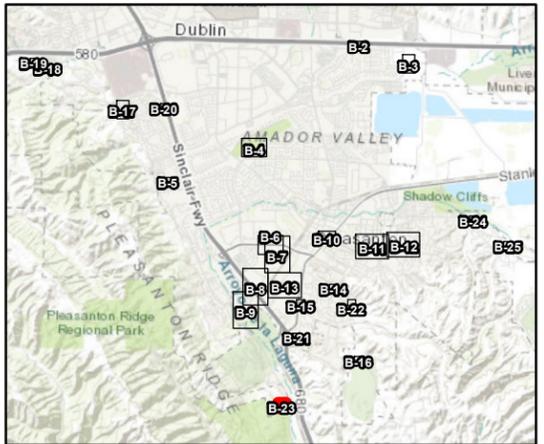
Potential Waters of the U.S.



Detention Pond



Ephemeral Stream



Study Area ID	Study Area Name	Acres	Width (ft.)	Length (ft.)
P-06	Oak Tree Farms Creek/Detention Pond	0.35		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
C-18	Ephemeral Stream	0.01	4	102
P-06	Detention Pond	0.02	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



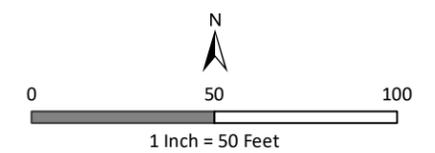
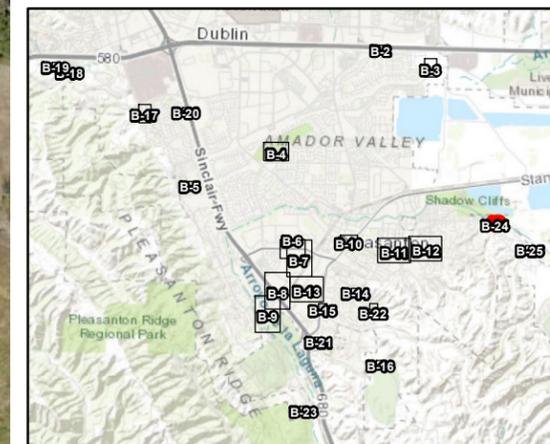
Path: L:\Acad 2000 Files\29000\29118\GIS\ArcMap\Delim\AppB-23_CorpsDelim.mxd

Appendix B-24. Potential Section 404 Jurisdictional Features (P-07)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Exempt Features**
- Detention Pond



Study Area ID	Study Area Name	Acres		
P-07	Vineyard West Detention Pond	1.97		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
P-07	Detention Pond	0.19	N/A	N/A

Path: L:\Acad 2000 Files\29000\29118\GIS\ArcMap\Delim\AppB-24_CorpsDelim.mxd

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019

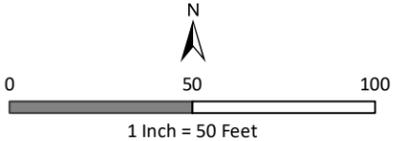
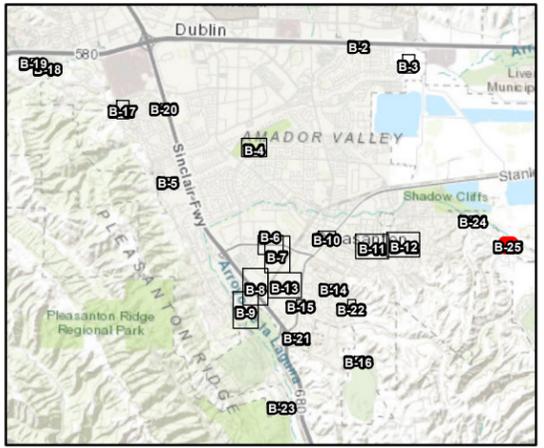


Appendix B-25. Potential Section 404 Jurisdictional Features (P-08)

City of Pleasanton
Stream Maintenance Program
Alameda County, California



- Study Area
- Exempt Features**
- Detention Pond



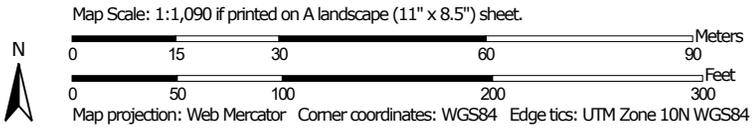
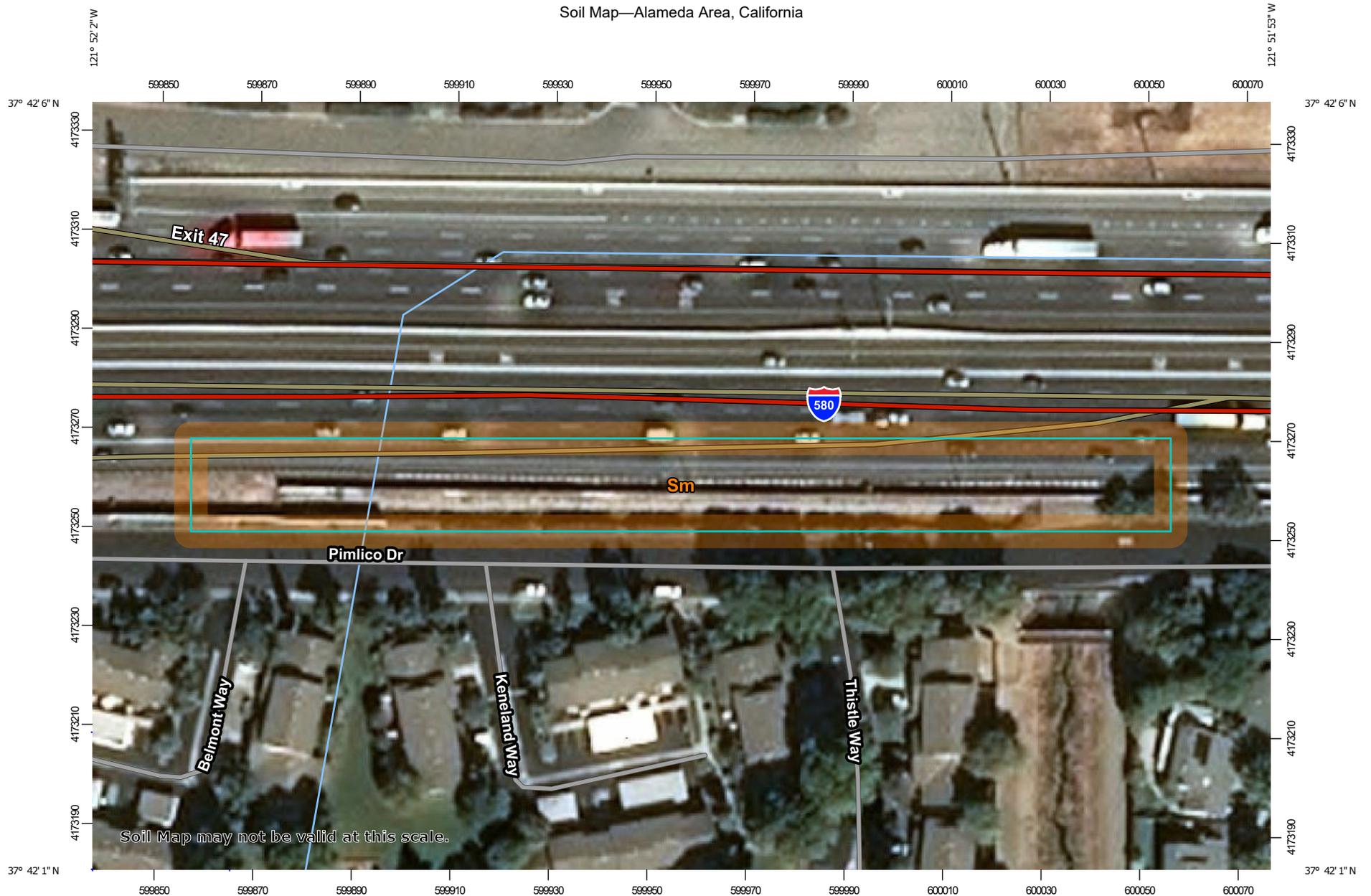
Study Area ID	Study Area Name	Acres	Width (ft.)	Length (ft.)
P-08	Vineyard West Detention Pond	1.45		
Waters ID	Waters Type	Acres	Width (ft.)	Length (ft.)
P-08	Detention Pond	0.23	N/A	N/A

Sources: Alameda County 2017, WRA | Prepared By: SGillespie, 11/19/2019



Path: L:\Acad 2000 Files\299000\29118\GIS\ArcMap\Delim\AppB-25_Corps\Delim.mxd

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

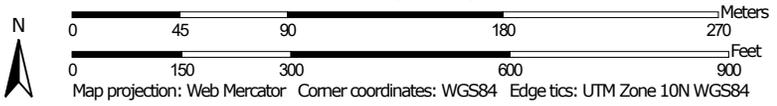
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:3,140 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

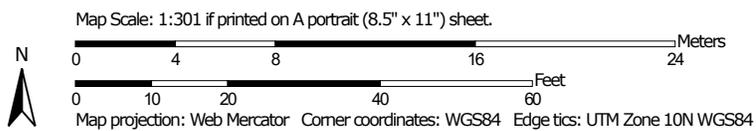
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	5.3	100.0%
Totals for Area of Interest		5.3	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DaB	Danville silty clay loam, 3 to 10 percent slopes	0.3	100.0%
Totals for Area of Interest		0.3	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:2,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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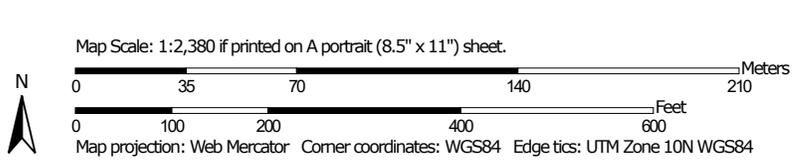
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sn	Sunnyvale clay loam, drained	0.3	15.4%
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	0.1	3.9%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	1.5	80.6%
Totals for Area of Interest		1.9	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	0.3	11.1%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.8	88.9%
Totals for Area of Interest		3.1	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:4,390 if printed on A portrait (8.5" x 11") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

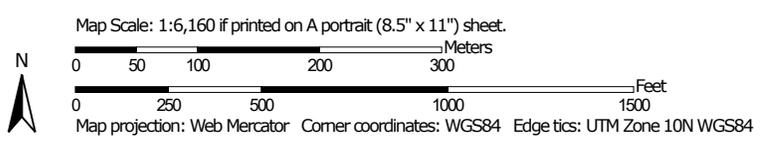
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	6.0	42.4%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	8.2	57.6%
Totals for Area of Interest		14.2	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

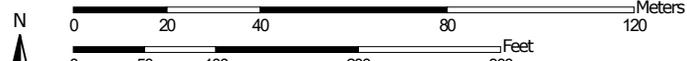
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoE2	Positas gravelly loam, 20 to 40 percent slopes, eroded	0.1	0.9%
Sm	Sunnyvale clay loam over clay	9.6	66.7%
Za	Zamora silt loam, 0 to 4 percent slopes	4.7	32.4%
Totals for Area of Interest		14.4	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:1,610 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



Natural Resources Conservation Service

Web Soil Survey National Cooperative Soil Survey

10/25/2019 Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 13, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

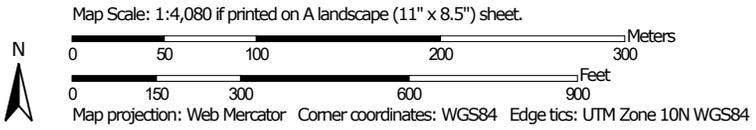
Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.8	100.0%
Totals for Area of Interest		2.8	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

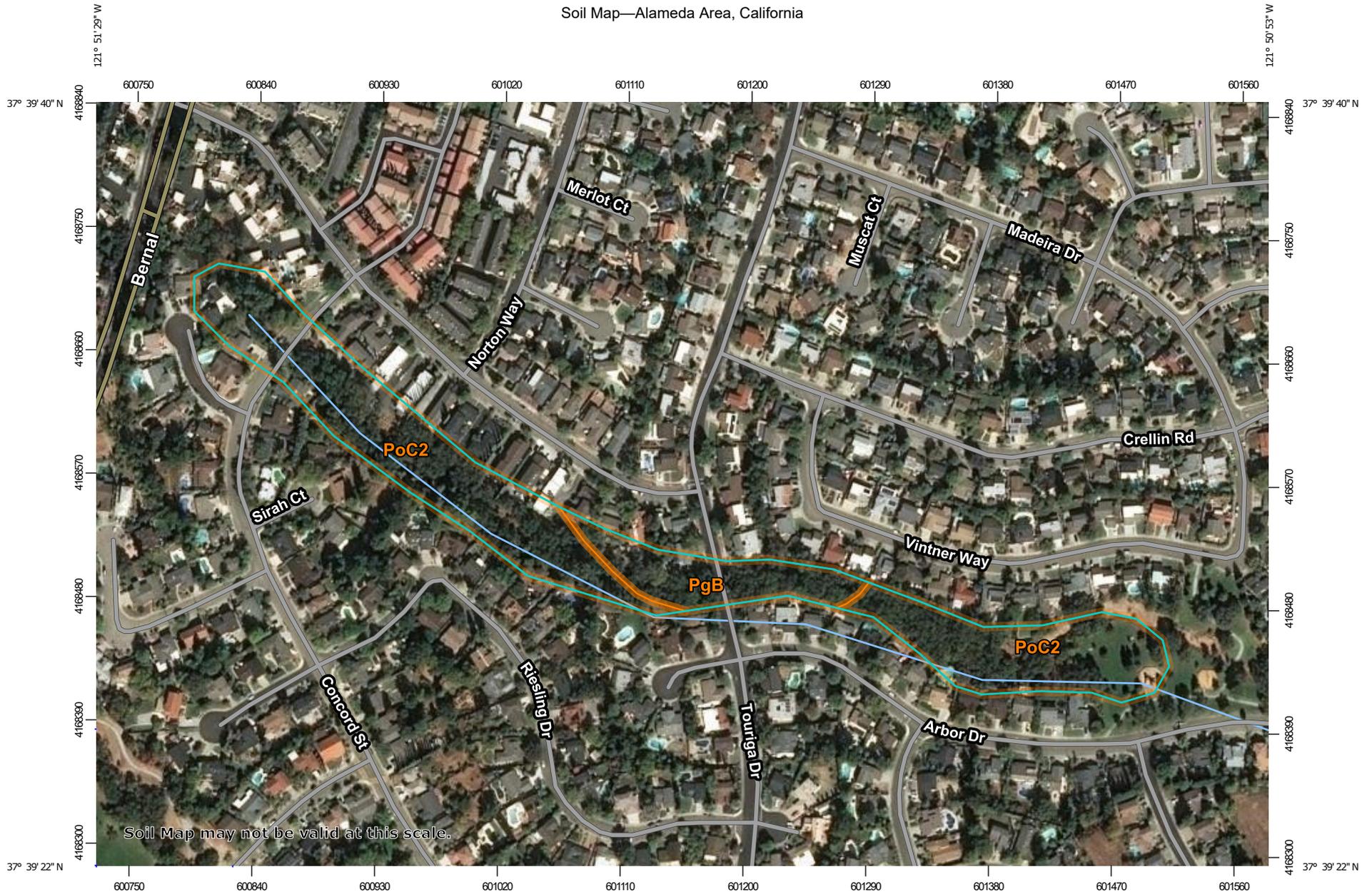
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

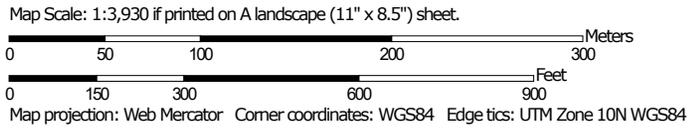
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	6.9	82.8%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	1.4	17.2%
Totals for Area of Interest		8.3	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

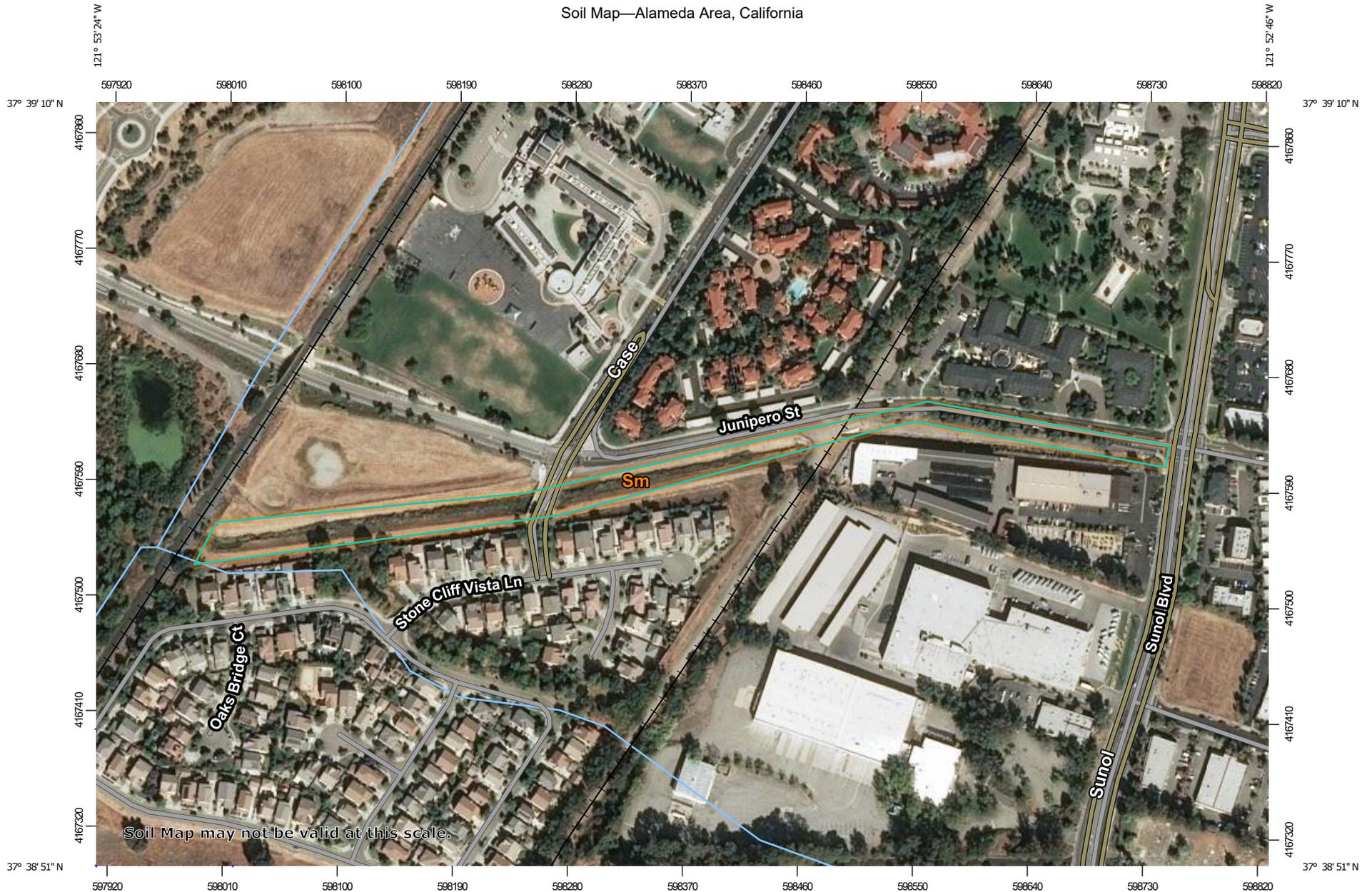
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

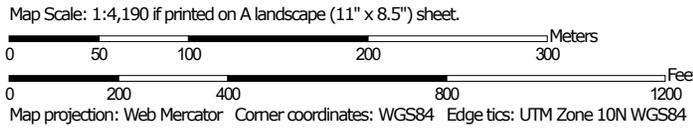
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.6	18.0%
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	7.1	82.0%
Totals for Area of Interest		8.7	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend

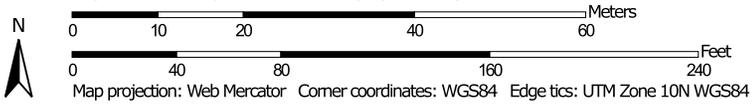
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	3.8	100.0%
Totals for Area of Interest		3.8	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:878 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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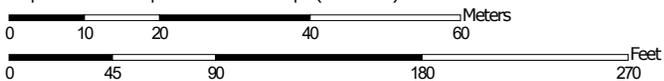
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.1	8.2%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.8	91.8%
Totals for Area of Interest		0.9	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:999 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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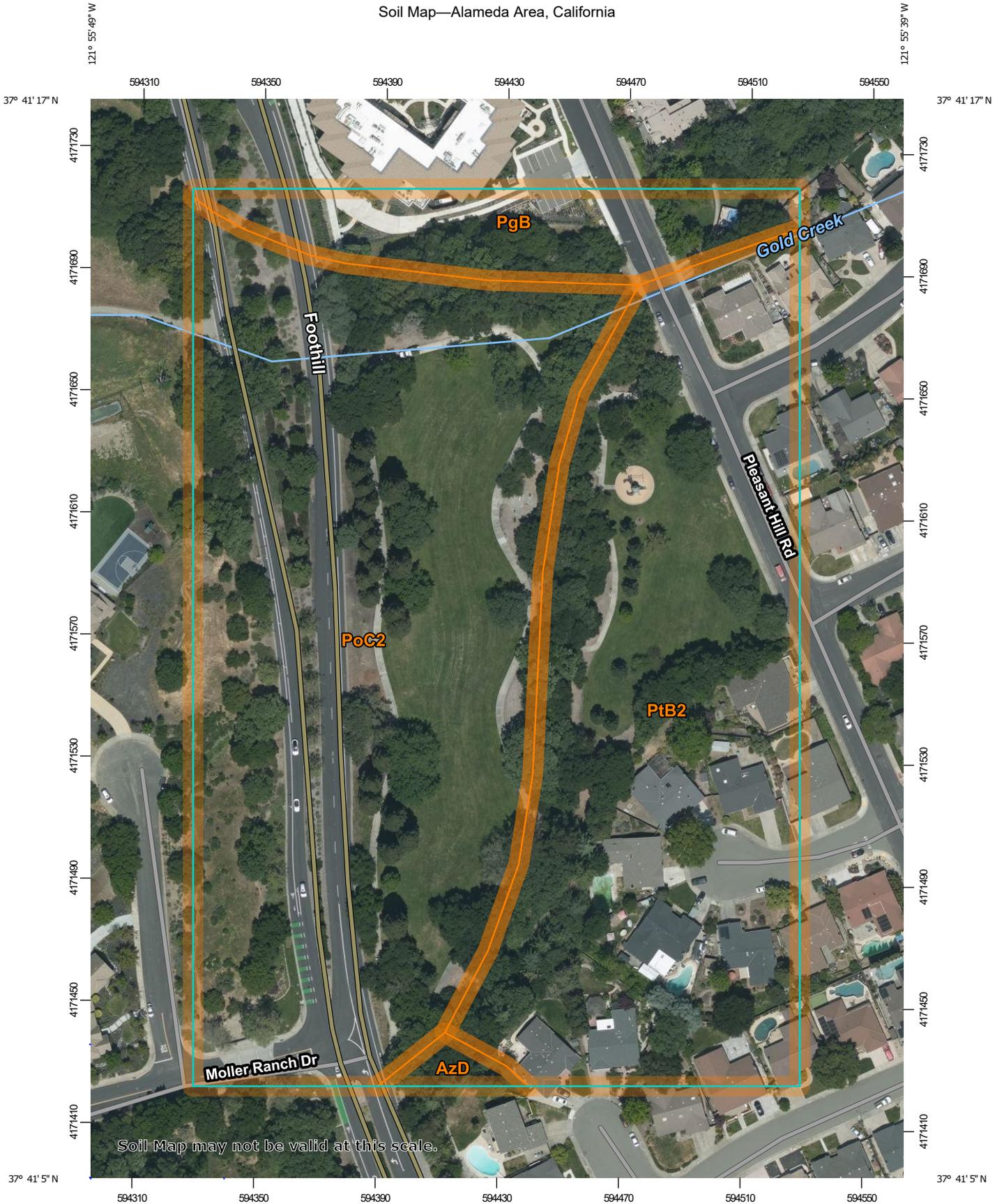
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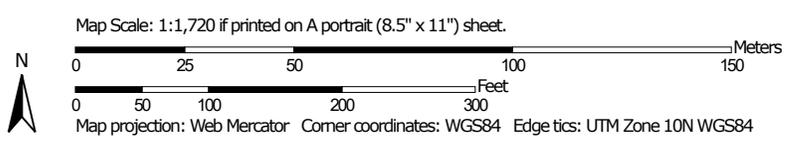
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	1.7	100.0%
Totals for Area of Interest		1.7	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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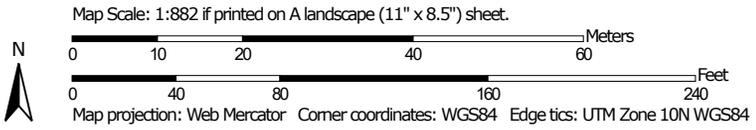
Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AzD	Azule clay loam, 3 to 30 percent slopes	0.1	0.8%
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	1.2	8.1%
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	7.5	51.5%
PtB2	Positas gravelly loam, thick surface, 2 to 10 percent slopes, eroded	5.8	39.6%
Totals for Area of Interest		14.5	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Coordinate System: Web Mercator (EPSG:3857)

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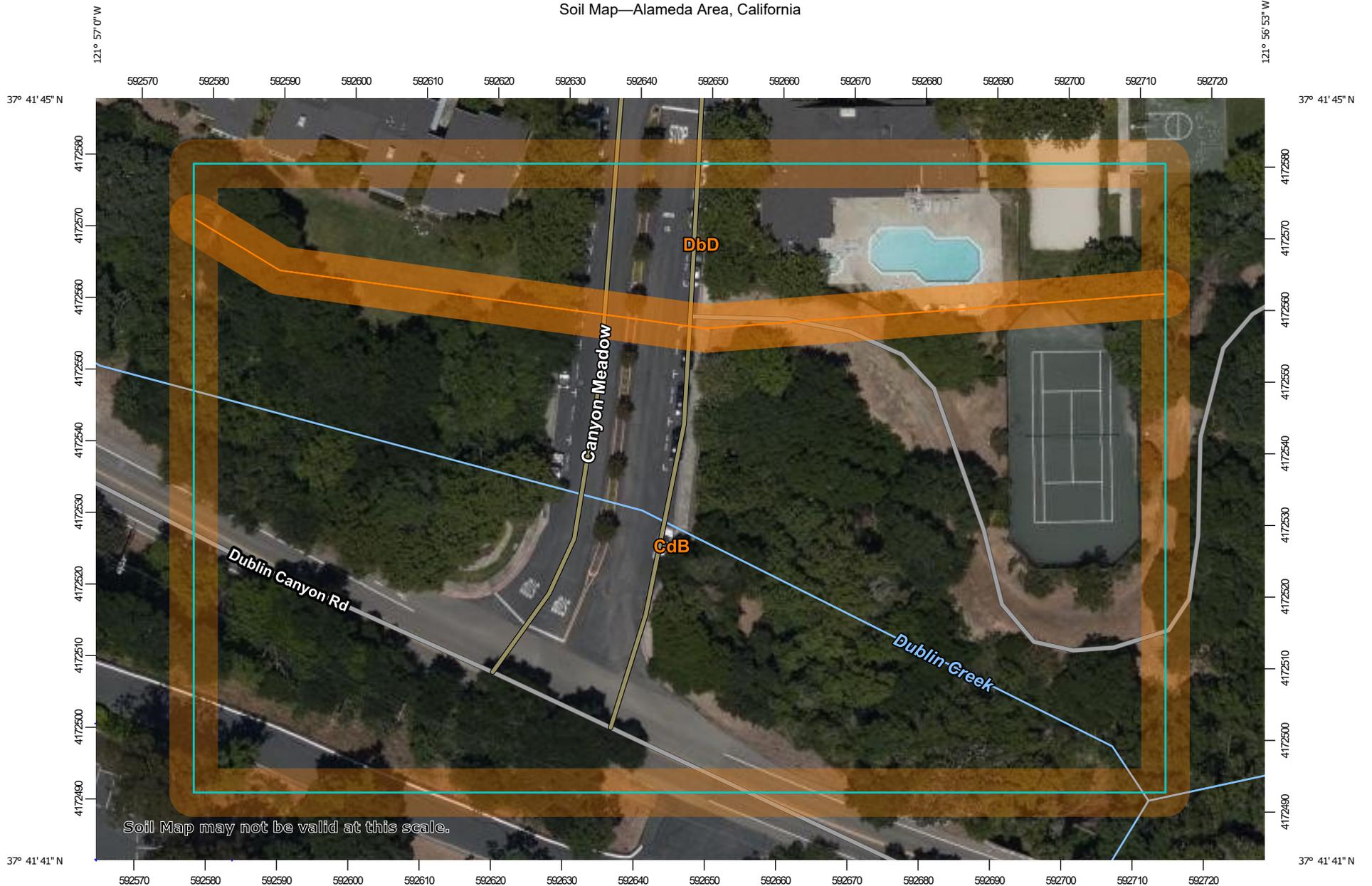
Date(s) aerial images were photographed: May 31, 2019—Jun 6, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

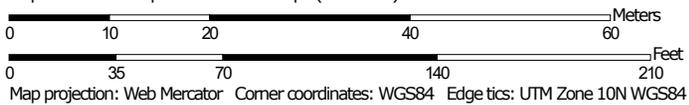
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdB	Clear Lake clay, drained, 3 to 7 percent slopes	2.4	60.7%
DbD	Diablo clay, 15 to 30 percent slopes, MLRA 15	0.0	0.7%
LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	1.5	38.7%
Totals for Area of Interest		4.0	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:750 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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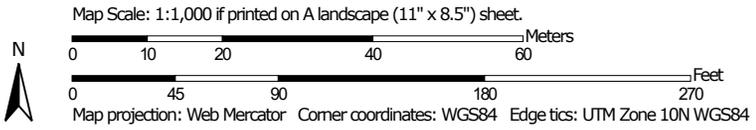
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdB	Clear Lake clay, drained, 3 to 7 percent slopes	2.3	78.3%
DbD	Diablo clay, 15 to 30 percent slopes, MLRA 15	0.6	21.7%
Totals for Area of Interest		3.0	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



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US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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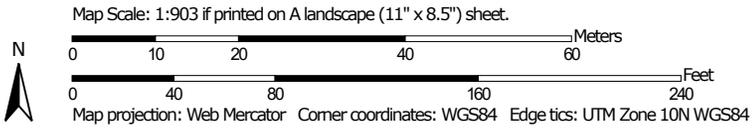
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	0.7	14.9%
PoE2	Positas gravelly loam, 20 to 40 percent slopes, eroded	1.3	28.5%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.6	56.6%
Totals for Area of Interest		4.6	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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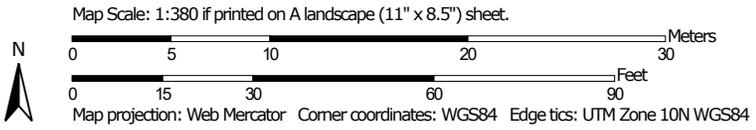
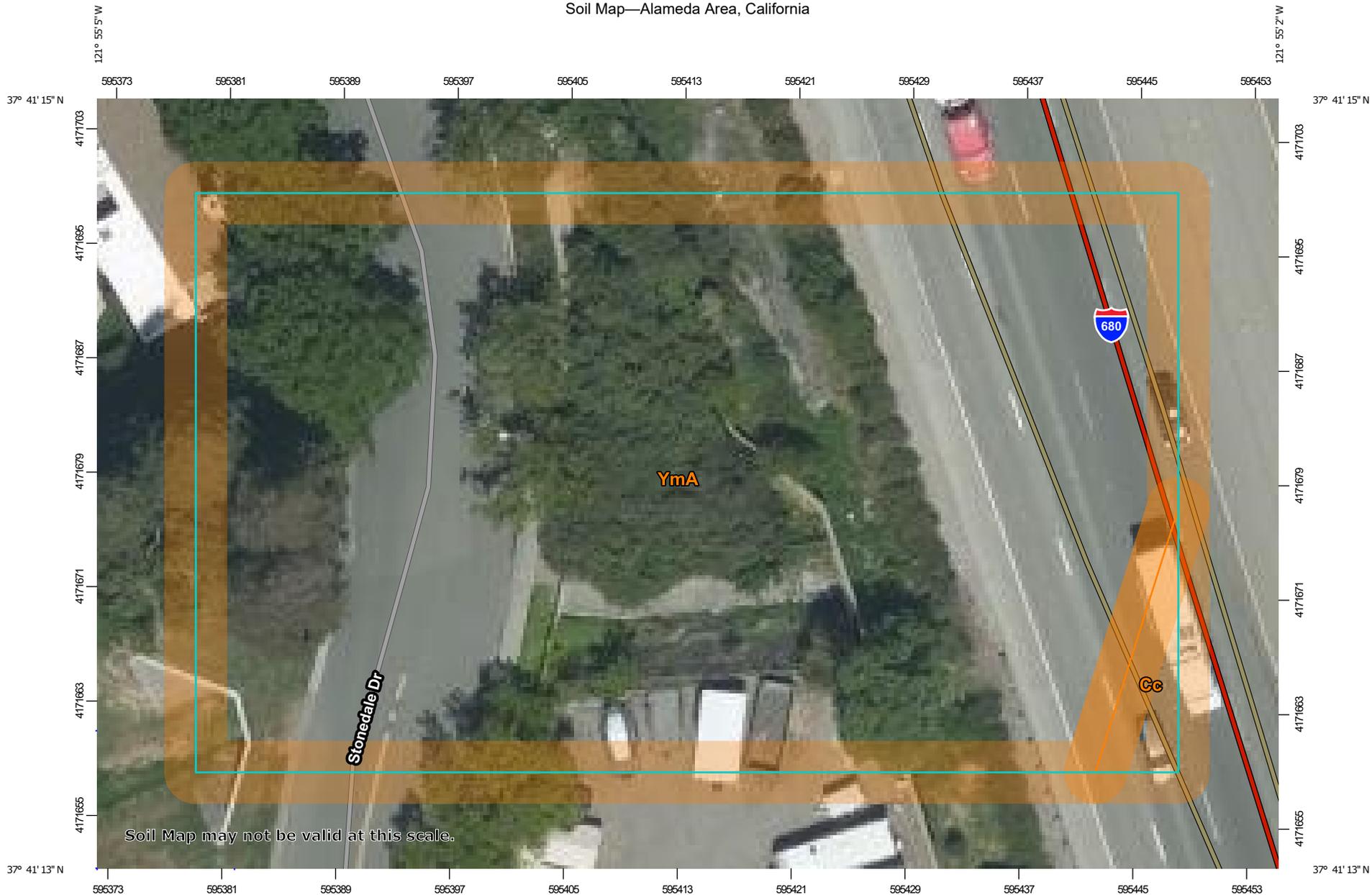
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PoC2	Positas gravelly loam, 2 to 20 percent slopes, eroded	3.5	100.0%
Totals for Area of Interest		3.5	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



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Stony Spot



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Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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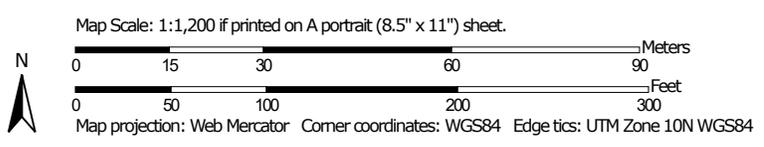
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cc	Clear Lake clay, 0 to 3 percent slopes, MLRA 14	0.0	1.9%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.7	98.1%
Totals for Area of Interest		0.7	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California

Survey Area Data: Version 12, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

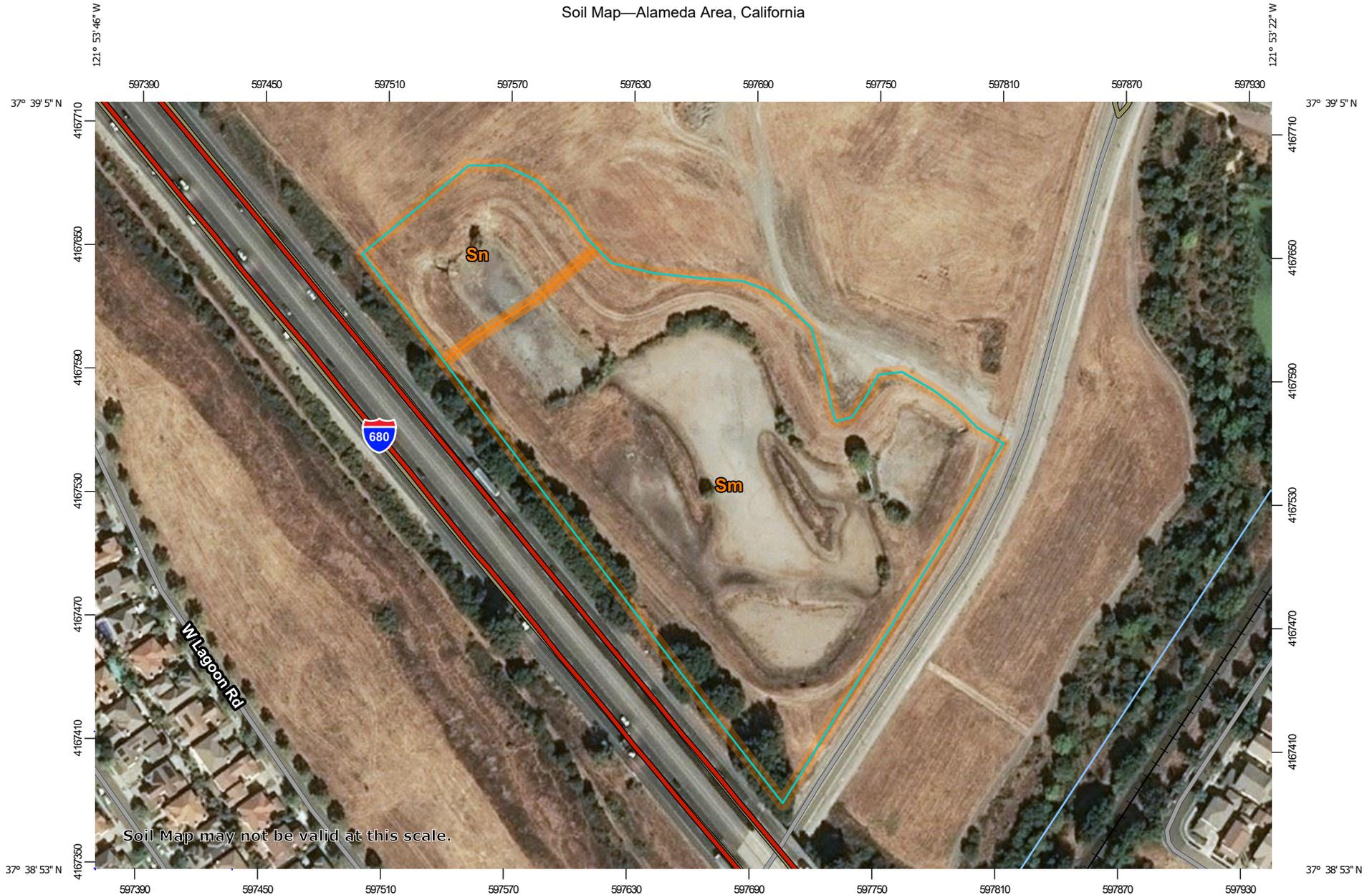
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	3.6	100.0%
Totals for Area of Interest		3.6	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:2,630 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	8.9	85.6%
Sn	Sunnyvale clay loam, drained	1.5	14.4%
Totals for Area of Interest		10.4	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.

Map Scale: 1:1,410 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Sm	Sunnyvale clay loam over clay	3.4	100.0%
Totals for Area of Interest		3.4	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:2,380 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Survey Area Data: Version 12, Sep 14, 2018

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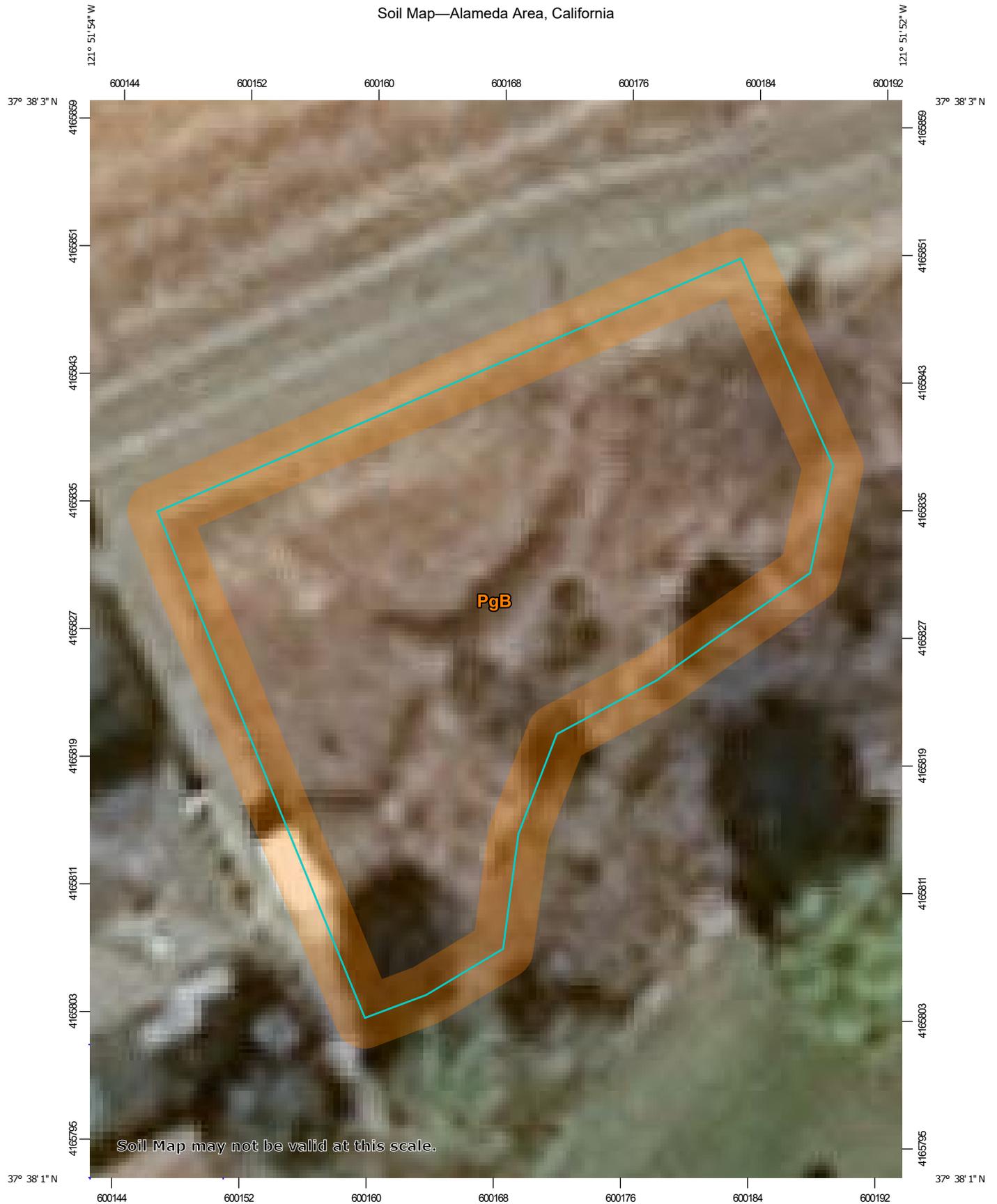
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

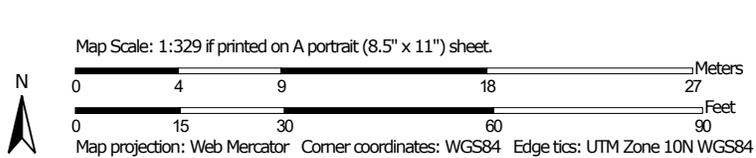
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
So	Sycamore silt loam, 0 to 2 percent slopes, MLRA 14	5.6	88.1%
Za	Zamora silt loam, 0 to 4 percent slopes	0.8	11.9%
Totals for Area of Interest		6.3	100.0%

Soil Map—Alameda Area, California



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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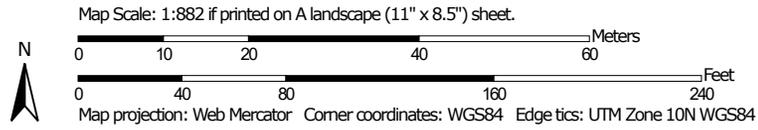
Date(s) aerial images were photographed: Jul 22, 2018—Oct 15, 2018

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	0.3	100.0%
Totals for Area of Interest		0.3	100.0%

Soil Map—Alameda Area, California



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Alameda Area, California

Survey Area Data: Version 13, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 29, 2019—May 10, 2019

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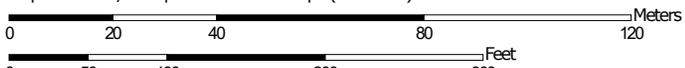
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LuD	Los Osos and Millsholm soils, 7 to 30 percent slopes	1.7	54.6%
Za	Zamora silt loam, 0 to 4 percent slopes	1.4	45.4%
Totals for Area of Interest		3.2	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:1,450 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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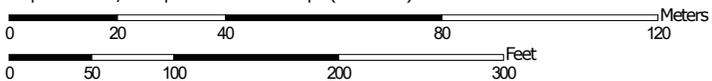
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Gp	Gravel pits	6.5	62.6%
W	Water	0.8	8.2%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	2.5	24.1%
Yo	Yolo loam over gravel, 0 to 3 percent slopes	0.5	5.1%
Totals for Area of Interest		10.3	100.0%

Soil Map—Alameda Area, California



Map Scale: 1:1,390 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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Web Soil Survey URL:

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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Gp	Gravel pits	2.1	27.5%
Lm	Livermore very gravelly coarse sandy loam	0.3	3.8%
PgB	Pleasanton gravelly loam, 3 to 12 percent slopes	4.9	65.0%
YmA	Yolo loam, calcareous substratum, 0 to 6 percent slopes, MLRA 14	0.3	3.7%
Totals for Area of Interest		7.6	100.0%



Photo 1: Concrete channel of Pimlico canal (C-01)



Photo 2: Concrete culvert at Pleasanton Canal (C-02)



Photo 3: Cattails in channel at C-02

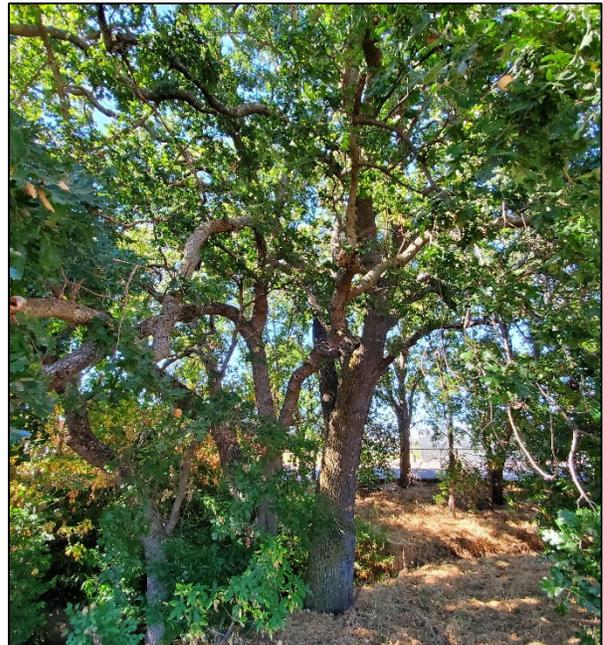


Photo 4: Riparian forest at Foothill High School Trash Rack (C-03)



Photo 5: Excavated channel at Bernal V-Ditch (C-04)



Photo 6: Culvert at C-04



Photo 7: Excavated channel at Bernal North/South Ditch (C-05)



Photo 8: Dry creekbed at C-05



Photo 9: Intermittent stream at Mission Creek Restoration Project (C-06)

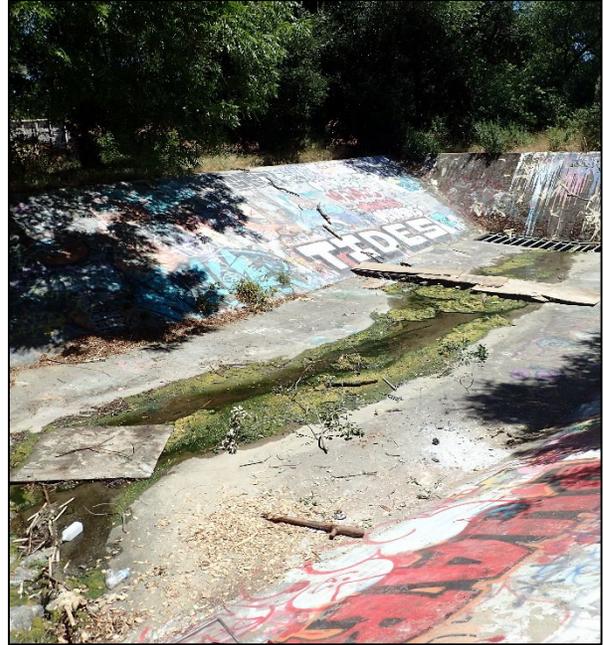


Photo 10: Manmade drainage at southern end of C-06



Photo 11: Manmade drainage feature at C-06 next to Arroyo de la Laguna

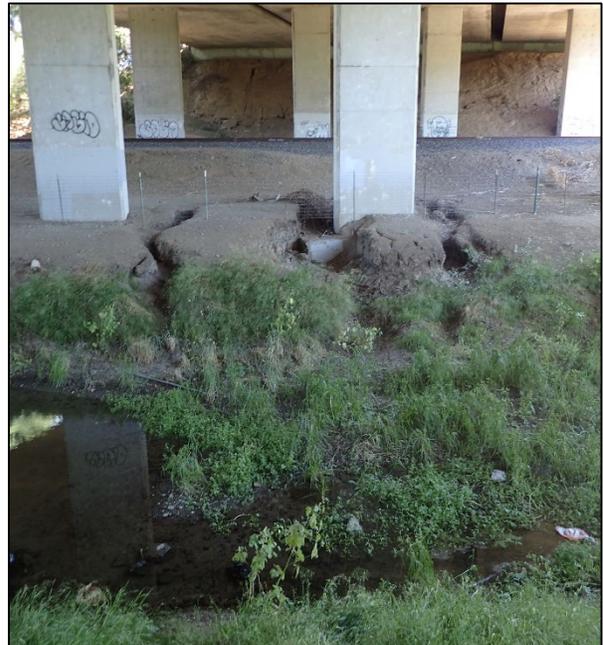


Photo 12: C-06 flowing under underpass



Photo 13: St. Mary Creek (C-07)

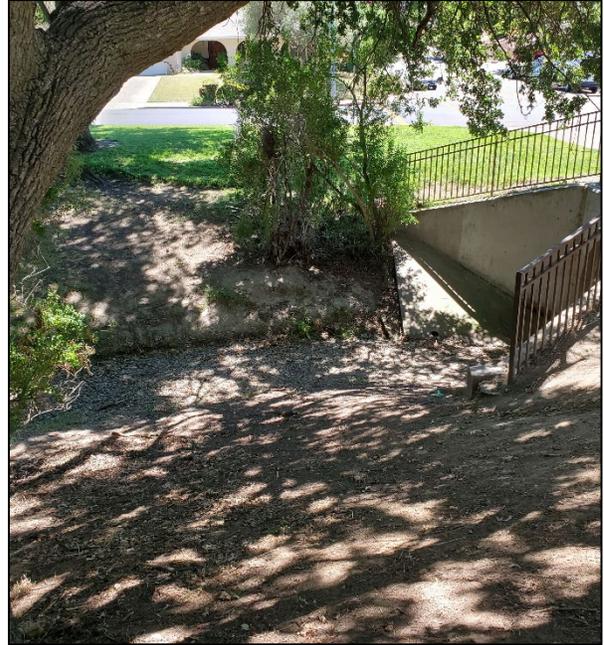


Photo 14: Upper Kottinger Creek (C-08)

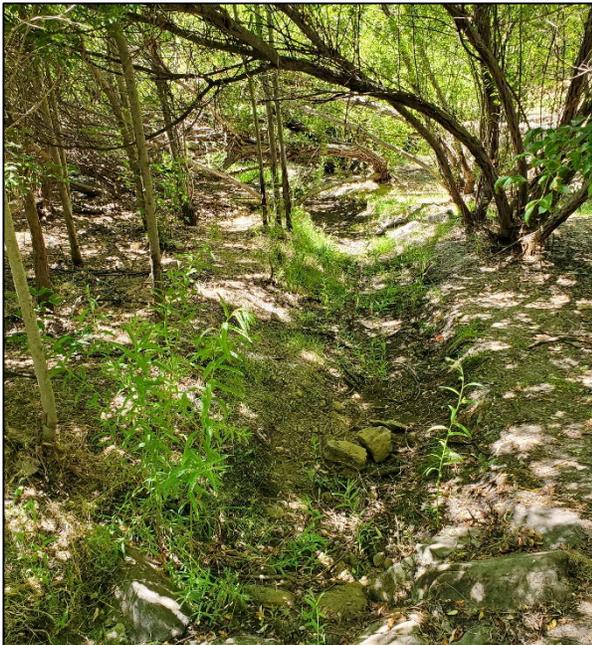


Photo 15: Streambed and riparian forest at C-08



Photo 16: Standing water near culvert at Touriga Creek (C-09)



Photo 17: Riparian forest at C-09



Photo 18: Bed and bank of C-09 lined with stones



Photo 19: Junipero Canal (C-10)

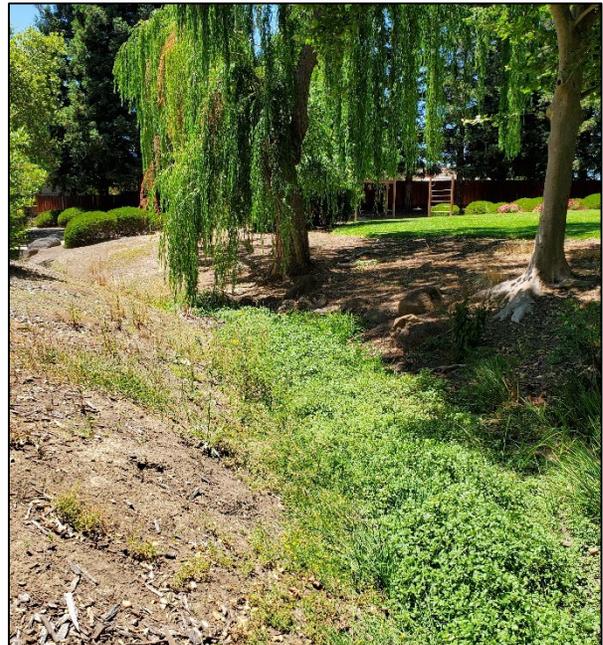


Photo 20: Mission Creek Park (C-11)



Photo 21: Cemetery Creek (C-12)



Photo 22: Gold Creek (C-13)



Photo 23: Dublin Canyon Creek (C-14)



Photo 24: Stonedale Channel (C-15)



Photo 25: Arlington Creek (C-16)



Photo 26: Rutledge Place Culvert (C-17)



Photo 27: Stoneridge Pond (P-01)

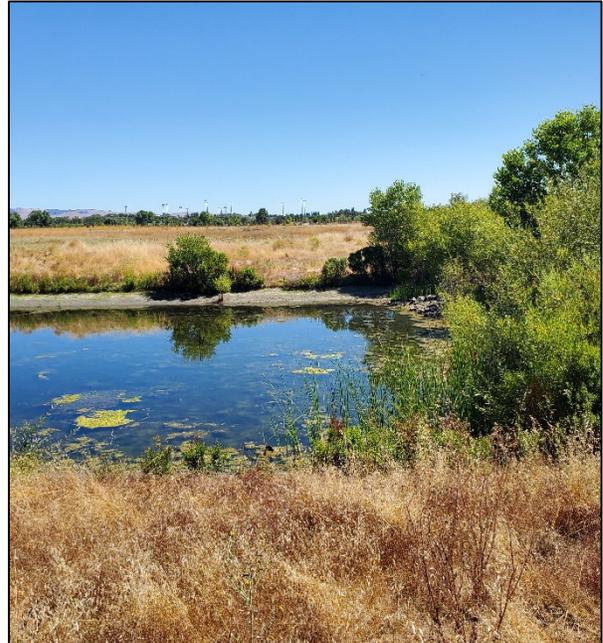


Photo 28: Bernal Detention Pond (P-02)



Photo 29: Bernal Central Detention Pond (P-02)

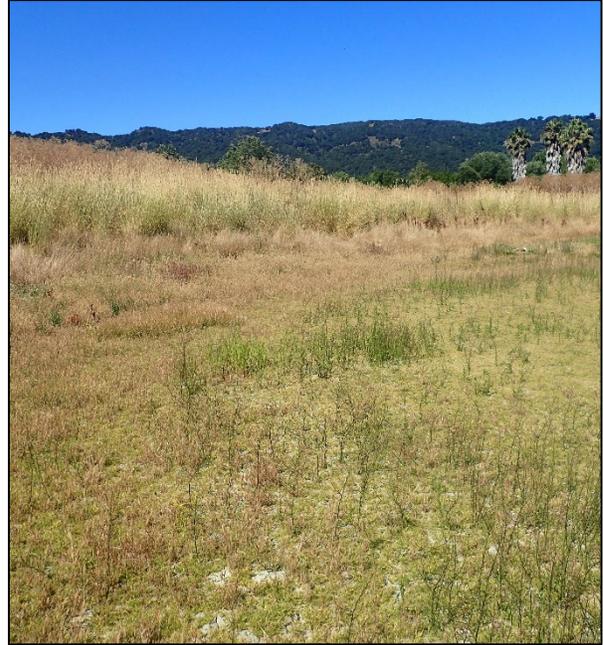


Photo 30: Canyon Oaks Detention Pond (P-03)



Photo 31: Bernal West Detention Pond (P-04)



Photo 32: Culvert at P-04

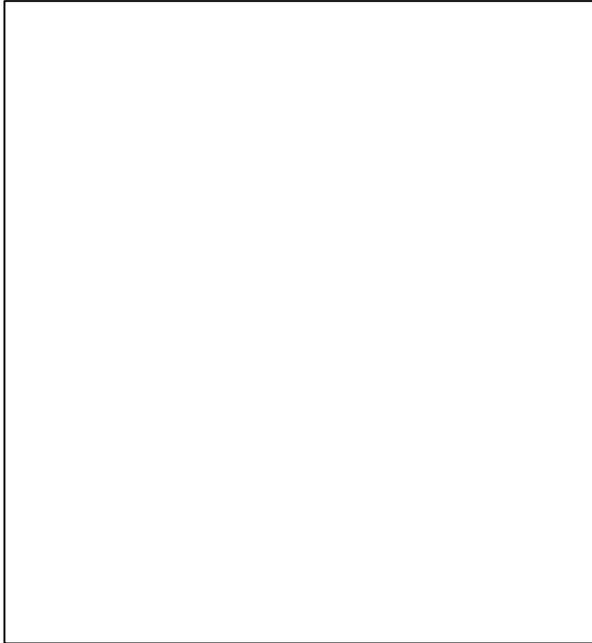


Photo 33: Callippe Detention Pond (P-05)



Photo 34: Oak Tree Farms Detention Pond (P-06)



Photo 35: Vineyard West Detention Pond (P-07)



Photo 36: Vineyard East Detention Pond (P-08)

Appendix E. List of plant and wildlife species observed within the Study Area during the July and October, 2019 site visit.

Scientific Name	Common Name
Wildlife	
<i>Cathartes aura</i>	turkey vulture
<i>Aphelocoma californica</i>	California scrub jay
<i>Agelaius tricolor</i>	Tricolored blackbird
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Carpodacus mexicanus</i>	house finch
<i>Pipilo maculatus</i>	Spotted towhee
<i>Charadrius vociferus</i>	killdeer
<i>Sayornis nigricans</i>	black phoebe
<i>Zenaida macroura</i>	mourning dove
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Melospiza crissalis</i>	California towhee
<i>Corvus brachyrhynchos</i>	American crow
<i>Hirundo rustica</i>	Barn swallow
<i>Thryomanes bewickii</i>	Bewicke's wren
<i>Psaltriparus minimus</i>	bushtit
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Melanerpes formicivorus</i>	Acorn woodpecker
<i>Leuconotopicus villosus</i>	Hairy woodpecker
<i>Otospermophilus beecheyi</i>	California ground squirrel
Plants	
<i>Aesculus californica</i>	buckeye
<i>Avena barbata</i>	slender oat
<i>Avena sativa</i>	wild oat
<i>Baccharis pilularis</i> ssp. <i>pilularis</i>	coyote brush
<i>Baccharis salicina</i>	willow baccharis
<i>Brassica nigra</i>	black mustard
<i>Bromus diandrus</i>	riggut brome
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Catalpa bignonioides</i>	southern catalpa
<i>Centaurea solstitialis</i>	yellow star thistle
<i>Chenopodium</i> sp.	goosefoot
<i>Cirsium vulgare</i>	spear thistle
<i>Convolvulus arvensis</i>	field bindweed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus eragrostis</i>	tall cyperus
<i>Epilobium brachycarpum</i>	tall annual willowherb
<i>Eschscholzia californica</i>	California poppy

<i>Eucalyptus globulus</i>	Blue gum
<i>Festuca myuros</i>	rattail fescue
<i>Festuca perennis</i>	Italian rye grass
<i>Foeniculum vulgare</i>	fennel
<i>Hedera canariensis</i>	canary ivy
<i>Helminthotheca echioides</i>	bristly ox-tongue
<i>Heteromeles arbutifolia</i>	toyon
<i>Hordeum marinum</i>	seaside barley
<i>Juglans nigra</i>	black walnut
<i>Lactuca canadensis</i>	Canada wild lettuce
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Liquidambar styraciflua</i>	sweetgum
<i>Lolium rigidum</i>	rigid Italian rye grass
<i>Lotus corniculatus</i>	bird's foot trefoil
<i>Mentha pulegium</i>	pennyroyal
<i>Nasturtium officinale</i>	watercress
<i>Nerium oleander</i>	Oleander
<i>Persicaria hydropiper</i>	common smartweed
<i>Phalaris aquatica</i>	harding grass
<i>Plantago arenaria</i>	Indian plantain
<i>Polypogon monspeliensis</i>	rabbitsfoot grass
<i>Populus fremontii</i>	Fremont cottonwood
<i>Pseudognaphalium californicum</i>	ladies' tobacco
<i>Quercus agrifolia</i>	coast live oak
<i>Quercus lobata</i>	valley oak
<i>Raphanus sativus</i>	jointed charlock
<i>Rosa sp.</i>	Rose
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rumex crispus</i>	curly dock
<i>Sequoia sempervirens</i>	coast redwood
<i>Schoenoplectus californicus.</i>	California bulrush
<i>Salix babylonica</i>	Weeping willow
<i>Tribulus terrestris</i>	puncture vine
<i>Trifolium hirtum</i>	rose clover
<i>Typha angustifolia</i>	narrow leaf cattail
<i>Typha latifolia</i>	broadleaf cattail
<i>Ulmus americana</i>	American elm
<i>Vicia sativa</i>	spring vetch
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Xanthium strumarium</i>	cocklebur

