APPENDIX E

BIOLOGICAL RESOURCES DOCUMENTS AND PEER REVIEW LETTER

Aquatic Resources Delineation Report
Project Garlic
Gilroy, Santa Clara County, California

Prepared for

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EXECUTIVE SUMMARY

At the request of Steve Beauchamp, Senior Development Manager, Panattoni Development Company, Inc., Huffman-Broadway Group, Inc. (HBG) conducted an investigation at the proposed Project Garlic Site (Project) to assess whether aquatic resources are present and potentially subject to US Army Corps of Engineers (Corps) and US Environmental Protection Agency (US EPA) regulation under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) or Corps jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403).

The delineation Review Area (Study Area) is in the City of Gilroy, California at the NE corner of Pacheco Pass Highway and Camino Arroyo. The approximate center point of the Study Area is latitude 37.005480 North and longitude 121.544837 West.

Following the analysis procedures outlined in the Corps' AJD Form (Appendix H), it was determined that the aquatic resources identified are potentially excluded from jurisdiction under the NWPR. Appendix H provides a detailed record of this analysis and determination for all aquatic resources identified within the Study Area. Appendix A Figure 9 shows the location of these non-jurisdictional waters or features. The following table provides a summary of these findings. The rationale for the exclusion determination is provided in Section 5.2 Table 5.

Excluded Waters or Features			
Waters ID	**Exclusion Size**		**Exclusion**
	Acres	**Linear Feet**	
R-1	NA	1,198	(b)(5) / (b)(3) (b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).
R-2	NA	967	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).
R-3	NA	1,048	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).
C-1	NA	12	(b)(1) Water or water feature that is not identified in (a)(1)(a)(4) and does not meet the other (b)(1) subcategories.
C-2	NA	135	(b)(1) Water or water feature that is not identified in (a)(1)(a)(4) and does not meet the other (b)(1) subcategories.

It was also determined that the (b)(5) ditches and (b)(1) features listed above are not subject to RHA Section 10 jurisdiction because they are non-tidal streams and are not on the San Francisco District's Section 10 waters list.

1.0 INTRODUCTION

1.1 Purpose and Scope of Work

At the request of Steve Beauchamp, Senior Development Manager, Panattoni Development Company, Inc., Huffman-Broadway Group, Inc. (HBG) conducted an investigation at the proposed Project Garlic Site (Project) to assess whether aquatic resources are present and potentially subject to US Army Corps of Engineers (Corps) and US Environmental Protection Agency (US EPA) regulation under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) or Corps jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403). The information will be used for project planning purposes and to determine the need to pursue project authorization from the Corps.

HBG conducted this study in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the *Corps' 1987 Wetlands Delineation Manual* (Corps Delineation Manual), the *Corps' 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Regional Supplement) and supporting Corps and US EPA guidance documents including recent guidance to include the new *Navigable Waters Protection Rule* that became effective June 22, 2020. The client intends to seek a Corps "Approved Jurisdictional Determination" (AJD) pursuant to applicable Corps guidance documents.

1.2 General Site Location

The Study Area is in the City of Gilroy, California at the NE corner of Pacheco Pass Highway and Camino Arroyo. The County of Santa Clara Assessor's Parcel Number is APN: 841-18-082. The approximate center point of the Study Area is latitude 37.005480 North and longitude 121.544837 West.

1.3 Directions to the Project Site

See Appendix B for driving directions.

From: U.S. Army Corps of Engineers San Francisco District 450 Golden Gate Ave, 4th Floor San Francisco, CA 94102	**To**: NE corner of Pacheco Pass Highway and Camino Arroyo, Gilroy, CA 95020

1.4 Contact Information

Table 1. Contact Information	
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1.5 Environmental Setting

This section presents background environmental information on the Study Area from published sources, which is augmented with observations made during the initial site reconnaissance.

1.5.1 Land Use

Review of Google Earth Pro aerial imagery from August 1998 to May 2018 and the July 21, 2020 on-site inspection indicate the site is cultivated for growing vegetable crops.

1.5.2 Topography

Appendix A, Figure 2 is a USGS topographic map of the site. Review of this mapping indicates that Study Area has gently sloping topography.

1.5.3 Vegetation

Onsite investigation indicates the site is actively farmed to grow vegetable crops such as brussels sprouts and garlic. Native and naturalized species are absent.

1.5.4 Soils

Soil survey information for the Project Area was obtained from the National Resources Conservation Service Web Soil Survey (NRCS 2020). Appendix D is a NRCS custom soil resources report developed for the Study Area (NRCS 2020). Two different soil types were mapped by NRCS within the Project Area (Appendix A, Figure 3). The table below provides a summarized description of the soil landform, parent material, typical profile, natural drainage and runoff classes, depth to water table, and frequency of flooding and ponding.

Table 2. Summary of Pertinent Characteristics of Soils Mapped Onsite by NRCS Project Garlic Site, Gilroy, Santa Clara County, CA

Soil Name	Landform / Parent Material	Typical Profile (inches)	Natural Drainage Class / Runoff Class	Depth to Water Table	Frequency of Flooding/ Ponding
Campbell silty clay, muck substratum	Alluvial fans / Alluvium	*A 1 - 0 to 18 inches: silty clay* *A2 - 18 to 36 inches: silty clay loam* *2Cg - 36 to 60 inches: muck, clay*	Somewhat poorly drained / High	> 80”	Rare None / None
Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA14	Basin floors / Clayey alluvium derived from metamorphic and sedimentary rock	Ap - 0 to 6 inches: clay Bss1 - 6 to 26 inches: clay Bss2 - 26 to 36 inches: clay C - 36 to 60 inches: clay	Poorly drained / High	About 12 to 48 inches	Occasional / Frequent

1.5.5 Climate.

Based on “WETS Station Gilroy, CA” precipitation and temperature data for the period of record

(1971 – 2000), the average annual precipitation amount received in the vicinity of Gilroy is 20.56 inches of rainfall and 0.0 inch received as snow. The wettest month, in which average monthly rainfall exceeds 4.0 inches, is January (4.32 inches) with the lowest average amount occurring in August (0.05). Record data also indicates that the annual average daily temperature is 74.5° F. Average high and low temperatures range between 71.4 and 48.3° F with the coldest months typically including December and January where temperatures are in the high 40s and the hottest months being July and August where temperatures are in the low 70s. The annual growing season, with a 50% probability of having days above 32° F, is 280 days (February 20 to November 27), and, with a 70% probability of having days above 32° F, is 298 days (February 11 to December 06) (Appendix E).

1.5.6 Hydrology

Watersheds. Appendix A, Figures 4, 5, and 6 identify US Geological Survey (USGS) National Hydrography Dataset (NHD) Hydrologic Unit Code (HUC) watershed and subwatersheds at and adjacent to the site. The Study Area primarily lies within the "Pajaro" 8-digit NHD HUC watershed (18060002). More specifically, the site lies in the HUC NHD 10-digit subwatershed of the Pajaro watershed "Llagas Creek" (1806000203) and in the NHD HUC 12-digit subwatershed "Lower Llagas Creek" (180600020303).

Direction of Surface Water Flow. Stormwater flows resulting from significant precipitation events flow to agricultural drainage ditches within the Study Area designed to direct flow off-site in a southerly direction.

Type of Surface Water Flow. Under the Navigable Waters Protection Rule, which revised the definition of *waters of the United States*, three types of tributary surface water flows are defined[1] as follows:

1. Perennial. Surface water flowing continuously year-round.
2. Intermittent. Surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts).
3. Ephemeral. Surface water flowing or pooling only in direct response to precipitation (e.g., rain or snow fall).

Based on these definitions no perennial or intermittent surface water flows occur within the Study Area. Surface water flows within ditches found within the Study Area appear to be the result of direct precipitation, storm water runoff, and overflow from seasonal crop irrigation.

1.5.7 FEMA Flood Zone

FEMA Rate Map City of Gilroy 060304 indicates the Study Area is in Zone X. Zone X has 0.2% Annual Chance Flood Hazard.

[1] https://www.epa.gov/sites/production/files/2020-07/documents/200609_nwpr_overview_508c.pdf

1.5.8 Wetlands

Appendix A, Figure 7, provides USFWS National Wetlands Inventory (NWI) mapping of the Study Area. The mapping shows a linear aquatic feature running in an approximate North to South direction through the Study Area. This feature is labeled “PEM1Cx” which is a Palustrine emergent hypersaline seasonally flooded excavated wetland (see Appendix A, Figures 7a, 7b, & 7c).

There are no known delineations that have been officially verified by the Corps.

1.6 Disclaimer

Huffman Broadway Group, Inc., and Panattoni Development Company, Inc., have made a good-faith effort herein to thoroughly describe and document the presence of potential factors that the Corps may consider in asserting jurisdiction pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. Nevertheless, Panattoni Development Company, Inc., reserves the right to challenge or seek revision to any areas over which the Corps may assert such jurisdiction, should such jurisdiction be further clarified or altered through formal guidance, assertions, or disclaimers of jurisdiction over other properties, court decisions, or other relevant actions.

2.0 DELINEATION METHOD

2.1 Overview of Sampling Methodology

HBG's investigation focused on identifying and mapping areas meeting the definitions of wetlands and other waters of the US under Section 404 of the Clean Water Act and navigable waters under Section 10 of the Rivers and Harbors Act of 1899; the Corps' *Delineation Manual*; the *Regional Supplement*; and supporting guidance documents. The *Regional Supplement* was followed when determining the presence or absence of vegetation, soil, and hydrology indicators.

Appendix C describes:

1. the geographic extent and limits of Section 404 CWA and Section 10 RHA jurisdiction;
2. definitions of wetlands and other waters of the US;
3. wetland delineation criteria and methods related to the use of hydrophytic vegetation, hydric soil, and wetland hydrology field indicators;
4. the use of field indicators to identify the ordinary high water mark (OHWM) for non-tidal waters to establish CWA jurisdictional limits; and
5. the use of field indicators to identify the OHWM for non-tidal waters to establish RHA jurisdictional limits.

In preparation for detailed field investigations, HBG identified existing landforms that would likely contain potential aquatic resources (wetlands and other waters) within the Study Area by reviewing Google Earth imagery available online from Google Earth Pro (1998 – 2018); USGS National Hydrography Dataset (NHD) HUC 8, 10, and 12 watershed mapping (Appendix A, Figures 4, 5, & 6); National Wetlands Inventory (NWI) mapping (Appendix A, Figures 7a, 7b, & 7c); a NRCS Custom Soil Resources Report (Appendix D); USGS topographic mapping (Appendix A, Figure 2), and Project specific LIDAR topographic mapping.

HBG conducted a field study on July 21, 2020 at four sampling locations to:

1. Determine the presence or absence of vegetation, hydric soil, and hydrology indicators of wetland conditions as defined by the Corps methodology;
2. Determine if field indicators of wetland conditions may be "significantly disturbed" or "naturally problematic;" and
3. Within any non-tidal drainage or depressional area found, determine if indicators of an ordinary high water mark (OHWM) are present and document the location(s) of the OHWM.

2.1.1 CWA Wetlands

Wetland identification and delineation followed the methods described in the *Regional Supplement*, Corps regulatory guidance documents, and Corps/US EPA regulations (33 CFR 328) that define CWA wetlands (Appendix C). Vegetation, soil, and hydrology observations were made at sampling locations determined to be representative of landform areas where the soils

may potentially flood, pond, and / or saturate.

Vegetation was sampled first. Depending on the size of the vegetation community in relationship to a different abutting plant community or non-vegetated zone, dominant vegetation and the presence or absence of dominant wetland vegetation were determined based on approximately 3-foot by 3-foot sampling plots. Soil observations were made within soil pits dug using a shovel or holes dug with a hand auger. The soil pits and auger holes were dug to a depth of at least 10 inches where permissible. Where one or more hydric soil indicator(s) were encountered, a minimum of one soil pit was dug on the inside low-lying edge of a potential wetland area and one soil pit was dug on the outside upland margin of the potential wetland area. Observations for wetland hydrology indicators were made within the same sampling plot. Soil, vegetation, and hydrology observations were recorded on Corps data forms (*Wetland Determination Data Form – Arid West Region*; Version 2.0) (Appendix F).

2.1.2 CWA Other Waters

Potential CWA other waters within the Study Area were identified in accordance with the regulatory definitions of non-tidal other WOTUS (33 CFR 328) and were determined (delineated) following the CWA definitions of an OHWM (33 CFR 328.3(e) and RGL 05-05(d)). Locations where other waters may potentially occur were first identified using USGS topographic mapping (Appendix A, Figure 2) and LIDAR topographic mapping. Field observations of physical features indicative of an OHWM such as bank scour, sediment lines, and debris lines were documented as point features using a hand-held Trimble Geo XH Global Positioning System (GPS) unit with sub-meter accuracy after geo-processing. OHWM widths were measured at several representative locations along the linear reaches of each drainage (stream) and pond feature encountered. OHWM widths were measured to the nearest half foot. LIDAR topographic mapping was also utilized to aid in mapping in heavily wooded areas where thick tree canopy conditions caused GPS signal interference. OHWM observation data were incorporated into the HBG database using GIS software and geo-referenced in overlay fashion onto an orthorectified aerial photograph following national mapping standards (Appendix A, Figure 9).

2.1.3 RHA Navigable Waters

Potential RHA Navigable Waters were identified in accordance with the regulatory definition of the geographic and jurisdictional limits of non-tidal waters (33 CFR 329.11). Data were processed in the manner described in Section 2.1.2.

2.2 Rainfall Analysis

An antecedent precipitation analysis was also conducted for the Study Area. The rainfall analysis followed the latest Corps guidance https://github.com/jDeters-USACE/Antecedent-Precipitation-Tool .The purpose of the antecedent precipitation analysis was to aid in: (1) determining if the climatic/hydrologic conditions observed on the site are typical for the time of year in which field investigations were conducted (e.g., rainy season versus dry season); and (2) establishing whether observations made of surface and near-surface hydrology indicators or

the lack thereof are the result of naturally problematic hydrology conditions (e.g., drought year, extreme precipitation/stormwater runoff event) preceding the field investigations.

2.3 Mapping

2.3.1 CWA Wetland Observations

Wetlands soil pit locations were documented as point features using a hand-held Trimble Geo XH Global Positioning System (GPS) unit with sub-meter accuracy after geo-processing. Soil, vegetation, and hydrology indicator data were collected at the soil pit locations. The GPS data were incorporated into an HBG project database using Geographic Information System (GIS) software and were geo-referenced in overlay fashion onto an orthorectified digital aerial photograph (Appendix A, Figure 9) following national mapping standards. Data overlays of indicator observations were mapped to assist in the analysis to determine if areas meet Corps technical criteria for wetlands (Appendix C). The geographic extent of areas identified as being potential wetlands / Corps jurisdictional waters were mapped and classified to the class level using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

2.3.2 CWA OHWM

OHWM field data were incorporated into the HBG project database using GIS software to assist in the analysis to determine if areas meet Corps technical criteria for jurisdictional waters (Appendix C). The geographic extent of areas identified as being potential other waters / Corps jurisdictional waters were mapped and classified to the class level using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

2.3.3 RHA OHWM

OHWM field data were incorporated into the HBG project database using GIS software to assist in the analysis to determine if areas meet Corps technical criteria for jurisdictional waters (Appendix C). The geographic extent of areas identified as being potential other waters / Corps jurisdictional waters were mapped and classified to the class level using the U.S. Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

3.0 TECHNICAL FINDINGS

Section 3.1 discusses technical findings regarding the presence or absence of the vegetation, soil, and hydrology indicators of wetland conditions observed within the Study Area. Section 3.2 discusses technical findings regarding the presence of physical characteristics of the landward boundary of other waters as defined by an OHWM for non-tidal waters (Section 3.2.1).

Field data are presented on Wetland Determination Data Forms for the Arid West in Appendix F. The following table provides a summary of the field data provided in Appendix F with the locations of sample points shown on Figure 9 in Appendix A.

Table 3. Sampling Point Results Summary, Project Garlic, Gilroy, Santa Clara County, California

Sampling Point Number	Waters ID	Wetland Vegetation?	Wetland Soil?	Wetland Hydrology?	Wetland Criteria Met?	Size (lin. ft.)	Figure
Sampling Points:							
SP 1	R-1	N	N	N	N	1,198	9
SP 2	R-2	N	N	Y (B – 2 & C -9)	N	967	9
SP 3	R-3	N	N	Y (B – 2 & C -9)	N	1,065	9
SP 4	R-1	N	N	N	N	1,048	9
C-1	C-1	N	N	N	N	12	9
C-2	C-1	N	N	N	N	142	9

Key: Wetland Hydrology Indicators: B2 = Sediment Deposits; and C9 = Saturation Visible on Aerial Imagery.

3.1 CWA Wetlands

3.1.1 Study Area Climatic / Hydrologic Conditions

A typical year analysis was conducted for this delineation to ensure that the hydrologic flows and surface water connections necessary to establish jurisdiction are characterized based on normal climatic conditions. The term "Typical Year" as defined by the NWPR means:

> When precipitation and other climatic variables are within the normal periodic range (e.g., seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period.

The *Antecedent Precipitation Tool Version 1.0* (APT) was used to determine if the Study Area climatic / hydrologic conditions when field investigations occurred were representative of a typical year. Analysis was conducted based on a rolling thirty-year period for the three month time frame prior to the start of the July 21, 2020 on-site investigation. Based on the results of the analysis it was determined that the amount of precipitation the Study Area received 90 days prior to both the 2019 and 2020 site visits was within the normal range expected for a typical year.

3.1.2 Normal Circumstances

An assessment was conducted to determine if "Normal Circumstances" are present in the Study

Area. The Corps' Delineation Manual interprets "normal circumstances" as:

> the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed [7 CFR 12.31(b)(2)(i)] [Manual page 71].

The expired Corps Regulatory Guidance Letter (RGL 90-07) states:

> …. 4. The primary consideration in determining whether a disturbed area qualifies as a Section 404 wetland under "normal circumstances" involves an evaluation of the extent and relative permanence of the physical alteration of wetlands hydrology and hydrophytic vegetation. In addition, consideration is given to the purpose and cause of the physical alterations to hydrology and vegetation. For example, we have always maintained that areas where individuals have destroyed hydrophytic vegetation in an attempt to eliminate the regulatory requirements of Section 404 remain part of the overall aquatic system and are subject to regulation under Section 404. In such a case, where the Corps can determine or reasonably infer that the purpose of the physical disturbance to hydrophytic vegetation was to avoid regulation, the Corps will continue to assert Section 404 jurisdictions. …..

Detailed review of Google Earth Pro aerial imagery from January 1998 to January 2018 shows that land use in the Study Area has consistently been cultivated for row crop production with earthen farm access roads and drainage ditches. No evidence was found to reasonably infer that the purpose of the physical disturbance to hydrophytic vegetation or surface water hydrology was to avoid regulation. Based on consideration of the above, normal circumstances are determined to be present.

3.1.3 Field Indicators of Wetland Vegetation

Vegetation conditions were determined to be significantly disturbed throughout the Project Study Area due to continued crop production activities. Based on this disturbance it is unknown whether undisturbed vegetation would be determined to not be naturally problematic. Drainage ditches, a landform typically found with a prevalence / dominance of hydrophytic species, were found to be unvegetated due to agricultural maintenance activities.

3.1.4 Field Indicators of Hydric Soils

Soil conditions were determined to be significantly disturbed throughout the Study Area due to crop production activities which have been on-going at least since the period of historical aerial imagery review (1998 – 2018) and the 2020 on-site observations that were made as part of this study. Based on soil pit observations the soils were determined to not be naturally problematic.

The NRCS Custom Soil Resources Report in Appendix D provides detailed soil mapping and soils descriptions. Onsite examination found that the NRCS soil mapping provided in the report is relatively accurate.

No hydric soil features were found even within drainage ditches.

3.1.5 Field Indicators of Wetland Hydrology Conditions

Study Area wetland hydrology conditions were determined to be significantly disturbed based on the surface hydrology being disrupted by crop production activities which include effective drainage and irrigation activities. Based on the antecedent precipitation analysis results (Appendix E), field indicators of wetland hydrology conditions observed were determined not to be naturally problematic, but representative of a typical year. No evidence was found to indicate that flows from Miller Creek to the North flow onto the Study Area.

Excavated ditches were found to be the only depressional landform found with wetland hydrology indicators. Specific wetland hydrology indicators observed during the investigation included: B2 – Sediment Deposits and (C9) - Saturation Visible on Aerial Imagery.

3.2 CWA Other Waters and RHA Navigable Waters

3.2.1 Field Indicators of Ordinary High Water

As described in Appendix C, an OHWM provides a technical basis for (a) determining the presence of a potential CWA Section 404 WOTUS and RHA Section 10 Waters, and (b) defining the geographic extent of potential CWA WOTUS and RHA Navigable Waters. For non-tidal WOTUS, federal jurisdiction extends to the ordinary high water mark (OHWM) when no adjacent wetlands are present (33 CFR 328.4(c)(1)). The Corps definition of OHWM applies to "WOTUS" under the Clean Water Act (CWA) (33 CFR 328.3(e)) and to "navigable waters of the United States" under the Rivers and Harbors Act (RHA) (33 CFR 329.11(a)(1)). These definitions are identical, and define OHWMs as observable physical features, such as "a clean, natural line impressed on the bank" that result from fluctuations of water. The frequency and/or duration of such fluctuations is not defined. Importantly, however, the definitions state that the OHWM also is established by "other appropriate means that consider the characteristics of the surrounding areas" (citations above). The following describes the indicators of an OHWM found within the Study Area.

OHWMs were observed within agricultural drainage ditches found within the Study Area (Appendix A, Figure 9). Physically the excavated drainage ditches had a bed and banks. Field indicators of an OHWM observed along the banks of these landforms included the following: B2 – Sediment Deposits and (C9) - Saturation Visible on Aerial Imagery.

3.2.2 Flow Duration Classification

Appendix A, Figures 4, 5 and 6 show the locations of USGS NHD HUC 8 watershed, and HUC 10 and 12 and subwatersheds. The flow characteristics of the ditches found within the Study Area are discussed below.

Ditches

The drainage ditches found on-site were dry during the July 21, 2020 field inspection, but each had an observable field indicator of past surface water flow events in the form of B2 – Sediment Deposits. This indicator provides evidence that the drainages direct stormwater surface water flows within the Study Area in a southerly direction to an off-site culvert which allows water

from the Study Area to flow under Pacheco Pass Highway to Lower Miller Creek. Channel widths of the drainage ditches range from approximately 1.5 ft to 3.0 feet. Review of Google Earth Pro aerial imagery from January 1998 to January 2018 showed the soils within these ditches to be dry much of the time during the rainy season. No evidence of a high water table within the upper 24 inches of the soil surface was found. This determination is based on the lack of hydric soil indicators and the history of the site's ability to be farmed successfully to grow row crops. Based on the field observations which were made during a typical year, it is highly likely that the drainages only function to convey surface water flows in direct response to rainfall and therefore are classified as having ephemeral flow characteristics as defined by the NWPR.

4.0 AQUATIC RESOURCES POTENTIALLY SUBJECT TO CWA FEDERAL JURISDICTION

This section presents the findings of this delineation with respect to the identification and geographic extent of aquatic resources found that meet the technical criteria for either wetlands or other types of aquatic resources that potentially could be regulated by the Corps and the US EPA as a water of the US under Section 404 of the CWA and / or by the Corps under Section 10 of the RHA as a navigable water.

4.1 Potential CWA Wetlands

No aquatic resources were found within the Study Area Appendix A, Figure 2 that were identified as "potentially" meeting the Corps and US EPA technical wetland criteria for wetlands based on an analysis of the technical findings in Sections 3.1.1 – 3.1.3. A positive determination that a wetland is present requires the collective presence of hydric soil, wetland hydrology, and hydrophytic vegetation indicators as required by the *Corps Delineation Manual*, the *Regional Supplement*, guidance documents, and Corps/US EPA regulations.

4.2 Potential CWA Other Aquatic Resources

Based on an analysis of the technical findings in Section 3.2.1, aquatic resources were also identified within the Study Area that did not satisfy the Corps and US EPA technical wetland criteria but had ordinary high water marks. The locations of these potential "other CWA waters" are shown on Appendix A, Figure 9.

The following table summarizes the types of aquatic resources identified within the Study Area based on Corps delineation methodology. Given the number of aquatic resources identified and delineated, the table below only provides a summary listing of these waters based on aquatic resource type. Appendix H provides a detailed record of this analysis and determination for all aquatic resources identified within the Study Area.

Table 4. Summary of the Types of Aquatic Resources Identified

Aquatic Resource Type	Local Name	Cowardin Classification[1]
Other Waters	Drainage Ditch	Riverine Intermittent Streambed Seasonally Flooded Excavated
Other Waters	Culvert	Riverine Intermittent Streambed Seasonally Flooded Artificial Substrate

[1] Waters of the US classified using the US Fish and Wildlife Service's Classification System for Wetland and Deepwater Habitats (Cowardin et al. 1979).

5.0 FINDINGS: CWA SECTION 404 AND RHA SECTION 10 JURISDICTION

This section analyzes the potential for the aquatic resources identified within the Study Area to constitute waters of the US subject to jurisdiction under CWA Section 404 as defined by the Navigable Waters Protection Rule (NWPR) and / or RHA Section 10 as defined by the Rivers and Harbors act of 1899.

5.1 Potential CWA Section 404 Jurisdiction

Following the analysis procedures in the Corps' *Interim Navigable Waters Protection Rule Approved Jurisdictional Determination (AJD) Form* (AJD Form) (Appendix H), it was determined that none of the aquatic resources identified in Section 4.0 (see Table 4) are potentially CWA jurisdictional waters of the US. Appendix H provides a record of this analysis and determination. Appendix A, Figure 9 shows the location of the aquatic resources found within the Study Area.

5.2 Potentially Excluded Waters or Features

Following the analysis procedures outlined in the Corps' *AJD Form* (Appendix H), it was determined that the aquatic resources identified in Section 4.0 (see Table 4) are potentially excluded from jurisdiction under the NWPR. Appendix H provides a detailed record of this analysis and determination for all aquatic resources identified within the Study Area. Appendix A Figure 9 shows the location of these non-jurisdictional waters or features. Table 5 below provides a summary of these potentially excluded waters and features in terms of size, regulatory exclusion type, and rationale for determining that the CWA Section 404 regulatory exclusion applies.

Table 5. Excluded Waters or Features

Waters ID	Exclusion Size		Exclusion	Rationale for Exclusion Determination
	Acres	Linear Feet		
R-1	NA	1,198	(b)(5) / (b)(3) (b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	1. Ditch R-1 is constructed within a cut off portion of Miller Slough which was relocated along the northern edge of the Study Area between 1965 and 1973 according to historical Gilroy 7.5 minute series USGS topographic quad maps. Relocation by SCV Water included construction of Miller Creek Channel and levees. Levee construction cut stream flows off to the portion of the Miller Creek which runs from North to South across the Study Area. 2. The relocated drainage became ephemeral due to the construction of an upstream artificial feature (Miller Slough Levee). 3. Based on review of Google Earth Pro aerial imagery (1998 to 2018) and July 21, 2020 onsite observations, the former stream channel was repurposed as a maintained agricultural drainage ditch. 4. Field indicator observations were made during typical precipitation years as determined using the APT. 5. Field indicators of surface water flow were observed present in the ditch. 6. There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. 7. Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.

Table 5. Excluded Waters or Features				
Waters ID	Exclusion Size		Exclusion	Rationale for Exclusion Determination
	Acres	Linear Feet		
R-2	NA	967	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	1. Ditch R-2 was constructed in uplands, is not a tributary, is not a natural stream, is not a relocated tributary, and was not constructed within tributaries or adjacent wetlands. 2. Field indicator observations were made during typical precipitation years as determined using the APT. 3. Field indicators of surface water flow were observed present in dry drainages. 4. There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. 5. Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.
R-3	NA	1,048	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	1. Ditch R-3 was constructed in uplands, is not a tributary, is not a natural stream, is not a relocated tributary, and was not constructed within tributaries or adjacent wetlands. 2. Field indicator observations were made during typical precipitation years as determined using the APT. 3. Field indicators of surface water flow were observed present in dry drainages. 4. There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. 5. Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.
C-1	NA	12	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	1. Corrugated metal culvert which conveys seasonal ephemeral flows underground from agricultural drainage ditches which are excluded drainage ditches (R-1, R-2. & R-3).
C-2	NA	135	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	1. Concrete box culvert which conveys seasonal ephemeral flows underground from agricultural drainage ditches which are excluded drainage ditches (R-1, R-2. & R-3).

5.3 RHA Section 10 Jurisdiction

As described by Corps regulation 33 CFR 322.1, Section 10 of the RHA of 1899 (33 U.S.C. 403) authorizes the Corps to regulate certain structures or work in or affecting navigable waters.

Navigable waters are defined in 33 CFR 329.4:

> Navigable waters of the US are those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce.

Three factors must be examined when making a determination whether a waterbody is a navigable water (33 CFR 329.5): "… (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce…, and (c) defined geographic limits of the waterbody."

Following the analysis procedures outlined in the *AJD Form* (Appendix H), one of the following criteria must be met before a water is determined to be subject to Section 10 RHA jurisdiction:

1. RHA Tidal water is subject to the ebb and flow of the tide
2. RHA Non-tidal water is on the district's Section 10 waters list

Based on these criteria it was determined that the (b)(5) ditches and (b)(1) features found within the Study Area are not subject to RHA Section 10 jurisdiction because they are non-tidal streams and are not on the San Francisco District's Section 10 waters list.

6.0 REFERENCES

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33 U.S.C. 1344. *Permits for Dredged or Fill Material.*

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33 CFR Part 329. *Definition of Navigable Waters of the United States*. http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title33/33cfr329_main_02.tpl

40 CFR Part 230. *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material*. http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr230_main_02.tpl

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APPENDIX A

FIGURES

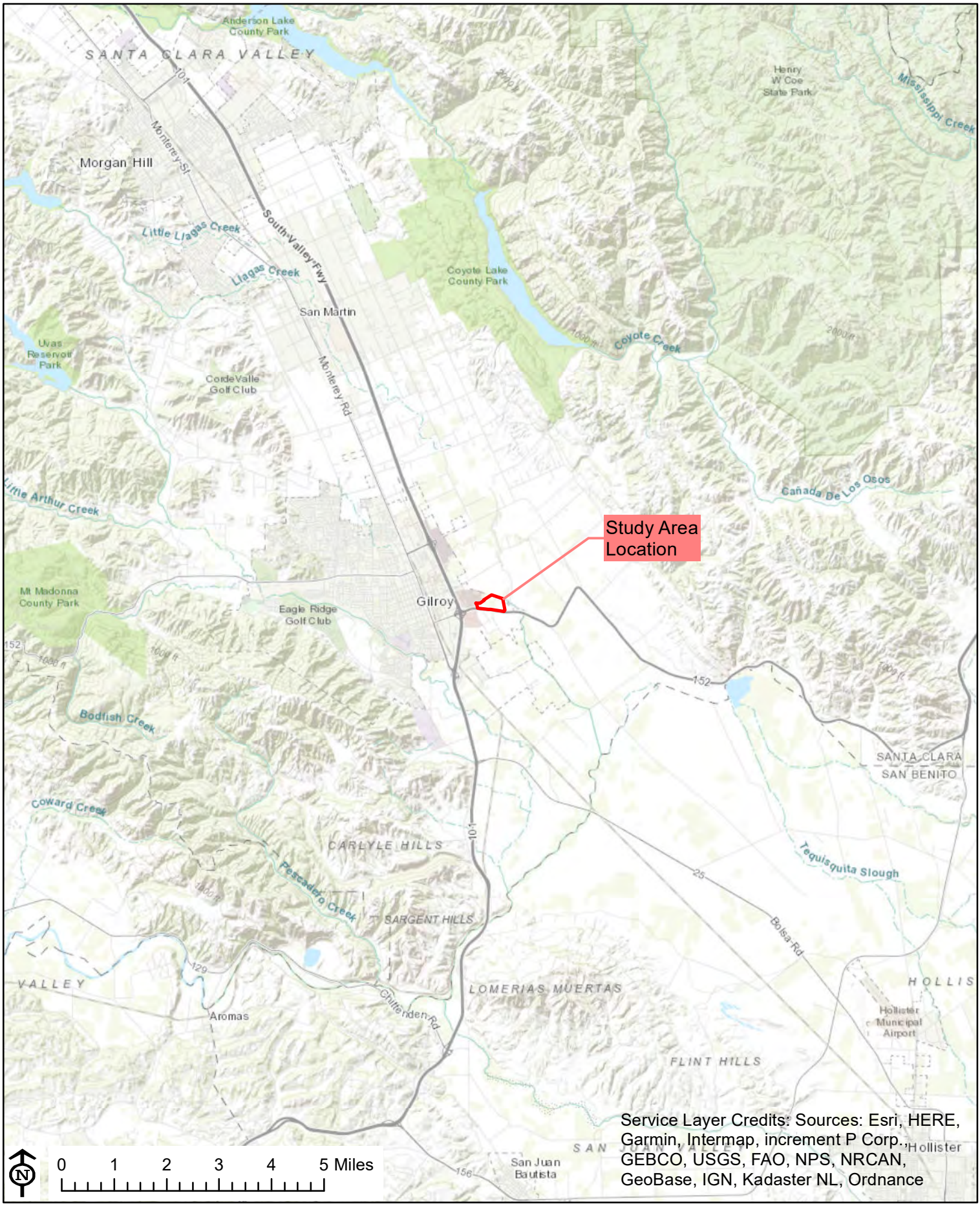

Figure 1. Location Map

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

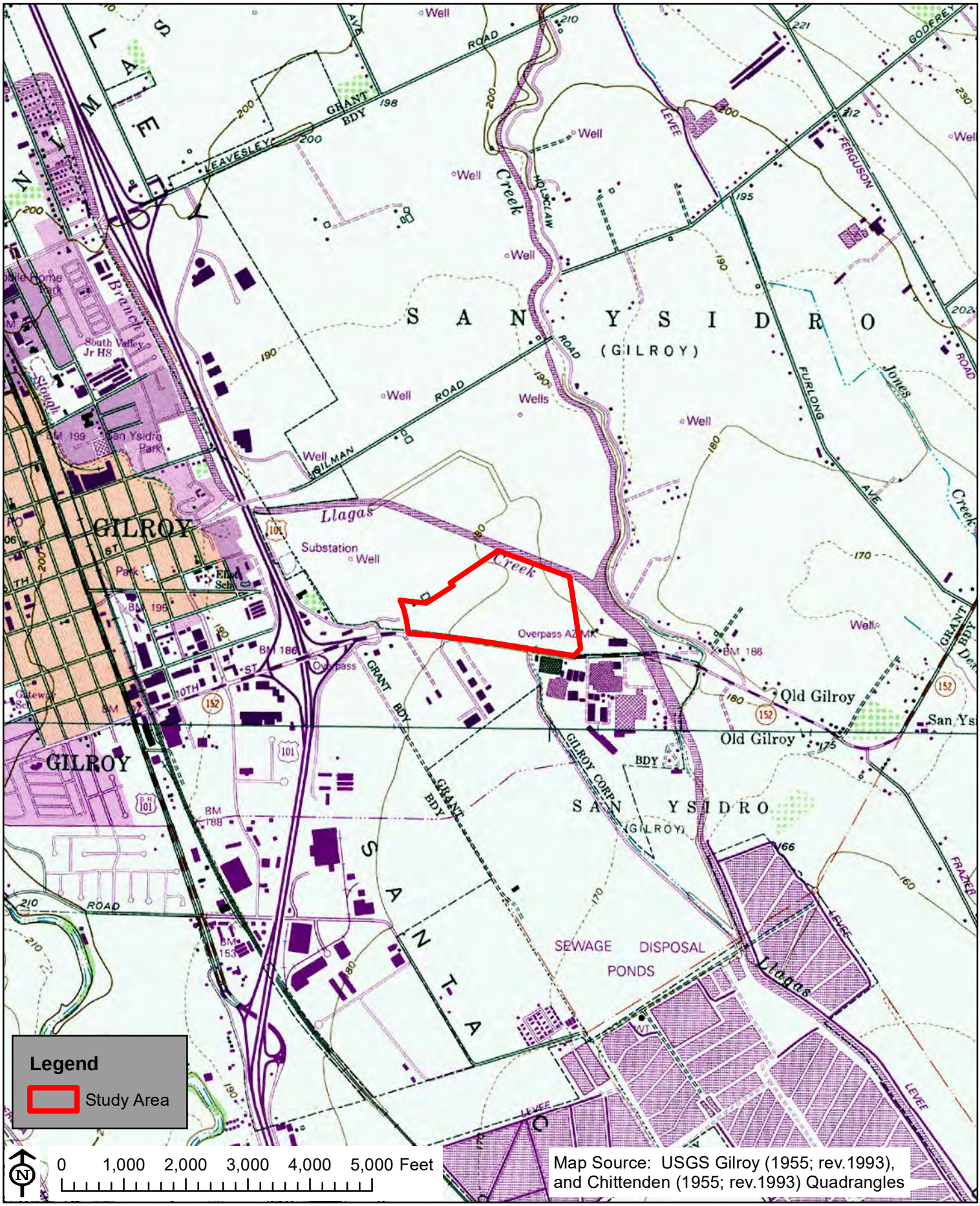

Figure 2. USGS Topo Map

Project Garlic

Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

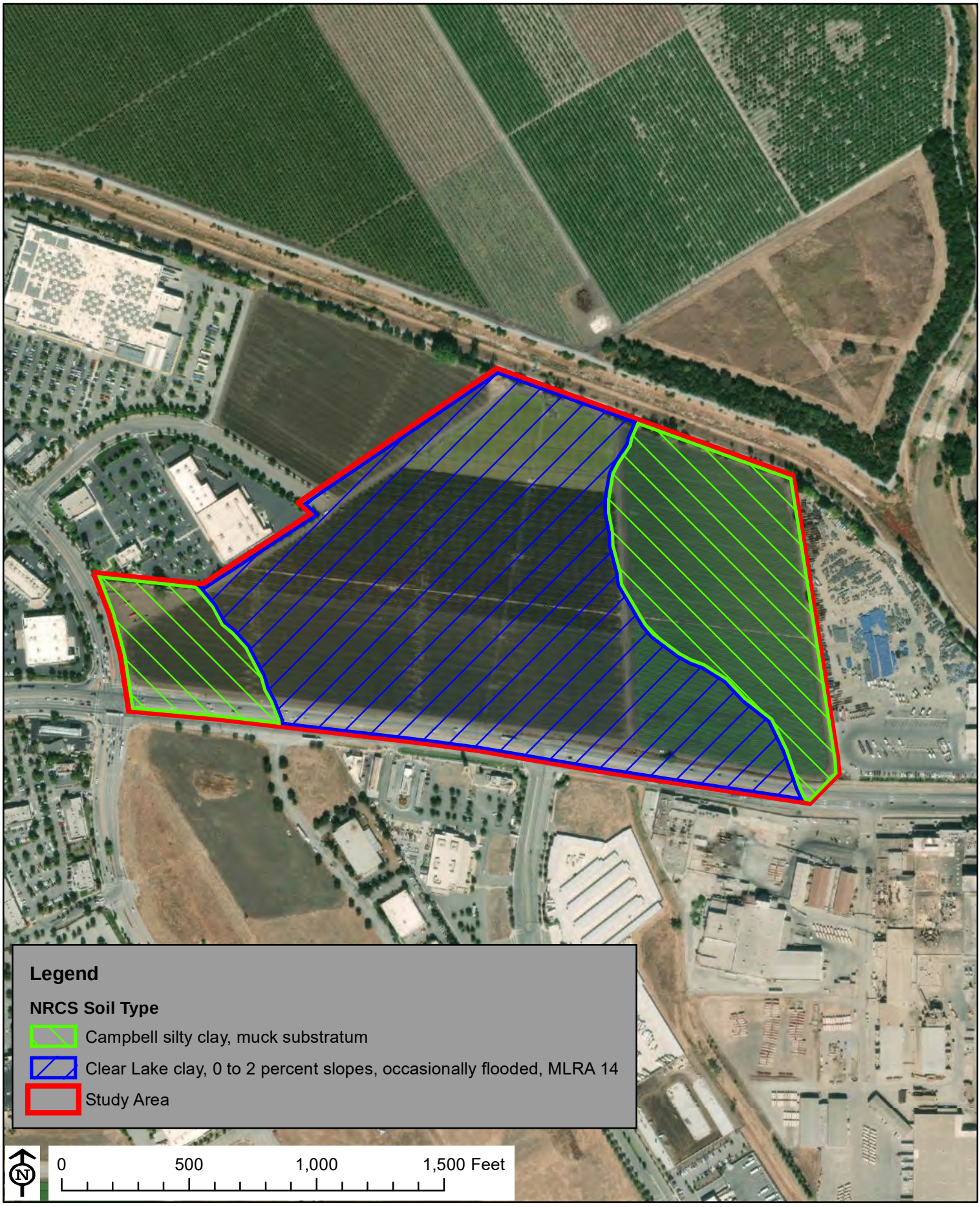

Figure 2. NRCS Soils Mapping
Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

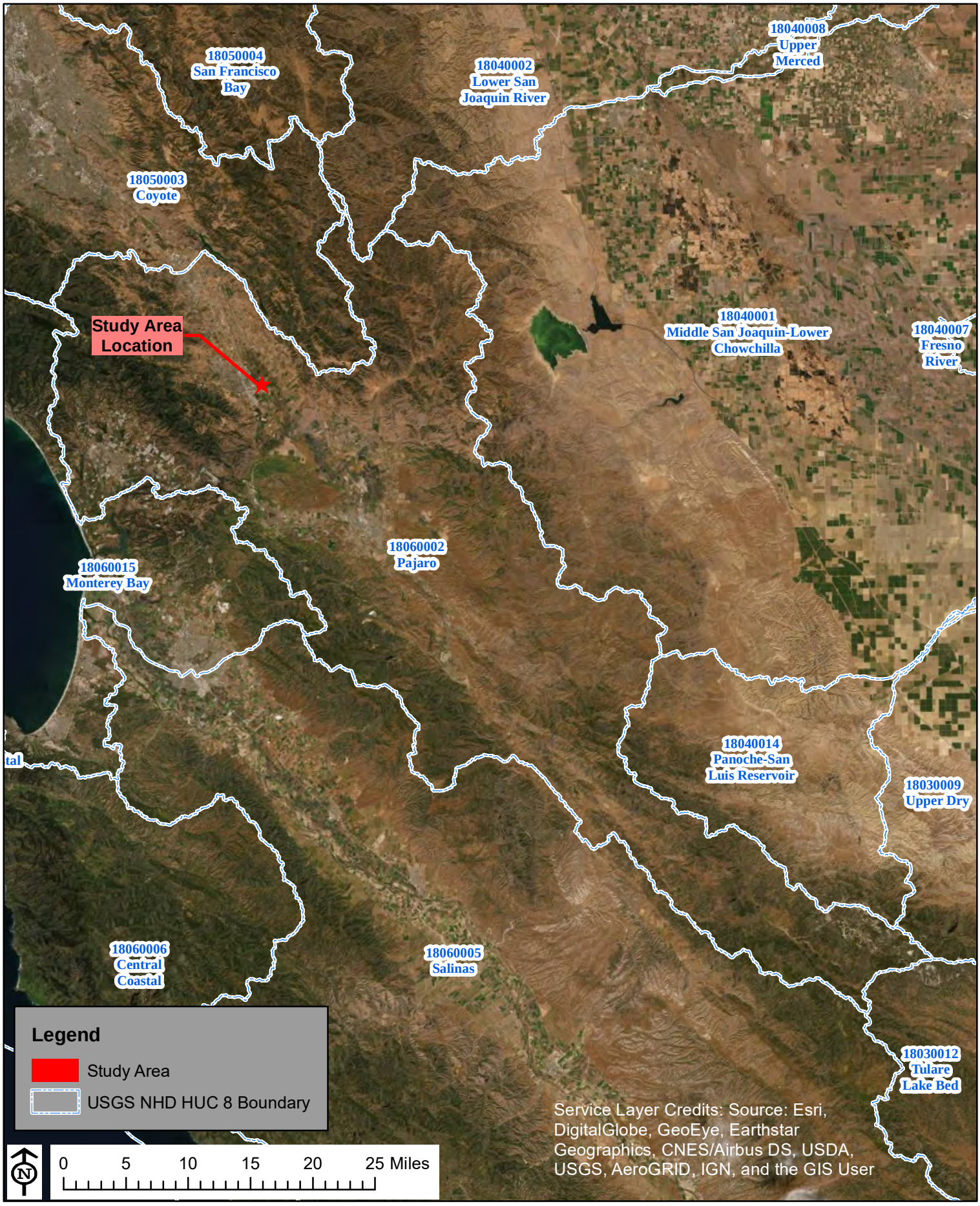

Figure 4. Watershed Mapping: USGS HUC 8 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

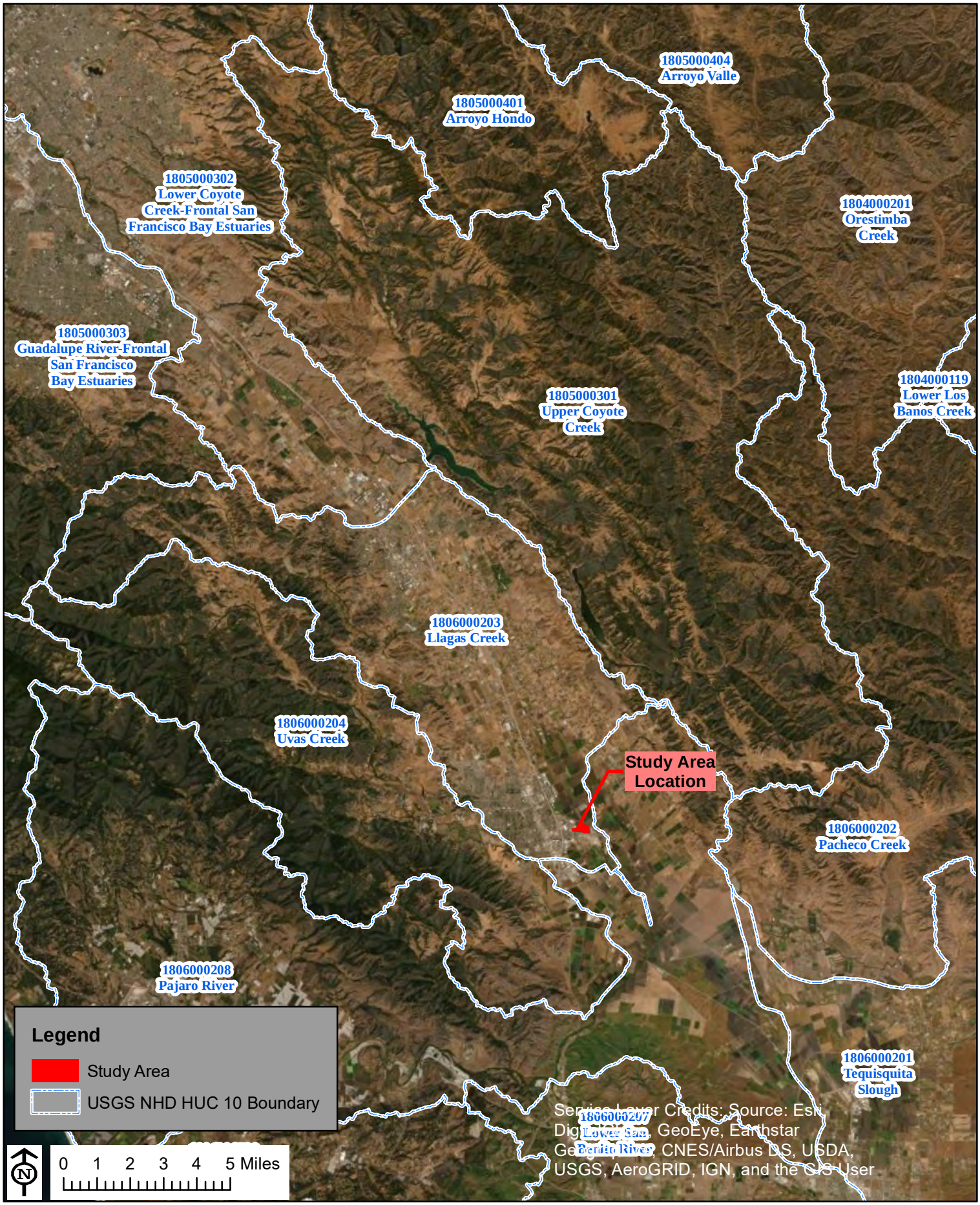

Figure 5. Watershed Mapping: USGS HUC 10 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

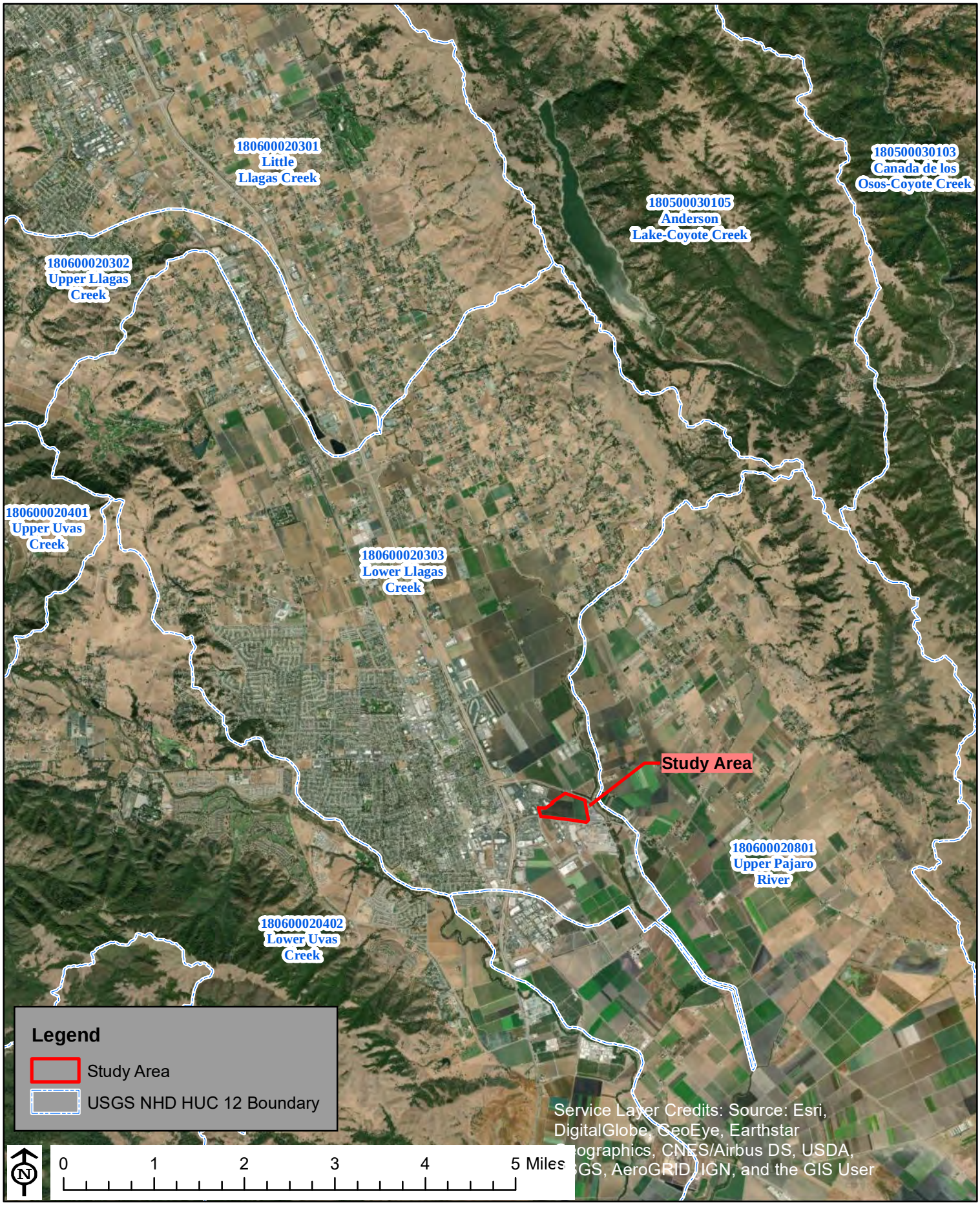

Figure 6. Subwatershed Mapping: USGS HUC 12 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

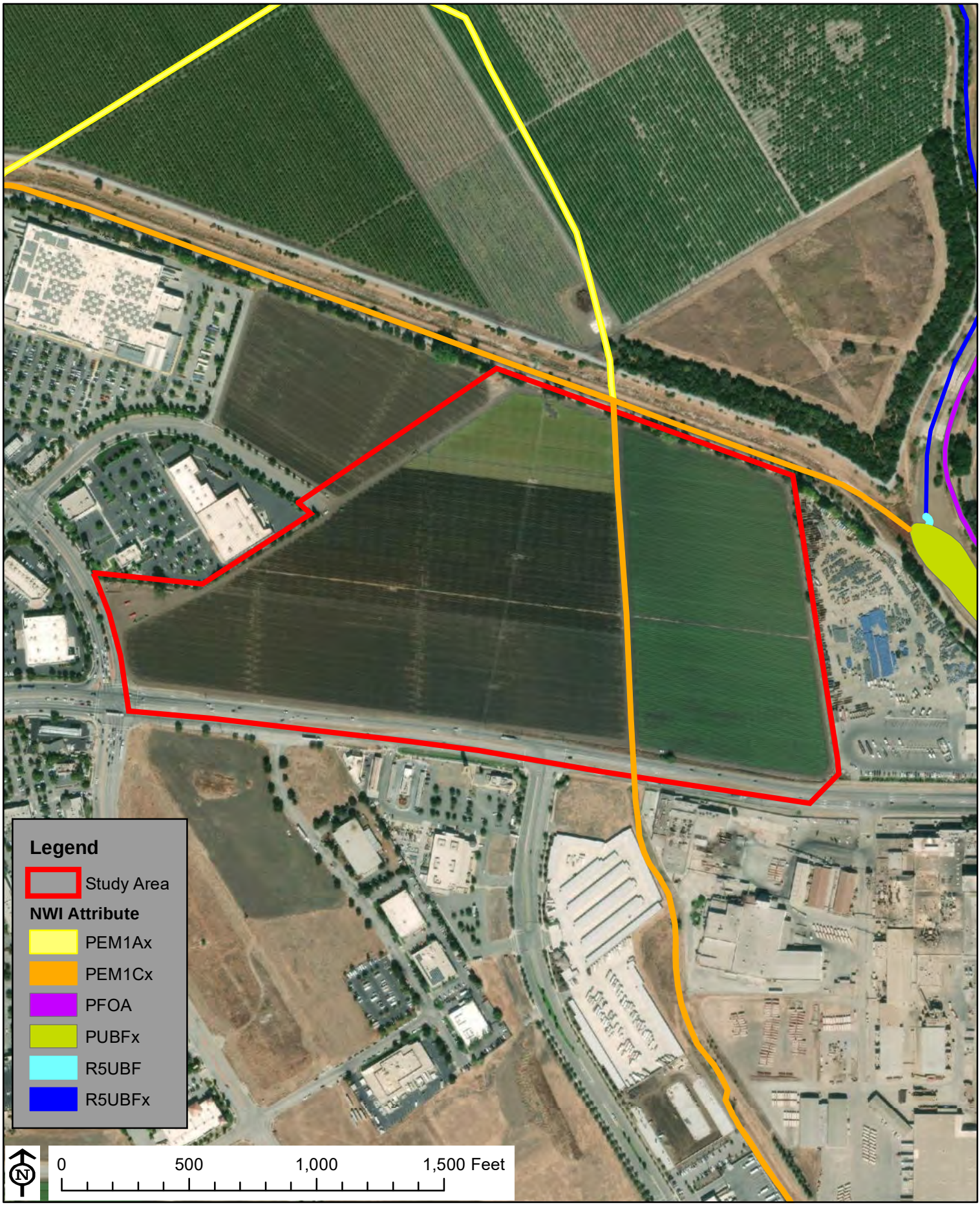

Figure 7a. USFWS National Wetlands Inventory Mapping Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
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NWI Wetlands and Deepwater Map Code Diagram

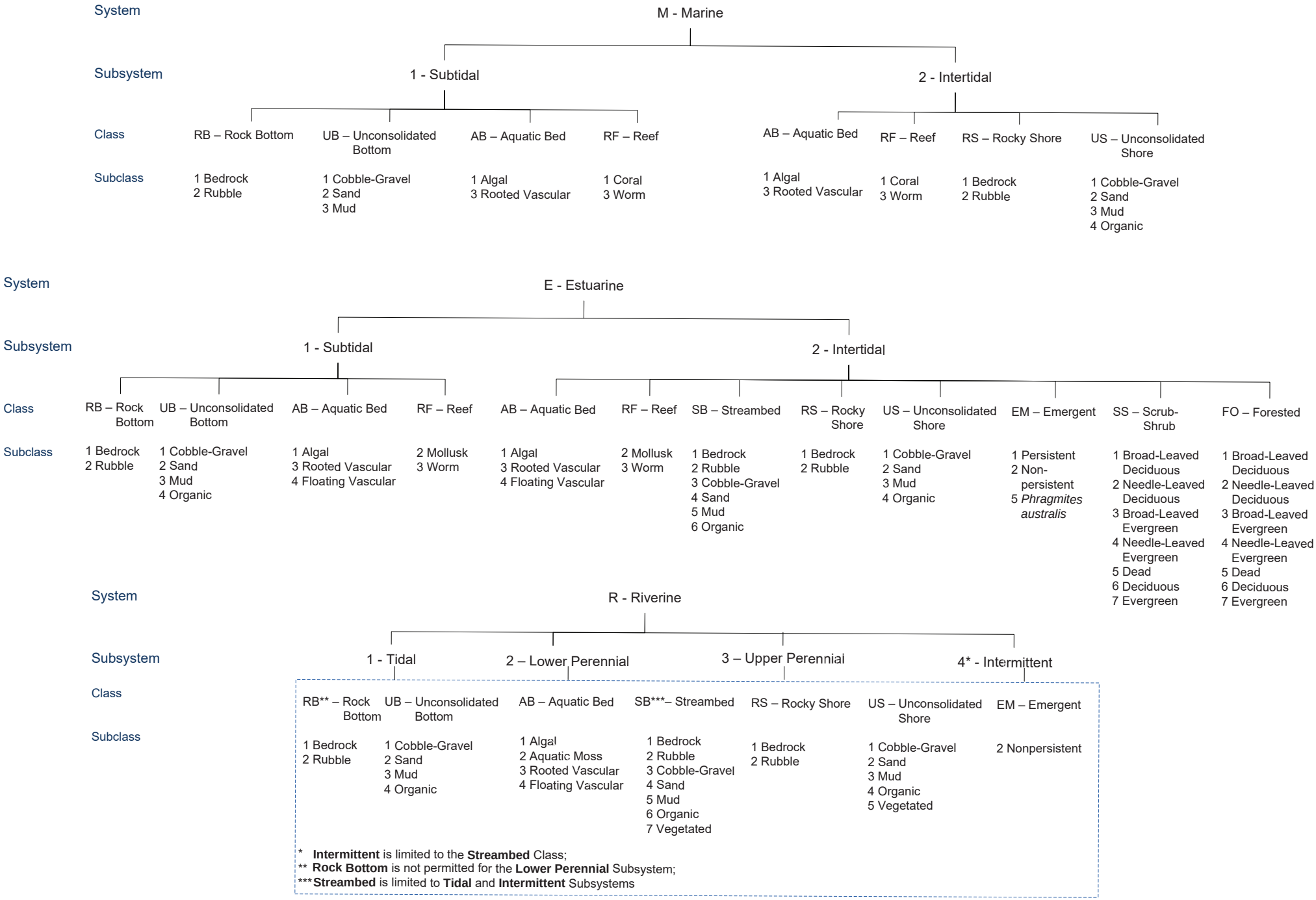
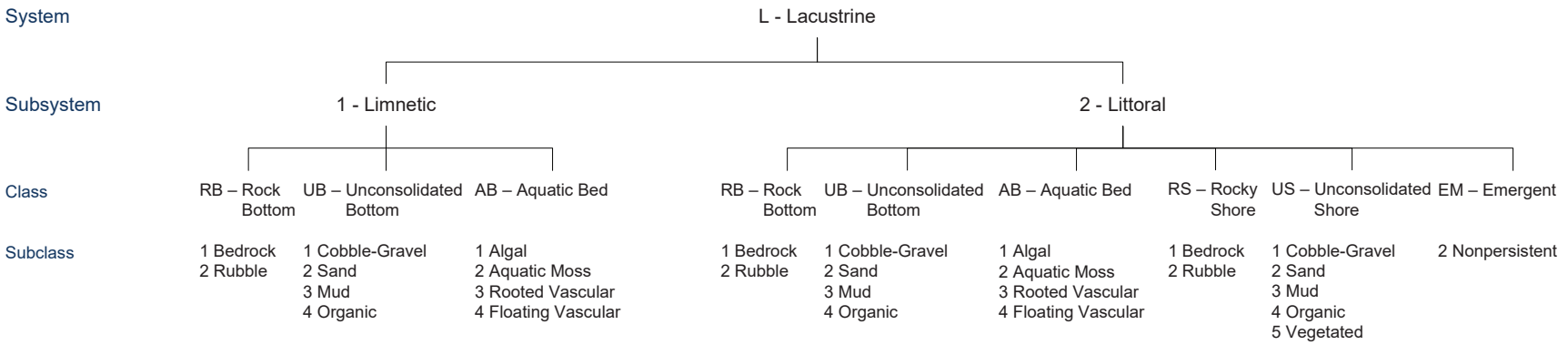
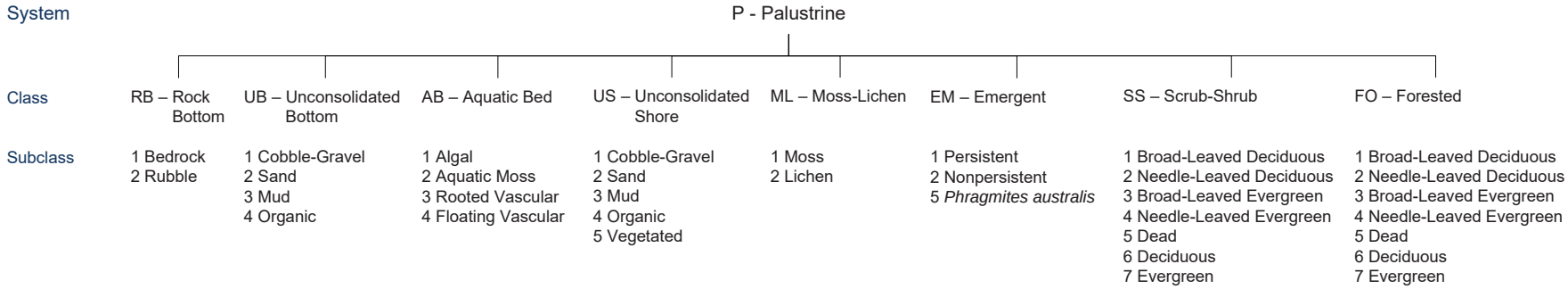


Figure 7b. NWI Wetlands and Deepwater Code Map Diagram, Part 1

Classification of Wetlands and Deepwater Habitats of the United States, Cowardin *et al*. 1979

NWI Wetlands and Deepwater Map Code Diagram





MODIFIERS

In order to more adequately describe the wetland and deepwater habitats, one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy.

Water Regime			Special Modifiers	Water Chemistry		Soil
Nontidal	**Saltwater Tidal**	**Freshwater Tidal**		**Halinity/Salinity**	**pH Modifiers for Fresh Water**	
A Temporarily Flooded	L Subtidal	S Temporarily Flooded- Fresh Tidal	b Beaver	1 Hyperhaline / Hypersaline	a Acid	g Organic
B Seasonally Saturated	M Irregularly Exposed	Q Regularly Flooded-Fresh Tidal	d Partly Drained/Ditched	2 Euhaline / Eusaline	t Circumneutral	n Mineral
C Seasonally Flooded	N Regularly Flooded	R Seasonally Flooded-Fresh Tidal	f Farmed	3 Mixohaline / Mixosaline (Brackish)	i Alkaline	
D Continuously Saturated	P Irregularly Flooded	T Semipermanently Flooded-Fresh Tidal	m Managed	4 Polyhaline		
E Seasonally Flooded / Saturated		V Permanently Flooded-Fresh Tidal	h Diked/Impounded	5 Mesohaline		
			r Artificial Substrate	6 Oligohaline		
F Semipermanently Flooded			s Spoil	0 Fresh		
G Intermittently Exposed			x Excavated			
H Permanently Flooded						
J Intermittently Flooded						
K Artificially Flooded						

Figure 7c. NWI Wetlands and Deepwater Code Map Diagram, Part 2

National Flood Hazard Layer FIRMette

FEMA

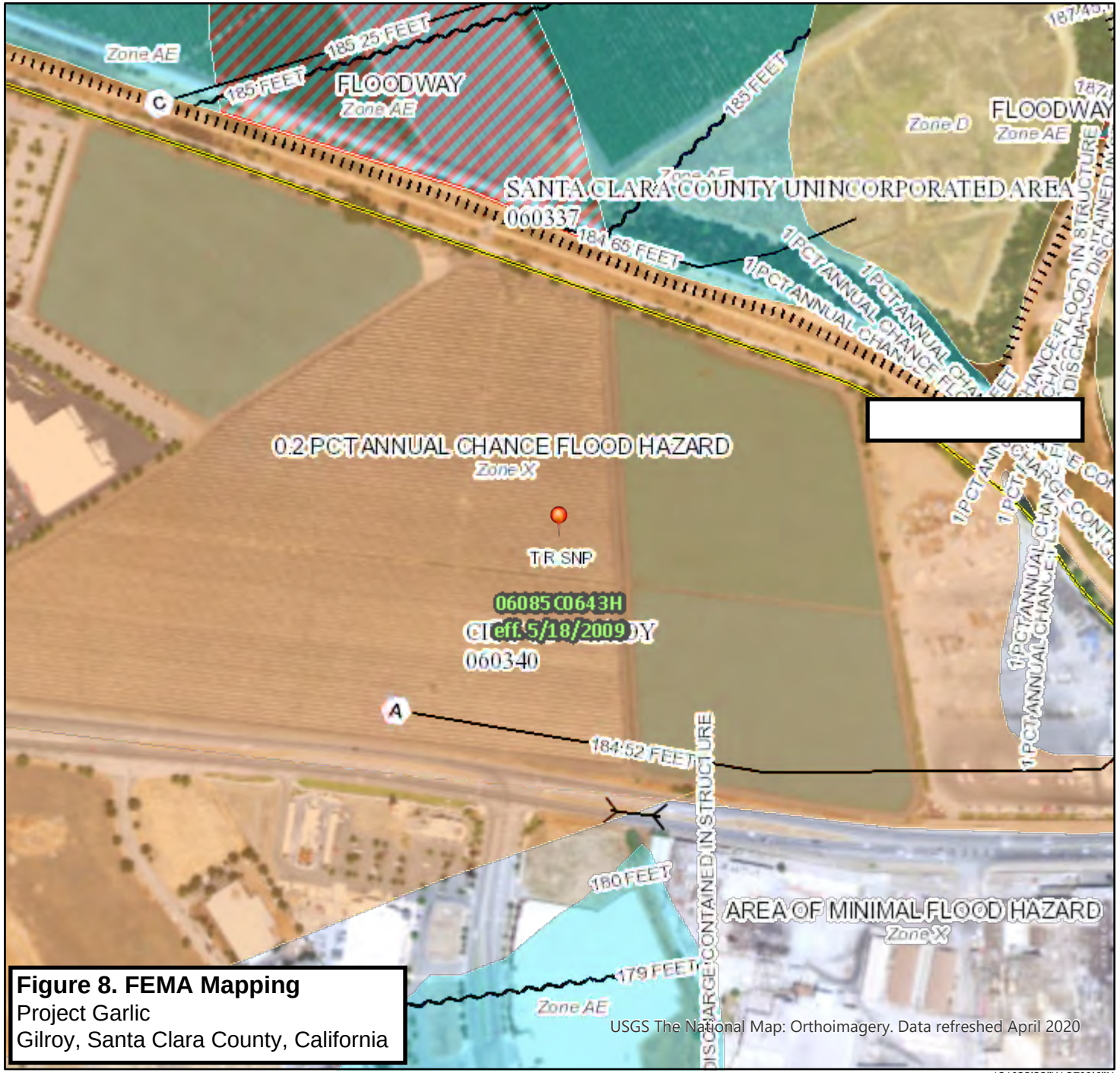


Figure 8. FEMA Mapping
Project Garlic
Gilroy, Santa Clara County, California

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/18/2020 at 2:11 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

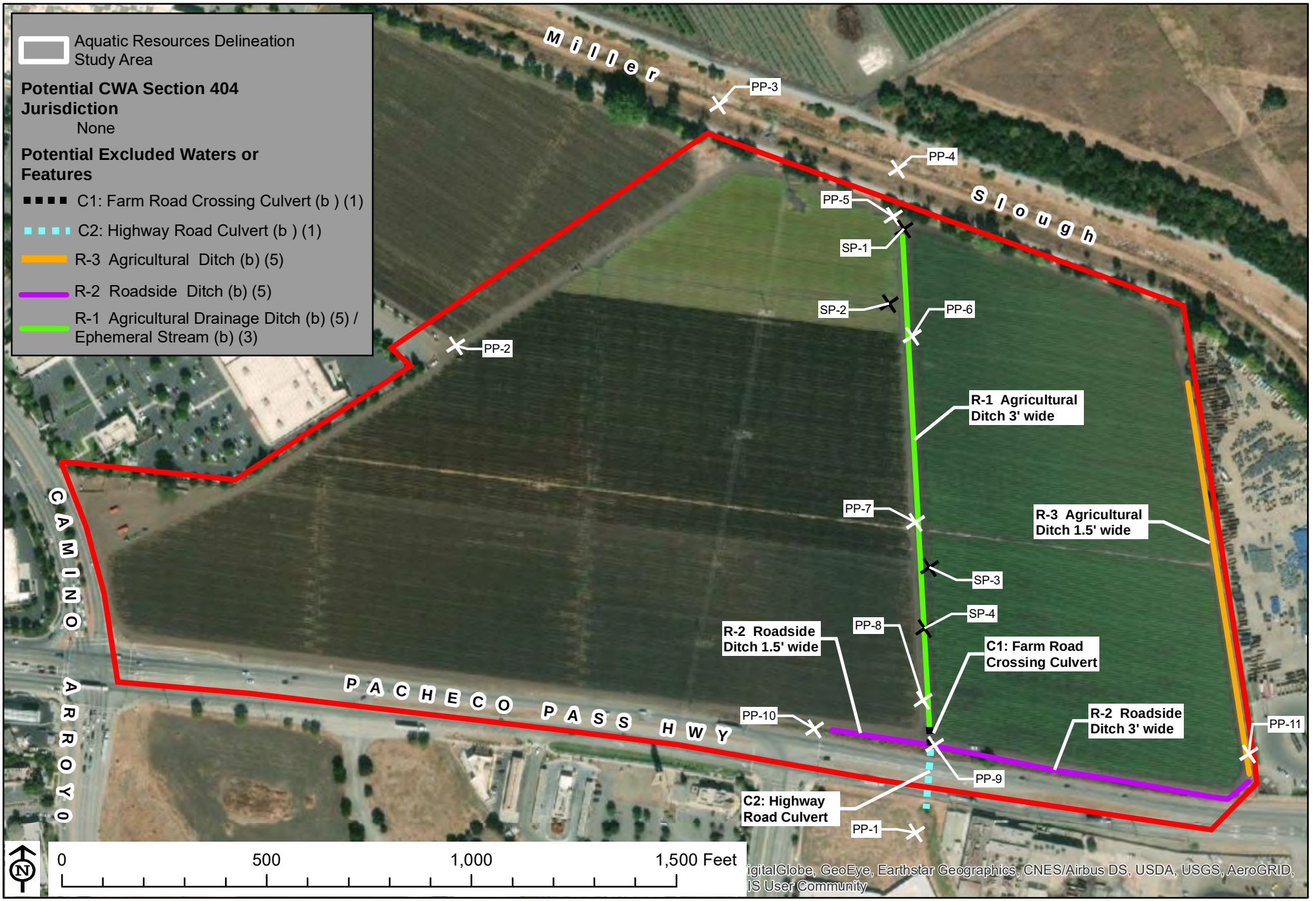


Figure 9 Aquatic Resource Delineation

Project Garlic

Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

APPENDIX B

DRIVING DIRECTIONS

APPENDIX B. DRIVING DIRECTIONS

Google Maps

US Army Corps of Engineers to Camino Arroyo & California 152 — Drive 79.1 miles, 1 h 15 min

US Army Corps of Engineers

450 Golden Gate Ave 4th floor, San Francisco, CA 94102

1. Head west on Turk St toward Polk St

230 ft

2. Turn left onto Polk St

0.4 mi

3. Continue onto 10th St

Pass by Peet's Coffee (on the right)

0.6 mi

4. Slight left to merge onto US-101 S toward San Jose

77.3 mi

5. Use the right 2 lanes to take exit 356 for 10th St/CA-152 E

0.3 mi

6. Use the left 2 lanes to turn left onto CA-152 E/E 10th St/E Pacheco Pass Rd

Continue to follow CA-152 E/E Pacheco Pass Rd

0.5 mi

Camino Arroyo & CA-152

Gilroy, CA 95020

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

APPENDIX C

Regulatory Background

APPENDIX C. REGULATORY BACKGROUND

This appendix describes the regulatory framework for jurisdictional delineations. Section B1.0 addresses Section 404 of the federal Clean Water Act, including the definitions of "waters of the United States" under the Navigable Waters Protection Rule (Section 1.1), limits of Section 404 jurisdiction (Section 1.2), changes in limits of waters of the United States (Section 1.3), and using an Ordinary High Water Mark to establish CWA Jurisdictional limits (Section 1.4). Section 2.0 describes the geographic extent and limits of federal jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (Sections 2.1 and 2.2, respectively). Section 3.0 identifies the key diagnostic criteria for determining the presence of wetlands.

1.0 Section 404 of the Clean Water Act

1.1 § 328.3 Definitions.

For the purpose of this regulation these terms are defined as follows:

(a) Jurisdictional waters. For purposes of the Clean Water Act, 33 U.S.C. 1251 et seq. and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term "waters of the United States" means:

(1) The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;

(2) Tributaries;

(3) Lakes and ponds, and impoundments of jurisdictional waters; and

(4) Adjacent wetlands.

(b) Non-jurisdictional waters. The following are not "waters of the United States":

(1) Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;

(2) Groundwater, including groundwater drained through subsurface drainage systems;

(3) Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;

(4) Diffuse stormwater run-off and directional sheet flow over upland;

(5) Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;

(6) Prior converted cropland;

(7) Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;

(8) Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;

(9) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

(10) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;

(11) Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and

(12) Waste treatment systems.

(c) Definitions. In this section, the following definitions apply:

(1) Adjacent wetlands. The term adjacent wetlands means wetlands that:

(i) Abut, meaning to touch at least at one point or side of, a water identified in paragraph (a)(1), (2), or (3) of this section;

(ii) Are inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year;

(iii) Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by a natural berm, bank, dune, or similar natural feature; or

(iv) Are physically separated from a water identified in paragraph (a)(1), (2), or (3) of this section only by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrologic surface connection between the wetlands and the water identified in paragraph (a)(1), (2), or (3) of this section in a typical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature. An adjacent wetland is jurisdictional in its entirety when a road or similar artificial structure divides the wetland, as long as the structure allows for a direct hydrologic surface connection through or over that structure in a typical year.

(2) Ditch. The term ditch means a constructed or excavated channel used to convey water.

(3) Ephemeral. The term ephemeral means surface water flowing or pooling only in direct response to precipitation (e.g., rain or snow fall).

(4) High tide line. The term high tide line means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds, such as those accompanying a hurricane or other intense storm.

(5) Intermittent. The term intermittent means surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts).

(6) Lakes and ponds, and impoundments of jurisdictional waters. The term lakes and ponds, and impoundments of jurisdictional waters means standing bodies of open water that contribute surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A lake, pond, or impoundment of a jurisdictional water does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a culvert, dike, spillway, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. A lake or pond, or impoundment of a jurisdictional water is also jurisdictional if it is inundated by flooding from a water identified in paragraph (a)(1), (2), or (3) of this section in a typical year.

(7) Ordinary high water mark. The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(8) Perennial. The term perennial means surface water flowing continuously year-round.

(9) Prior converted cropland. The term prior converted cropland means any area that, prior to December 23, 1985, was drained or otherwise manipulated for the purpose, or having the effect, of making production of an agricultural product possible. EPA and the Corps will recognize designations of prior converted cropland made by the Secretary of Agriculture. An area is no longer considered prior converted cropland for purposes of the

Clean Water Act when the area is abandoned and has reverted to wetlands, as defined in paragraph (c)(16) of this section. Abandonment occurs when prior converted cropland is not used for, or in support of, agricultural purposes at least once in the immediately preceding five years. For the purposes of the Clean Water Act, the EPA Administrator shall have the final authority to determine whether prior converted cropland has been abandoned.

(10) Snowpack. The term snowpack means layers of snow that accumulate over extended periods of time in certain geographic regions or at high elevation (e.g., in northern climes or mountainous regions).

(11) Tidal waters and waters subject to the ebb and flow of the tide. The terms tidal waters and waters subject to the ebb and flow of the tide mean those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters and waters subject to the ebb and flow of the tide end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

(12) Tributary. The term tributary means a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to a water identified in paragraph (a)(1) of this section in a typical year either directly or through one or more waters identified in paragraph (a)(2), (3), or (4) of this section. A tributary must be perennial or intermittent in a typical year. The alteration or relocation of a tributary does not modify its jurisdictional status as long as it continues to satisfy the flow conditions of this definition. A tributary does not lose its jurisdictional status if it contributes surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a subterranean river, through a culvert, dam, tunnel, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. The term tributary includes a ditch that either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch satisfies the flow conditions of this definition.

(13) Typical year. The term typical year means when precipitation and other climatic variables are within the normal periodic range (e.g., seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period.

(14) Upland. The term upland means any land area that under normal circumstances does not satisfy all three wetland factors (i.e., hydrology, hydrophytic vegetation, hydric soils) identified in paragraph (c)(16) of this section, and does not lie below the ordinary high water mark or the high tide line of a jurisdictional water.

(15) Waste treatment system. The term waste treatment system includes all components, including lagoons and treatment ponds (such as settling or cooling ponds), designed to either convey or retain, concentrate, settle, reduce, or remove pollutants, either actively or passively, from wastewater prior to discharge (or eliminating any such discharge).

(16) Wetlands. The term wetlands means areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

[51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993; 80 FR 37104, June 29, 2015; 83 FR 5208, Feb. 6, 2018; 84 FR 56667, Oct. 22, 2019; 85 FR 22338, Apr. 21, 2020]

1.2 § 328.4 Limits of jurisdiction

(a) Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)

(b) Tidal waters of the United States. The landward limits of jurisdiction in tidal waters:

(1) Extends to the high tide line, or

(2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.

(c) Non-tidal waters of the United States. The limits of jurisdiction in non-tidal waters:

(1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or

(2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.

(3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

1.3 § 328.5 Changes in limits of waters of the United States

Permanent changes of the shoreline configuration result in similar alterations of the boundaries of waters of the United States. Gradual changes which are due to natural causes and are perceptible only over some period of time constitute changes in the bed of a waterway which also change the boundaries of the waters of the United States. For example, changing sea levels or subsidence of land may cause some areas to become waters of the United States while siltation or a change in drainage may remove an area from waters of the United States. Man-made changes may affect the limits of waters of the United States; however, permanent changes should not be presumed until the particular circumstances have been examined and verified by the district engineer. Verification of changes to the lateral limits of jurisdiction may be obtained from the district engineer.

1.4 Using an Ordinary High Water Mark to Establish CWA Jurisdictional Limits

The OHWM is the defining factor for jurisdiction for non-wetland, non-tidal waters of the US. (33 CFR 328.4(c)). And, because the OHWM should be representative of ordinary events that "occur on a regular or frequent basis" (See Section 2.4.2 and Appendix D; RGL 05-05(d)), the period of years for which the OHWM is assessed should be long enough to ensure that the range of surface water levels is representative, but also recent enough to incorporate changes in the watershed (e.g., dams, diversions) to ensure that an OHWM determination appropriately reflects hydrologic conditions and constraints as they now exist.[1]

Much Corps research exists for identifying the OHWM for non-tidal streams and rivers, particularly for intermittent and ephemeral streams in the Arid West.[2] In contrast to the high

1EPA regulatory guidance in the preamble to its 404(b)(1) Guidelines, and regulatory guidance published by the Corps of Engineers clarify that Clean Water Act jurisdiction is intended "to regulate discharges of dredged or fill material into the aquatic system as it exists and not as it may have existed over a record period of time."

2 See list at http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx.

tide line, which is based upon the 19-year National Tidal Datum Epoch, the ordinary high water line for non-tidal streams is an approximation of the water level reached by the highest flows that are "ordinary" for a particular stream. The ordinary high water level for a given stream must have some probability of occurring regularly, and from a regulatory perspective, this probability of occurrence appears to range from 1 to 2 years in perennial channels to a probability of being reached or exceeded as rarely as once or twice per decade on average for ephemeral/intermittent channels in the Arid West (Lichvar et al, 2006, 2008).[3] [4] In other words, Corps guidance for streams suggests that a high water level that occurs as seldom as once every 10 years for a stream in the Arid West can be considered "ordinary" from a regulatory perspective in determining an OHWM.

1.4.1 Ephemeral/Intermittent Channels in the Arid West

For the Arid West, Curtis and Lichvar (2010)[5] described ephemeral/ intermittent channels and emphasizes that evaluation and characterization of channel composition – the low-flow channel, the active floodplain, and the low terrace – facilitates identification of the OHWM.

> The three distinctive hydrogeomorphic surfaces in many ephemeral and intermittent channels are the low-flow channel, the active floodplain, and the low terrace (Figure 1). The distinguishing feature of the low-flow channel is the frequent absence of vegetation cover. Common indicators signifying a recent discharge, such as ripples or mudcracks, may also be present on the streambed. During low-discharge events in many streams, the low-flow channel often fills with sediment and migrates within the active floodplain, incising a new low-flow channel. Conversely, the extent of the active floodplain is a consistent and reliable feature within the channel. It is formed by the geomorphically effective

discharge — a low -to moderate-discharge event in the Arid West — and is frequently identified by a break in slope indicating the outer extent of ordinary high discharges. Depending on the time that has passed since the last ordinary high event, the active floodplain often has early to mid-community successional stage vegetation. The sediment texture is generally coarser grained than that in the surrounding floodplain units. The low terrace is inundated less frequently than the active channel. It is characterized by well-established, late-stage vegetation, and the surface may show indications of desert pavement or surface relief.

3Lichvar, R.W., D. Finnegan, M. Ericsson, and W. Ochs. 2006. *Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of "Waters of the United States" in Arid Southwestern Channels*. ERDC/CRREL TR-06-5. (http://www.crrel.usace.army.mil/techpub/CRREL_Reports/reports/TR06-5.pdf).

4 Lichvar, R.W. and S.M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual*. ERDC/CRREL TR-08-12. August. http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf

5 Curtis, K.E. and R.W. Lichvar. 2010. *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. ERDC/CRREL TN-10-1. July. http://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/UpdatedDatasheetforIDOHWM_ERDC_2010.pdf

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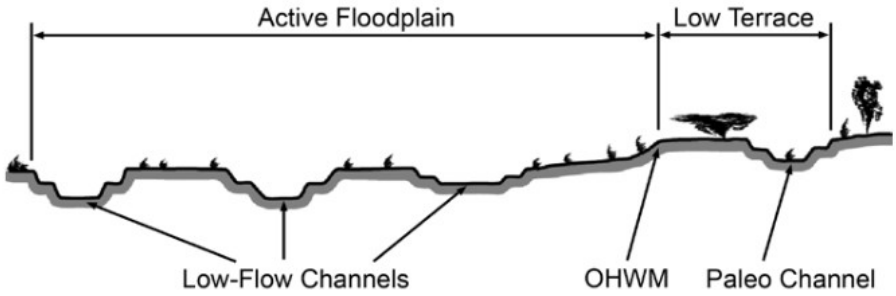

Figure 1. Example of a representative cross section identifying the hydrogeomorphic floodplain units in intermittent and ephemeral channels.

It is the consistent position of the boundary between the active floodplain and low terrace that is important to regulators. The low-flow channel, which migrates frequently and may be dry most of the time, is too undefined to be consistently delineated. However, characterizing each of these floodplain units helps develop an understanding of the channel dynamics that is crucial to identifying the OHWM.

1.4.2 Corps Regulatory Guidance Letter 05-05

Corps Regulatory Guidance Letter (RGL) 05-05 provides regulatory guidance to Corps staff nationwide regarding OHWM identification. This guidance, published December 7, 2005, quotes the definition for OHWM in 33 CFR 328.3(e) (see Section B1.1) and further states that:

a. In determining the location of the OHWM for non-tidal water bodies under the CWA (33 CFR 328.3(e)) or the Rivers and Harbors Act (33 CFR 329.11(a)(1)), districts should give priority to evaluating the physical characteristics of the area that are determined to be reliable indicators of the OHWM. Physical evidence to

be evaluated includes those items listed in the definitions at 33 CFR Sections 328.3(e) and 329.11(a)(1). Because many types of water bodies occur with varying conditions, including topography, channel morphology and flow dynamics, districts may consider other physical characteristics indicative of the OHWM.

b. The following physical characteristics should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable:

Natural line impressed on the bank	Leaf litter disturbed or washed away
Shelving	Scour
Changes in the character of soil	Deposition
Destruction of terrestrial vegetation	Multiple observed flow events
Presence of litter and debris	Bed and banks
Wracking	Water staining
Vegetation matted down, bent, or absent	Change in plant community
Sediment sorting	

This list of OHWM characteristics is not exhaustive. Physical characteristics that correspond to the line on the shore established by the fluctuations of water may vary depending on the type of water body and conditions of the area. There are no "required" physical characteristics that must be present to make an OHWM determination. However, if physical evidence alone will be used for the determination, districts should generally try to identify two or more characteristics, unless there is particularly strong evidence of one.

c. Where the physical characteristics are inconclusive, misleading, unreliable, or otherwise not evident, districts may determine the OHWM by using other appropriate means that consider the characteristics of the surrounding areas, provided those other means are reliable.[6] Such other reliable methods that may be indicative of the OHWM include, but are not limited to, lake and stream gage data, elevation data, spillway height, flood predictions, historic records of water flow, and statistical evidence.

d. When making OHWM determinations, districts should be careful to look at characteristics associated with ordinary high water events, which occur on a regular or frequent basis. Evidence resulting from extraordinary events, including major flooding and storm surges, is not indicative of the OHWM. For instance, a litter or wrack line resulting from a 200-year flood event would in most cases not be considered evidence of an OHWM.

2.0 Section 10 of the Rivers and Harbors Act

2.1 Geographic Extent of Section 10 of the Rivers and Harbors Act Jurisdiction

As described by Corps regulation 33 CFR 322.1, Section 10 of the RHA of 1899 (33 U.S.C. 403) authorizes the Corps to regulate certain structures or work in or affecting navigable waters. Navigable waters are defined in 33 CFR 329.4:

> Navigable waters of the US are those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce.

Three factors must be examined when making a determination whether a waterbody is a navigable water (33 CFR 329.5): "… (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce…, and (c) defined geographic limits of the waterbody."

2.2 Limits of Section 10 RHA Jurisdiction

The geographic limits of relevant federal jurisdiction for navigable rivers or lakes and for ocean

[6] In some cases, the physical characteristics may be misleading and would not be reliable for determining the OHWM. For example, water levels or flows may be manipulated by human intervention for power generation or water supply. For such cases, districts should consider using other appropriate means to determine the OHWM.

and coastal waters pursuant to RHA jurisdiction are defined in the following manner:

2.2.1 Limits of Section 10 RHA Jurisdiction for Rivers and Lakes (33 CFR 329.11)

If a river or lake is determined to be "navigable" the regulatory jurisdiction extends laterally to the entire water surface and bed of a navigable lake or river, which includes all the land and waters below the ordinary high water mark. (33 CFR 329.11)

> (a) *Jurisdiction over entire bed.* Federal regulatory jurisdiction, and powers of improvement for navigation, extend laterally to the entire water surface and bed of a navigable waterbody, which includes all the land and waters below the ordinary high water mark. Jurisdiction thus extends to the edge (as determined above) of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation or other barriers. Marshlands and similar areas are thus considered navigable in law, but only so far as the area is subject to inundation by the ordinary high waters.

2.2.2 Limits of Section 10 RHA Jurisdiction for Ocean and Coastal Waters (33 CFR 329.12)

> (a) *Ocean and coastal waters.* The navigable waters of the United States over which Corps of Engineers regulatory jurisdiction extends include all ocean and coastal waters within a zone three geographic (nautical) miles seaward from the baseline (The Territorial Seas). Wider zones are recognized for special regulatory powers exercised over the outer continental shelf. (See 33 CFR 322.3(b)).
>
> (1) *Baseline defined.* Generally, where the shore directly contacts the open sea, the line on the shore reached by the ordinary low tides comprises the baseline from which the distance of three geographic miles is measured. The baseline has significance for both domestic and international law and is subject to precise definitions. Special problems arise when offshore rocks, islands, or other bodies exist, and the baseline may have to be drawn seaward of such bodies.
>
> (2) *Shoreward limit of jurisdiction.* Regulatory jurisdiction in coastal areas extends to the line on the shore reached by the plane of the mean (average) high water. Where precise determination of the actual location of the line becomes necessary, it must be established by survey with reference to the available tidal datum, preferably averaged over a period of 18.6 years. Less precise methods, such as observation of the "apparent shoreline" which is determined by reference to physical markings, lines of vegetation, or changes in type of vegetation, may be used only where an estimate is needed of the line reached by the mean high water.
>
> (b) *Bays and estuaries.* Regulatory jurisdiction extends to the entire surface and bed of all waterbodies subject to tidal action. Jurisdiction thus extends to the edge (as determined by paragraph (a)(2) of this section) of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation, or other barriers. Marshlands and similar areas are thus considered "navigable in law," but only so far as the area is subject to inundation

> by the mean high waters. The relevant test is therefore the presence of the mean high tidal waters, and not the general test described above, which generally applies to inland rivers and lakes.

3.0 Wetlands Delineation Criteria

The *Corps 1987 Manual* identifies the key diagnostic criteria for determining the presence of wetlands. These are:

> *Wetland Hydrology*: Inundation or saturation to the surface during the growing season.
>
> *Hydric Soils:* Soils classified as hydric or that possess characteristics associated with reducing soil conditions.
>
> *Predominance of Wetland Vegetation:* Vegetation classified as facultative, facultative wet, or obligate according to its tolerance of saturated (i.e., anaerobic) soil conditions.

Specific criteria used to determine the presence or absence of wetland hydrology, soil, and vegetation conditions are described in the sections below.

3.1 Wetland Hydrology

The *Corps 1987 Manual* states that wetland hydrology conditions occur when a "site is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation." Whether a site meets either of these criteria is determined by the presence of diagnostic indicators of wetland hydrology, which include the following:

Table B1. Wetland Hydrology Indicators (*Corps 1987 Manual*)

Primary Indicators	Secondary Indicators
Watermarks	Oxidized Rhizospheres Associated with Living Roots
Drift Lines	Water-Stained Leaves
Water-Borne Sediment Deposits	FAC-Neutral Test
Drainage Patterns Within Wetlands	Local Soil Survey Data

A March 8, 1992, Corps memorandum entitled *Clarification and Interpretation of the 1987 Manual* provides further clarification:

> Areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas wet between 5 percent and 12.5 percent of the growing season in most years may or

may not be wetlands. Sites saturated to the surface for less than 5 percent of the growing season are non-wetlands.

Wetland hydrology indicators have also been further defined and described in the *Regional Supplements to the Corps of Engineers Wetland Delineation Manual*.

3.2 Hydric Soils

The *Corps 1987 Manual* states that the diagnostic environmental characteristics indicative of wetland soil conditions are met where "soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions." According to the *Manual*, indicators of soils developed under reducing conditions may include:

1. Organic soils (Histosols);
2. Histic epipedons;
3. Sulfidic material;
4. Aquic or peraquic moisture regime;
5. Reducing soil conditions;
6. Soil colors (chroma of 2 or less);
7. Soil appearing on hydric soils list; and
8. Iron and manganese concretions.

A February 20, 1992, Corps memorandum entitled *Regional Interpretation of the 1987 Manual* states that the most recent version of National Technical Committee for Hydric Soils (NTCHS) hydric soil criteria will be used (to make hydric soil determinations). These soil criteria specify at least 15 consecutive days of saturation or 7 days of inundation (flooding or ponding) during the growing season in most years.

The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics. As indicated above, like the NRCS, the Corps has typically accepted guidance for the identification of hydric soils developed by the National Technical Committee for Hydric Soils (NTCHS). The NTCHS, a working group organized by NRCS, has developed criteria for identifying and mapping hydric soils throughout the United States (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/use/hydric/?cid=nrcs142p2_053959). The NTCHS definition of a hydric soil states:

> *Hydric soil* means a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part [of the soil profile]. This definition includes soils that developed under anaerobic conditions in the upper part but no longer experience these conditions due to hydrologic alteration such as those hydric soils that have been artificially drained or protected (e.g., ditches or levees).

The most recent (2012) version of the NTCHS hydric soils criteria identifies those soils that are likely to meet this definition. These criteria, which are accepted by most state and federal agencies, are as follows:

1. All Histels except Folistels and Histosols except Folists; or

2. Map unit components in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, or Andic, Cumulic, Pachic, or Vitrandic subgroups that:

   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States,[7] or

   b. Show evidence that the soil meets the definition of a hydric soil;

3. Map unit components that are frequently ponded for long duration or very long duration during the growing season that:

   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

[7] United States Department of Agriculture, Natural Resources Conservation Service. 2010. *Field Indicators of Hydric Soils in the United States*, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

Show evidence that the soil meets the definition of a hydric soil; or

4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:

   a. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or

   b. Show evidence that the soils meet the definition of a hydric

soil. Terms used in the above definition are defined as follows:

- *Flooded* means a condition in which the soil surface is temporarily covered with flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from the high tides, or any combination of sources.
- *Frequently flooded, ponded, saturated:* a frequency class in which flooding, ponding, or saturation is likely to occur often under usual weather conditions (more than 50 percent chance in any year, or more than 50 times in 100 years).
- *Long duration* means a duration class in which inundation for a single event ranges from 7 days to 1 month.
- *Map unit* means a collection of areas defined and named the same in terms of their soil components or miscellaneous areas or both.
- *Map unit components* means the collection of soils and miscellaneous areas found within a map unit.
- *Ponded* means a condition in which water stands in a closed depression. The water

is removed only by percolation, evaporation, or transpiration.

- *Very long duration* means a duration class in which inundation for a single event is greater than 1 month.

On the basis of computer database searches for soils meeting the second criterion, NRCS has developed hydric soils lists for many parts of the country. Although they are useful for determining whether a particular soil series *has the potential to support current hydric soil conditions*, caution should be used when using these lists for site-specific hydric soil determinations. Many soils on the lists have ranges in water table depths and other characteristics that allow them to be either hydric or non-hydric depending on landscape position and other site-specific factors (e.g., soil clay content, depth to bedrock). Accordingly, hydric soils lists are good ancillary tools to facilitate wetland determinations but are not a substitute for onsite investigations.

Field indicators of hydric soils are morphological properties known to be associated with soils that meet the definition of a hydric soil. Presence of one or more field indicator suggests that the processes associated with hydric soil formation have taken place on the site being observed. The field indicators are essential for hydric soil identification because once formed, they persist in the soil during both wet and dry seasonal periods. However, few hydric soil indicators identify soils at a site as being currently hydric in accordance with the NTCHS hydric soils criteria described above. Field indicators of hydric soil conditions include the following:

Table B2. Field Indicators of Hydric Soil Conditions (Listing summarized from *Corps 1987 Manual* and Corps Guidance Documents)

1. Indicators of Historical Hydric Soil Conditions:	2. Indicators of Current Hydric Soil Conditions:
a. Histosols b. Histic epipedons; c. Soil colors (e.g., gleyed or low-chroma colors, soils with bright mottles (Redoximorphic features) and/or depleted soil matrix d. High organic content in surface of sandy soils e. Organic streaking in sandy soils f. Iron and manganese concretions g. Soil listed on county hydric soils list	a. Aquic or peraquic moisture regime (inundation and/or soil saturation for ≥7 continuous days) b. Reducing soil conditions (inundation and/or soil saturation for ≥ 7 continuous days) c. Sulfidic material (rotten egg smell)

The presence of one or more of the field indicators in "1 a, b c, and/or d" above suggests that historical processes associated with hydric soil development have taken place at a given site. These indicators are useful in determining if soils at a site were historically formed under hydric soil conditions because they persist in soils during both wet and dry periods and may remain for decades and even centuries after changes in site conditions occur that inhibit subsequent wetland development, such as the elimination of wetland hydrology (NRCS 1995). However, only the presence of field indicators "2 a, b, and/or c" confirms that hydric soils occur at a site during the period of observation. Hydric soil indicators have also been further defined and described in the Corps' *Regional Supplements to the Corps of Engineers Wetland Delineation Manual*.

3.3 Prevalence of Wetland Vegetation

The *Corps 1987 Manual* states that the wetland vegetation conditions are met when the prevalent vegetation (i.e., more than 50 percent of vegetation cover or tree basal area) consists of macrophytes that are typically adapted to sites having wetland hydrologic and soil conditions (e.g., periodic or continuous inundation or soil saturation). Hydrophytic vegetation is defined as "plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Cowardin *et al*. 1979). Hydrophytic vegetative species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Positive indicators of the presence of hydrophytic vegetation include:

1. More than 50 percent of the dominant species are rated as Obligate ("OBL"), Facultative Wet ("FACW"), or Facultative ("FAC") on lists of plant species that occur in wetlands (see Reed 1988);

2. Visual observations of plant species growing in sites of prolonged inundation or soil saturation; and

3. Reports in the technical literature indicating the prevalent vegetation is commonly found in saturated soils.

Hydrophytic vegetation indicators have been further defined and described in the *Regional Supplements to the Corps of Engineers Wetland Delineation Manual*.

These indicators include:

1. More than 50 percent of dominant plant species across all strata are OBL, FACW or FAC;
2. Prevalence Index is ≤ 3.0 with indicators of hydric soils and wetland hydrology being present; and
3. Morphological adaptations

In classifying vegetation encountered the current edition of the *National Wetland Plant List: Wetland Ratings* (NWPL; Lichvar, et al.) will be relied on. The list is a comprehensive update of the *National List of Plant Species that Occur in Wetlands* (Reed 1988), and, as noted in the List's Abstract, "represents a collaborative effort between four Federal agencies, under the administrative responsibilities of the US Army Corps of Engineers, to update and administer the national list." Wetland ratings were developed for species for each of the 10 Corps regions. The definitions of the NWPL wetland indicator status groups, are presented in the table below:

Table B3. National Wetland Plant Indicator Status Definitions		
Wetland Indicator Status	**Designation**	**Definition**

Table B3. National Wetland Plant Indicator Status Definitions		
Wetland Indicator Status	**Designation**	**Definition**
Obligate Wetland (OBL)	Hydrophyte	Almost always occur in wetlands
Facultative Wetland	Hydrophyte	Usually occur in wetlands, but may occur in non-
Facultative (FAC)	Hydrophyte	Occur in wetlands or non-wetlands
Facultative Upland (FACU)	Nonhydrophyte	Usually occur in non-wetlands, but may occur in
Upland (UPL)	Nonhydrophyte	Almost never occur in wetlands

Species that have an indicator status of OBL, FACW, or FAC are typically considered to be adapted for life in anaerobic soil conditions (Corps 1987) and are used as evidence of hydrophytic vegetation when they dominate plant community composition or cover. It is important to note that wetland indicator species assignments are approximations of wetland affinity based on a synthesis of submitted review comments, published botanical literature, and the field experience. For this reason and because many plants have properties that enable them to occur in a range of microhabitats (i.e., wetlands and non-wetlands), the presence of wetland indicator species is not unequivocal evidence of the presence of wetland hydrology and hydric soils. A positive indicator or indicators of wetlands should be emphasized, such as an assemblage of plants that can only be considered "hydrophytes" when they are growing in water or partly drained hydric soils (not effectively drained hydric soils) (Corps 1987). For the reasons stated above, the 1987 Corps *Manual* does not solely rely on the presence of hydrophytic vegetation to make wetland determinations.

3.4 Difficult Wetland Situations

Some wetlands can be difficult to identify because wetland indicators may be missing or difficult to identify due to natural processes or recent disturbances. In accordance with the 1987 Corps Manual, these situations are defined as either Atypical Situations or Problem Areas. The term Atypical Situation, defined in Section F and Appendix A of the 1987 Corps Manual, "refers to areas in which one or more parameters (vegetation, soil, and/or hydrology) have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators of the parameter." HBG has interpreted the term "Significantly Disturbed" as used on the Wetland Determination Data Form for the Corps Regional Supplements to signify an Atypical Situation. Problem Areas, defined in Section G of the 1987 Corps Manual, "are wetland types in which wetland indicators of one or more parameters may be periodically lacking due to normal seasonal or annual variations in environmental conditions that result from causes other than human activities or catastrophic natural events." HBG has interpreted the term "Naturally Problematic" as used on the *Wetland Determination Data Form* specific to a *Regional Supplement to the Corps of Engineers Wetland Delineation Manual* to signify a Problem Area. If a determination is made that an Atypical Situation or Problem Area exists, special procedures or additional analysis of factors affecting the site may need to be employed. Steps and procedures to address Atypical Situations and Problem Areas are outlined in Sections F and G of the 1987 Corps Manual and Section 5 of the *Regional Supplements to the Corps of Engineers Wetland Delineation Manual*.

APPENDIX D

NRCS Custom Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eastern Santa Clara Area, California

Project Garlic, Gilroy, CA

September 2, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

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 1:24,000.

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: Eastern Santa Clara Area, California
Survey Area Data: Version 16, May 29, 2020

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

Date(s) aerial images were photographed: Mar 31, 2019—Apr 24, 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
Ce	Campbell silty clay, muck substratum	23.3	34.5%
Cg	Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA 14	44.2	65.5%
Totals for Area of Interest		**67.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Santa Clara Area, California

Ce—Campbell silty clay, muck substratum

Map Unit Setting

National map unit symbol: hbj3
Elevation: 130 to 300 feet
Mean annual precipitation: 16 to 20 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Campbell and similar soils: 85 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Campbell

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A1 - 0 to 18 inches: silty clay
A2 - 18 to 36 inches: silty clay loam
2Cg - 36 to 60 inches: muck, clay
2Cg - 36 to 60 inches:

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Very high (about 17.3 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Unnamed
Percent of map unit: 2 percent
Landform: Alluvial flats
Hydric soil rating: Yes

Unnamed
Percent of map unit: 2 percent
Landform: Alluvial flats
Hydric soil rating: Yes

Unnamed
Percent of map unit: 2 percent
Hydric soil rating: No

Cg—Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA 14

Map Unit Setting
National map unit symbol: 2vbsp
Elevation: 130 to 2,400 feet
Mean annual precipitation: 12 to 28 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 250 to 275 days
Farmland classification: Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition
Clear lake and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Clear Lake

Setting
Landform: Basin floors
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Clayey alluvium derived from metamorphic and sedimentary rock

Typical profile
Ap - 0 to 6 inches: clay
Bss1 - 6 to 26 inches: clay
Bss2 - 26 to 36 inches: clay
C - 36 to 60 inches: clay

Properties and qualities
Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 48 inches
Frequency of flooding: Occasional
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 4 percent
Maximum salinity: Nonsaline to very slightly saline (0.5 to 3.0 mmhos/cm)
Sodium adsorption ratio, maximum: 7.0
Available water capacity: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Capay

Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed

Percent of map unit: 5 percent
Landform: Alluvial flats
Hydric soil rating: Yes

Unnamed

Percent of map unit: 5 percent
Landform: Alluvial flats
Hydric soil rating: Yes

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APPENDIX E. Precipitation Analysis

1. APT Results
2. WETS Summary Table

Antecedent Precipitation Tool v.1.0 - Watershed Sampling Summary

Generated on 2020-09-04

User Inputs

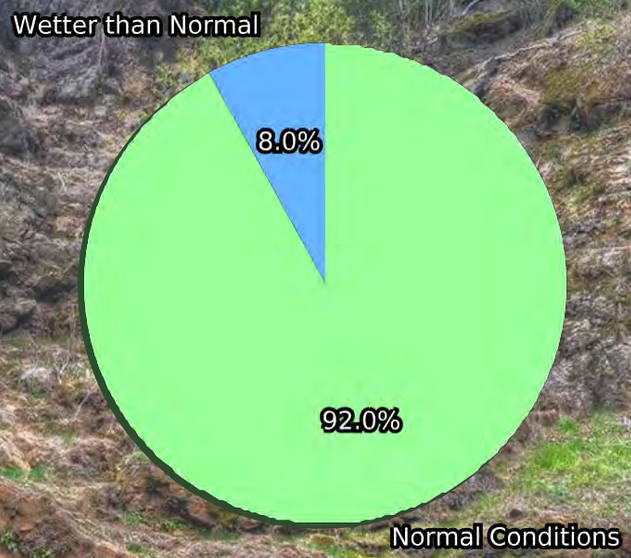
Coordinates	36.985289, -121.567474
Date	2020-07-21
Geographic Scope	HUC8

Intermediate Data

Hydrologic Unit Code	18060002
Watershed Size	1300.62 mi²
# Random Sampling Points	79

Preliminary Result

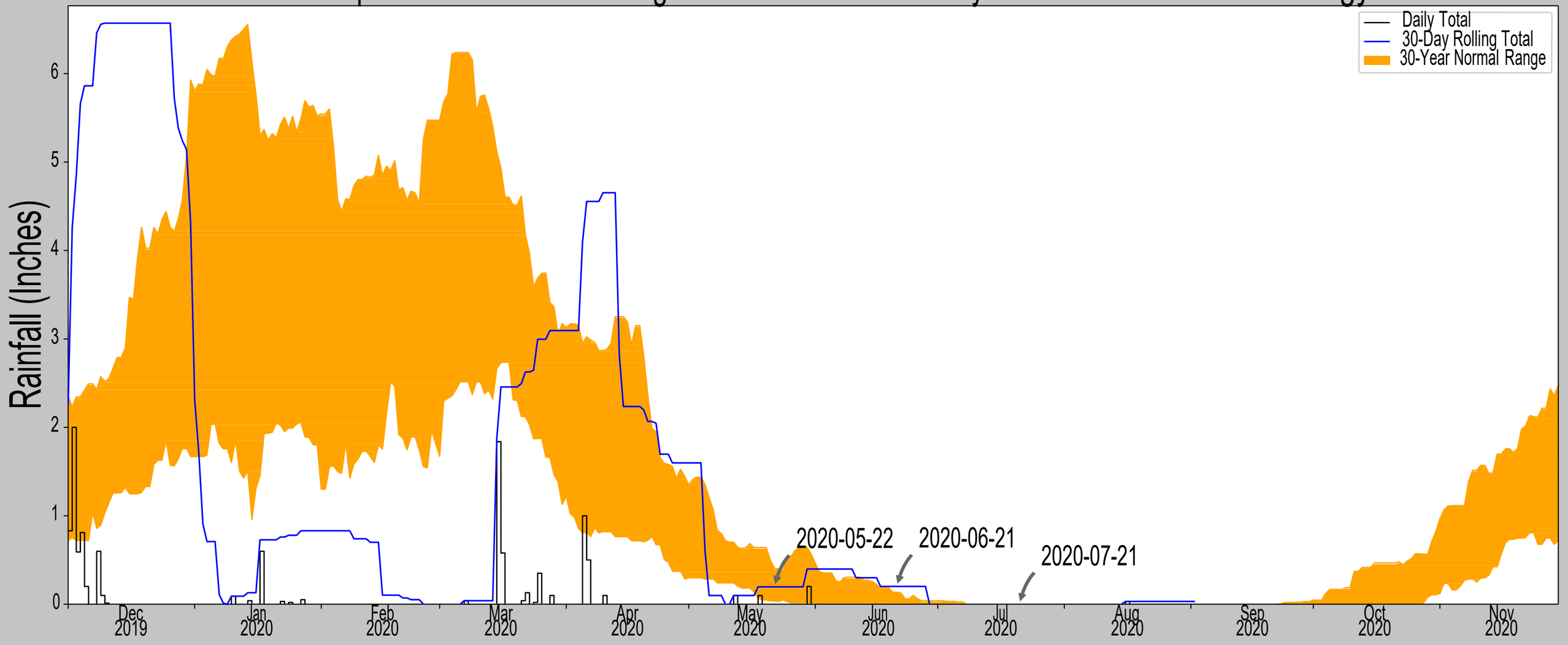
Average Antecedent Precipitation Score	12.95
Preliminary Determination	Normal Conditions



Sampling Point Breakdown

Antecedent Precipitation Score	Antecedent Precipitation Condition	WebWIMP H_2O Balance	Drought Index (PDSI)	# of Points
17	Wetter than Normal	Dry Season	Incipient drought	2
15	Wetter than Normal	Dry Season	Incipient drought	3
15	Wetter than Normal	Dry Season	Mild drought	1
14	Normal Conditions	Dry Season	Incipient drought	32
13	Normal Conditions	Dry Season	Incipient drought	1
12	Normal Conditions	Dry Season	Incipient drought	32
12	Normal Conditions	Dry Season	Mild drought	2
10	Normal Conditions	Dry Season	Incipient drought	6

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.985289, -121.567474
Observation Date	2020-07-21
Elevation (ft)	2001.1
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

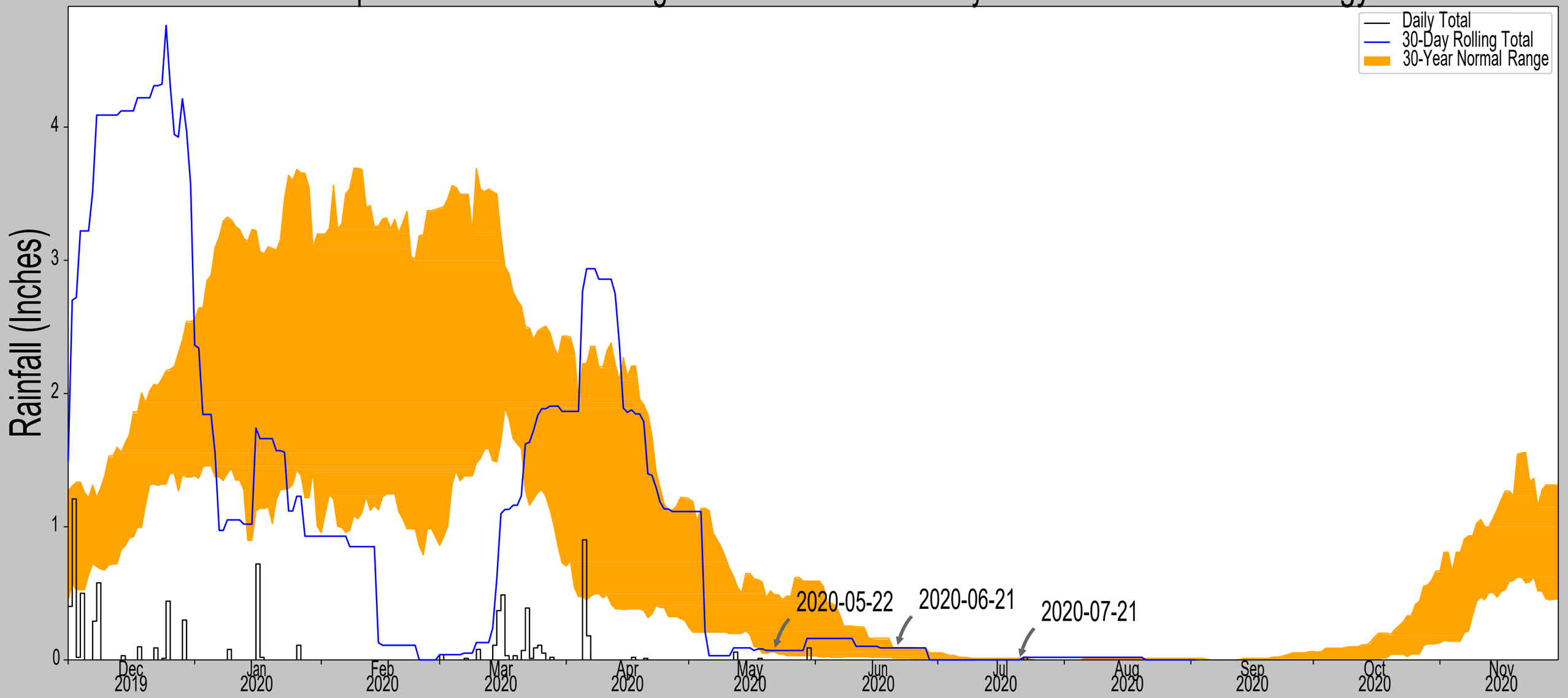
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.13622	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	1.285	1807.202	2.901	10134	87
GILROY 2.0 S	36.9811, -121.572	221.129	0.382	1779.971	0.852	228	0
GILROY 0.1 SE	37.0092, -121.577	210.958	1.734	1790.142	3.884	412	3
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	19.564	198.047	12.678	54	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	13.945	622.916	14.962	14	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	8.197	1663.173	17.322	9	0
LOS GATOS 6.1 S	37.1427, -121.9725	1731.955	24.838	269.145	17.862	14	0
BONNY DOON 2.0 NE	37.0681, -122.1329	1879.921	31.71	121.179	18.112	9	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	25.987	339.026	20.504	165	0
AROMAS 2.0 SSW	36.85, -121.65	344.16	10.4	1656.94	21.912	7	0
BLACK MTN 2 WSW	37.3167, -122.1667	2120.079	40.166	118.979	22.854	80	0
HOLLISTER 2	36.8483, -121.4214	274.934	12.438	1726.166	27.067	196	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	11.757	1905.956	27.699	30	0

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.749189, -121.326206
Observation Date	2020-07-21
Elevation (ft)	568.31
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

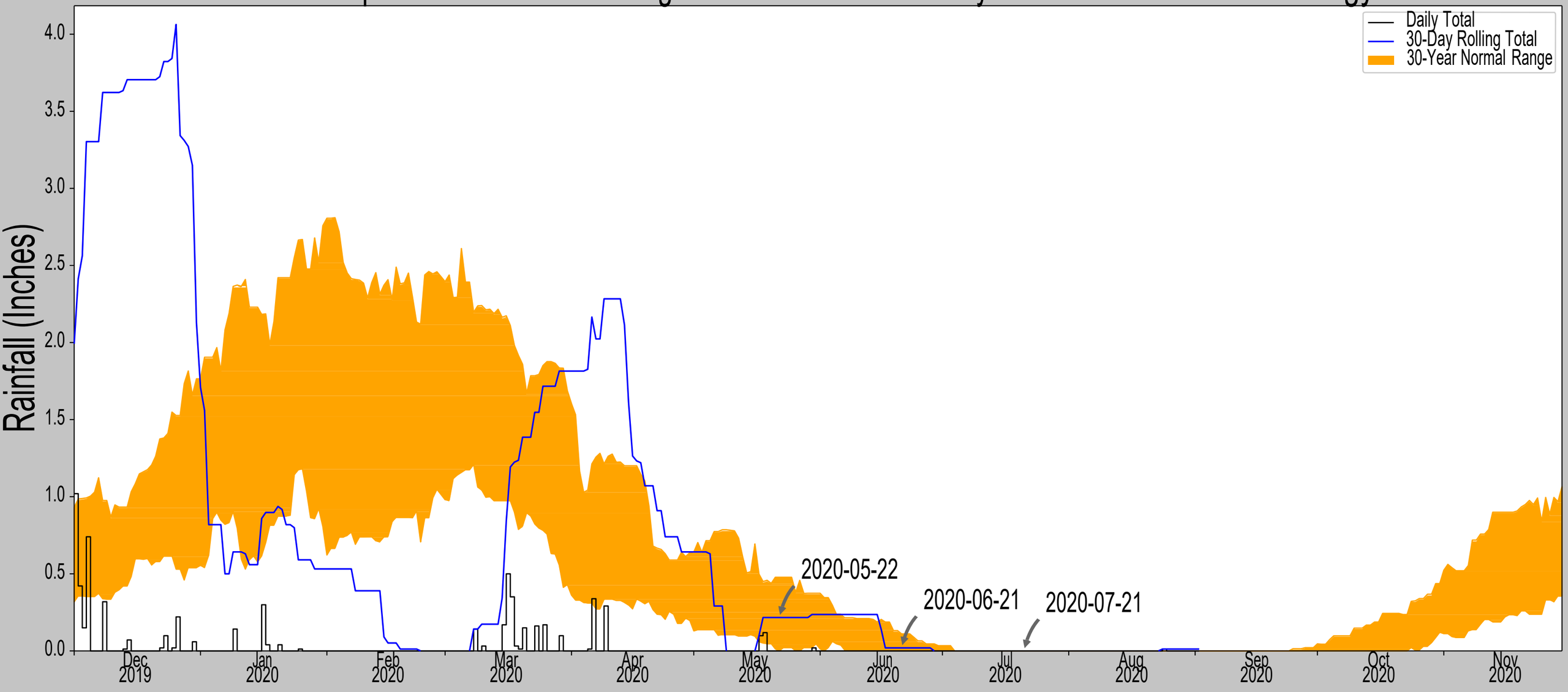
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.011811	0.0	Normal	2	3	6
2020-06-21	0.011811	0.092913	0.090551	Normal	2	2	4
2020-05-22	0.059449	0.489764	0.070866	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SALINAS MUNICIPAL AP	36.6636, -121.6081	74.147	16.697	494.163	15.765	11338	90
PAICINES 4 W	36.715, -121.3492	904.856	2.684	336.546	2.111	14	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.746279, -121.240758
Observation Date	2020-07-21
Elevation (ft)	1795
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

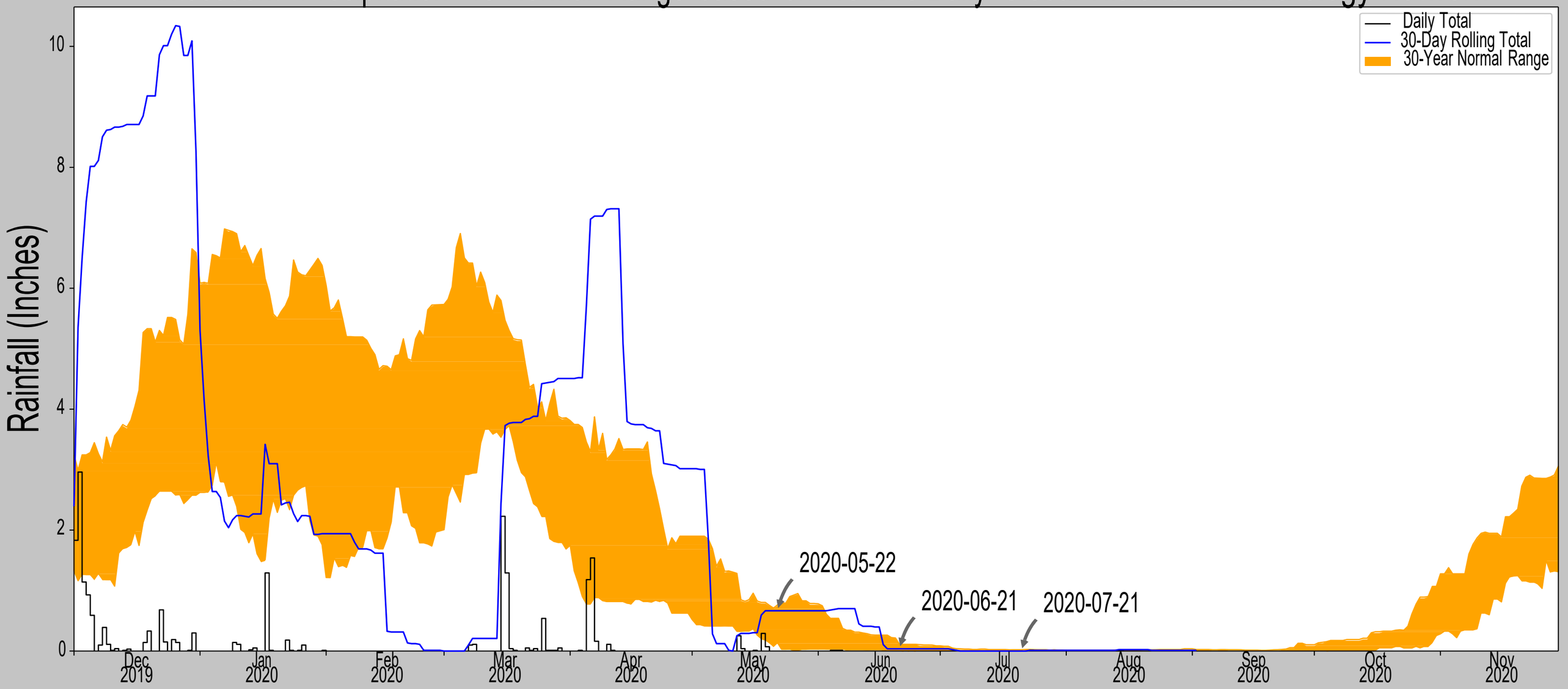
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	18.934	952.152	26.548	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	6.382	890.144	8.553	91	0
PINNACLES NM	36.4819, -121.1822	1307.087	18.553	487.913	17.401	283	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	9.549	1405.892	17.722	99	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.882681, -121.806798
Observation Date	2020-07-21
Elevation (ft)	11.28
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.035433	Normal	2	2	4
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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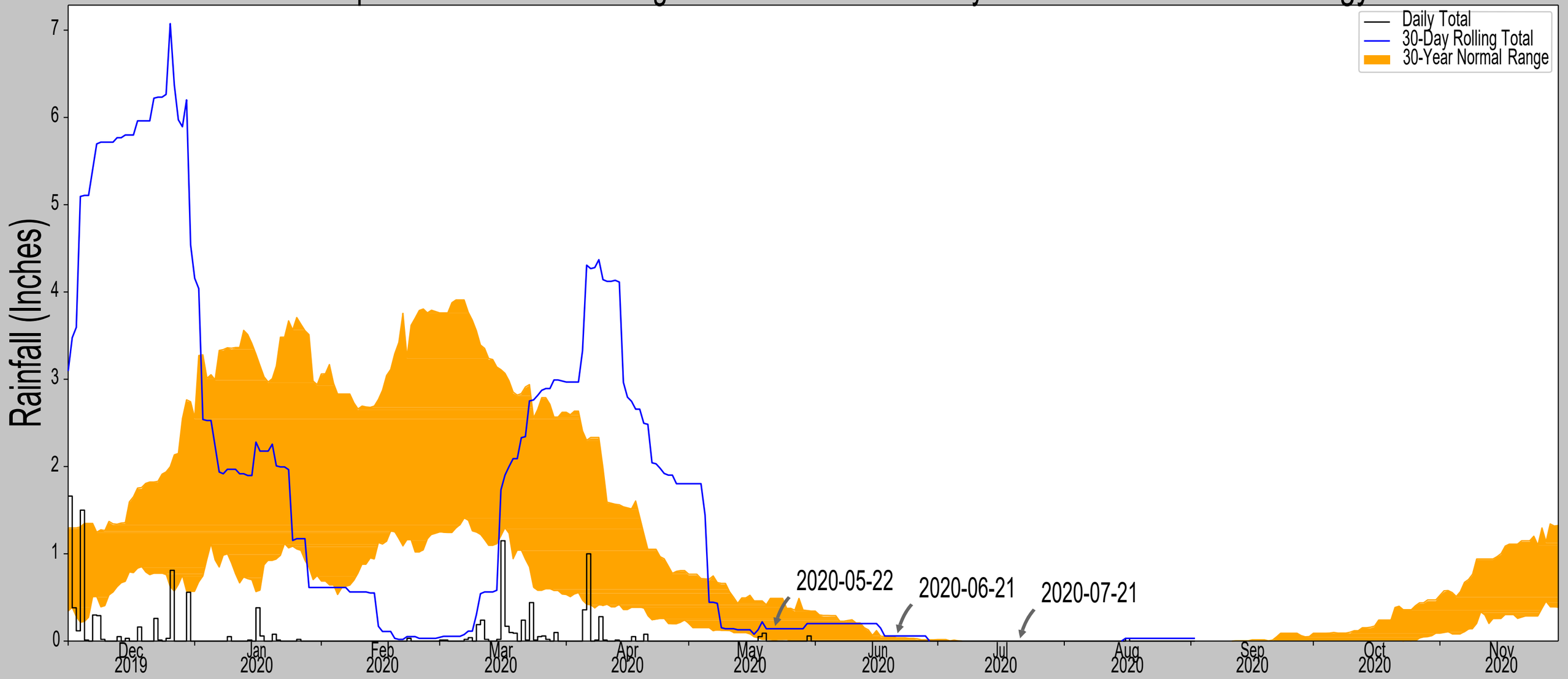
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	3.92	83.864	2.093	11002	79
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	3.805	148.825	2.279	345	11
CASTROVILLE 1.6 ENE	36.7764, -121.7284	18.045	8.528	6.765	3.895	1	0
SANTA CRUZ	36.9878, -121.9994	69.882	12.88	58.602	6.551	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.317409, -120.72264
Observation Date	2020-07-21
Elevation (ft)	3426.07
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
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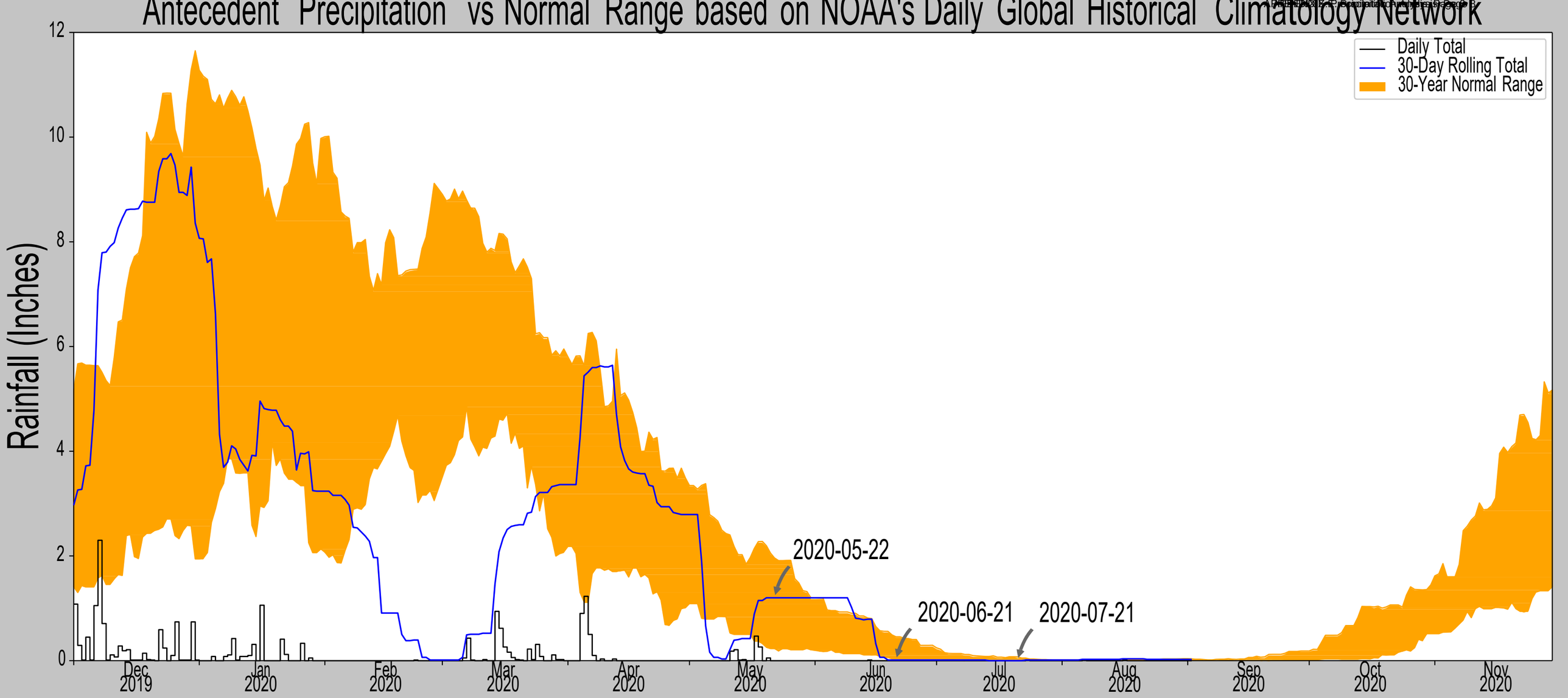
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	24.357	3106.188	86.618	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	9.05	1126.201	14.265	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	21.912	2026.136	54.257	349	0
PINNACLES NM	36.4819, -121.1822	1307.087	27.971	2118.983	71.857	3	0
COALINGA	36.1356, -120.3606	669.948	23.769	2756.122	76.206	0	10
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	32.031	2244.968	86.323	0	11

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.541069, -121.293105
Observation Date	2020-07-21
Elevation (ft)	2316.42
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.07126	0.0	Normal	2	3	6
2020-06-21	0.043307	0.455118	0.011811	Dry	1	2	2
2020-05-22	0.23189	1.96063	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

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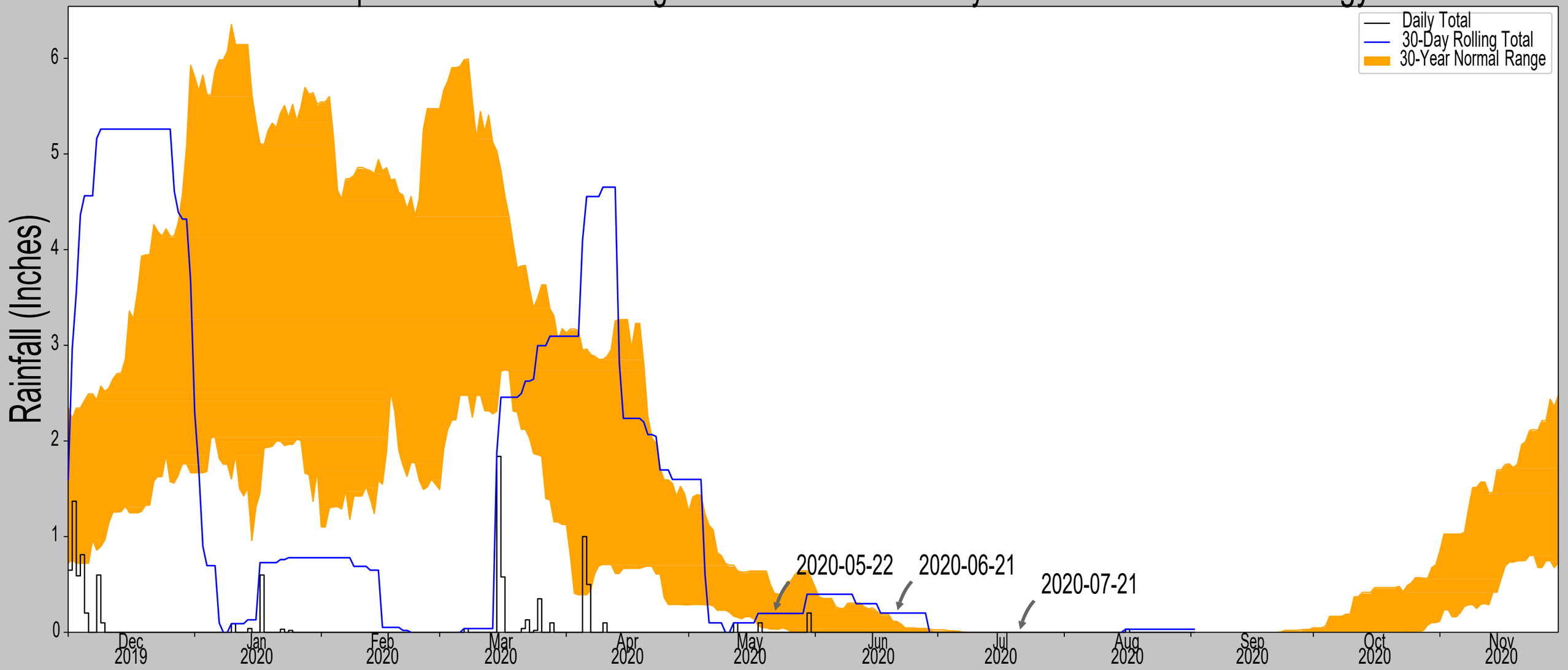
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	72.619	46.407	36.049	8505	69
PINNACLES NM	36.4819, -121.1822	1307.087	7.392	1009.333	10.787	2785	2
PALOMA	36.3503, -121.54	1774.934	19.027	541.486	18.865	40	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	41.235	16.551	19.238	5	0
CARMEL VALLEY VILLAGE 12.2 SE	36.3539, -121.5766	3083.99	20.384	767.57	24.819	11	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	50.997	117.273	28.929	0	19
PANOCHE 2 W	36.6067, -120.8842	1399.934	23.138	916.486	31.618	6	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.89498, -121.36364
Observation Date	2020-07-21
Elevation (ft)	253.84
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	13.203	59.942	6.733	10134	87
HOLLISTER 5.3 NNE	36.9198, -121.3459	325.131	1.975	71.291	1.03	258	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	2.489	6.793	1.137	556	0
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	2.266	131.003	1.317	96	0
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	3.566	72.275	1.862	0	2
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	3.648	135.268	2.135	2	1
HOLLISTER 2	36.8483, -121.4214	274.934	4.538	21.094	2.138	276	0
SAN LUIS DAM	37.0533, -121.0578	276.903	20.116	23.063	9.516	30	0

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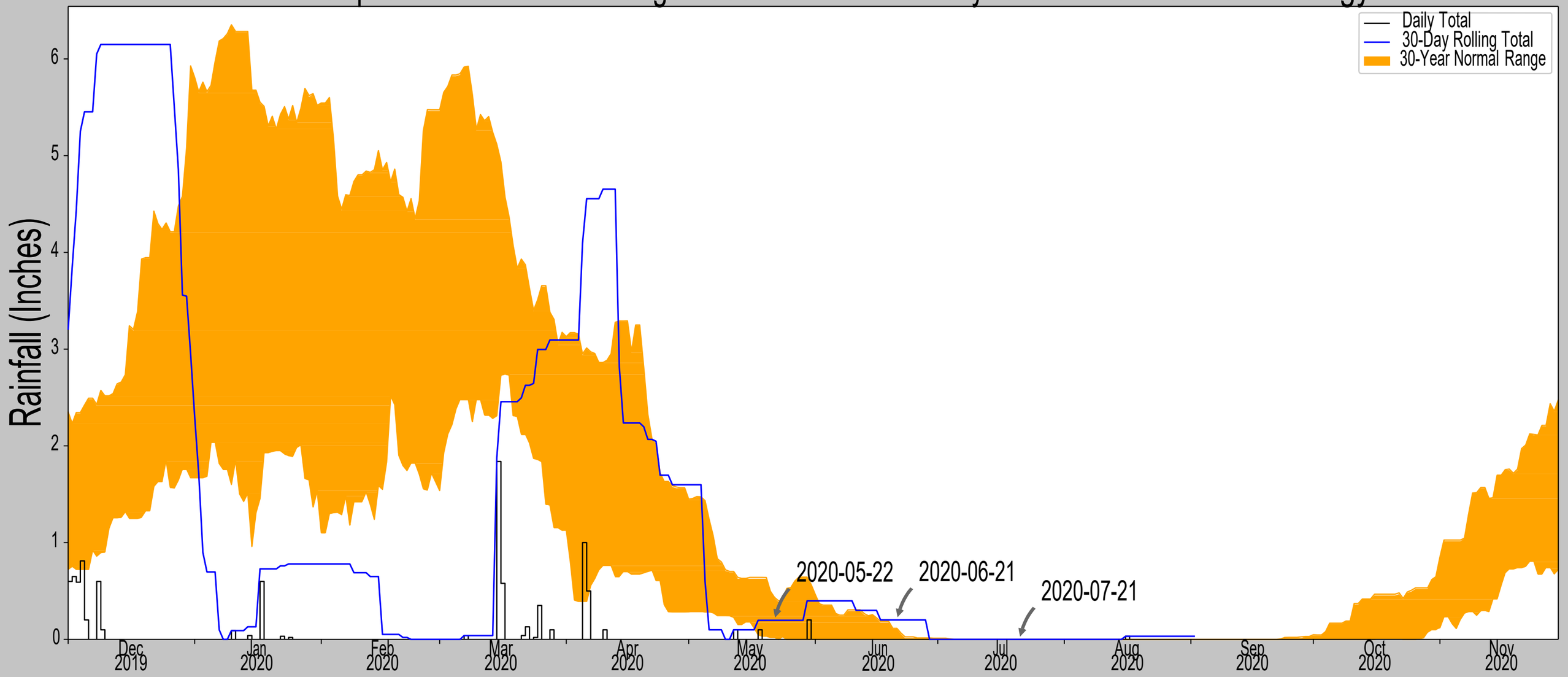
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.815034, -121.526004
Observation Date	2020-07-21
Elevation (ft)	395.49
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.022047	0.434252	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

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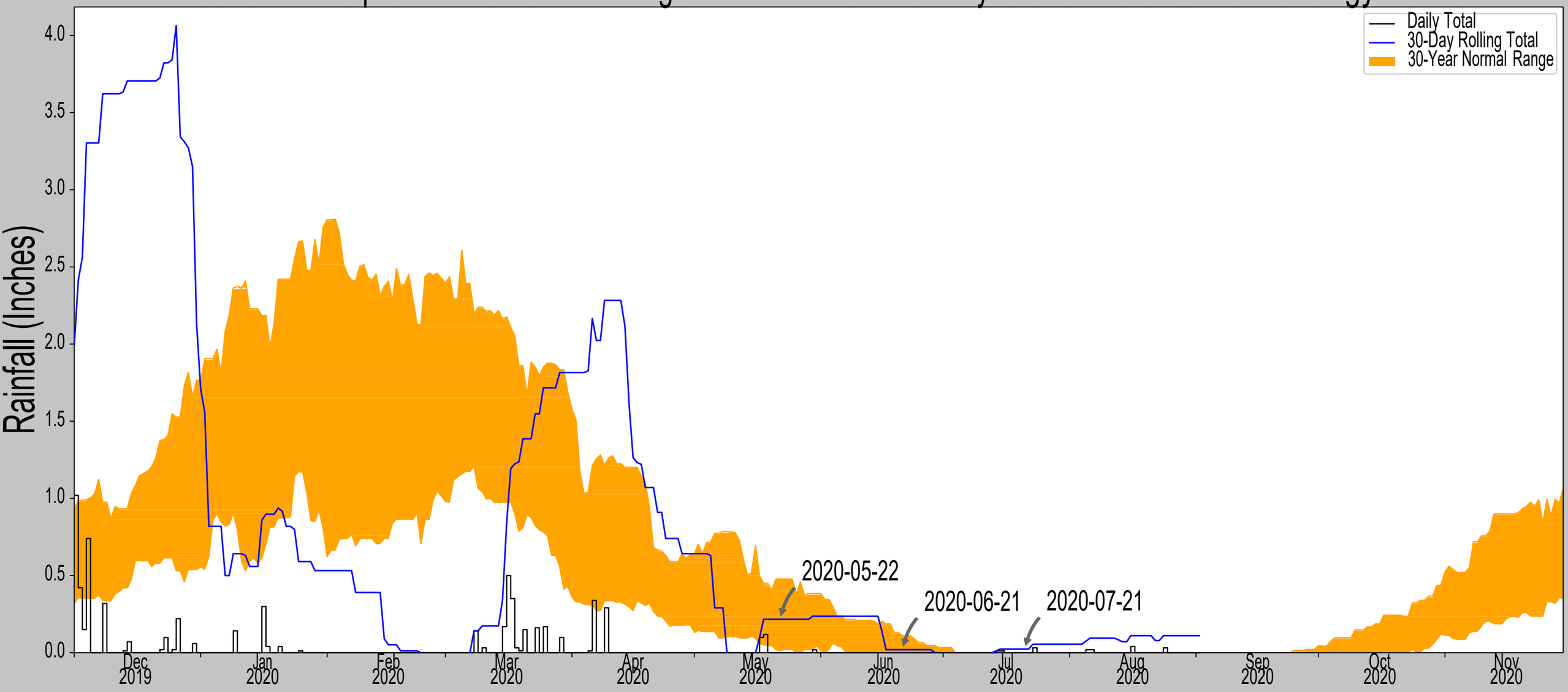
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	13.136	201.592	8.559	10134	87
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	1.793	143.521	1.064	835	0
HOLLISTER 2	36.8483, -121.4214	274.934	6.225	120.556	3.552	321	2
AROMAS 2.0 SSW	36.85, -121.65	344.16	7.27	51.33	3.645	7	0
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	7.3	69.375	3.791	22	1
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	9.1	6.382	4.153	3	0
SALINAS MUNICIPAL AP	36.6636, -121.6081	74.147	11.408	321.343	8.799	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.548738, -121.120458
Observation Date	2020-07-21
Elevation (ft)	1865.17
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.023622	Wet	3	3	9
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Wetter than Normal - 15

Figure and tables made by the
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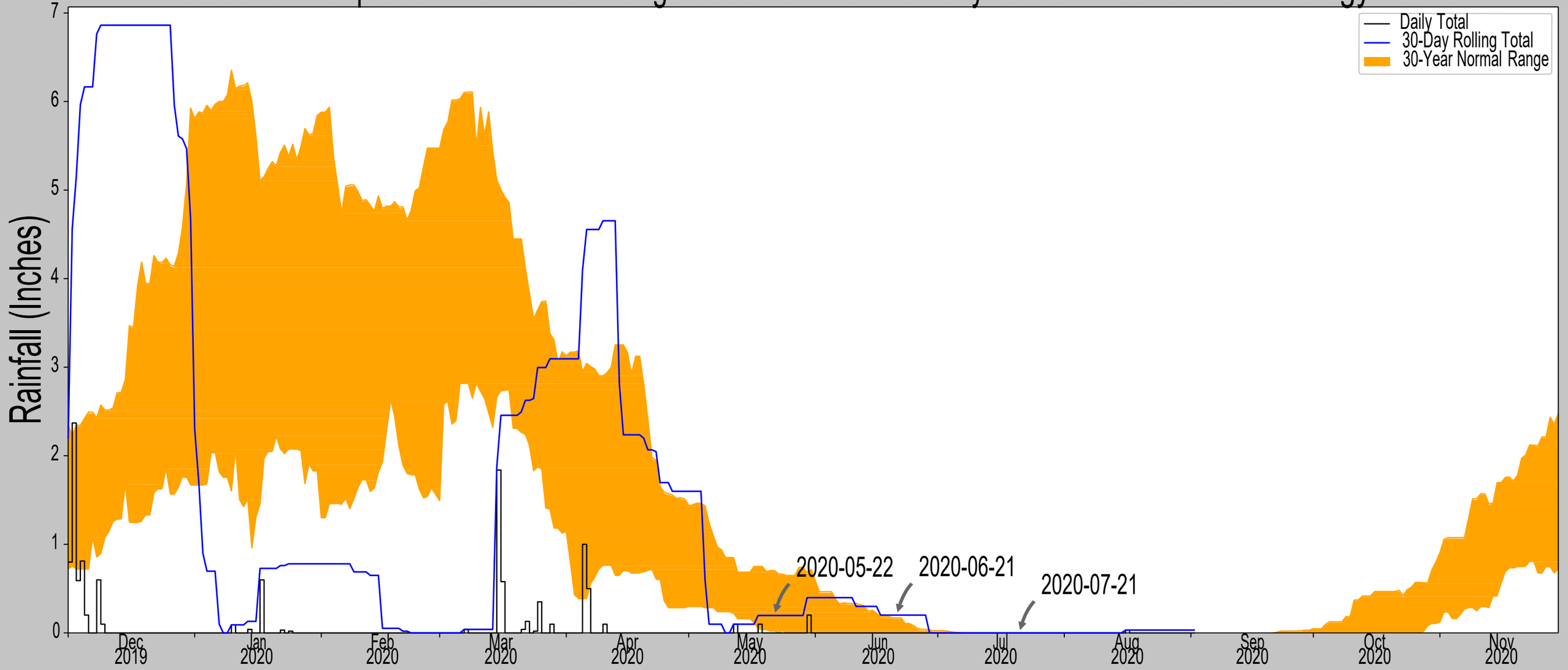
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	24.691	1022.322	36.353	10879	69
PINNACLES NM	36.4819, -121.1822	1307.087	5.752	558.083	5.798	371	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	13.707	465.236	12.545	102	0
BOULDER CREEK 3.6 NE	37.1811, -122.0911	1724.081	69.194	141.089	40.9	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.063277, -121.688202
Observation Date	2020-07-21
Elevation (ft)	422.46
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.022047	0.70315	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	8.165	228.562	5.54	10134	87
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	4.031	10.611	1.857	710	2
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	3.661	84.533	1.957	17	0
MORGAN HILL 4.5 NW	37.1725, -121.703	310.039	7.591	112.421	4.269	10	0
GILROY 0.1 SE	37.0092, -121.577	210.958	7.182	211.502	4.751	6	1
APTOS 2.6 E	36.9961, -121.8536	382.874	10.236	39.586	5.011	163	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	10.405	262.355	7.412	210	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	10.186	327.316	7.918	102	0

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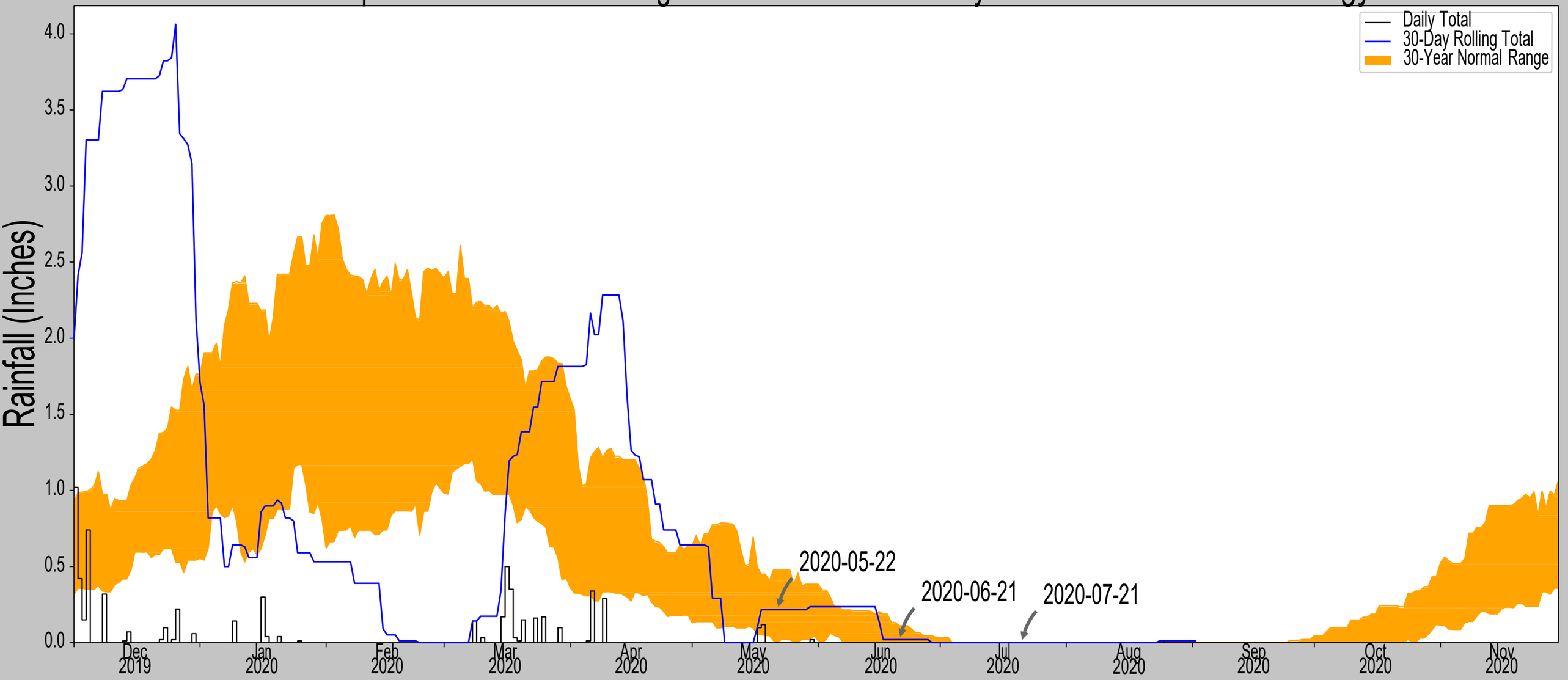
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.702335, -121.202756
Observation Date	2020-07-21
Elevation (ft)	1067.29
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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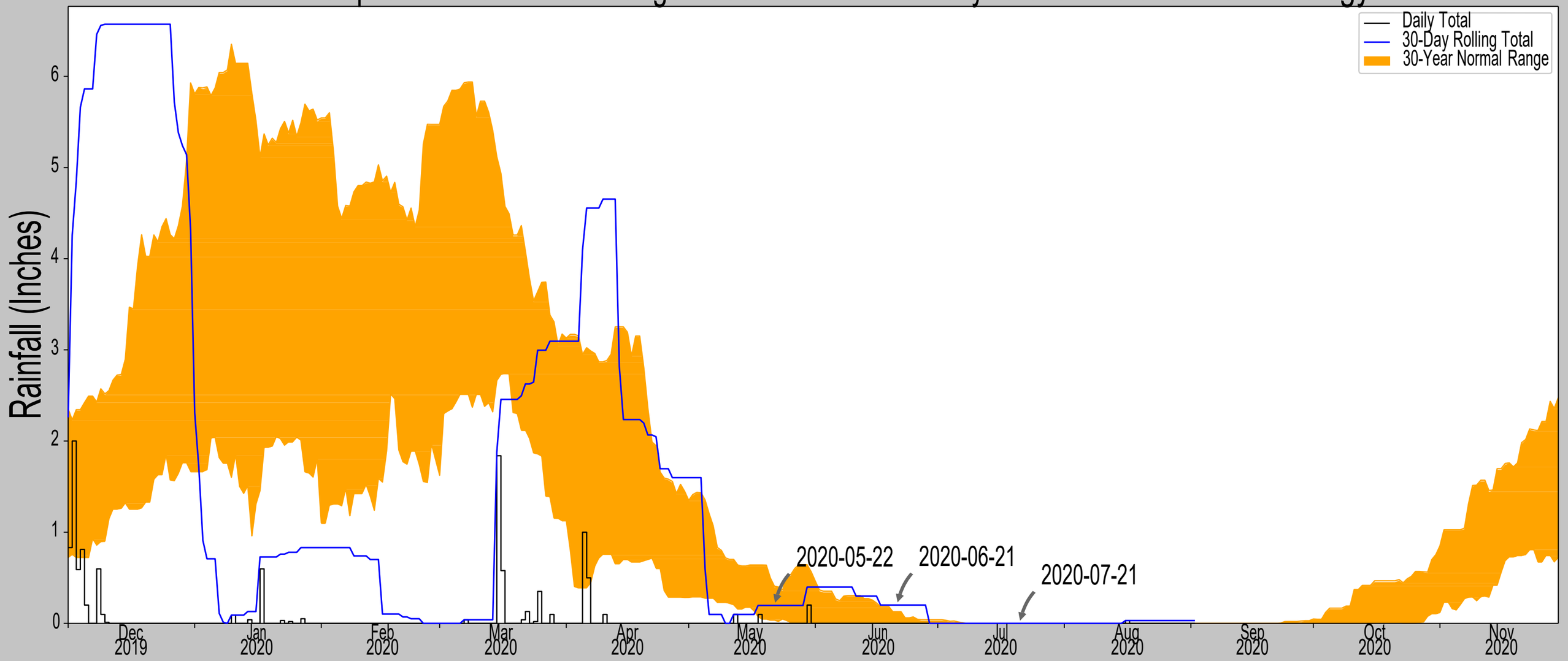
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	18.867	224.442	12.725	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	8.159	162.434	4.997	91	0
PINNACLES NM	36.4819, -121.1822	1307.087	15.273	239.797	10.535	283	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	18.853	332.644	14.755	99	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	13.192	678.182	14.883	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.935163, -121.577094
Observation Date	2020-07-21
Elevation (ft)	521.77
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.127953	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	4.779	327.872	3.717	10134	87
GILROY 2.0 S	36.9811, -121.572	221.129	3.186	300.641	2.392	228	0
GILROY 0.1 SE	37.0092, -121.577	210.958	5.115	310.812	3.892	412	3
AROMAS 2.0 SSW	36.85, -121.65	344.16	7.131	177.61	4.475	182	0
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	6.976	269.801	5.021	82	0
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	11.097	195.655	7.165	6	0
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	13.34	88.699	7.186	2	0
HOLLISTER 2	36.8483, -121.4214	274.934	10.49	246.836	7.31	276	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	10.614	426.626	9.305	30	0

Figure and tables made by the
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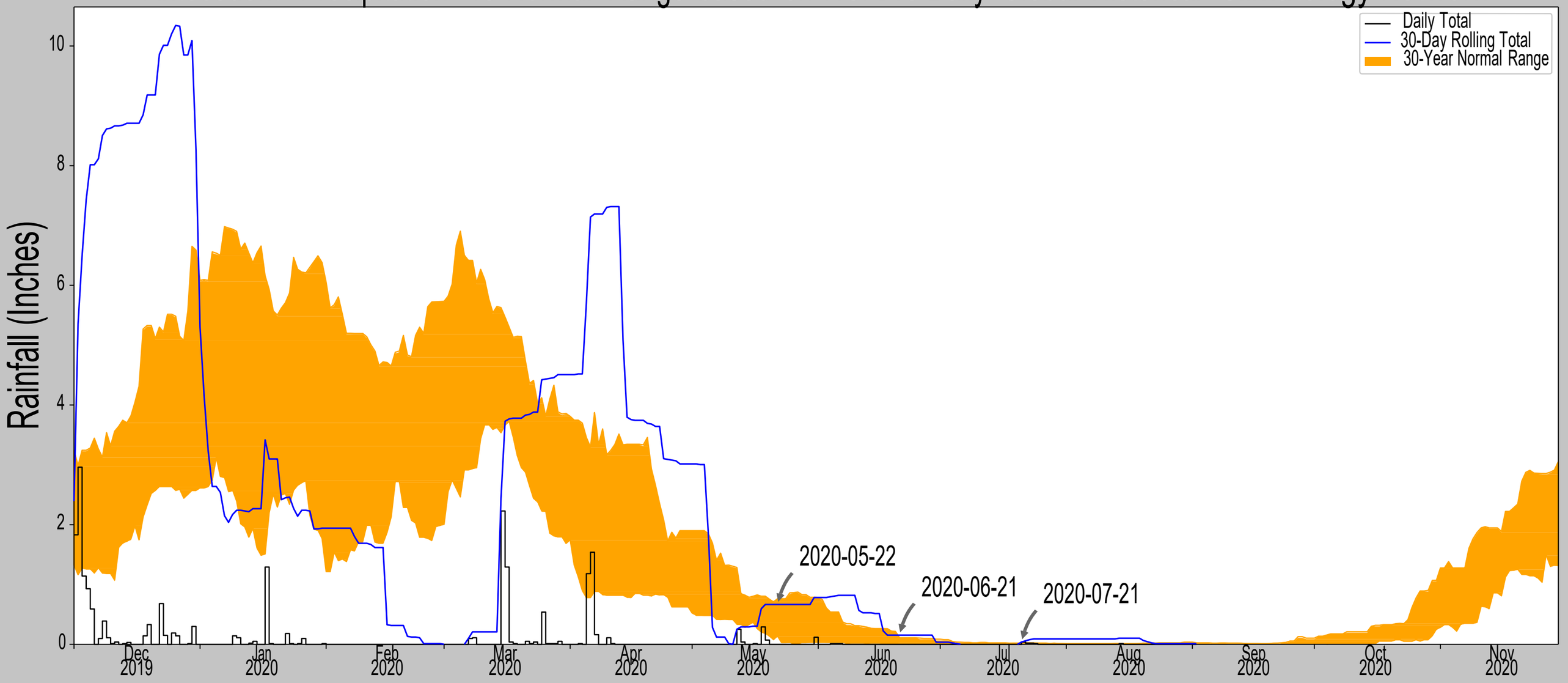
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.009071, -121.784359
Observation Date	2020-07-21
Elevation (ft)	715.05
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.03937	Wet	3	3	9
2020-06-21	0.008268	0.110236	0.153543	Wet	3	2	6
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Wetter than Normal - 17

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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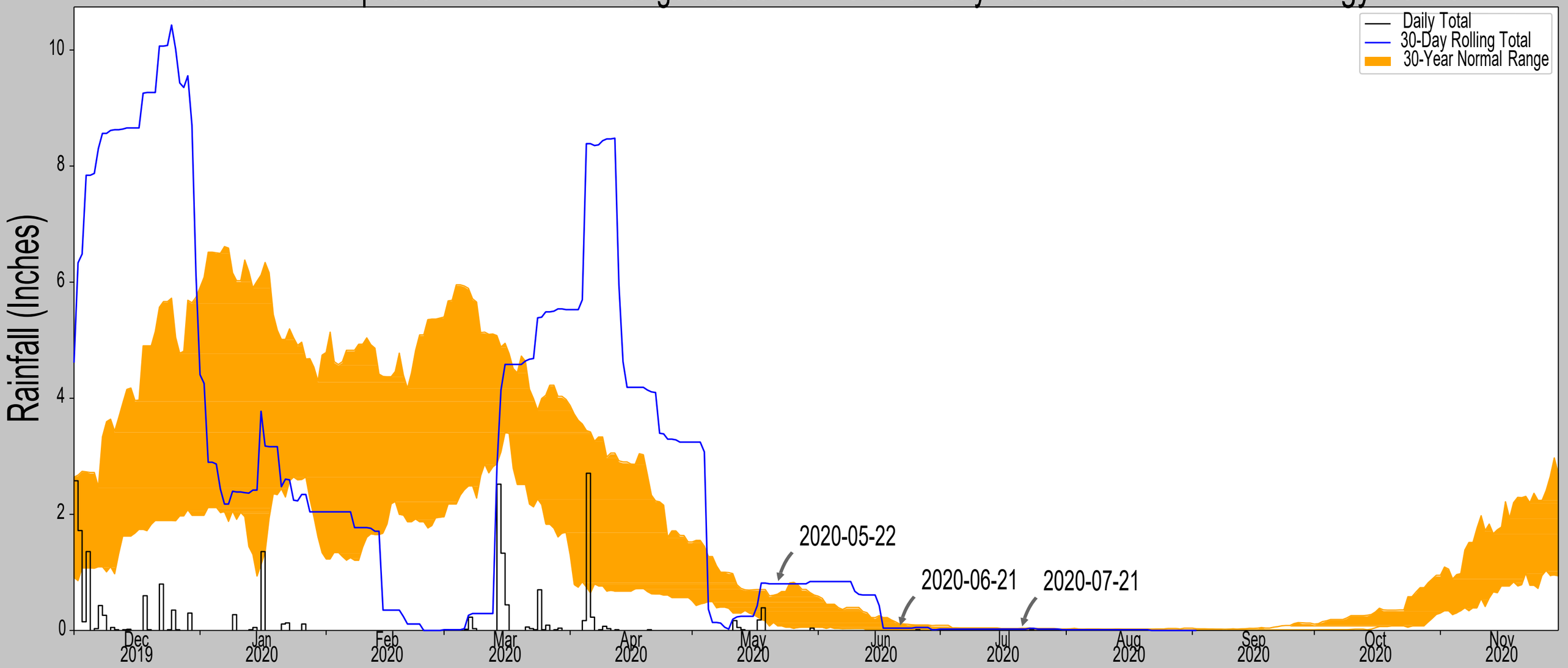
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	5.472	619.906	5.855	11002	79
APTOS 2.6 E	36.9961, -121.8536	382.874	3.924	332.176	3.069	205	0
WATSONVILLE 3.9 NW	36.9557, -121.8217	329.068	4.224	385.982	3.531	0	11
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	5.068	554.945	5.093	141	0
GILROY	37.0031, -121.5608	193.898	12.342	521.152	11.986	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.054969, -121.830927
Observation Date	2020-07-21
Elevation (ft)	1753.9
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.037795	0.023622	Normal	2	3	6
2020-06-21	0.011811	0.111417	0.03937	Normal	2	2	4
2020-05-22	0.082283	0.624409	0.80315	Wet	3	1	3
Result							Normal Conditions - 13

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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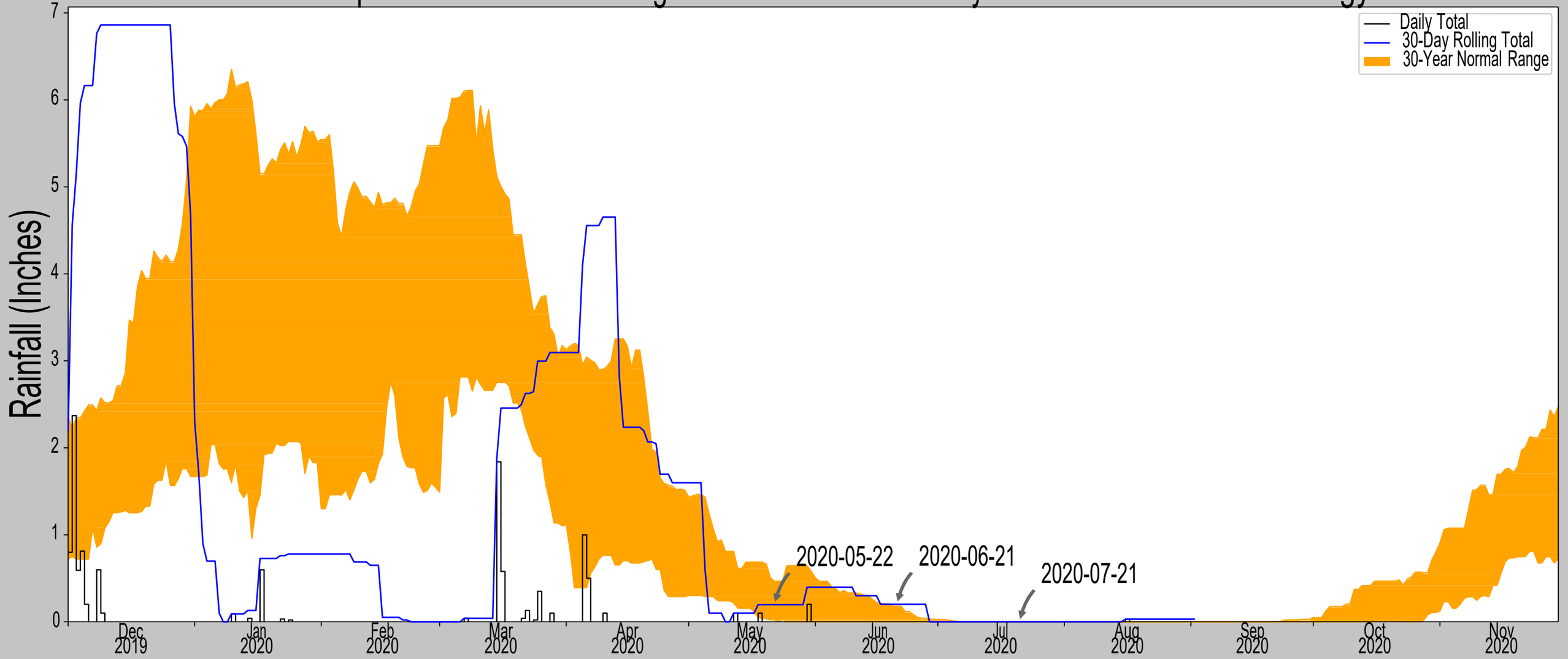
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	8.559	1593.795	17.493	7697	90
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	4.679	445.247	4.189	18	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	11.098	91.826	6.013	1	0
APTOS 2.6 E	36.9961, -121.8536	382.874	4.255	1371.026	7.748	1	0
LOS GATOS 4 SW	37.1833, -122.0333	2415.026	14.245	661.126	15.828	88	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	9.231	1658.756	19.466	3543	0
BLACK MTN 2 WSW	37.3167, -122.1667	2120.079	25.858	366.179	21.105	2	0
SANTA CRUZ	36.9878, -121.9994	69.882	10.388	1684.018	22.168	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.124805, -121.741759
Observation Date	2020-07-21
Elevation (ft)	711.72
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

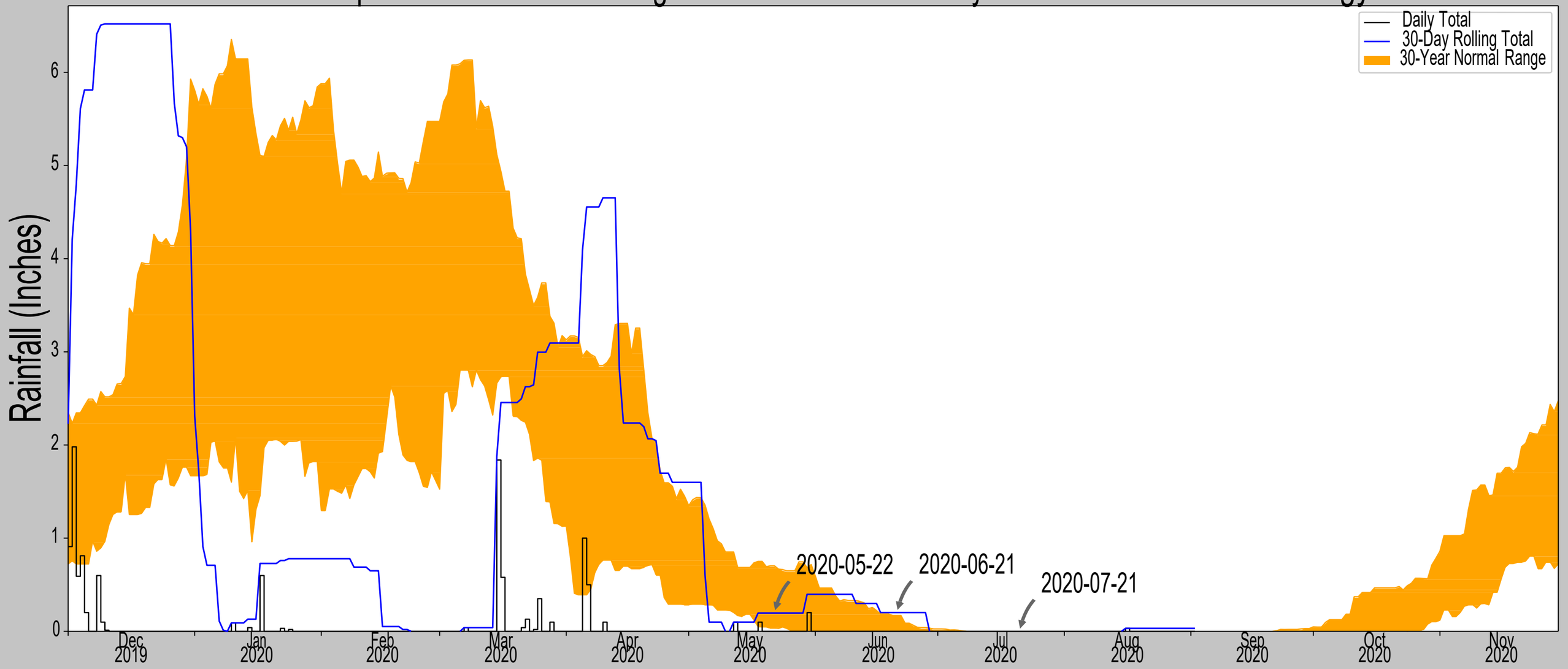
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.17874	0.200787	Wet	3	2	6
2020-05-22	0.022047	0.464173	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	13.048	517.822	12.628	10134	87
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	4.587	278.649	3.342	710	2
MORGAN HILL 4.5 NW	37.1725, -121.703	310.039	3.926	401.681	3.344	17	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	6.438	373.793	5.304	10	0
APTOS 2.6 E	36.9961, -121.8536	382.874	10.822	328.846	8.429	163	0
SAN JOSE 4.6 S	37.2381, -121.8356	158.136	9.379	553.584	9.413	1	0
FELTON 4.5 NNE	37.1051, -122.0468	837.927	16.862	126.207	9.716	9	1
SOQUEL 0.8 NE	37.0022, -121.9363	414.042	13.668	297.678	10.219	2	0
LOS GATOS	37.2319, -121.9592	365.157	14.073	346.563	11.21	303	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	13.312	551.615	13.333	3	0

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.014699, -121.544166
Observation Date	2020-07-21
Elevation (ft)	189.01
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.70315	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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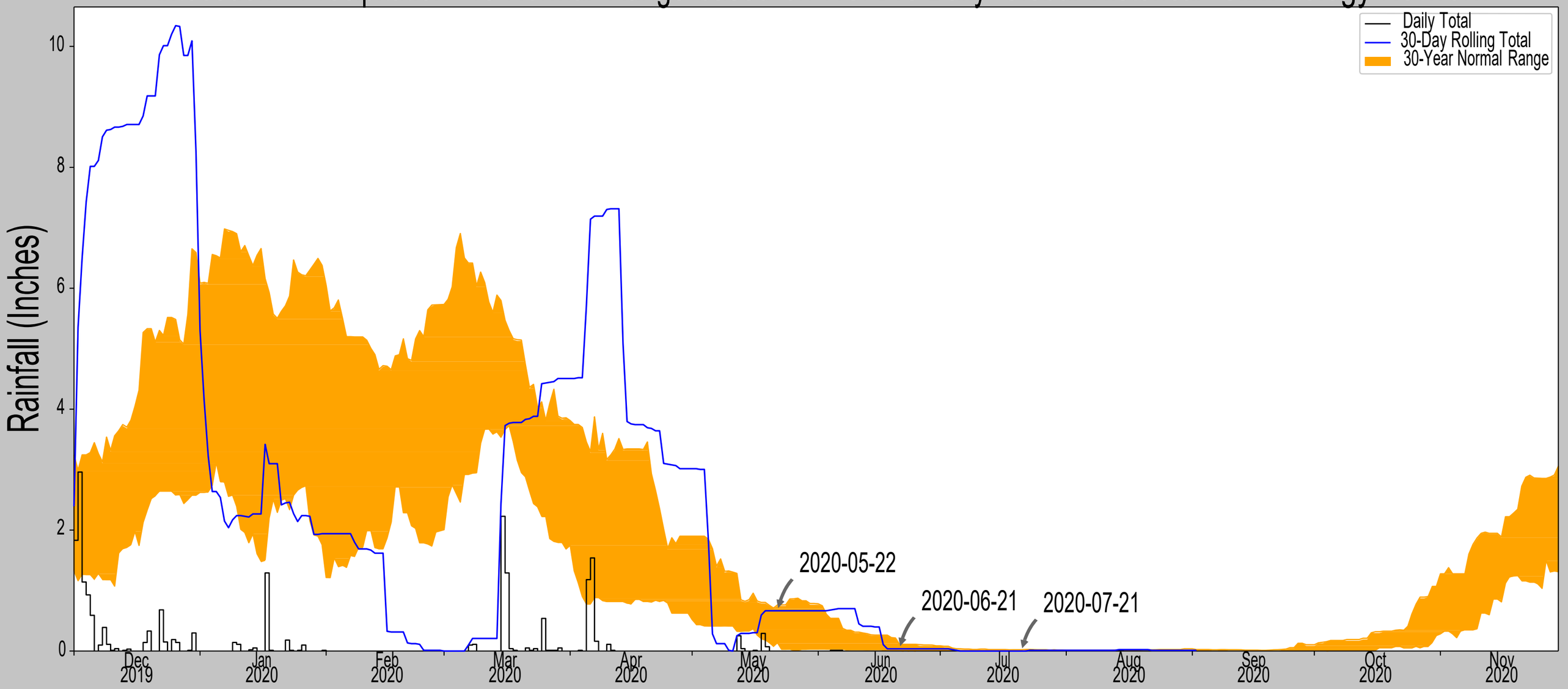
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	1.218	4.888	0.554	10134	87
GILROY 0.1 SE	37.0092, -121.577	210.958	1.851	21.948	0.874	618	3
GILROY 2.0 S	36.9811, -121.572	221.129	2.784	32.119	1.342	22	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	7.225	148.917	4.327	10	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	11.215	58.037	5.698	260	0
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	12.125	62.959	6.22	2	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	14.552	28.905	6.969	204	0
HOLLISTER 2	36.8483, -121.4214	274.934	13.348	85.924	7.154	102	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.933713, -121.745562
Observation Date	2020-07-21
Elevation (ft)	69.26
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.035433	Normal	2	2	4
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
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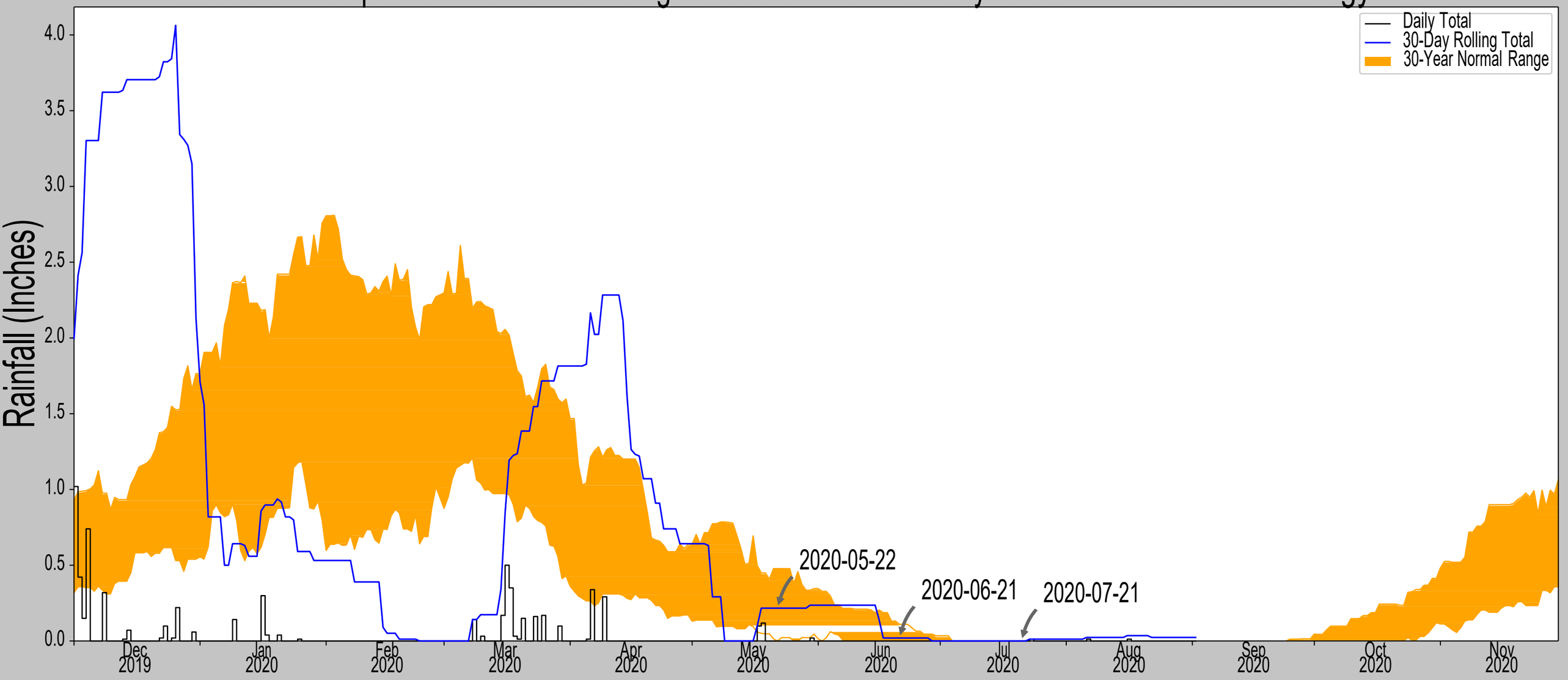
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	1.321	25.884	0.629	11002	79
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	2.381	90.845	1.288	345	11
CASTROVILLE 1.6 ENE	36.7764, -121.7284	18.045	10.911	51.215	5.469	1	0
GILROY	37.0031, -121.5608	193.898	11.27	124.638	6.476	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.732088, -121.132803
Observation Date	2020-07-21
Elevation (ft)	2234.38
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

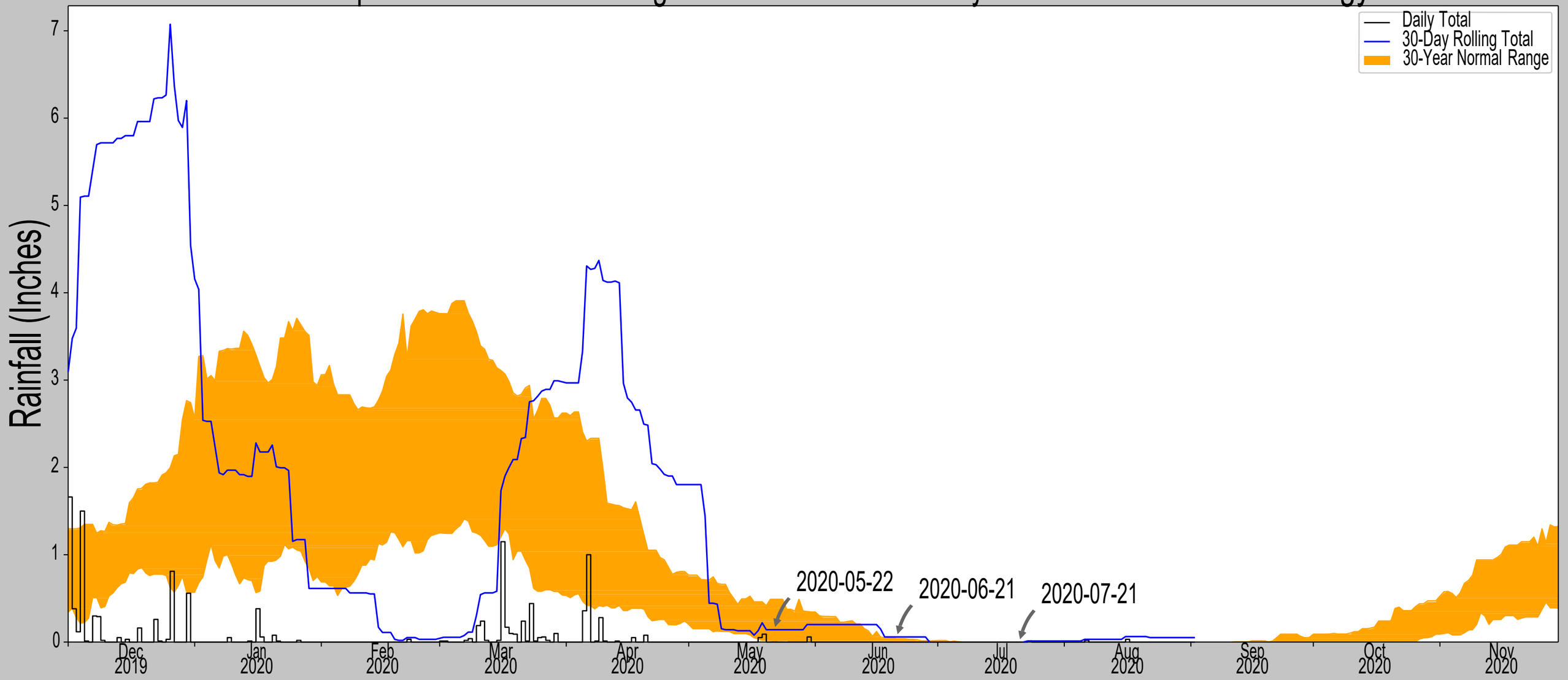
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	14.592	1391.532	26.872	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	16.275	834.446	20.904	466	0
PAICINES 4 W	36.715, -121.3492	904.856	12.042	1329.524	21.429	2	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	44.752	65.489	23.069	2	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	49.068	35.233	23.809	0	21
PINNACLES NM	36.4819, -121.1822	1307.087	17.502	927.293	24.105	3	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.436259, -120.91583
Observation Date	2020-07-21
Elevation (ft)	2402.98
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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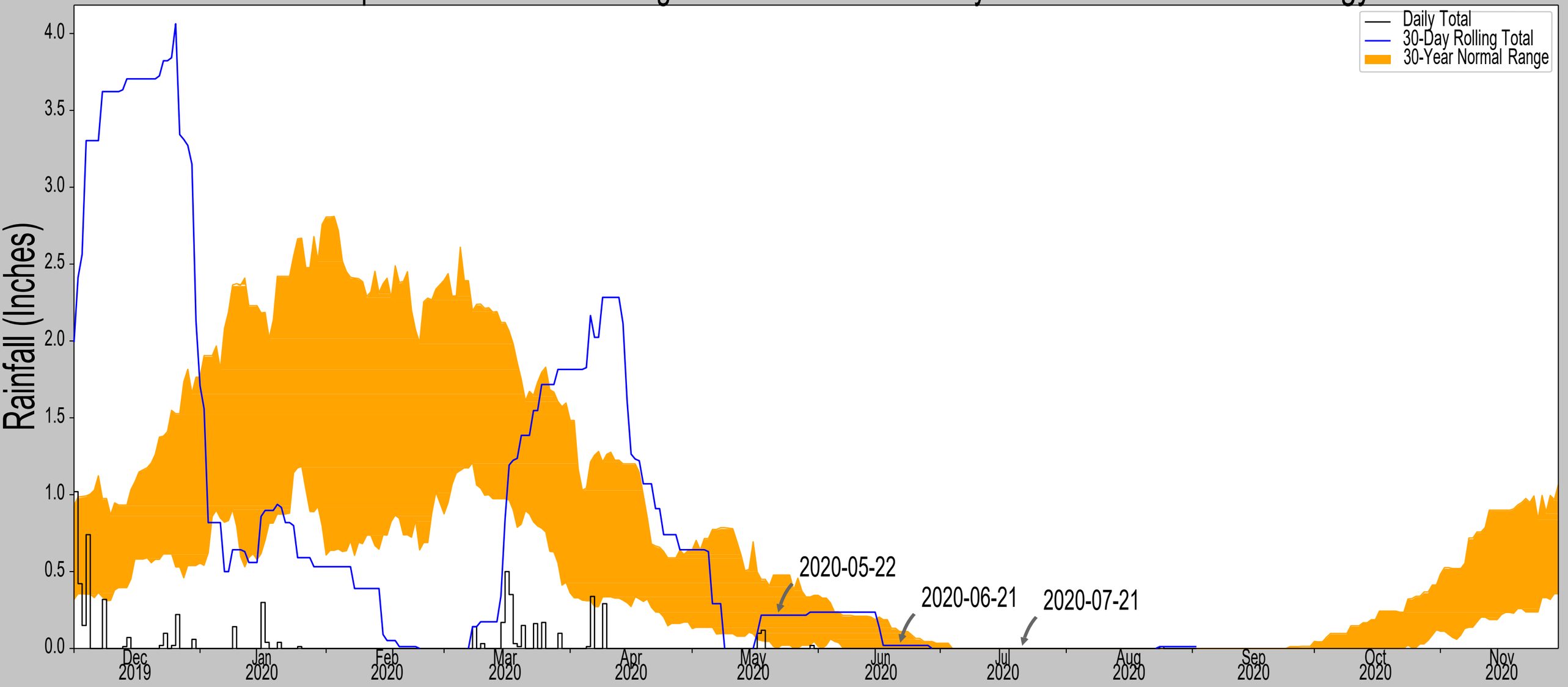
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	20.095	2083.098	50.903	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	21.078	103.111	11.658	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	11.907	1003.046	17.301	349	0
PINNACLES NM	36.4819, -121.1822	1307.087	15.135	1095.893	23.397	3	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	62.468	221.036	41.918	0	11
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	70.94	203.833	46.383	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.839363, -121.188819
Observation Date	2020-07-21
Elevation (ft)	1619.71
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

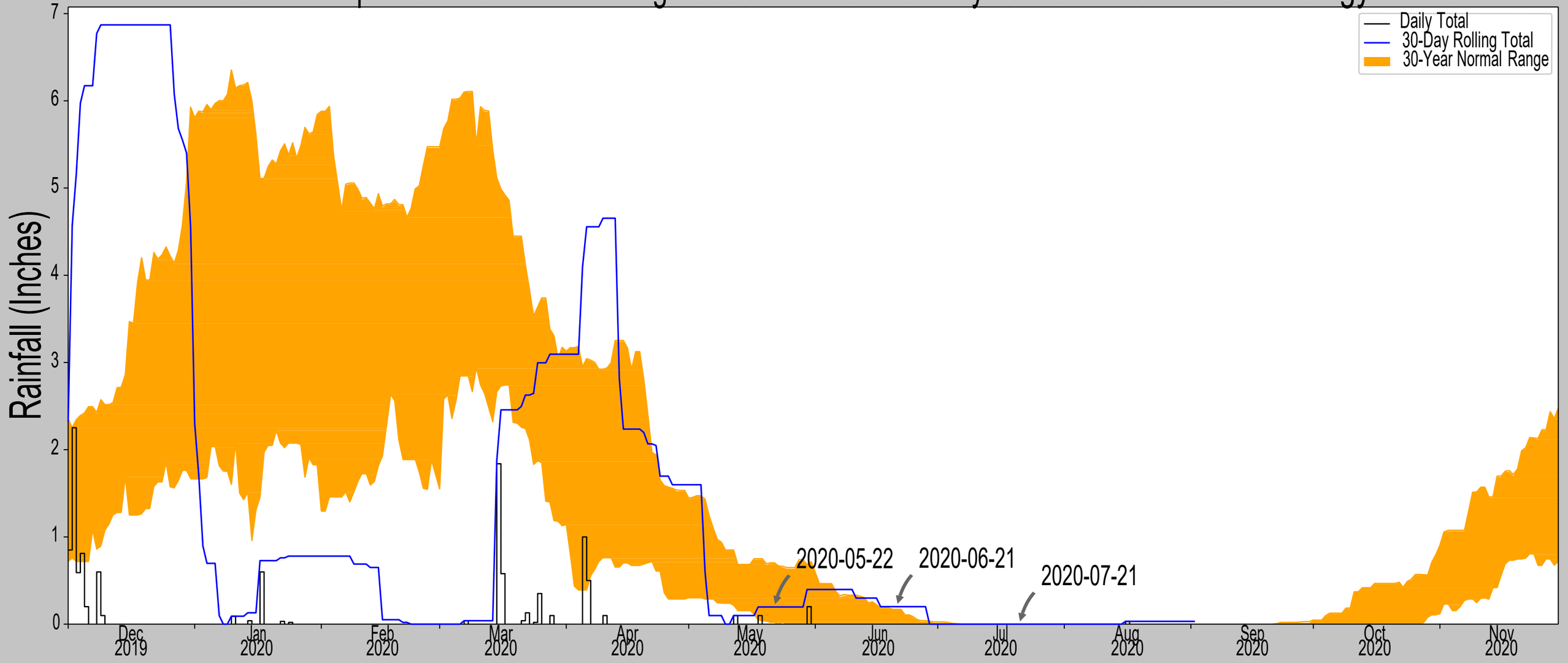
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	14.051	776.862	17.239	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	12.354	714.854	14.391	91	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	23.303	219.776	15.608	377	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	9.744	1230.602	16.376	5	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.107942, -121.634739
Observation Date	2020-07-21
Elevation (ft)	318.85
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.022047	0.70315	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	8.312	124.952	4.779	10134	87
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	1.109	19.077	0.52	91	0
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	1.475	114.221	0.832	636	2
MORGAN HILL 4.5 NW	37.1725, -121.703	310.039	5.834	8.811	2.677	10	0
GILROY 0.1 SE	37.0092, -121.577	210.958	7.529	107.892	4.2	6	1
APTOS 2.6 E	36.9961, -121.8536	382.874	14.331	64.024	7.366	163	0
AROMAS 2.0 SSW	36.85, -121.65	344.16	17.842	25.31	8.48	6	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	14.612	158.745	8.895	204	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	14.312	223.706	9.642	102	0

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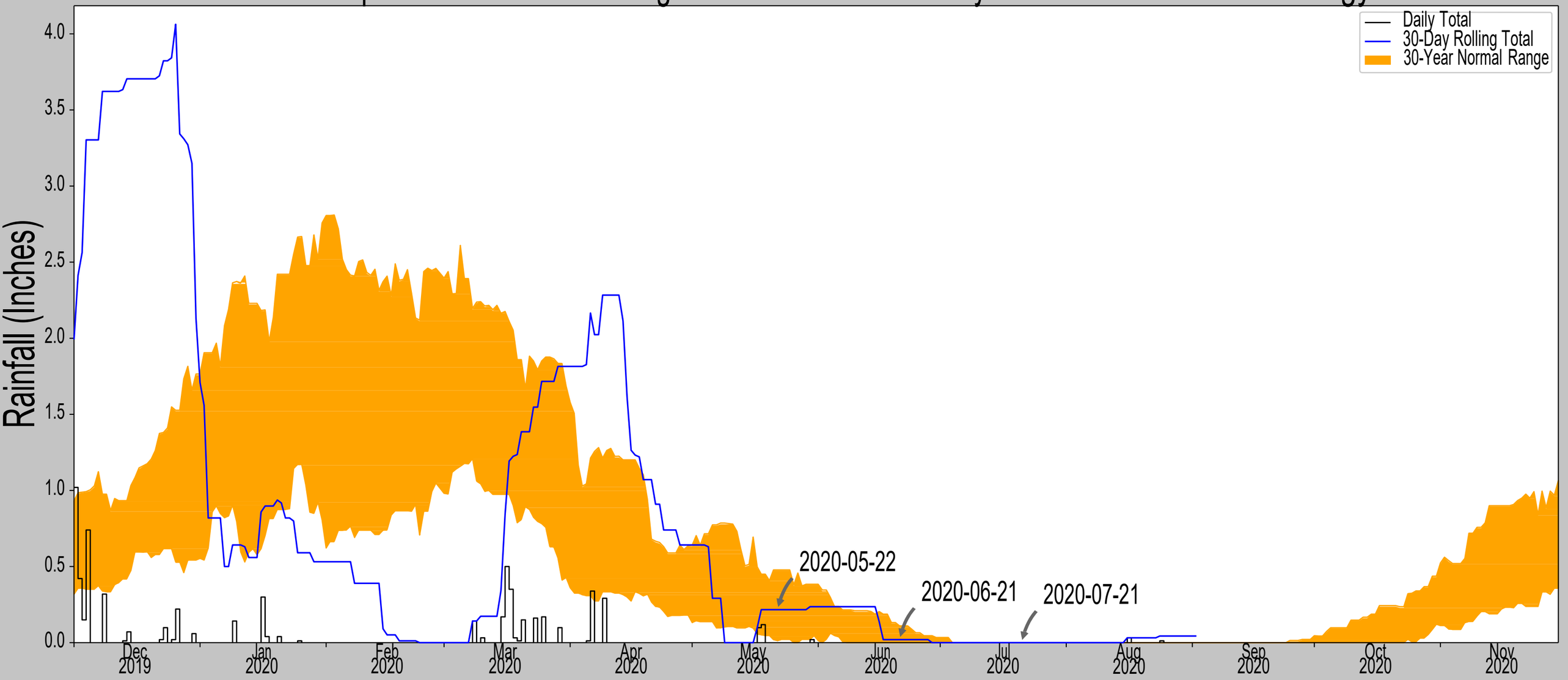
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.607999, -121.08099
Observation Date	2020-07-21
Elevation (ft)	2967.66
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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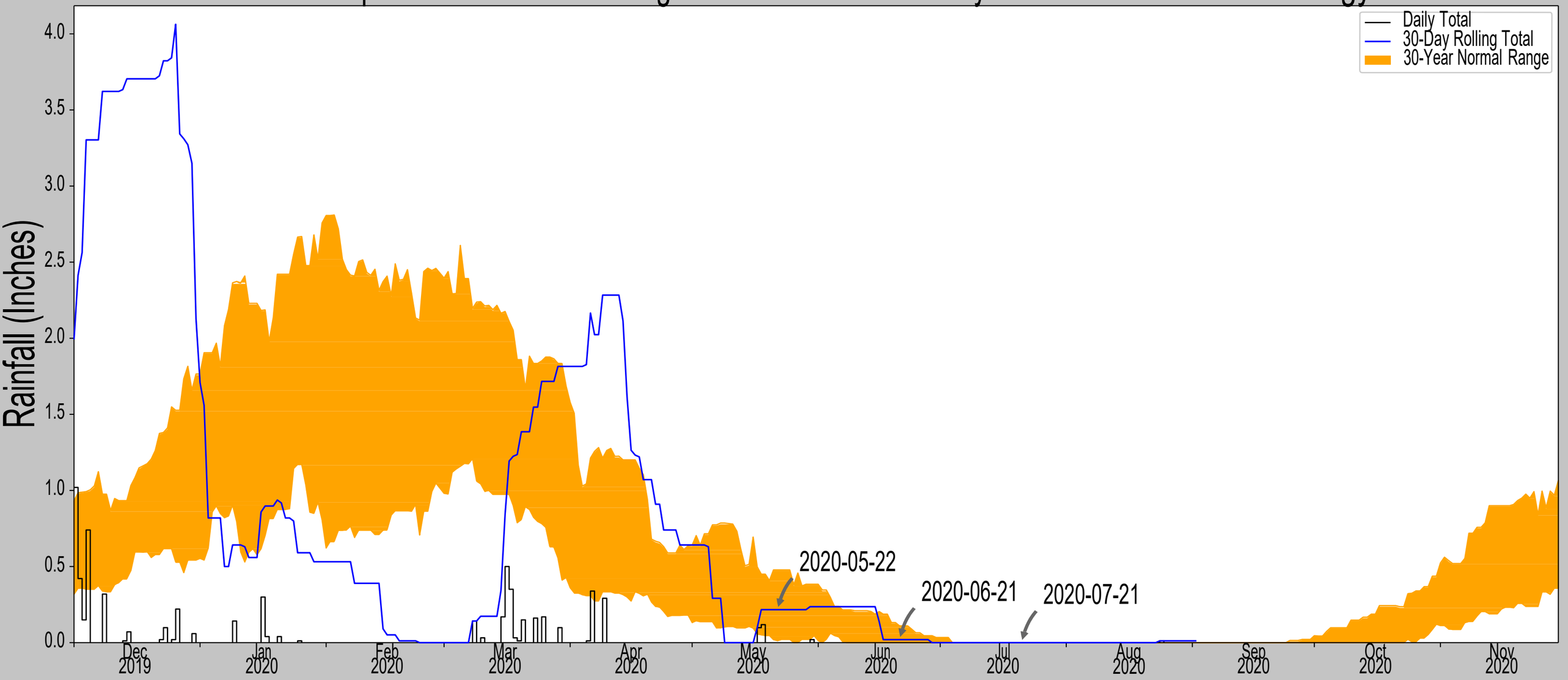
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	20.062	2124.812	51.656	10879	69
PINNACLES NM	36.4819, -121.1822	1307.087	10.367	1660.573	21.88	371	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	10.915	1567.726	22.023	102	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	47.517	343.644	37.712	0	11
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	22.566	2578.552	68.342	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.631793, -121.211072
Observation Date	2020-07-21
Elevation (ft)	1212.24
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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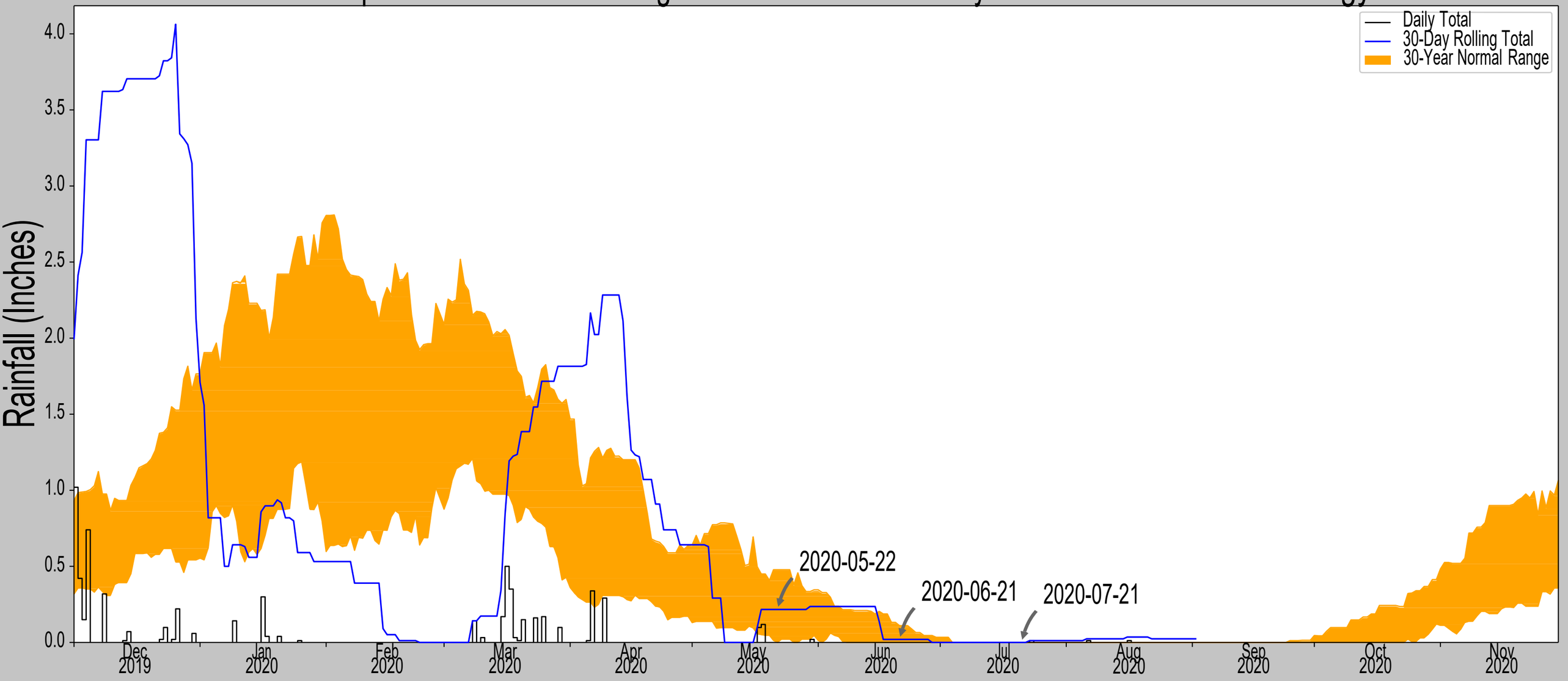
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	22.581	369.392	18.503	10879	69
PINNACLES NM	36.4819, -121.1822	1307.087	10.48	94.847	5.71	371	0
PAICINES 4 W	36.715, -121.3492	904.856	9.573	307.384	7.25	3	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	18.21	187.694	11.612	99	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	16.852	823.132	21.455	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.690367, -121.084773
Observation Date	2020-07-21
Elevation (ft)	2286.88
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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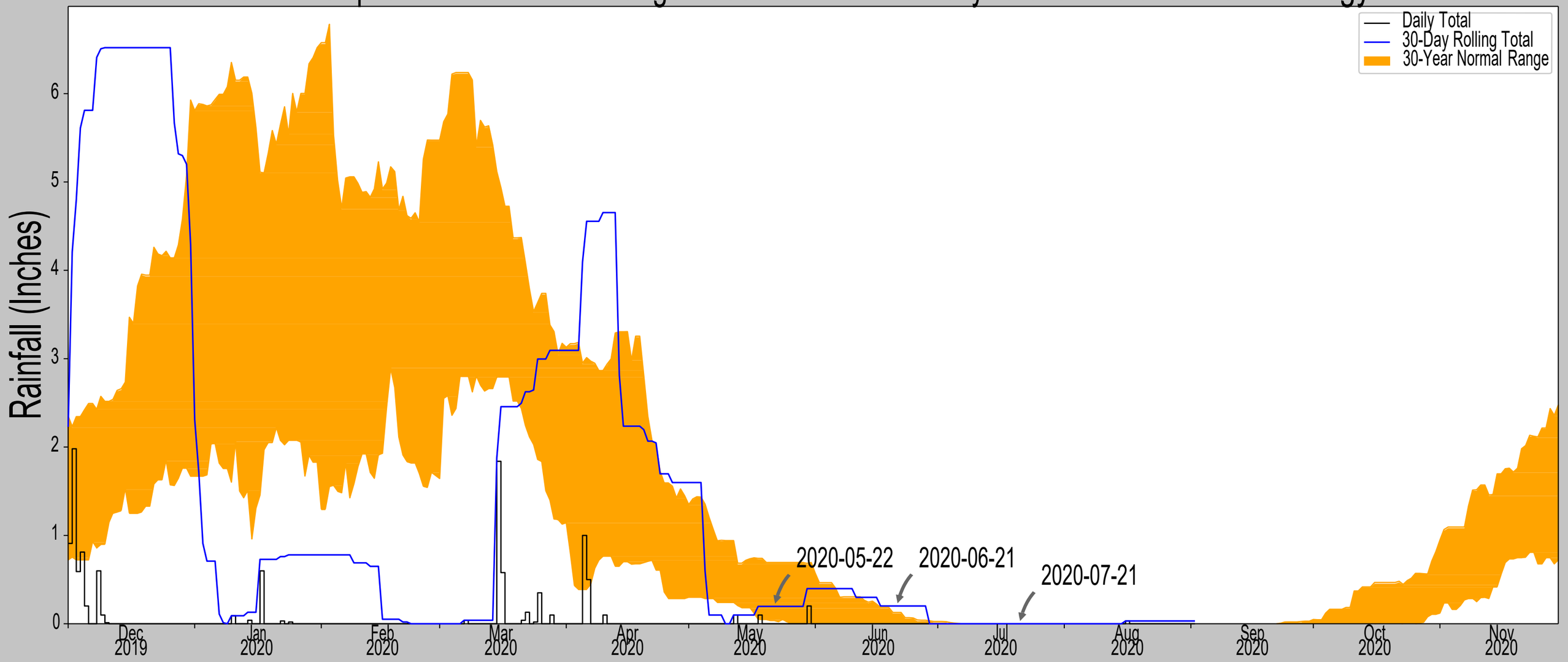
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	15.105	1444.032	28.609	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	12.532	886.946	16.755	466	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	40.89	12.989	18.932	4	0
PINNACLES NM	36.4819, -121.1822	1307.087	15.384	979.793	21.996	3	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	52.858	87.733	28.423	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.988531, -121.643587
Observation Date	2020-07-21
Elevation (ft)	1479.54
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.127953	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.693701	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	4.678	1285.642	8.119	10134	87
GILROY 0.1 SE	37.0092, -121.577	210.958	3.942	1268.582	6.775	618	3
GILROY 2.0 S	36.9811, -121.572	221.129	3.984	1258.411	6.806	22	0
LOS GATOS 5.6 S	37.1509, -121.9778	1438.976	21.572	40.564	10.582	10	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	7.176	1141.613	11.421	10	0
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	8.904	1046.469	13.325	83	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	22.211	182.534	14.049	158	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	8.0	1384.396	14.675	311	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	8.796	1319.435	15.564	6	0

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

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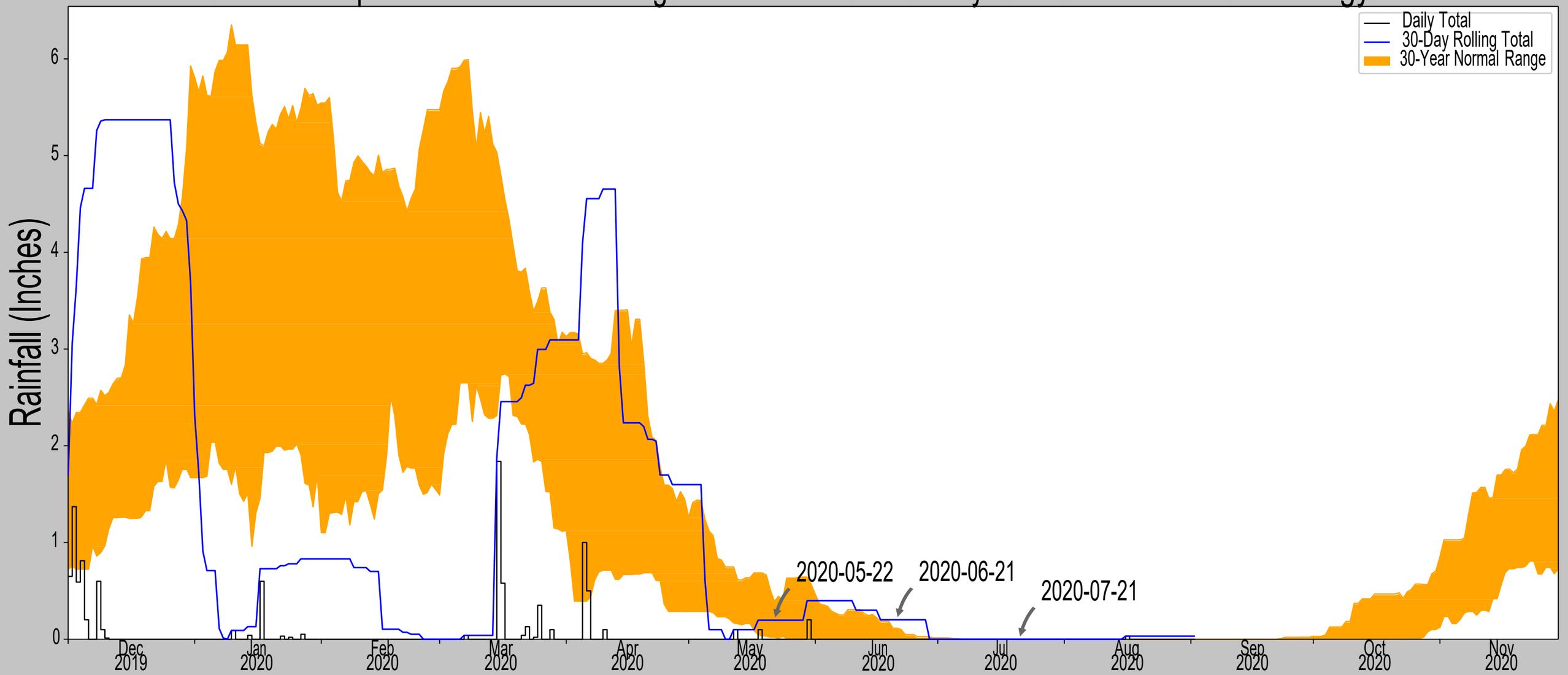
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.012352, -121.40434
Observation Date	2020-07-21
Elevation (ft)	1121.48
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

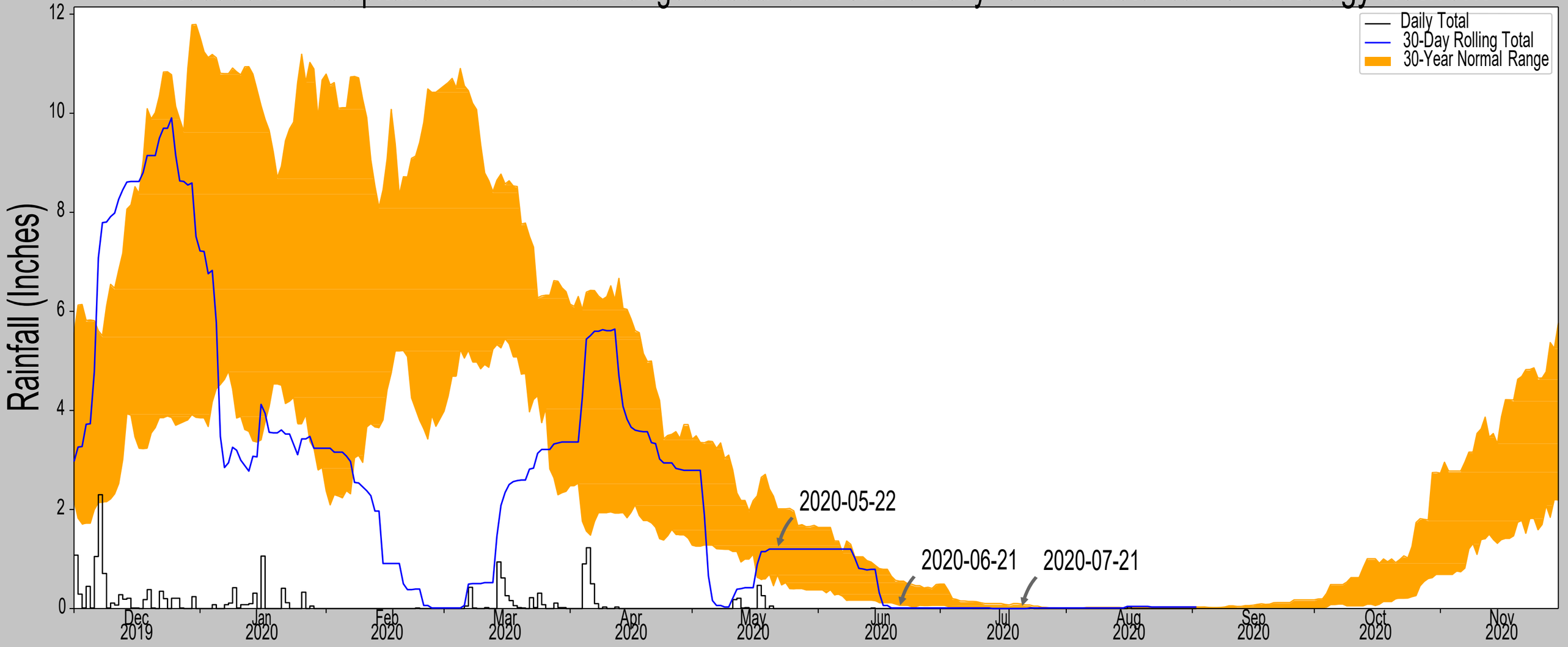
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.025591	0.389764	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	8.656	927.582	11.924	10134	87
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	5.951	874.433	7.882	805	0
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	7.183	736.637	8.524	105	0
GILROY 0.1 SE	37.0092, -121.577	210.958	9.529	910.522	12.964	0	3
PAICINES 4 W	36.715, -121.3492	904.856	20.77	216.624	13.846	272	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.955	732.372	14.135	2	0
HOLLISTER 2	36.8483, -121.4214	274.934	11.374	846.546	14.747	34	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.197313, -121.413849
Observation Date	2020-07-21
Elevation (ft)	2225.47
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

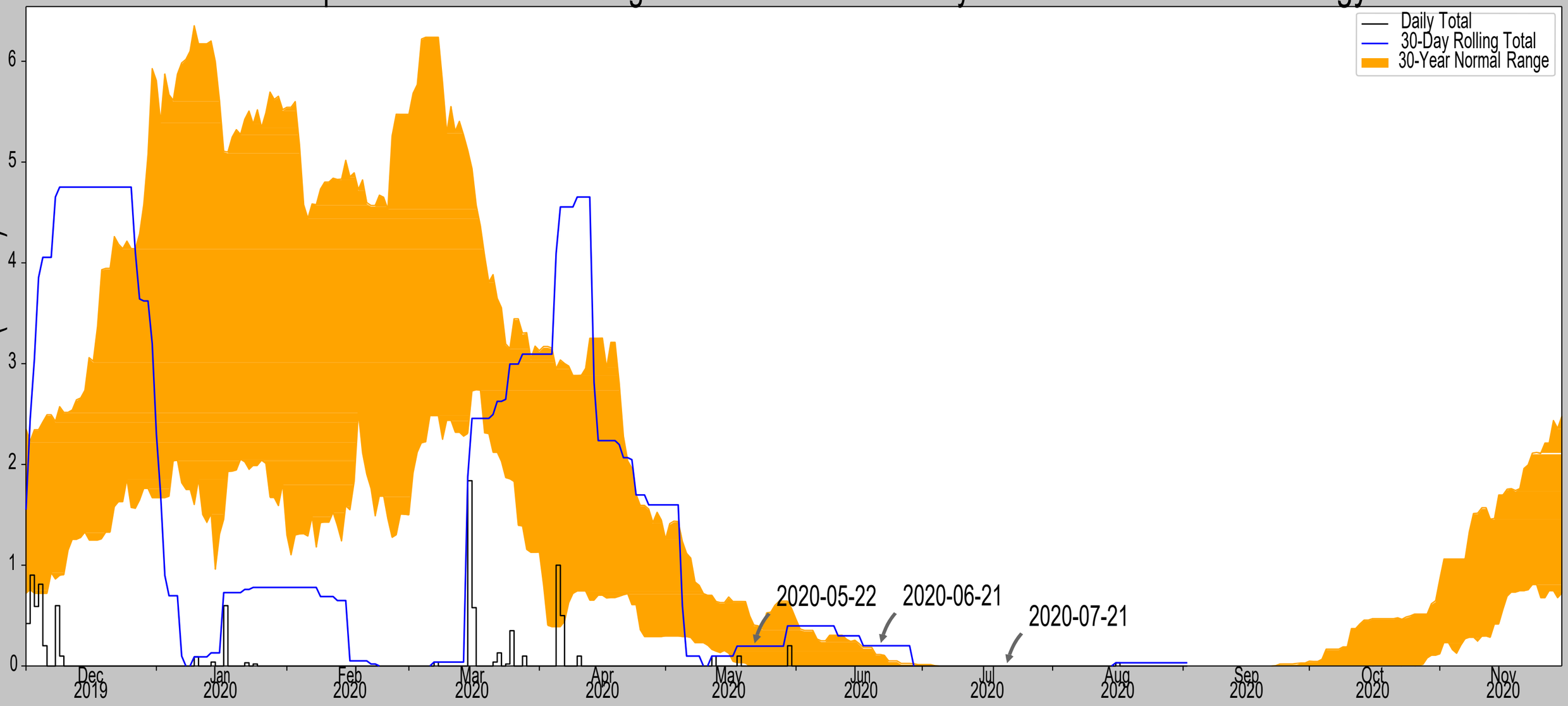
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.092913	0.0	Normal	2	3	6
2020-06-21	0.077559	0.55315	0.011811	Dry	1	2	2
2020-05-22	0.683465	2.012598	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	43.16	44.543	21.344	8505	69
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	7.324	398.546	6.215	34	10
LOS GATOS 9.6 SSE	37.1039, -121.8696	2199.147	26.983	26.323	12.853	15	11
LOS GATOS 4 SW	37.1833, -122.0333	2415.026	34.11	189.556	21.815	88	0
BLACK MTN 2 WSW	37.3167, -122.1667	2120.079	42.215	105.391	23.446	2319	0
LOS GATOS 6.1 S	37.1427, -121.9725	1731.955	30.988	493.515	29.238	16	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	31.709	563.396	32.134	34	0
BONNY DOON 2.0 NE	37.0681, -122.1329	1879.921	40.602	345.549	32.301	3	0
BOULDER CREEK 3.6 NE	37.1811, -122.0911	1724.081	37.295	501.389	35.482	12	0
GILROY	37.0031, -121.5608	193.898	15.673	2031.572	38.894	292	0
MT HAMILTON	37.3436, -121.6425	4206.037	16.131	1980.567	39.207	34	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.8144, -121.432769
Observation Date	2020-07-21
Elevation (ft)	639.01
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

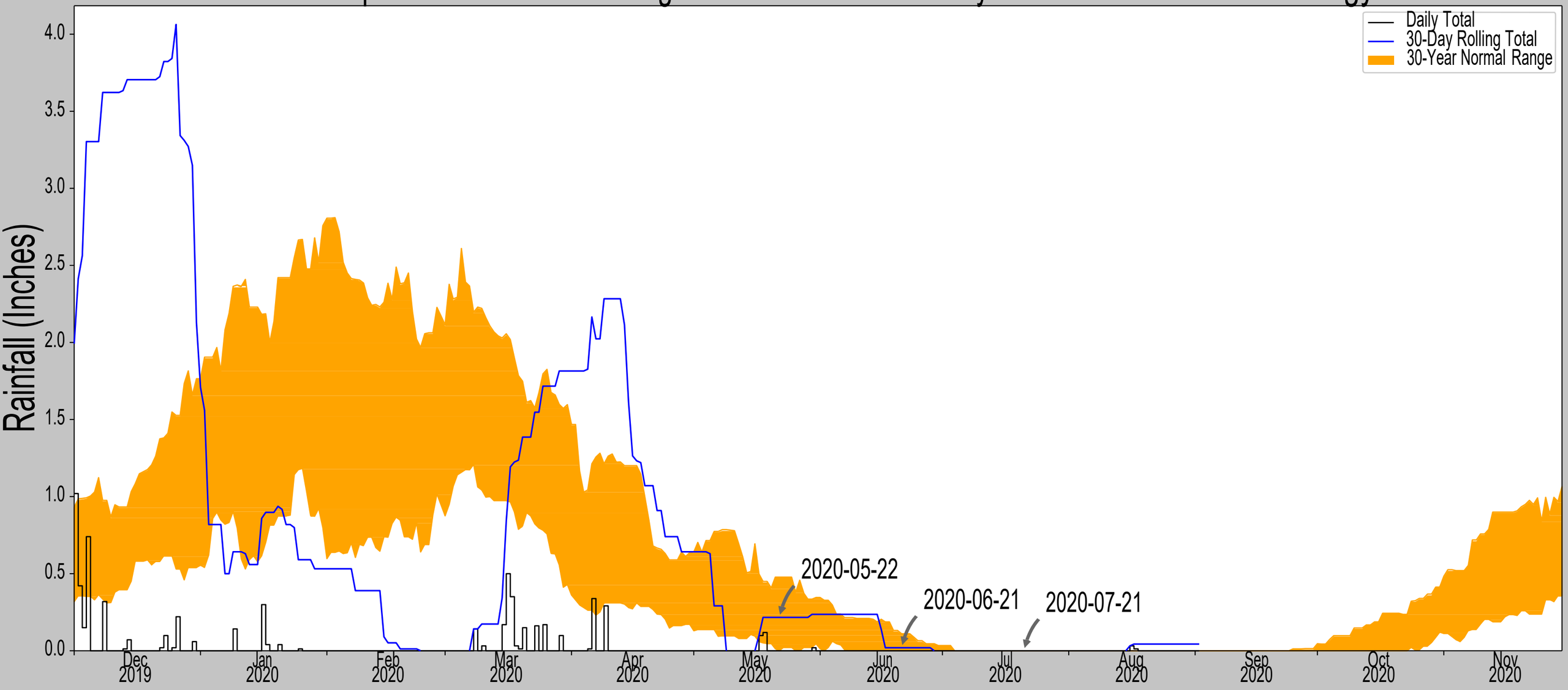
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.0	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	14.833	445.112	13.277	10134	87
HOLLISTER 2	36.8483, -121.4214	274.934	2.425	364.076	1.974	797	2
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	3.203	312.895	2.444	273	1
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	4.211	249.902	2.947	118	0
PAICINES 4 W	36.715, -121.3492	904.856	8.28	265.846	5.927	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.129387, -121.247228
Observation Date	2020-07-21
Elevation (ft)	1488.55
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

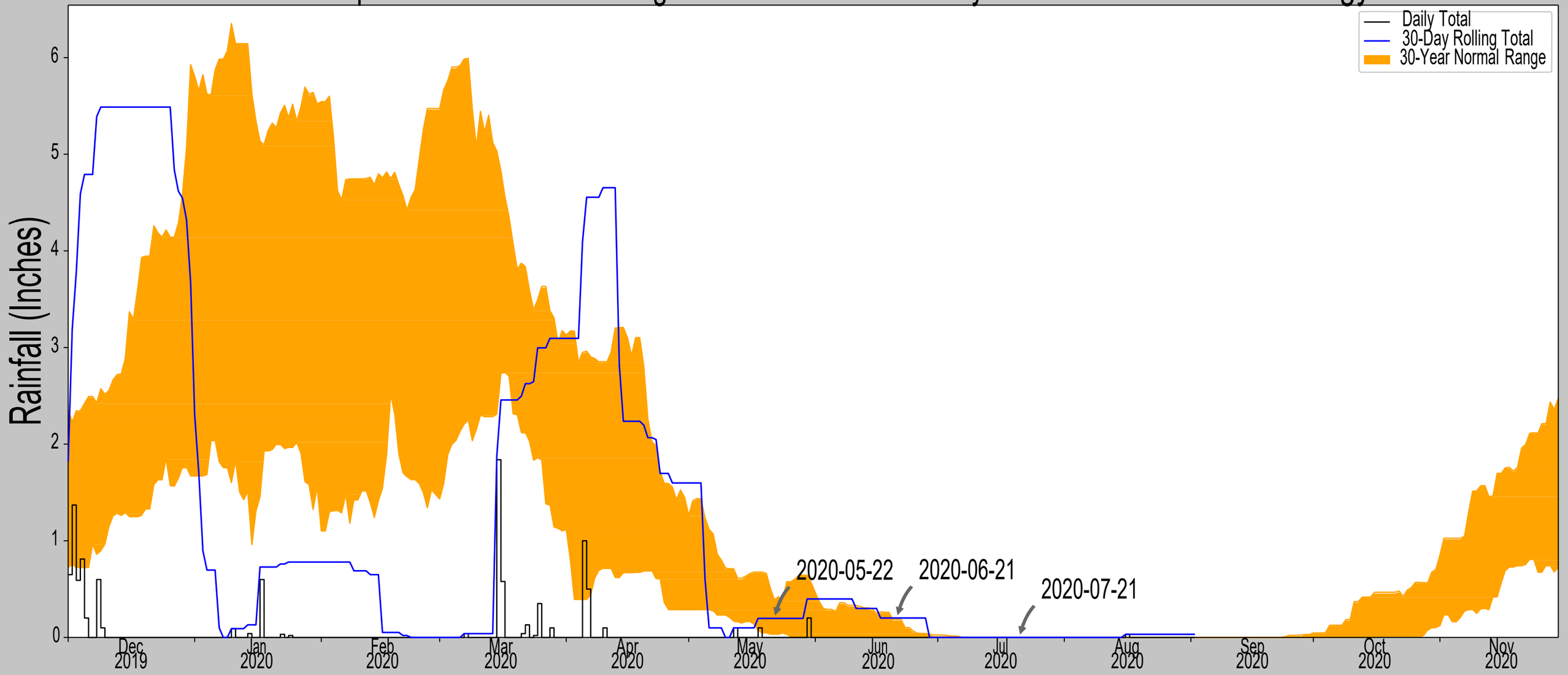
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	24.473	645.702	26.815	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	41.315	88.616	22.253	466	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	40.813	173.524	25.448	5	21
PINNACLES NM	36.4819, -121.1822	1307.087	44.881	181.463	28.341	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.061963, -121.341025
Observation Date	2020-07-21
Elevation (ft)	1394.15
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

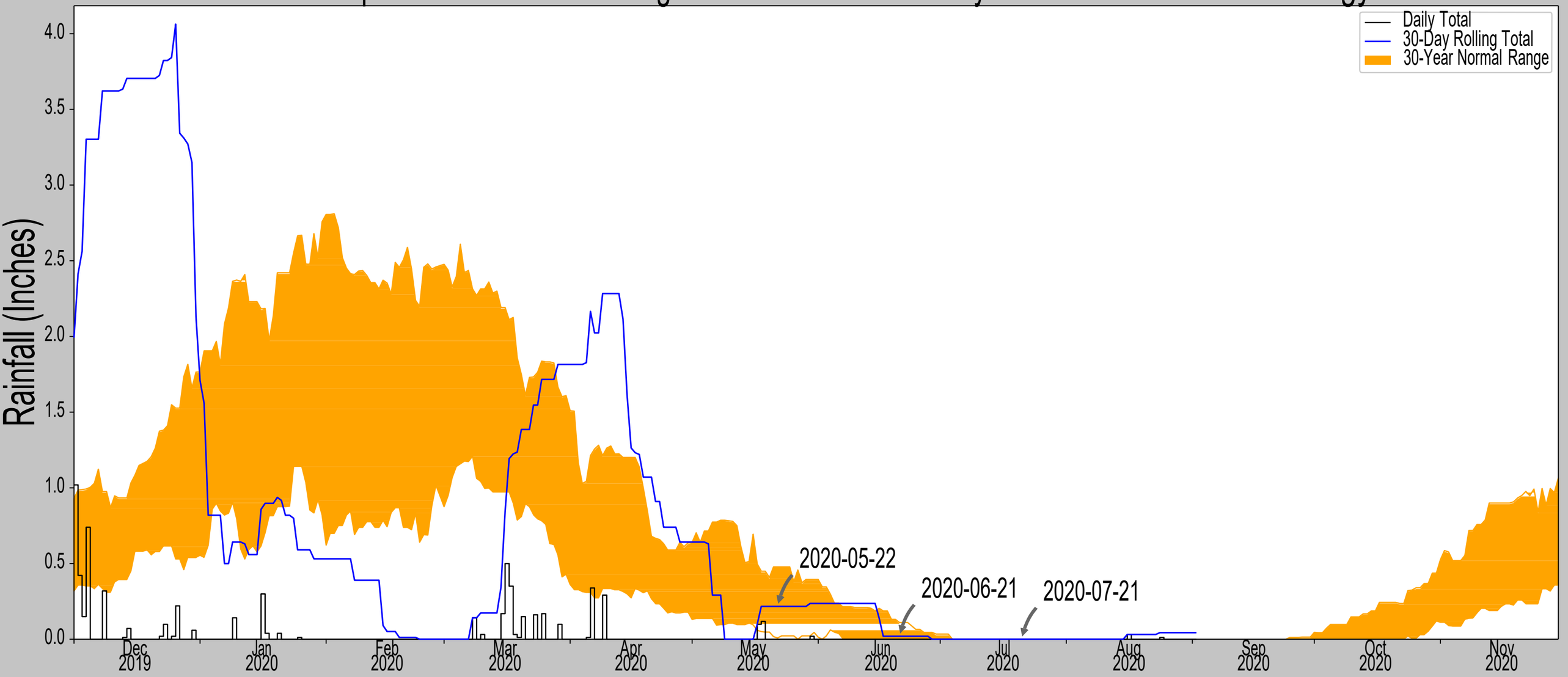
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.184646	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.389764	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	12.786	1200.252	21.1	10134	87
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	9.678	1009.307	14.123	475	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	9.22	1147.103	14.725	435	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	40.344	5.784	18.388	260	0
PINNACLES NM	36.4819, -121.1822	1307.087	41.031	87.063	22.036	34	2
GILROY 0.1 SE	37.0092, -121.577	210.958	13.516	1183.192	22.074	0	1
PAICINES 4 W	36.715, -121.3492	904.856	23.977	489.294	22.521	14	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.936456, -121.233357
Observation Date	2020-07-21
Elevation (ft)	2610.54
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

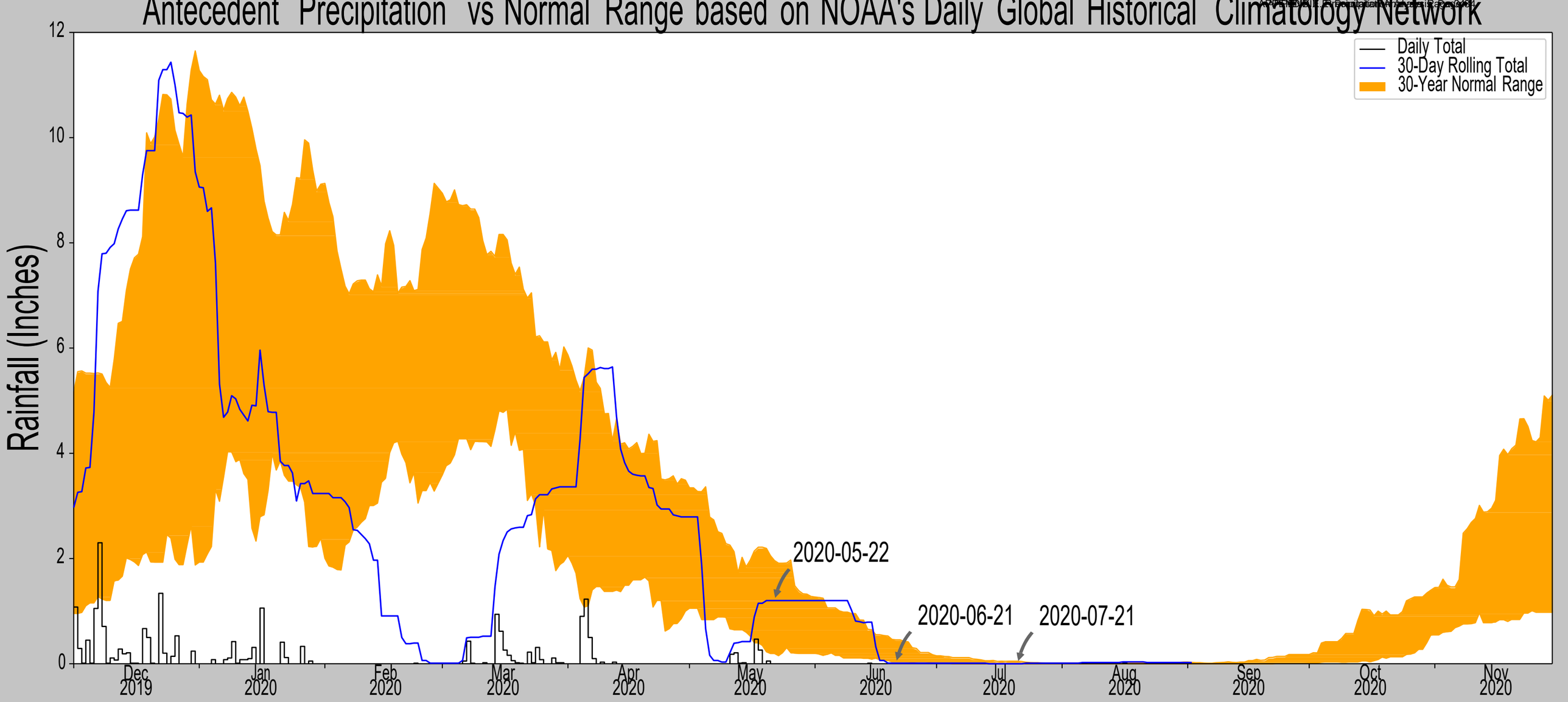
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.008268	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	16.829	1767.692	37.322	10879	69
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	24.408	13.476	11.313	0	11
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	7.58	2363.493	21.326	380	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	9.764	2221.432	26.084	2	10
HOLLISTER 2	36.8483, -121.4214	274.934	12.045	2335.606	33.553	79	0
PAICINES 4 W	36.715, -121.3492	904.856	16.588	1705.684	35.758	12	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.673592, -121.35373
Observation Date	2020-07-21
Elevation (ft)	2270.46
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

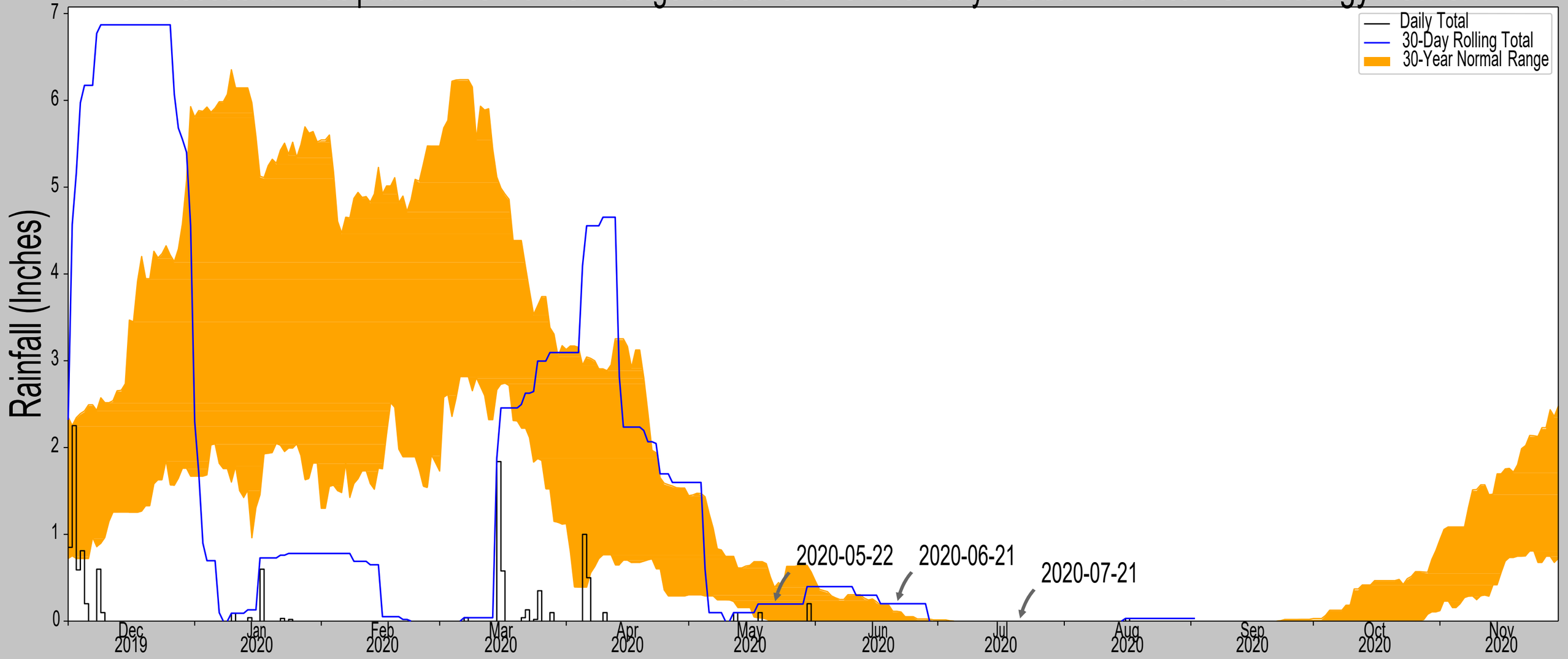
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.049213	0.0	Normal	2	3	6
2020-06-21	0.042126	0.455118	0.011811	Dry	1	2	2
2020-05-22	0.194882	1.96063	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	63.702	0.447	28.694	8505	69
PAICINES 4 W	36.715, -121.3492	904.856	2.872	1365.604	5.214	2614	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	41.963	71.313	21.876	45	21
PINNACLES NM	36.4819, -121.1822	1307.087	16.31	963.373	23.052	179	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	49.639	29.409	23.797	3	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.666	1881.352	27.198	6	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.103604, -121.554373
Observation Date	2020-07-21
Elevation (ft)	1098.24
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

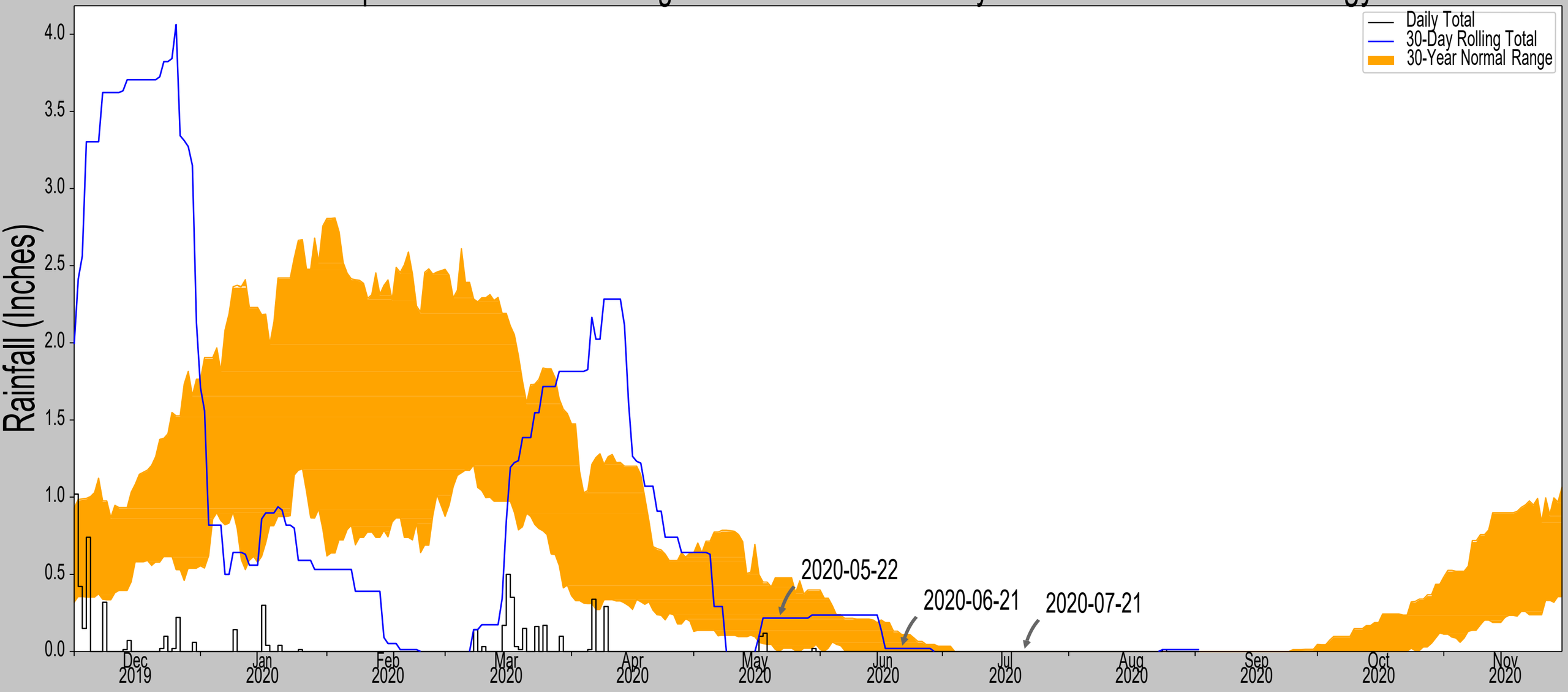
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.0	0.389764	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	6.953	904.342	9.417	10134	87
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	4.374	760.313	5.294	91	0
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	5.842	665.169	6.515	636	2
GILROY 0.1 SE	37.0092, -121.577	210.958	6.641	887.282	8.881	16	1
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	5.738	1525.776	11.337	1	0
PAICINES 4 W	36.715, -121.3492	904.856	29.145	193.384	18.751	279	0
FELTON 4.5 NNE	37.1051, -122.0468	837.927	27.135	260.313	19.274	148	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	15.681	851.193	20.404	13	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	17.36	938.135	24.098	14	0
HOLLISTER 2	36.8483, -121.4214	274.934	19.106	823.306	24.328	20	0

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.809322, -121.31228
Observation Date	2020-07-21
Elevation (ft)	760.39
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

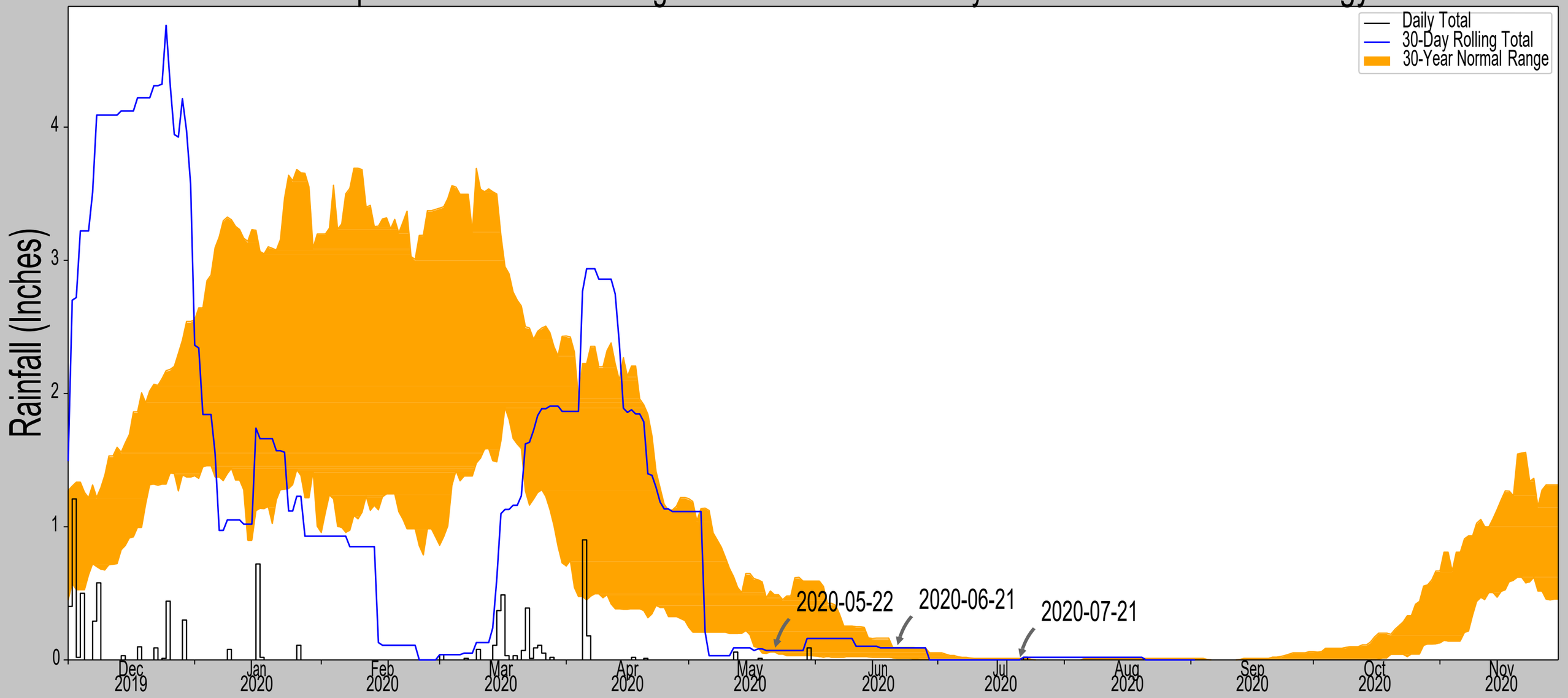
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	21.155	82.458	11.264	10879	69
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	3.696	371.282	3.035	380	21
PAICINES 4 W	36.715, -121.3492	904.856	6.83	144.466	4.06	91	0
HOLLISTER 2	36.8483, -121.4214	274.934	6.608	485.456	6.181	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.717372, -121.407863
Observation Date	2020-07-21
Elevation (ft)	1886.24
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

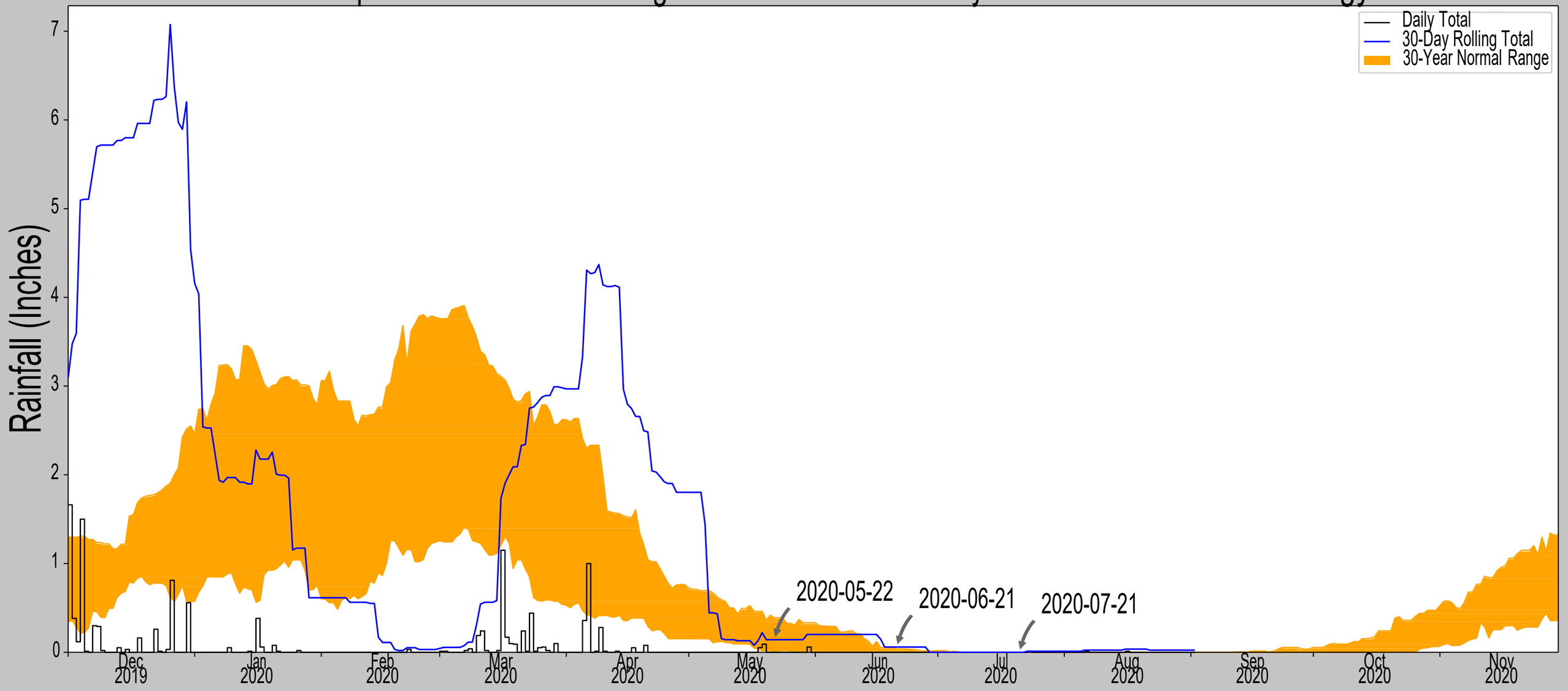
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.011811	0.0	Normal	2	3	6
2020-06-21	0.011811	0.092913	0.090551	Normal	2	2	4
2020-05-22	0.059449	0.489764	0.070866	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SALINAS MUNICIPAL AP	36.6636, -121.6081	74.147	11.7	1812.093	26.466	11338	90
PAICINES 4 W	36.715, -121.3492	904.856	3.253	981.384	4.656	14	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.480932, -120.988915
Observation Date	2020-07-21
Elevation (ft)	2016.41
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.38937	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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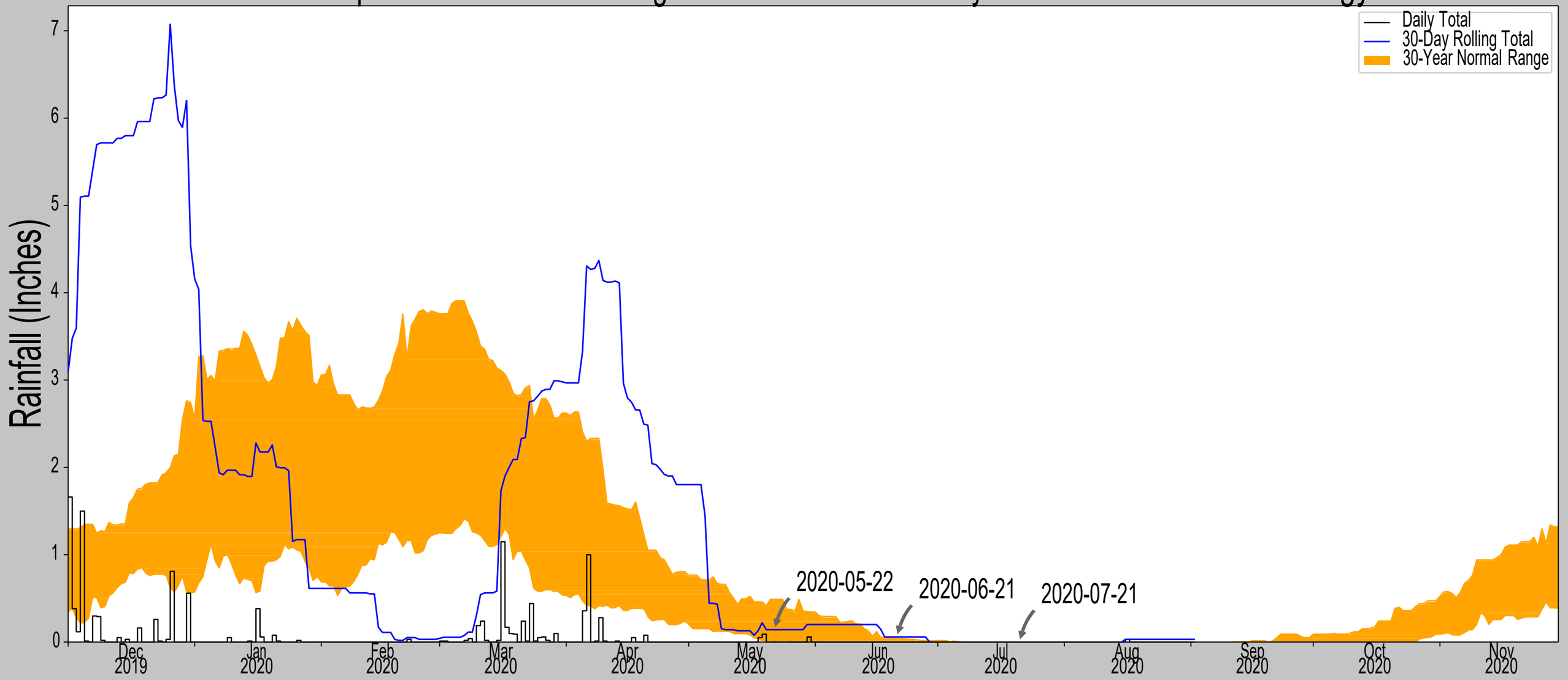
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	20.667	1696.528	44.362	10699	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	10.455	616.476	11.15	630	0
PINNACLES NM	36.4819, -121.1822	1307.087	10.738	709.323	12.449	23	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	65.85	182.737	41.666	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.374333, -120.845242
Observation Date	2020-07-21
Elevation (ft)	2847.53
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

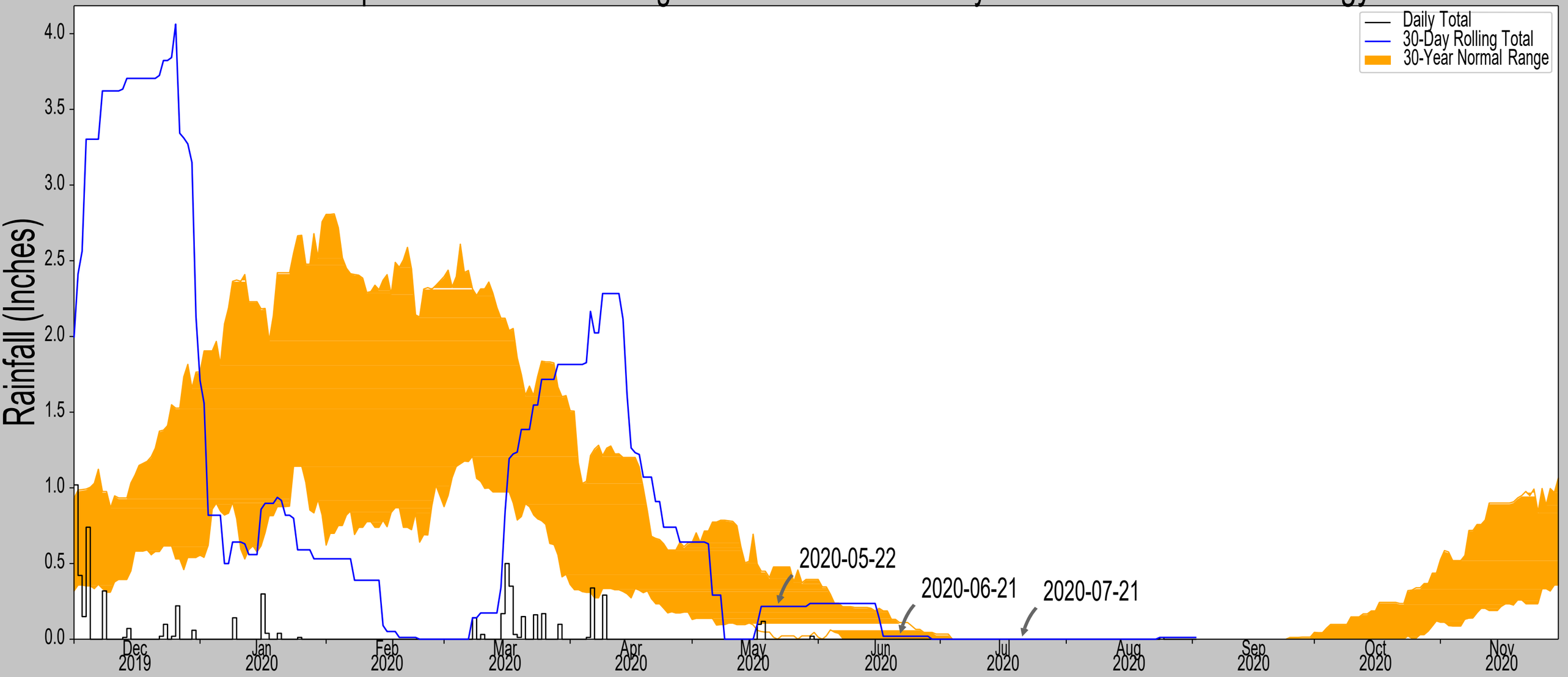
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	19.982	2527.648	59.499	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	15.328	547.661	15.292	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	16.2	1447.596	30.741	349	0
PINNACLES NM	36.4819, -121.1822	1307.087	20.153	1540.443	40.113	3	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	68.211	223.514	45.941	0	11
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	31.14	1666.428	65.906	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.98748, -121.26012
Observation Date	2020-07-21
Elevation (ft)	1626.8
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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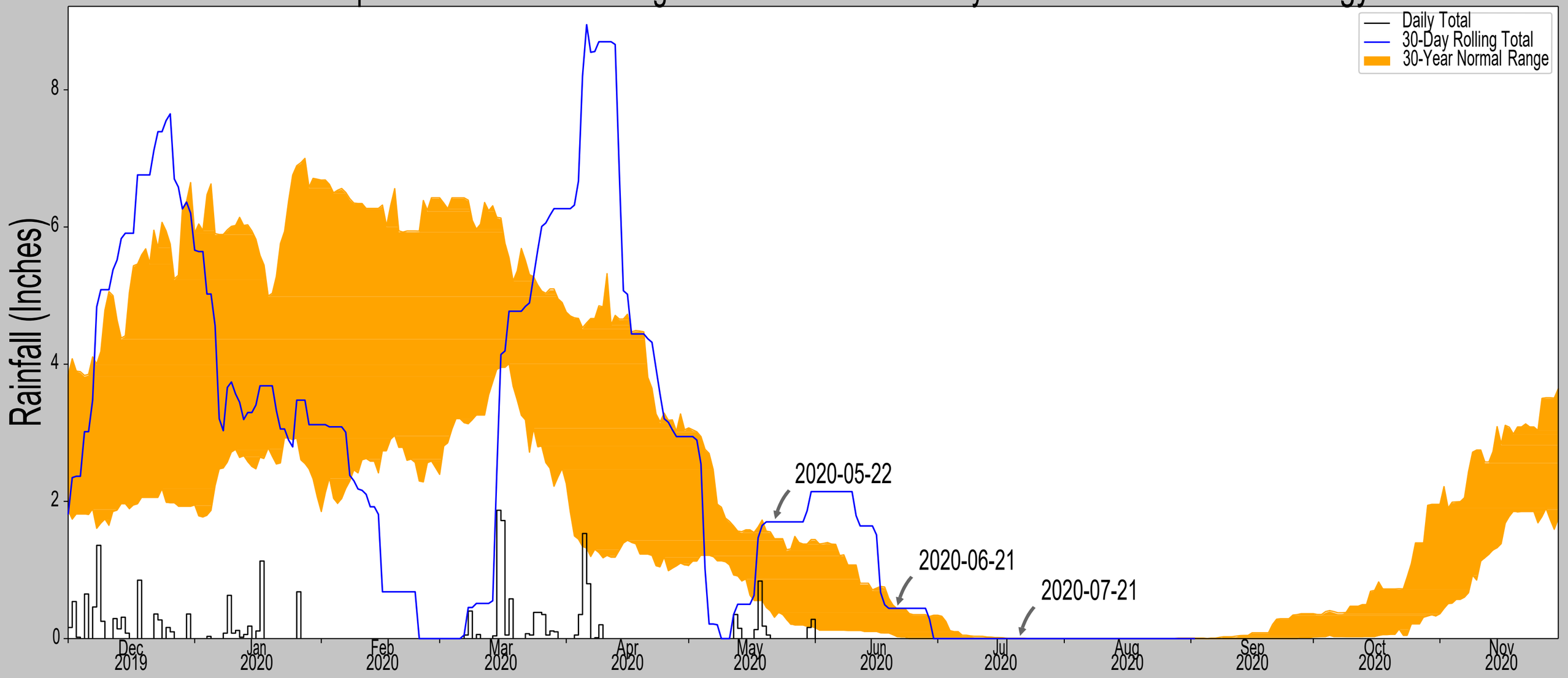
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	19.384	783.952	23.919	10879	69
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	7.247	1379.753	13.26	380	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.59	1237.692	19.56	2	21
LOS GATOS 6.1 S	37.1427, -121.9725	1731.955	40.714	105.155	22.603	1	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	33.537	226.866	22.7	88	0
PAICINES 4 W	36.715, -121.3492	904.856	19.46	721.944	22.806	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.384397, -120.672083
Observation Date	2020-07-21
Elevation (ft)	4245.56
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.003543	0.0	Normal	2	3	6
2020-06-21	0.031496	0.435827	0.440945	Wet	3	2	6
2020-05-22	0.309843	1.455906	1.700787	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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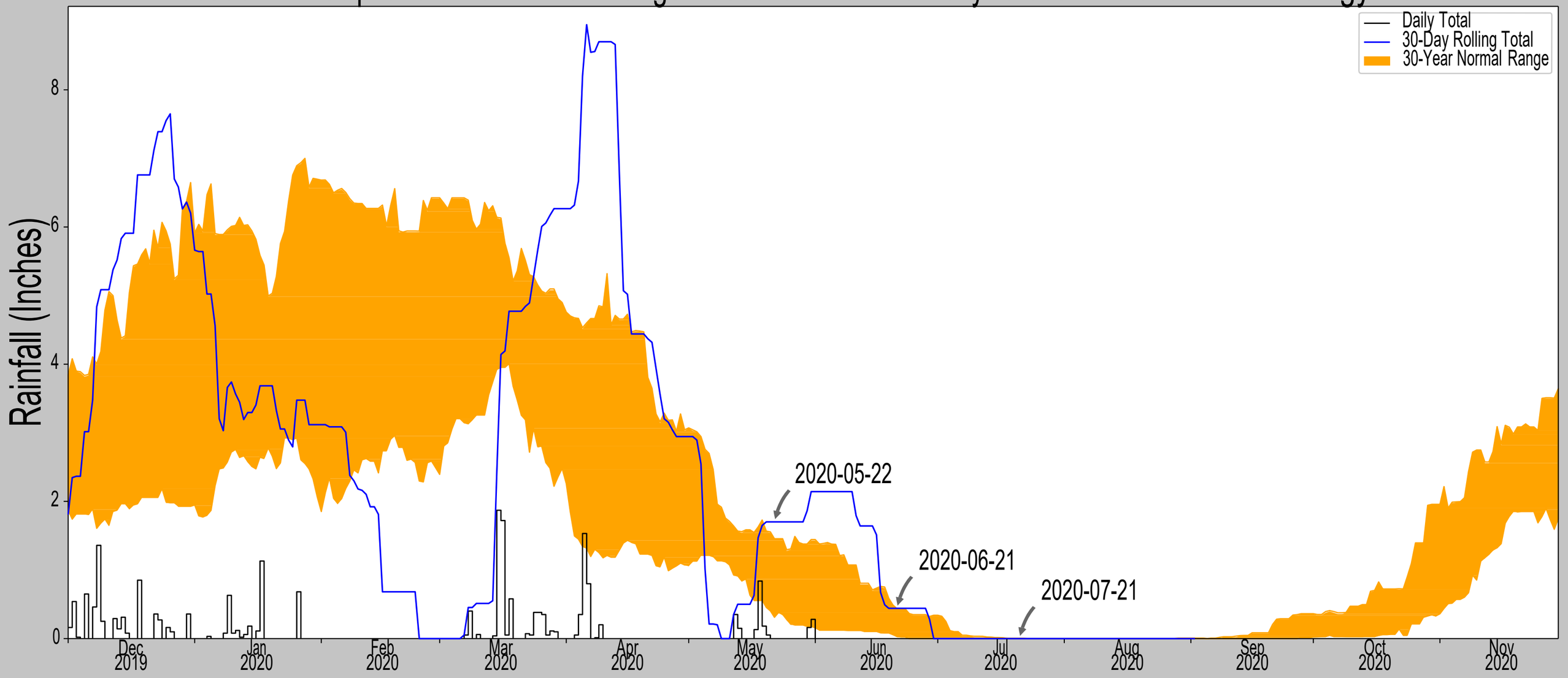
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
MT HAMILTON	37.3436, -121.6425	4206.037	85.263	39.523	41.738	11142	89
PRIEST VALLEY	36.1883, -120.6953	2299.869	13.611	1945.691	32.608	135	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	19.358	2845.626	63.797	63	0
COALINGA	36.1356, -120.3606	669.948	24.426	3575.612	98.33	9	0
PINNACLES NM	36.4819, -121.1822	1307.087	29.146	2938.473	98.76	2	0
KING CITY 11.1 SSW	36.0598, -121.1888	1354.003	36.504	2891.557	121.98	1	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	37.341	3064.458	131.233	0	1

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.31699, -120.800635
Observation Date	2020-07-21
Elevation (ft)	3864.76
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.003543	0.0	Normal	2	3	6
2020-06-21	0.031496	0.435827	0.440945	Wet	3	2	6
2020-05-22	0.309843	1.455906	1.700787	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the
Antecedent Precipitation Tool
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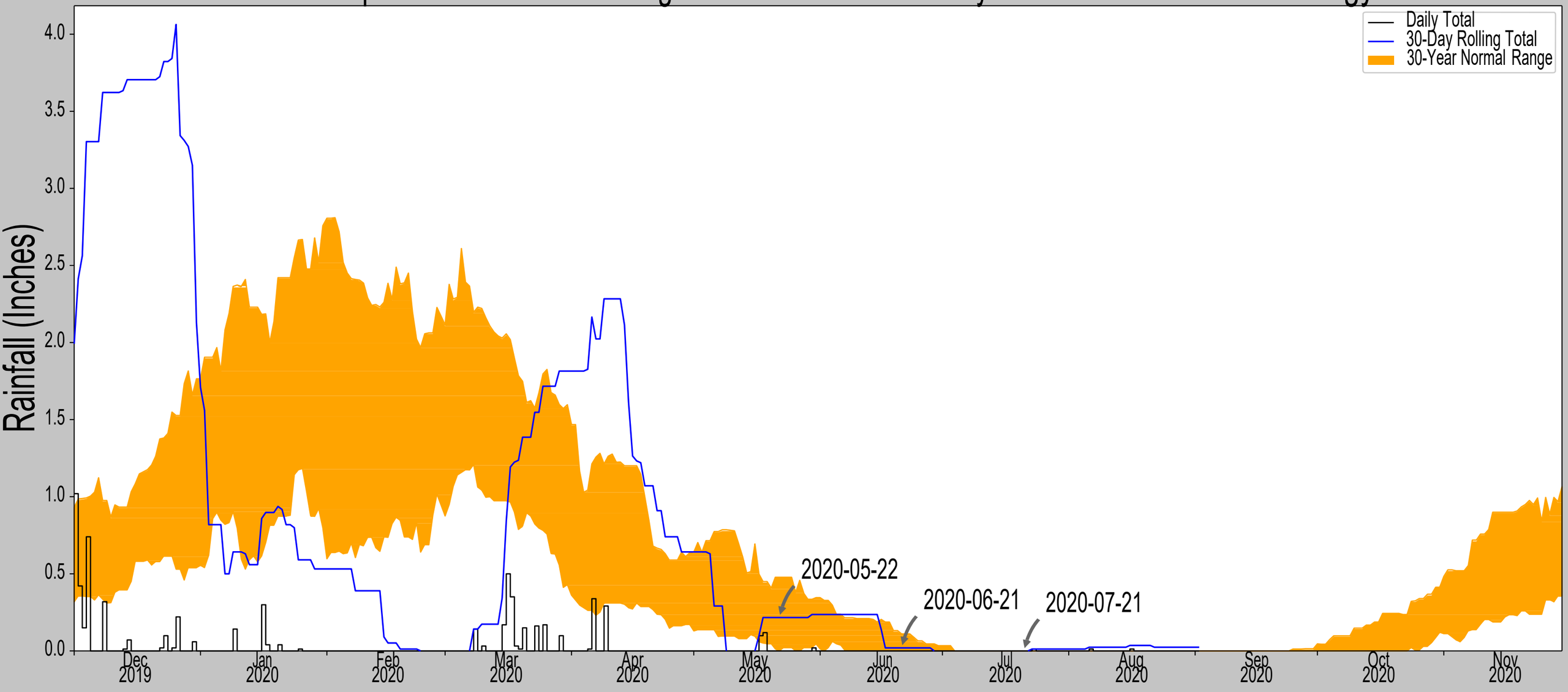
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
MT HAMILTON	37.3436, -121.6425	4206.037	84.846	341.277	67.137	11142	89
PRIEST VALLEY	36.1883, -120.6953	2299.869	10.654	1564.891	21.467	135	0
CARMEL VALLEY VILLAGE 12.2 SE	36.3539, -121.5766	3083.99	43.265	780.77	53.249	1	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	20.549	2464.826	59.897	62	0
PINNACLES NM	36.4819, -121.1822	1307.087	24.086	2557.673	72.443	11	0
KING CITY	36.2069, -121.1378	319.882	20.266	3544.878	80.96	1	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	29.187	2683.658	91.462	0	1

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.635316, -121.012087
Observation Date	2020-07-21
Elevation (ft)	2093.29
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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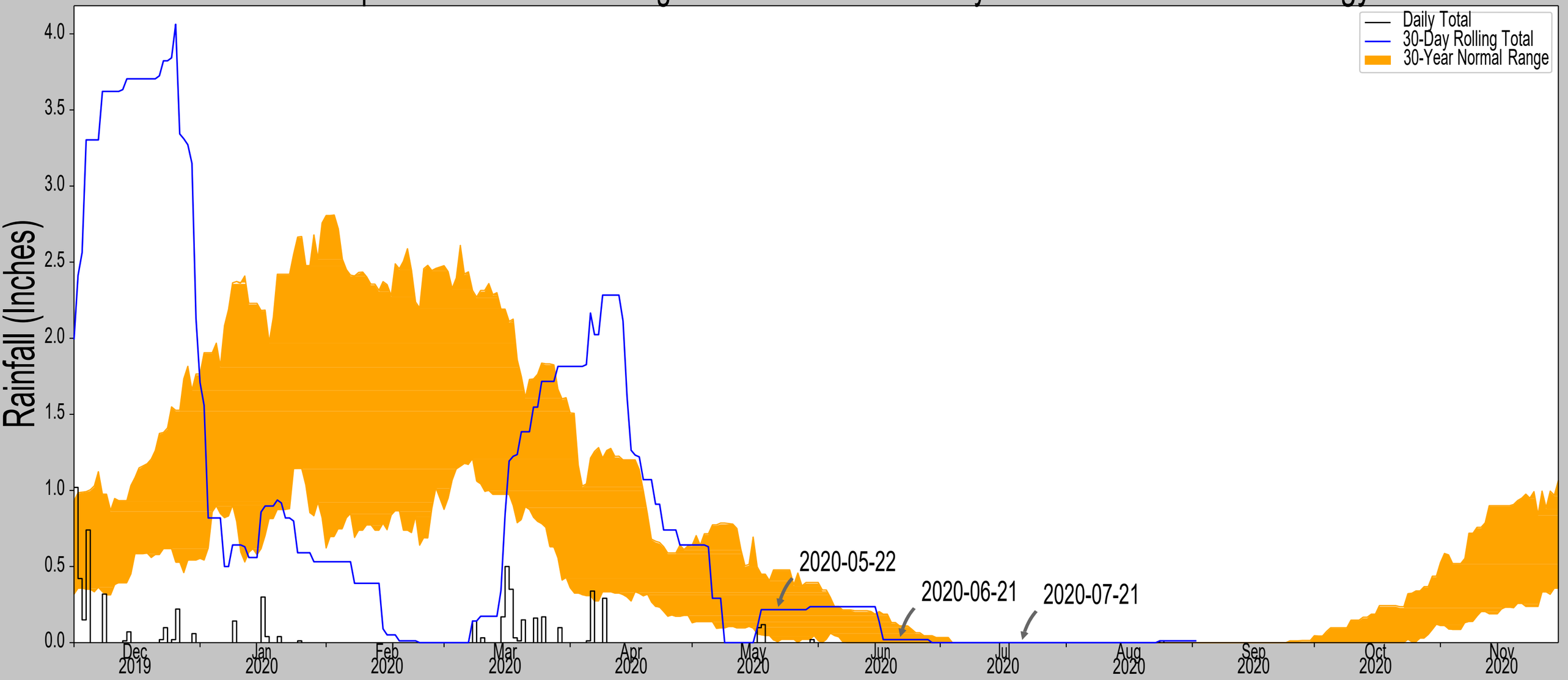
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	17.053	1250.442	28.998	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	7.362	693.356	8.417	466	0
PINNACLES NM	36.4819, -121.1822	1307.087	14.195	786.203	17.548	7	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	58.317	105.857	32.416	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.953192, -121.357561
Observation Date	2020-07-21
Elevation (ft)	804.99
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.008268	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
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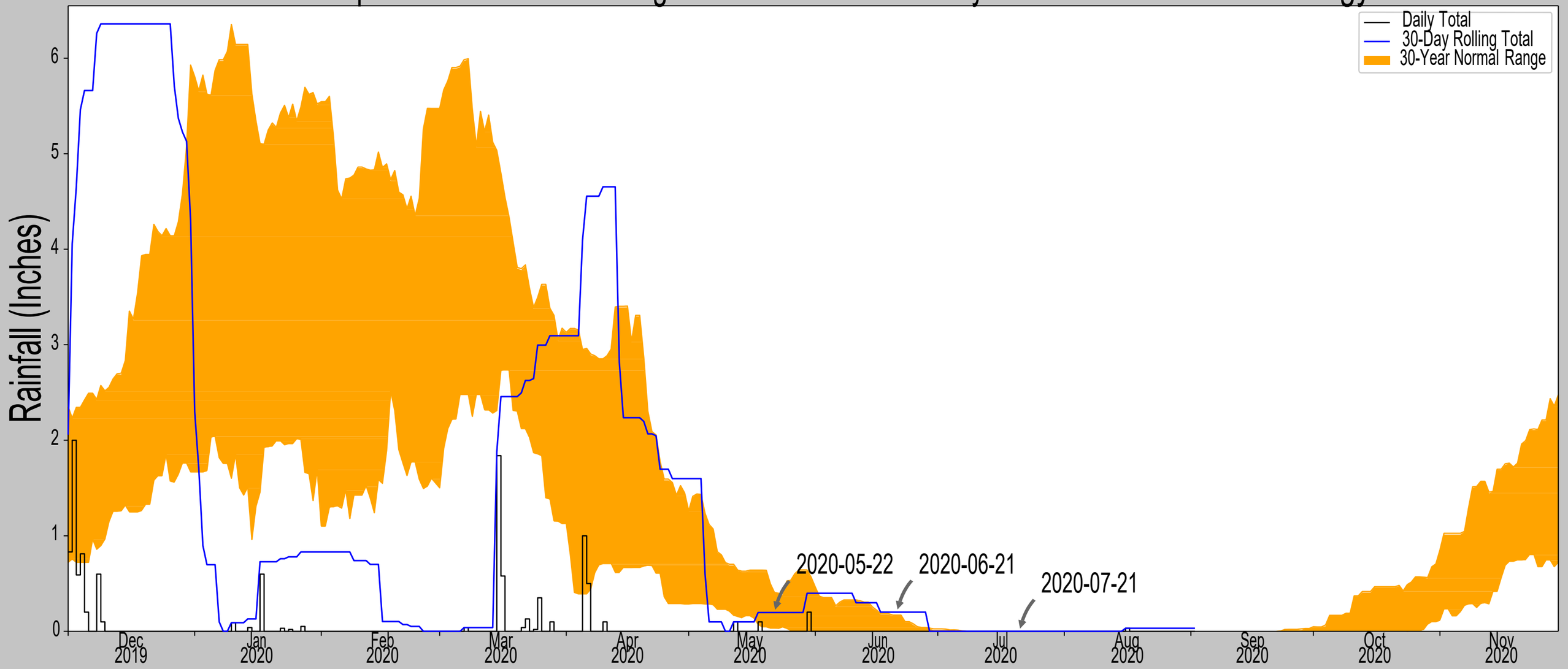
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	23.767	37.858	11.595	10879	69
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	1.714	557.943	1.728	380	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	7.68	415.882	6.65	2	21
HOLLISTER 2	36.8483, -121.4214	274.934	8.06	530.056	7.899	79	0
PAICINES 4 W	36.715, -121.3492	904.856	16.464	99.866	9.053	12	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.923116, -121.473204
Observation Date	2020-07-21
Elevation (ft)	170.91
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	7.343	22.988	3.473	10134	87
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	5.702	76.137	3.0	805	0
HOLLISTER 2	36.8483, -121.4214	274.934	5.909	104.024	3.274	335	2
GILROY 2.0 S	36.9811, -121.572	221.129	6.768	50.219	3.385	11	0
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	6.794	81.059	3.608	32	0
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	6.114	155.205	3.7	2	1
GILROY 0.1 SE	37.0092, -121.577	210.958	8.259	40.048	4.047	3	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	17.442	10.805	8.037	30	0

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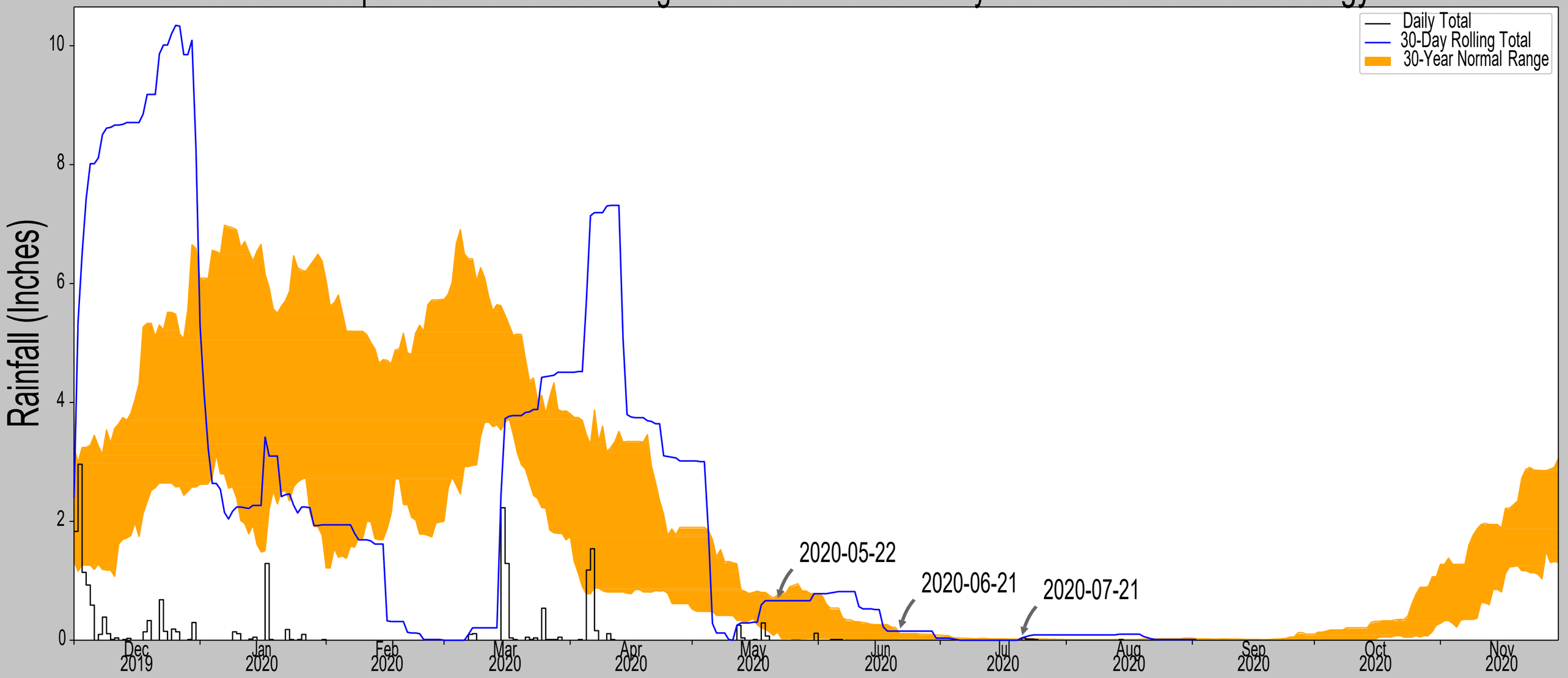
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.960165, -121.83567
Observation Date	2020-07-21
Elevation (ft)	300.86
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.03937	Wet	3	3	9
2020-06-21	0.008268	0.110236	0.153543	Wet	3	2	6
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Wetter than Normal - 17

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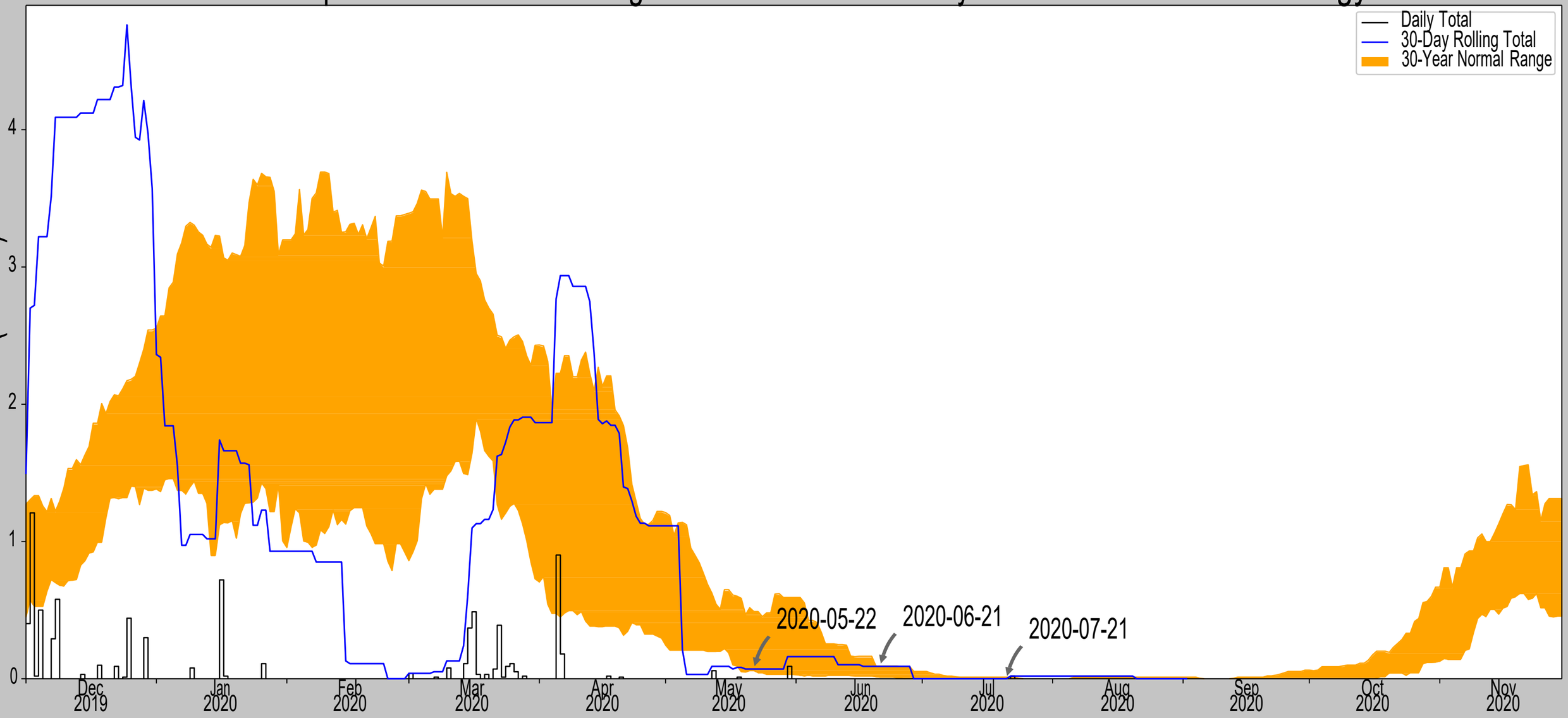
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	4.194	205.716	2.75	11002	79
WATSONVILLE 3.9 NW	36.9557, -121.8217	329.068	0.831	28.208	0.397	0	11
APTOS 1.7 SSE	36.9707, -121.8832	309.055	2.723	8.195	1.248	6	0
APTOS 2.6 E	36.9961, -121.8536	382.874	2.673	82.014	1.422	200	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	3.097	140.755	1.83	140	0
SANTA CRUZ	36.9878, -121.9994	69.882	9.237	230.978	6.29	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.756205, -121.459138
Observation Date	2020-07-21
Elevation (ft)	1969.51
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.011811	0.0	Normal	2	3	6
2020-06-21	0.011811	0.092913	0.090551	Normal	2	2	4
2020-05-22	0.059449	0.489764	0.070866	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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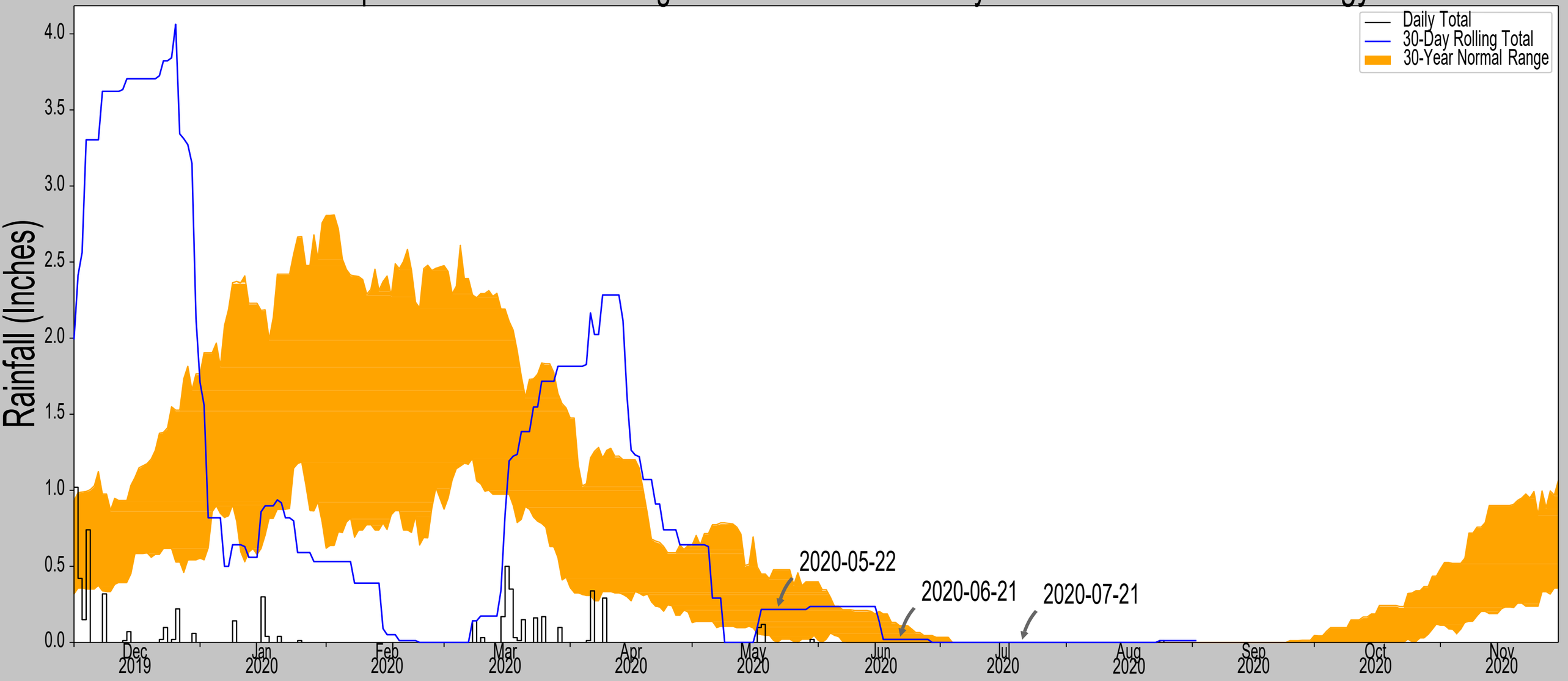
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SALINAS MUNICIPAL AP	36.6636, -121.6081	74.147	10.441	1895.363	24.488	11338	90
PAICINES 4 W	36.715, -121.3492	904.856	6.72	1064.654	10.178	14	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.856203, -121.273314
Observation Date	2020-07-21
Elevation (ft)	1419.57
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

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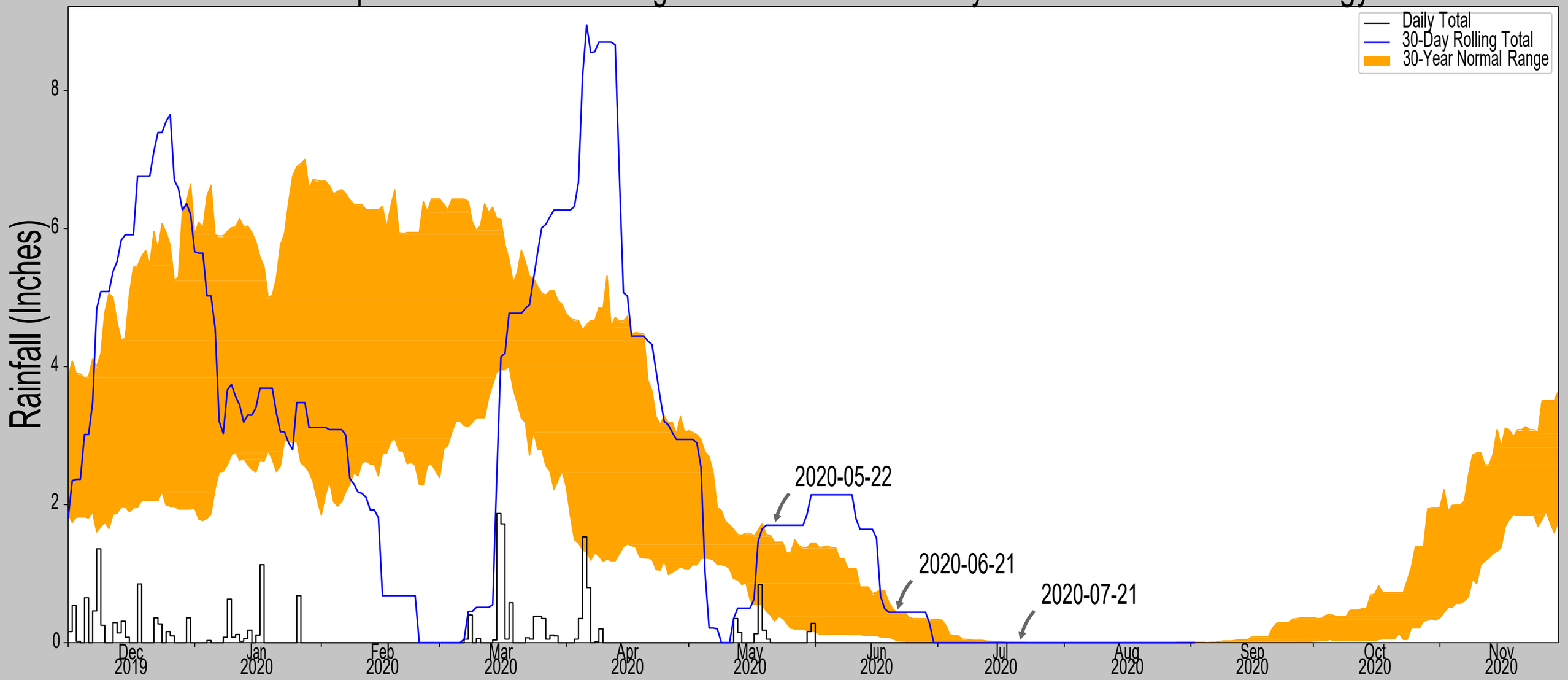
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	18.548	576.722	19.044	10879	69
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	5.161	1030.462	7.641	380	21
PAICINES 4 W	36.715, -121.3492	904.856	10.622	514.714	10.247	91	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	7.43	1172.523	12.055	1	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	27.595	19.636	12.96	1	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.324182, -120.616479
Observation Date	2020-07-21
Elevation (ft)	4373.62
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.003543	0.0	Normal	2	3	6
2020-06-21	0.031496	0.435827	0.440945	Wet	3	2	6
2020-05-22	0.309843	1.455906	1.700787	Wet	3	1	3
Result							Wetter than Normal - 15

Figure and tables made by the
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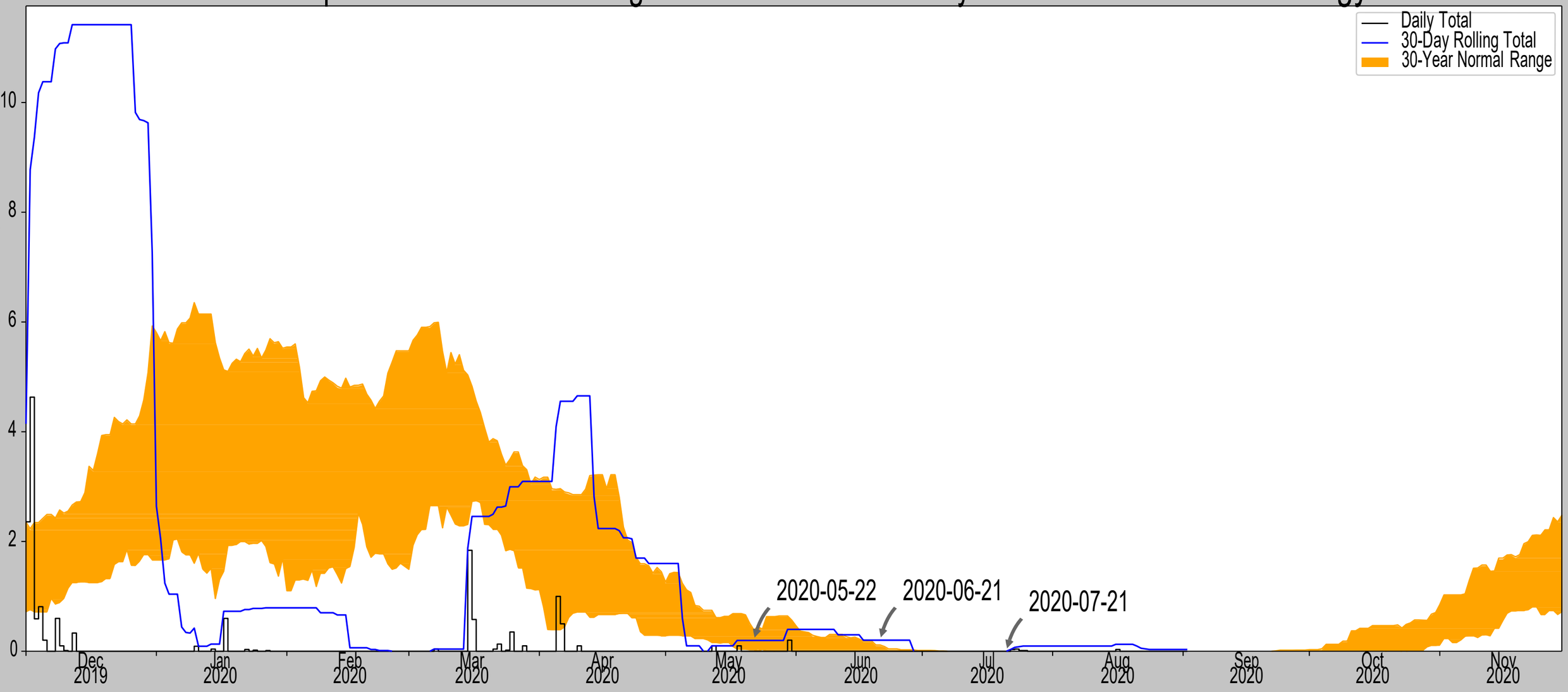
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
MT HAMILTON	37.3436, -121.6425	4206.037	90.445	167.583	55.857	11142	89
PRIEST VALLEY	36.1883, -120.6953	2299.869	10.365	2073.751	26.159	135	0
COALINGA	36.1356, -120.3606	669.948	19.317	3703.672	80.236	71	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	24.543	2973.686	84.028	1	0
FIVE POINTS 5 SSW	36.3642, -120.1561	285.105	25.77	4088.515	116.958	3	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	36.659	3192.518	133.531	0	1

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.125394, -121.368579
Observation Date	2020-07-21
Elevation (ft)	1070.65
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.025591	0.389764	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	13.554	876.752	17.983	10134	87
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	14.147	685.807	16.068	475	0
FELTON 4.0 NNE	37.0976, -122.0487	1070.866	37.523	0.216	16.893	1	3
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	13.459	823.603	17.141	434	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	14.719	732.723	17.408	1	0
PAICINES 4 W	36.715, -121.3492	904.856	28.376	165.794	17.474	272	0
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	29.364	227.802	19.903	34	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	19.568	681.542	22.142	1	0

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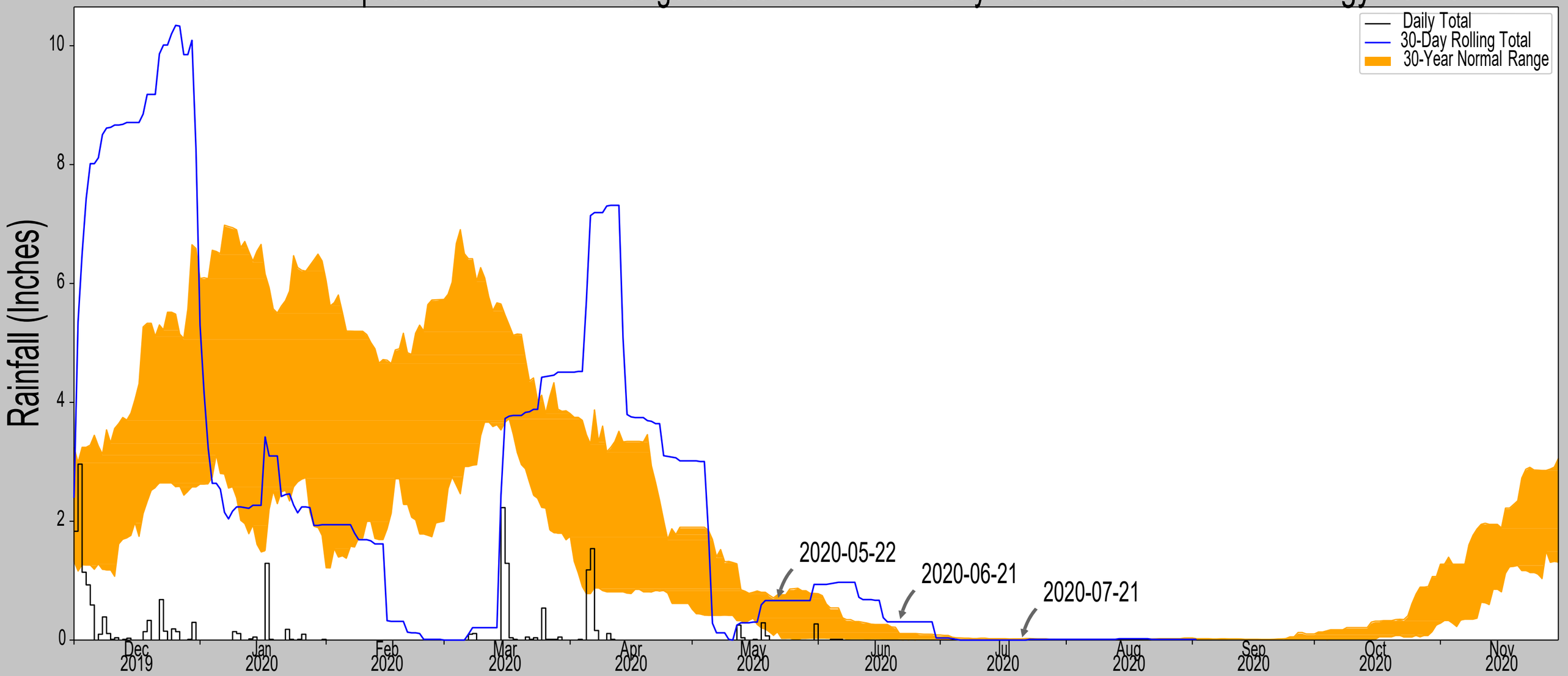
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.884018, -121.663367
Observation Date	2020-07-21
Elevation (ft)	223.62
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.307087	Wet	3	2	6
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 14

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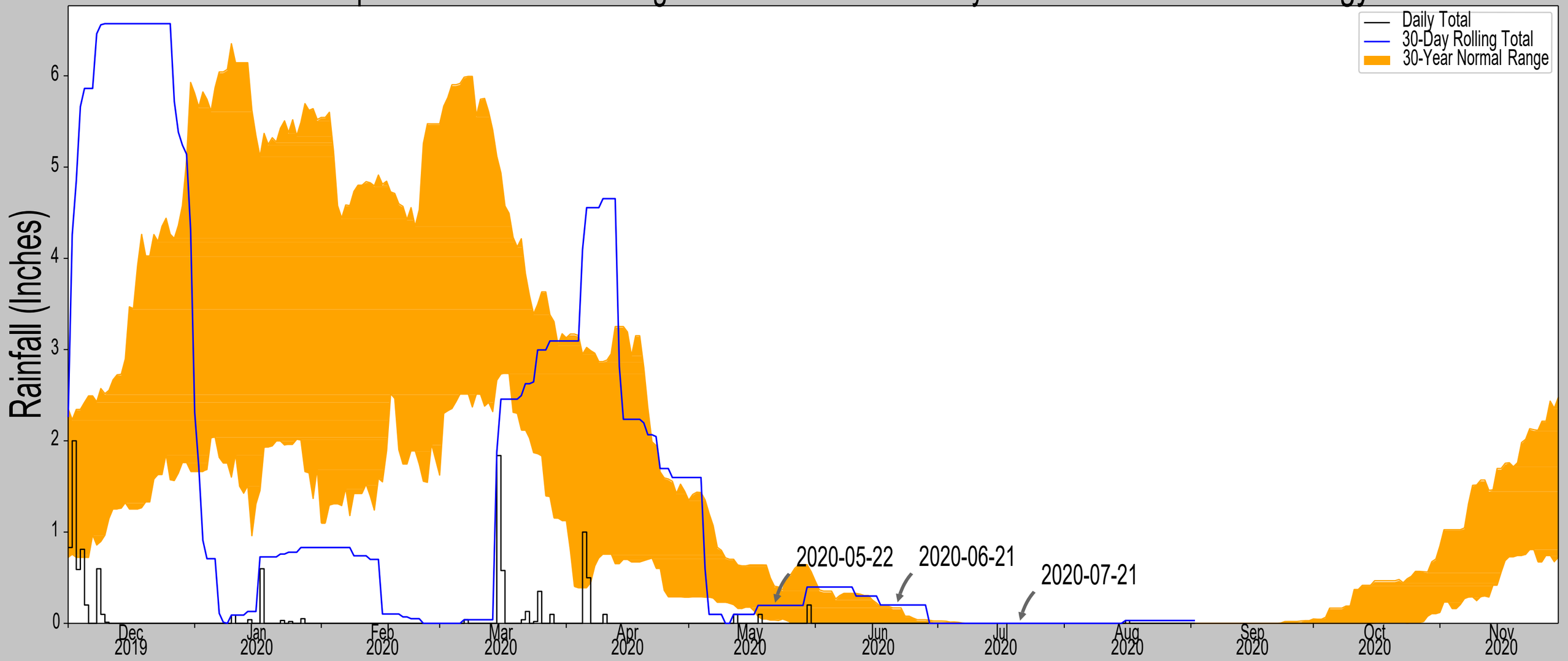
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	6.681	128.476	3.865	11002	79
AROMAS 2.0 SSW	36.85, -121.65	344.16	2.464	120.54	1.406	208	0
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	7.613	28.349	3.642	4	0
GILROY 2.0 S	36.9811, -121.572	221.129	8.394	2.491	3.798	0	1
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	7.789	63.515	4.0	134	10
GILROY	37.0031, -121.5608	193.898	9.989	29.722	4.792	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.995812, -121.474264
Observation Date	2020-07-21
Elevation (ft)	545.13
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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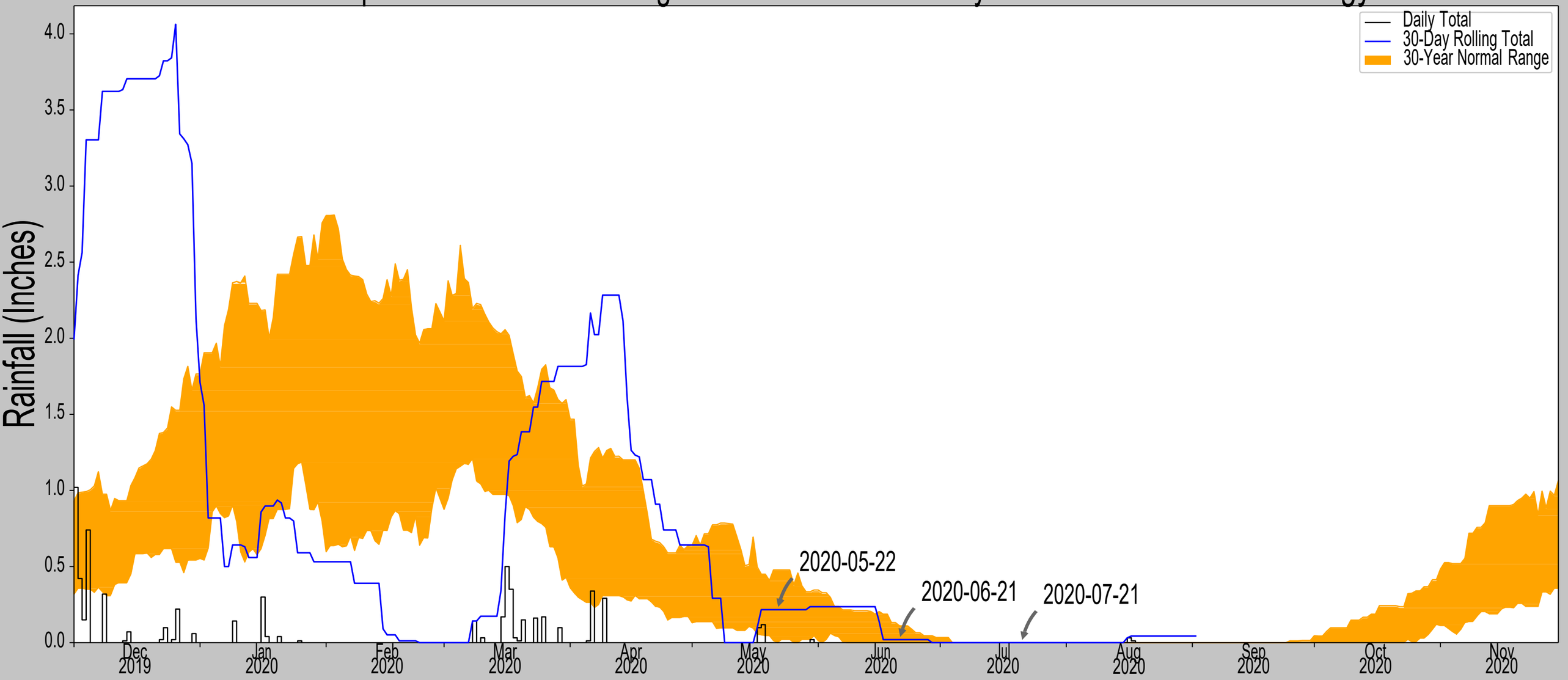
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	4.802	351.232	3.848	10134	87
GILROY 2.0 S	36.9811, -121.572	221.129	5.489	324.001	4.248	228	0
GILROY 0.1 SE	37.0092, -121.577	210.958	5.744	334.172	4.504	412	3
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	7.293	298.083	5.456	269	0
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	8.993	160.287	5.488	1	0
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	10.965	207.203	7.206	1	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	12.21	156.022	7.4	1	0
HOLLISTER 2	36.8483, -121.4214	274.934	10.602	270.196	7.636	276	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	17.842	385.025	14.899	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.075125, -121.224733
Observation Date	2020-07-21
Elevation (ft)	1468.74
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

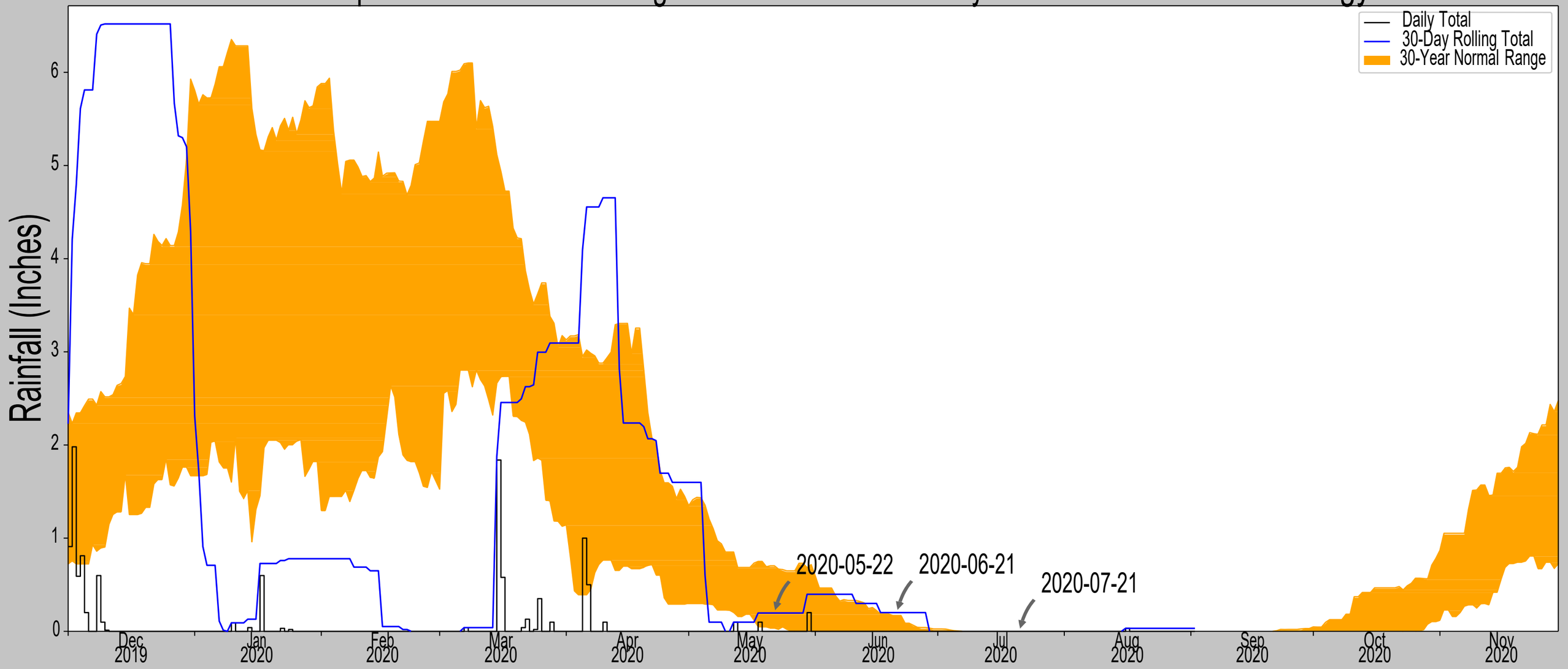
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	20.992	625.892	22.585	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	37.444	68.806	19.426	466	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	12.819	1221.693	21.429	5	0
PINNACLES NM	36.4819, -121.1822	1307.087	41.055	161.653	25.111	2	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	42.396	193.334	27.275	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.041834, -121.612346
Observation Date	2020-07-21
Elevation (ft)	259.6
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

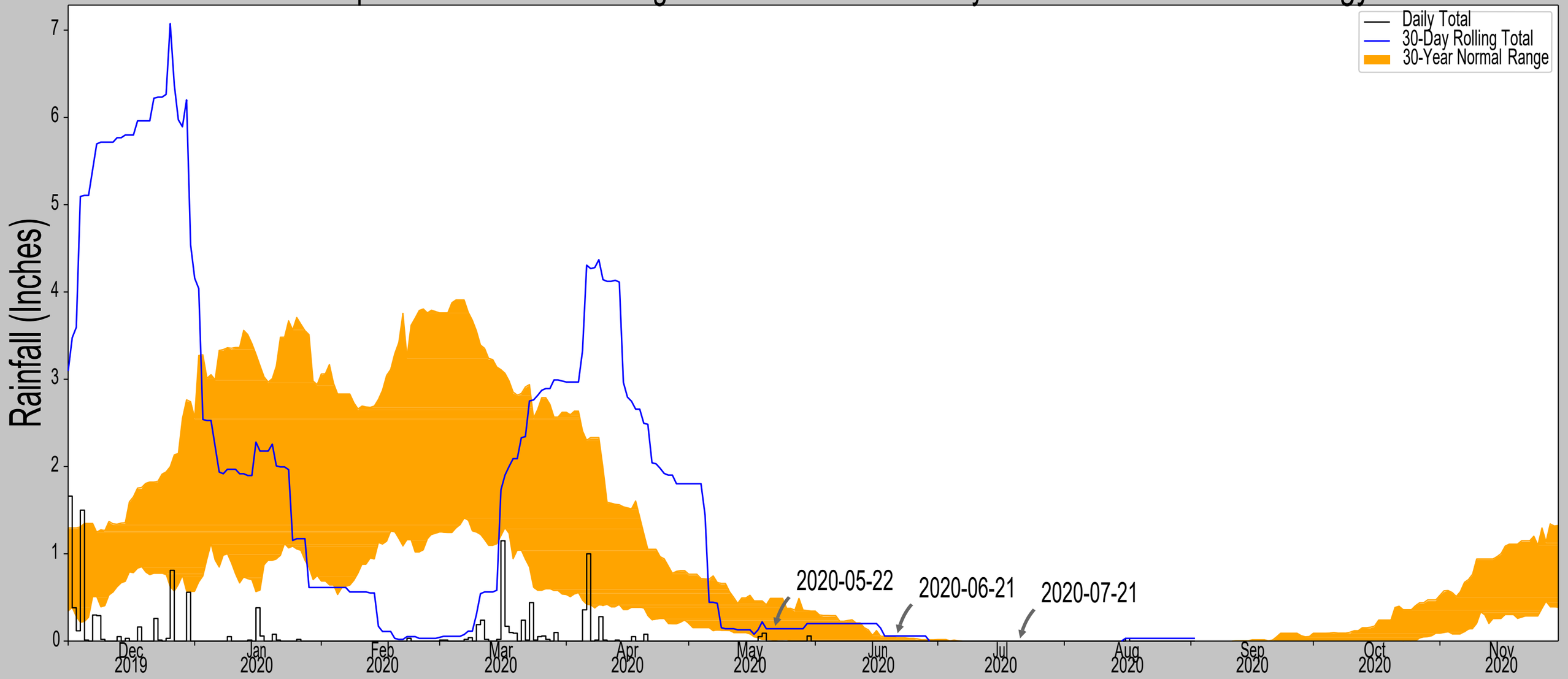
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.70315	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	3.905	65.702	2.014	10134	87
GILROY 0.1 SE	37.0092, -121.577	210.958	2.981	48.642	1.486	618	3
MORGAN HILL 2.7 S	37.092, -121.6324	337.927	3.638	78.327	1.922	13	0
GILROY 2.0 S	36.9811, -121.572	221.129	4.75	38.471	2.32	19	0
MORGAN HILL 1.4 SW	37.1168, -121.6591	433.071	5.785	173.471	3.607	93	0
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	14.591	7.631	6.677	160	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	12.178	99.495	6.692	213	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	11.567	164.456	7.107	102	0

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.388242, -120.772984
Observation Date	2020-07-21
Elevation (ft)	2664.72
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

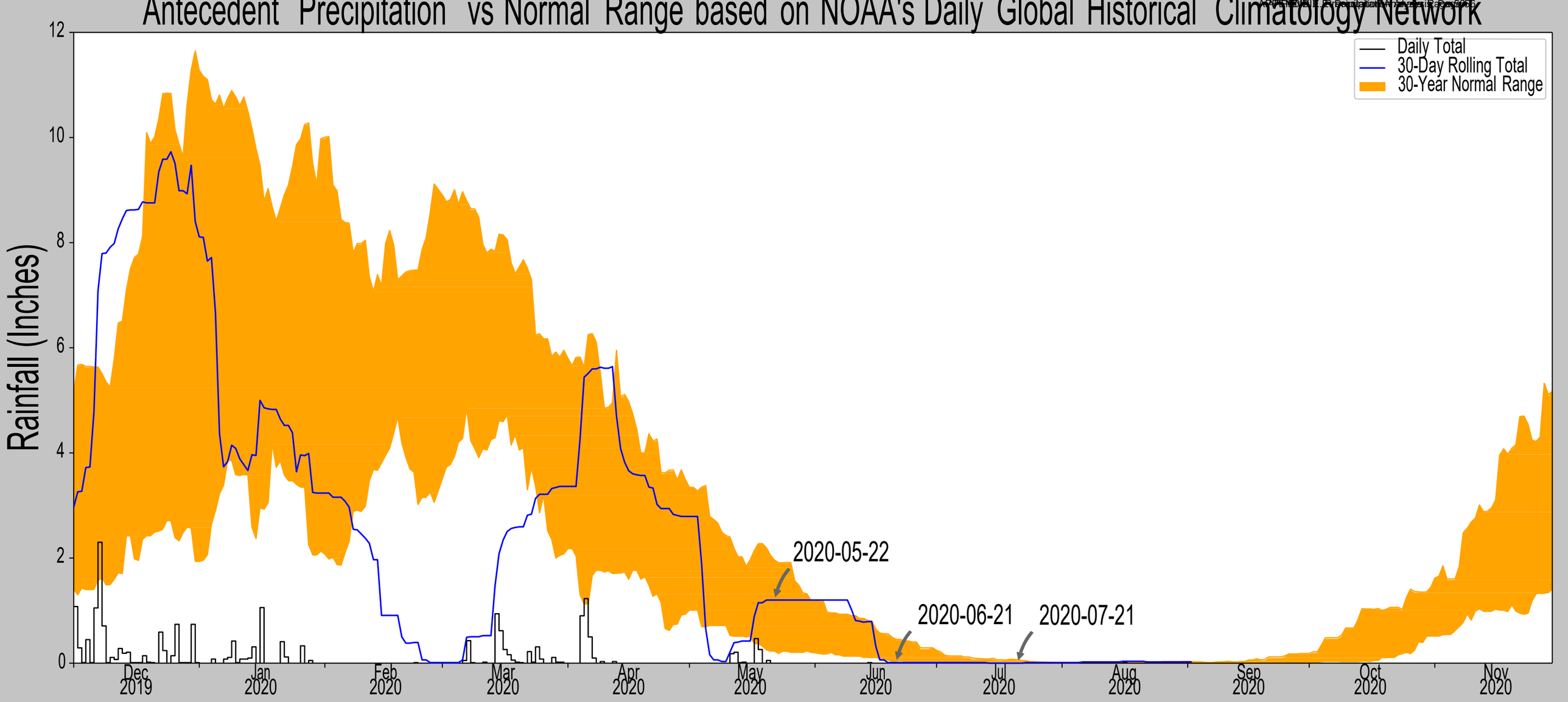
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	23.868	2344.838	66.707	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	14.476	364.851	11.796	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	16.309	1264.786	27.966	349	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	69.798	40.704	34.25	0	11
PINNACLES NM	36.4819, -121.1822	1307.087	23.65	1357.633	42.751	3	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	34.079	1483.618	65.896	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.593222, -121.283975
Observation Date	2020-07-21
Elevation (ft)	2203.08
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

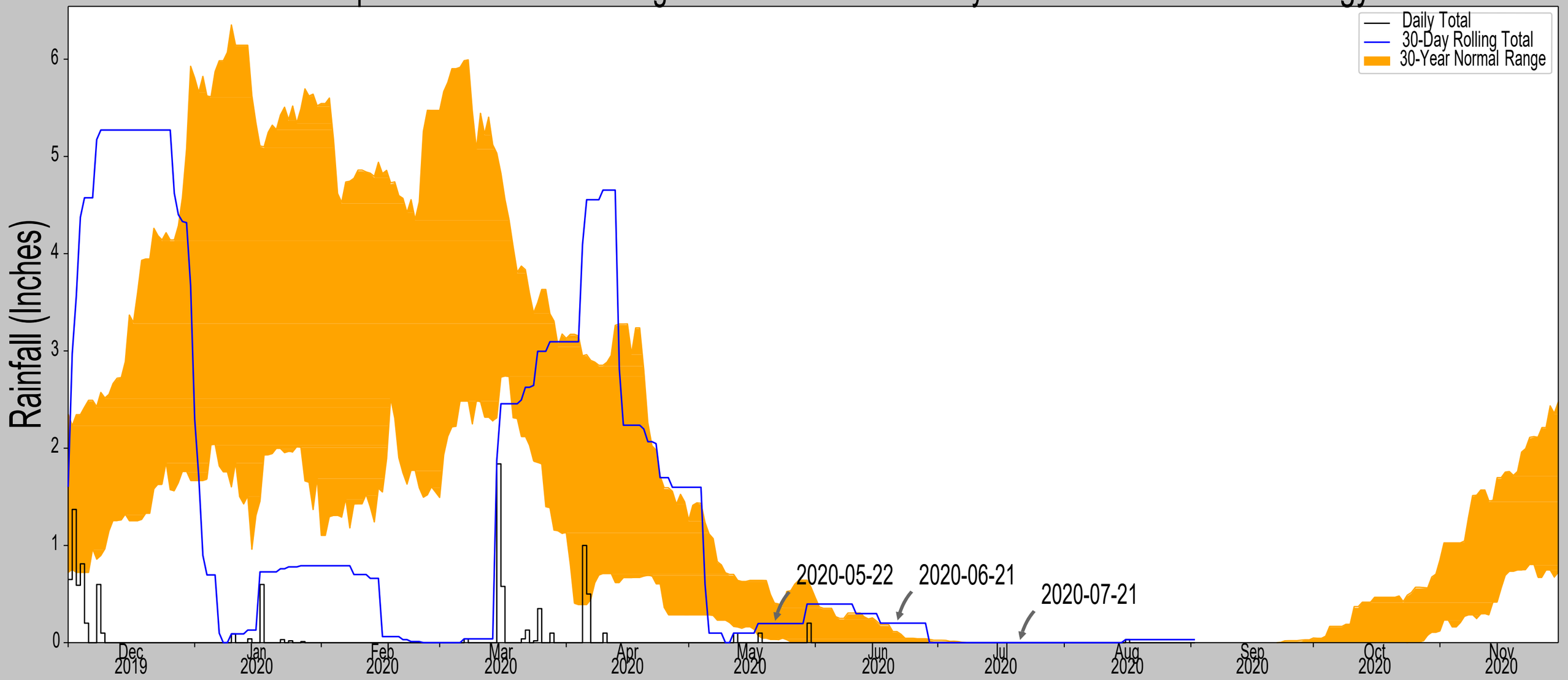
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.07126	0.0	Normal	2	3	6
2020-06-21	0.043307	0.455118	0.011811	Dry	1	2	2
2020-05-22	0.23189	1.96063	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	70.358	66.933	36.37	8505	69
PINNACLES NM	36.4819, -121.1822	1307.087	9.544	895.993	12.846	2785	2
PAICINES 4 W	36.715, -121.3492	904.856	9.158	1298.224	16.01	42	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	48.644	3.933	22.081	11	19
PRIEST VALLEY	36.1883, -120.6953	2299.869	43.067	96.789	23.549	3	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	22.195	803.146	27.814	6	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.010136, -121.330089
Observation Date	2020-07-21
Elevation (ft)	376.39
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

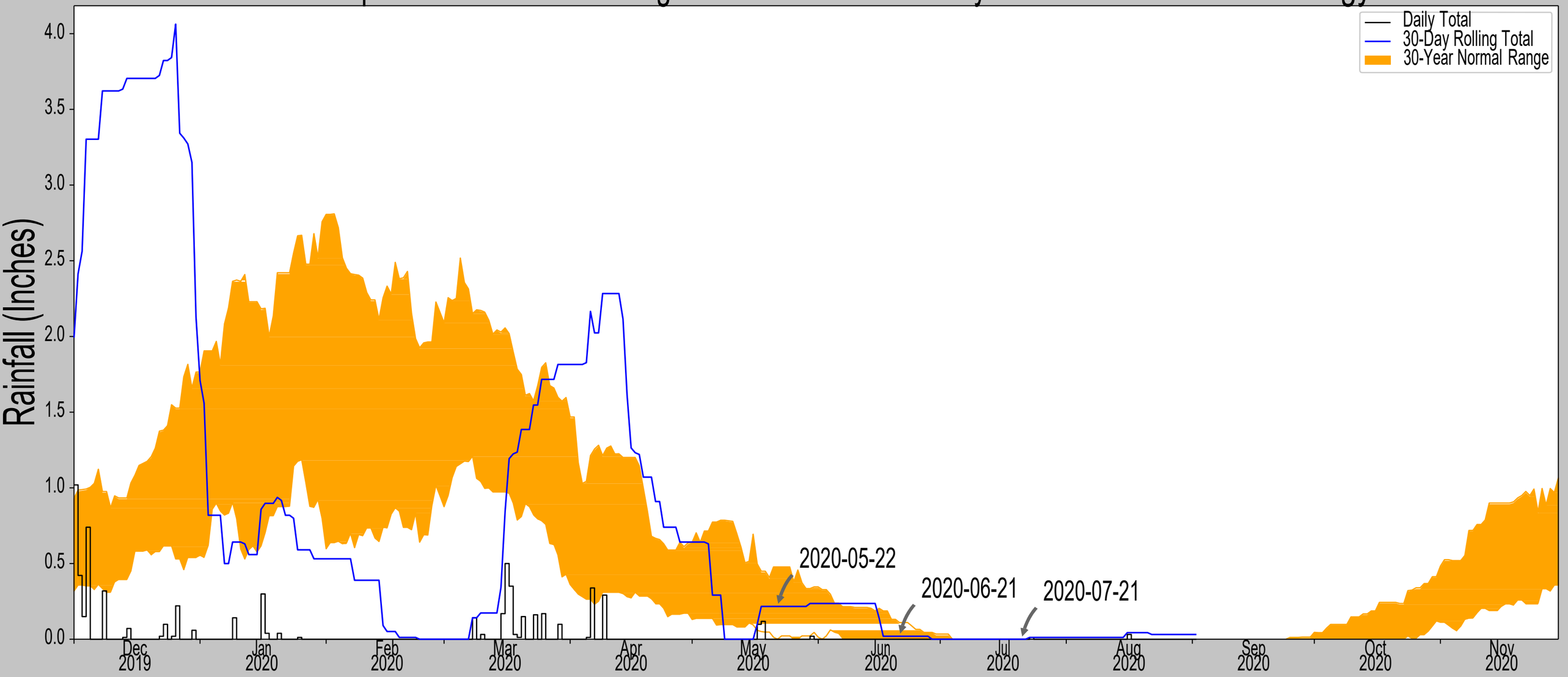
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.114173	0.200787	Wet	3	2	6
2020-05-22	0.037008	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	12.739	182.492	8.057	10134	87
HOLLISTER 5.6 NE	36.9219, -121.3402	384.843	6.122	8.453	2.807	475	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	5.929	129.343	3.435	435	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.762	12.718	5.442	2	3
HOLLISTER 2	36.8483, -121.4214	274.934	12.267	101.456	6.765	276	0
SAN LUIS DAM	37.0533, -121.0578	276.903	15.312	99.487	8.414	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.69981, -120.982744
Observation Date	2020-07-21
Elevation (ft)	2708.56
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

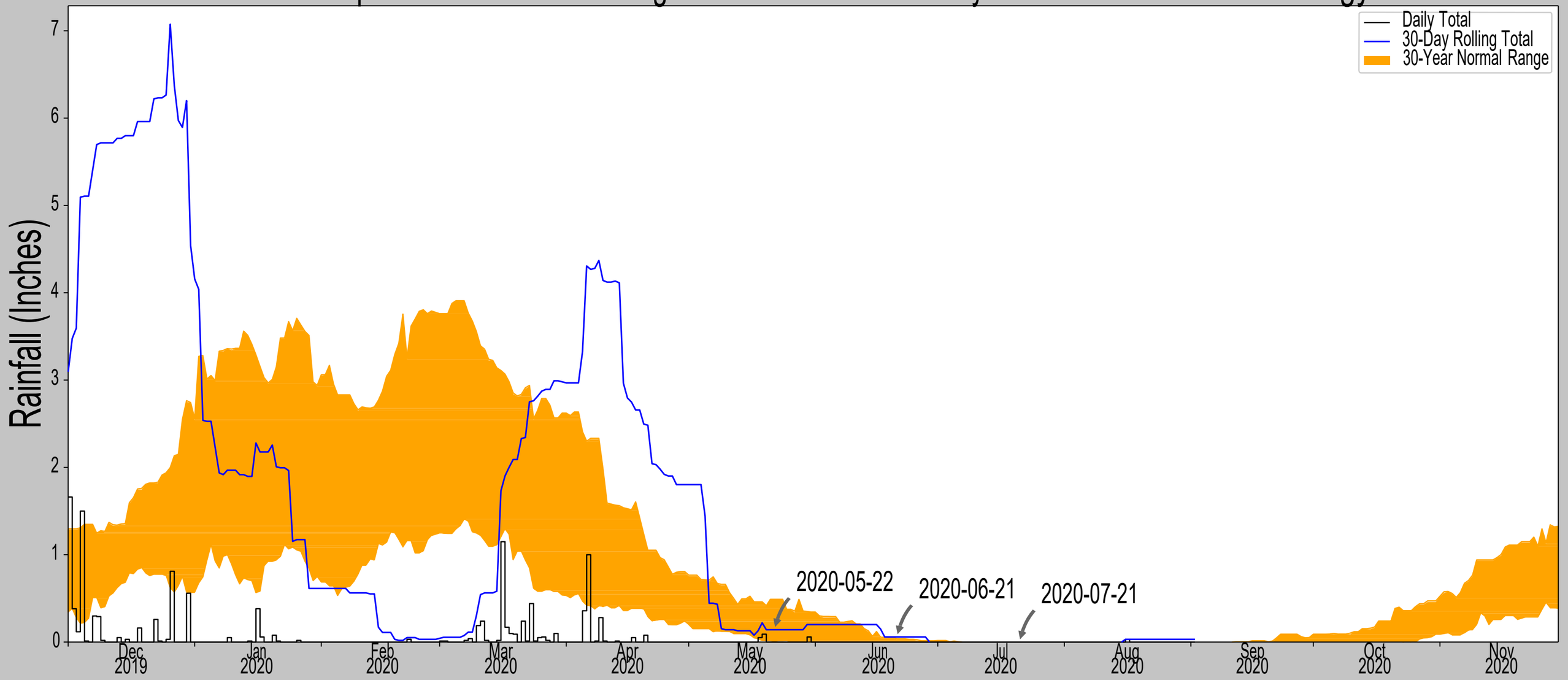
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	12.348	1865.712	28.594	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	8.439	1308.626	14.841	466	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	45.809	84.544	24.487	0	11
PRIEST VALLEY	36.1883, -120.6953	2299.869	38.785	408.691	33.304	4	0
PINNACLES NM	36.4819, -121.1822	1307.087	18.685	1401.473	34.595	3	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	57.359	509.413	55.031	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.439956, -120.817052
Observation Date	2020-07-21
Elevation (ft)	3035.85
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

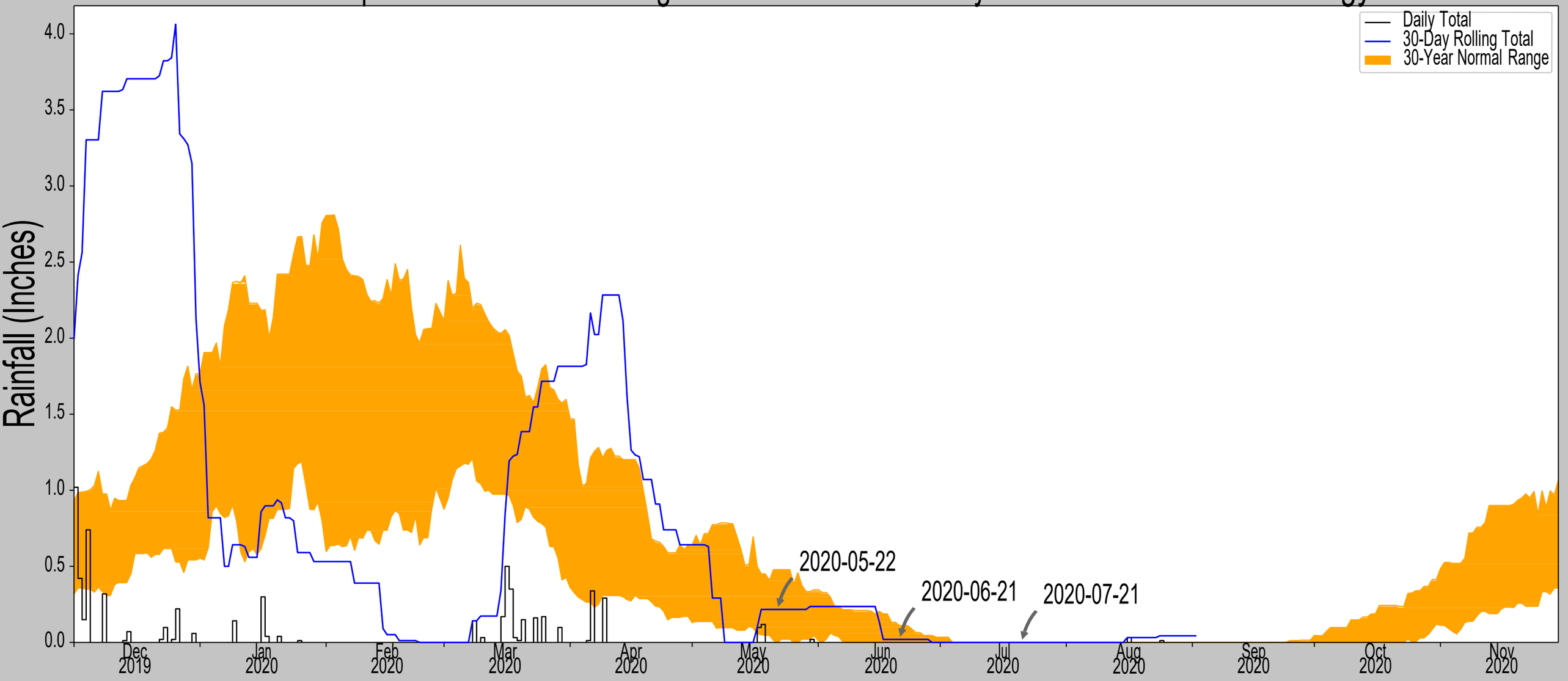
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	24.044	2715.968	76.123	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	18.662	735.981	22.133	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	12.109	1635.916	25.258	349	0
PINNACLES NM	36.4819, -121.1822	1307.087	20.497	1728.763	44.658	3	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	65.472	411.834	56.426	0	11
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	35.872	1854.748	82.676	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.552991, -121.029002
Observation Date	2020-07-21
Elevation (ft)	3517.04
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

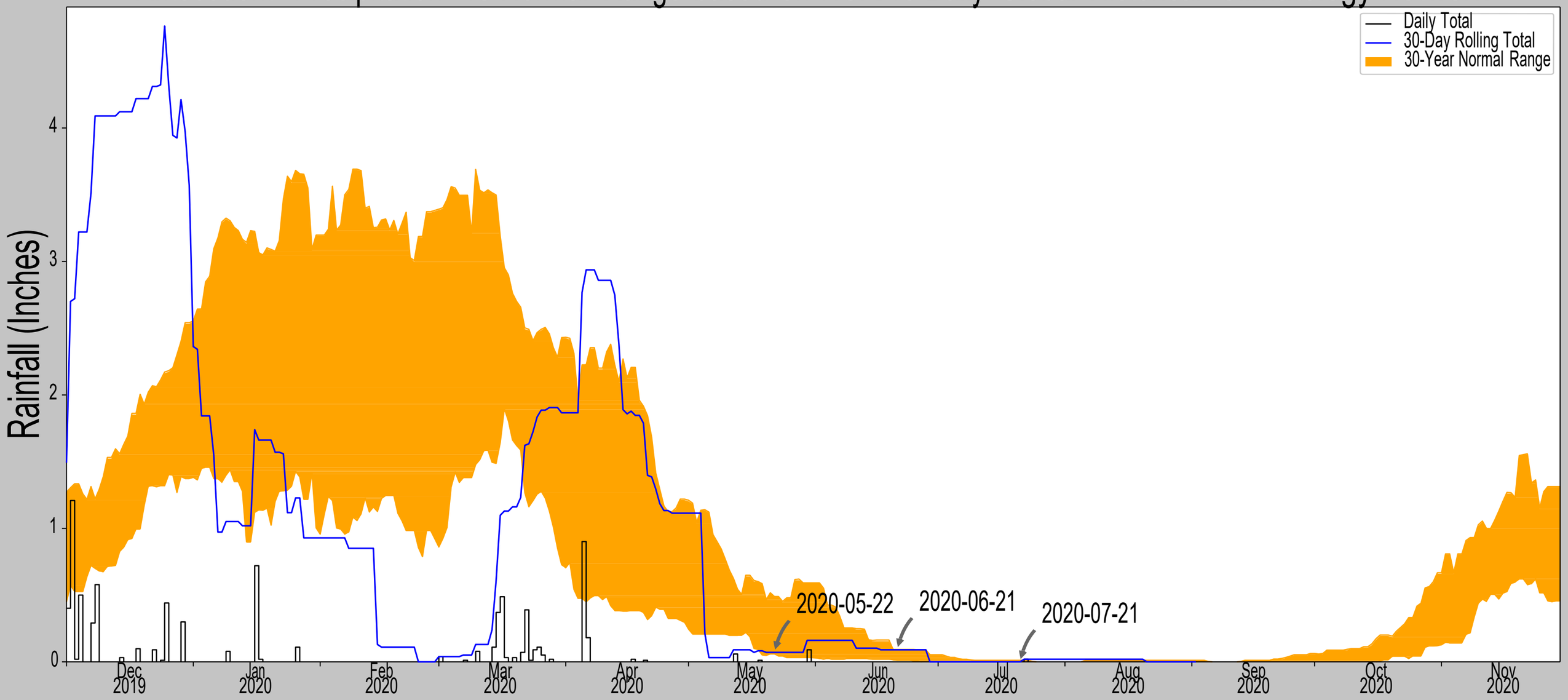
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	22.805	2674.192	71.247	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	8.85	2117.106	22.719	466	0
PINNACLES NM	36.4819, -121.1822	1307.087	9.823	2209.953	26.129	7	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	52.274	893.024	70.205	0	11
MT HAMILTON	37.3436, -121.6425	4206.037	64.277	688.997	73.211	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.688484, -121.467076
Observation Date	2020-07-21
Elevation (ft)	2633.31
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

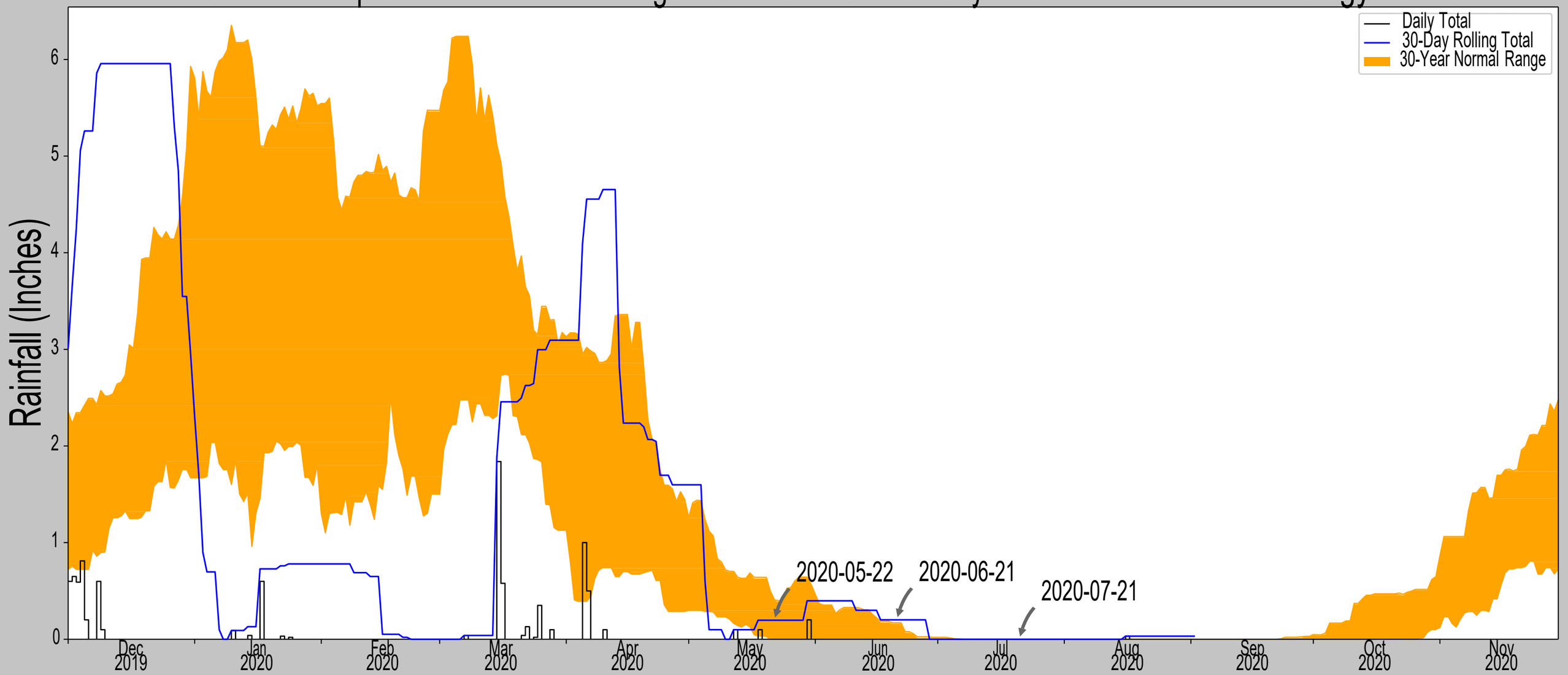
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.011811	0.0	Normal	2	3	6
2020-06-21	0.011811	0.092913	0.090551	Normal	2	2	4
2020-05-22	0.059449	0.489764	0.070866	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SALINAS MUNICIPAL AP	36.6636, -121.6081	74.147	8.002	2559.163	24.079	11338	90
PAICINES 4 W	36.715, -121.3492	904.856	6.782	1728.454	14.774	14	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.861184, -121.471356
Observation Date	2020-07-21
Elevation (ft)	212.88
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.169291	0.200787	Wet	3	2	6
2020-05-22	0.0	0.406693	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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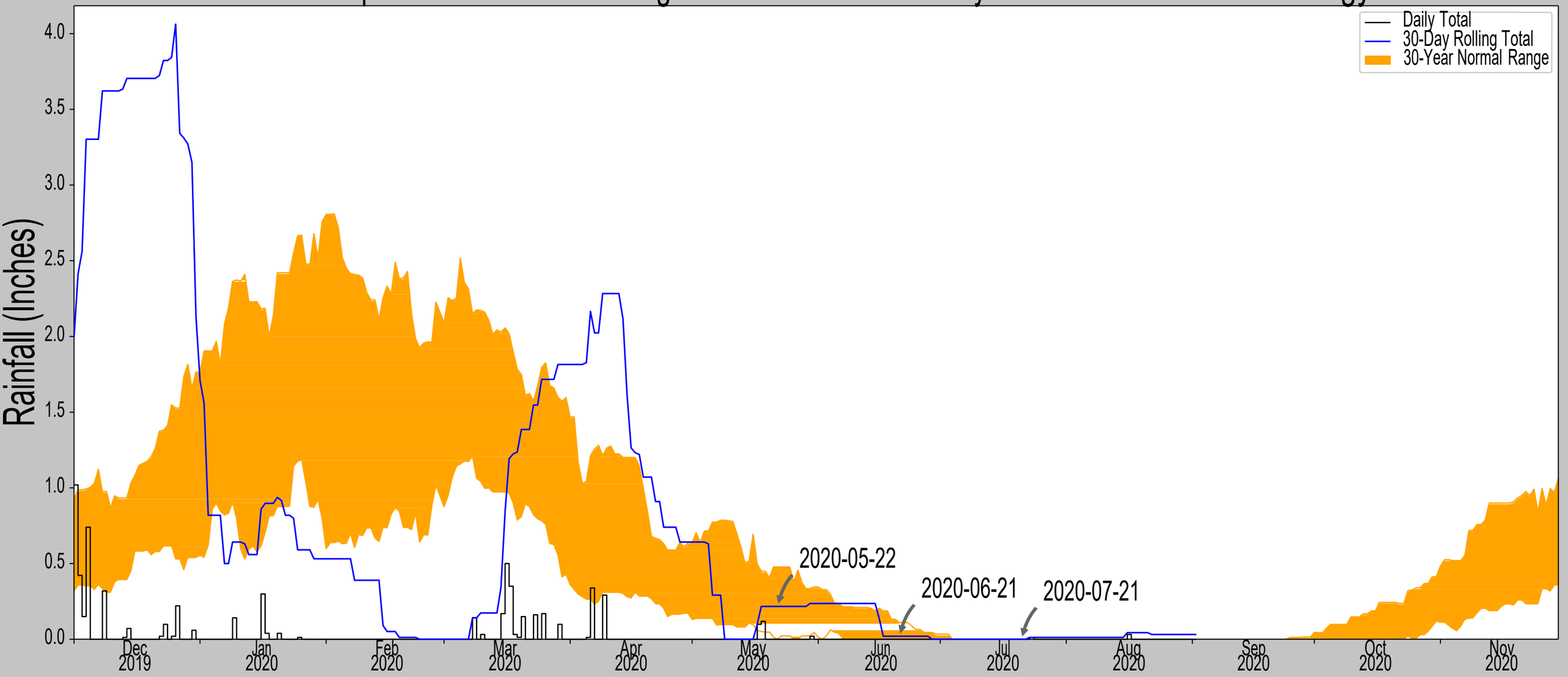
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	10.98	18.982	5.149	10134	87
HOLLISTER 2	36.8483, -121.4214	274.934	2.902	62.054	1.486	797	2
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	3.957	39.089	1.935	359	0
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	3.78	113.235	2.129	27	1
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	7.357	34.167	3.562	2	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	6.025	176.228	3.773	3	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	18.271	52.775	9.186	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.735685, -121.048648
Observation Date	2020-07-21
Elevation (ft)	2461.2
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

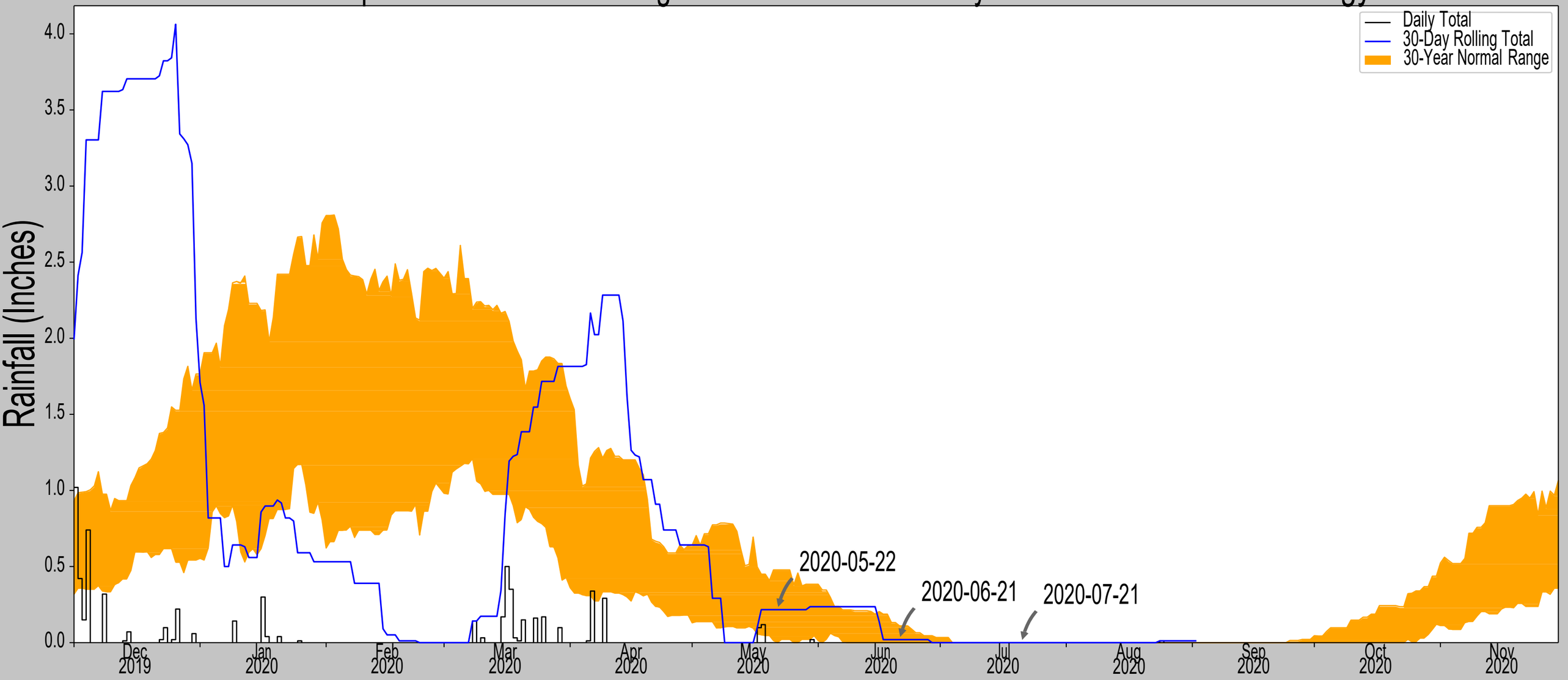
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	11.389	1618.352	23.556	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	12.747	1061.266	19.264	466	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	41.525	162.816	25.447	0	11
PRIEST VALLEY	36.1883, -120.6953	2299.869	42.614	161.331	26.051	4	0
PINNACLES NM	36.4819, -121.1822	1307.087	19.035	1154.113	30.534	3	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	52.963	262.053	37.712	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.645965, -121.281816
Observation Date	2020-07-21
Elevation (ft)	1145.45
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

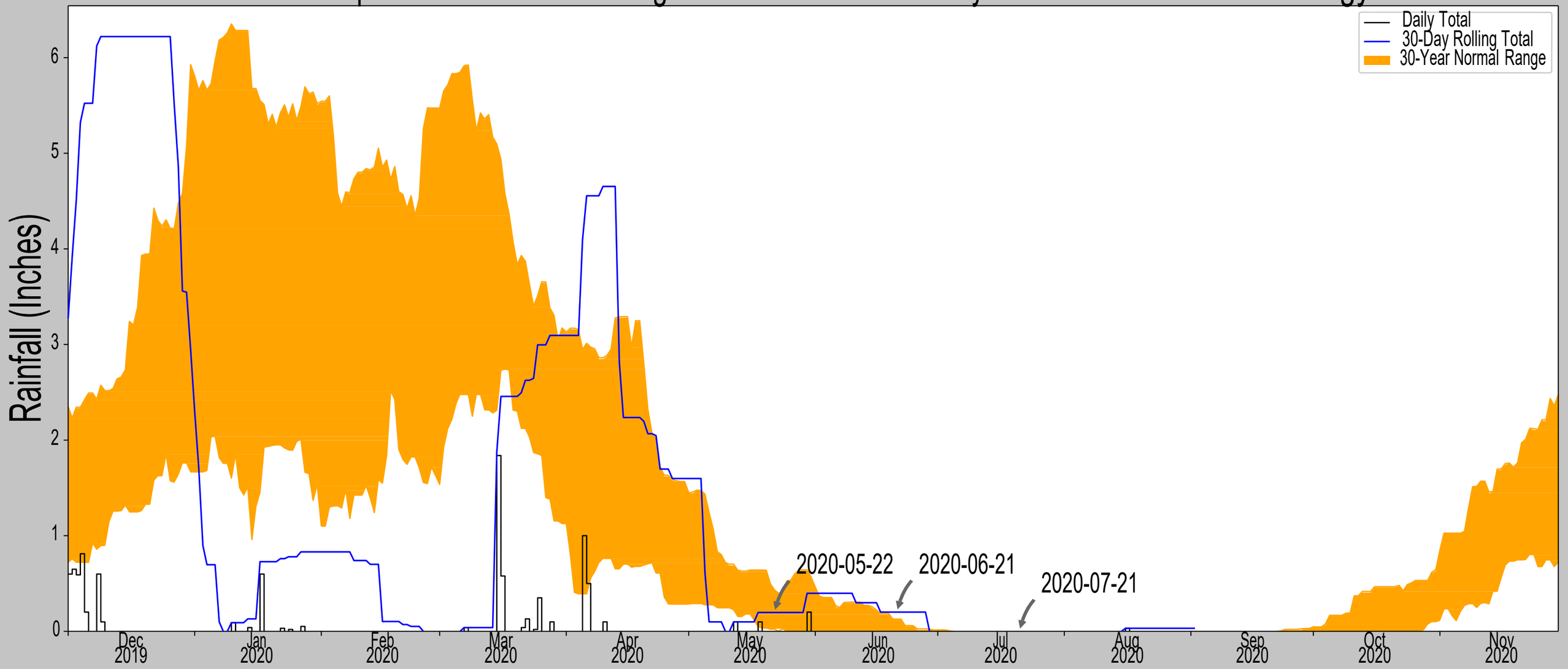
30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	24.726	302.602	18.609	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	6.057	240.594	4.183	91	0
PINNACLES NM	36.4819, -121.1822	1307.087	12.612	161.637	7.714	283	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	22.214	254.484	15.649	99	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	14.319	756.342	17.274	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.866696, -121.576743
Observation Date	2020-07-21
Elevation (ft)	386.13
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.127953	0.200787	Wet	3	2	6
2020-05-22	0.022047	0.434252	0.19685	Normal	2	1	2
Result							Normal Conditions - 14

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
GILROY	37.0031, -121.5608	193.898	9.466	192.232	6.079	10134	87
SAN JUAN BAUTISTA 0.5 S	36.8393, -121.5375	251.969	2.879	134.161	1.682	835	0
AROMAS 2.0 SSW	36.85, -121.65	344.16	4.211	41.97	2.072	21	0
GILROY 2.0 S	36.9811, -121.572	221.129	7.909	165.001	4.864	13	0
HOLLISTER 2	36.8483, -121.4214	274.934	8.681	111.196	4.872	301	2
HOLLISTER 0.3 WSW	36.8544, -121.4035	326.115	9.615	60.015	4.904	15	1
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.828	2.978	5.358	3	0
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	11.52	290.986	8.536	30	0

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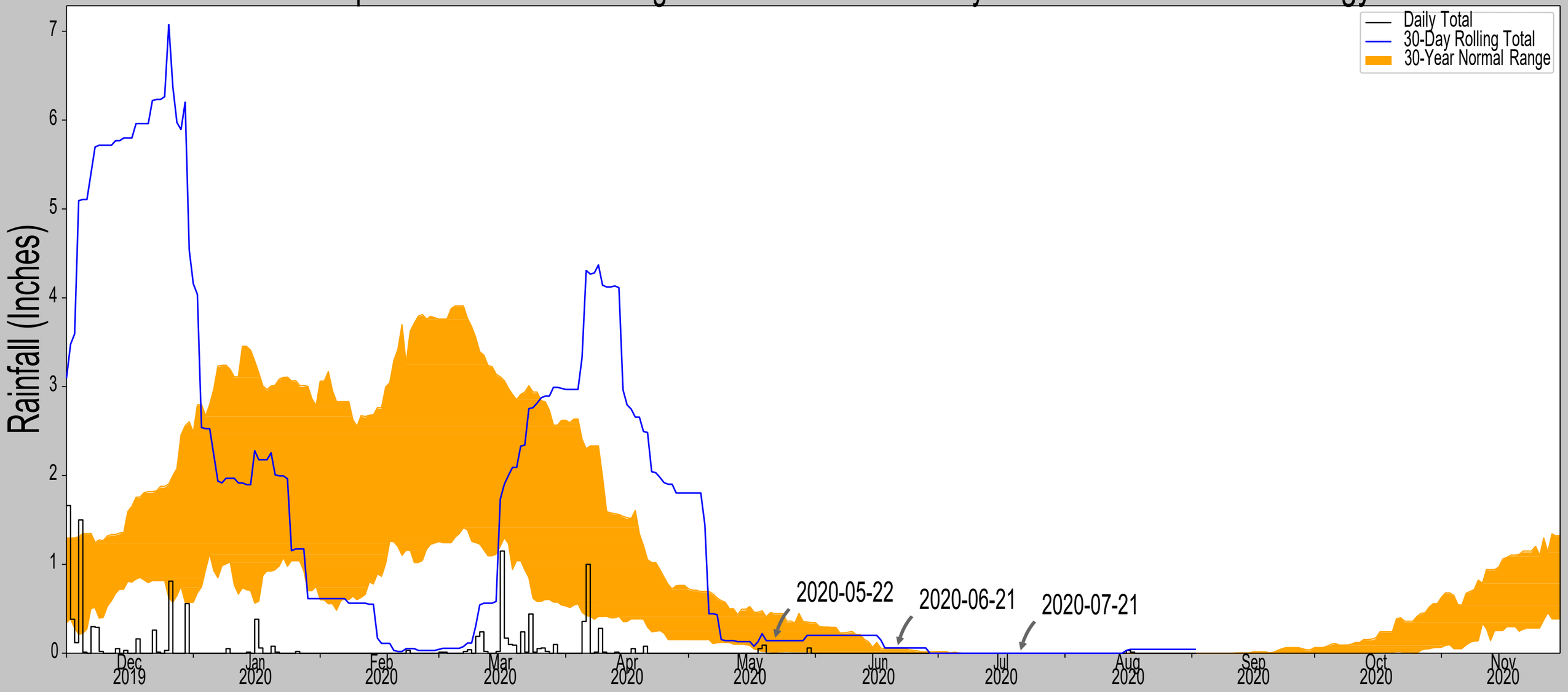
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.476879, -121.070773
Observation Date	2020-07-21
Elevation (ft)	1515.45
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.051181	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.447244	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

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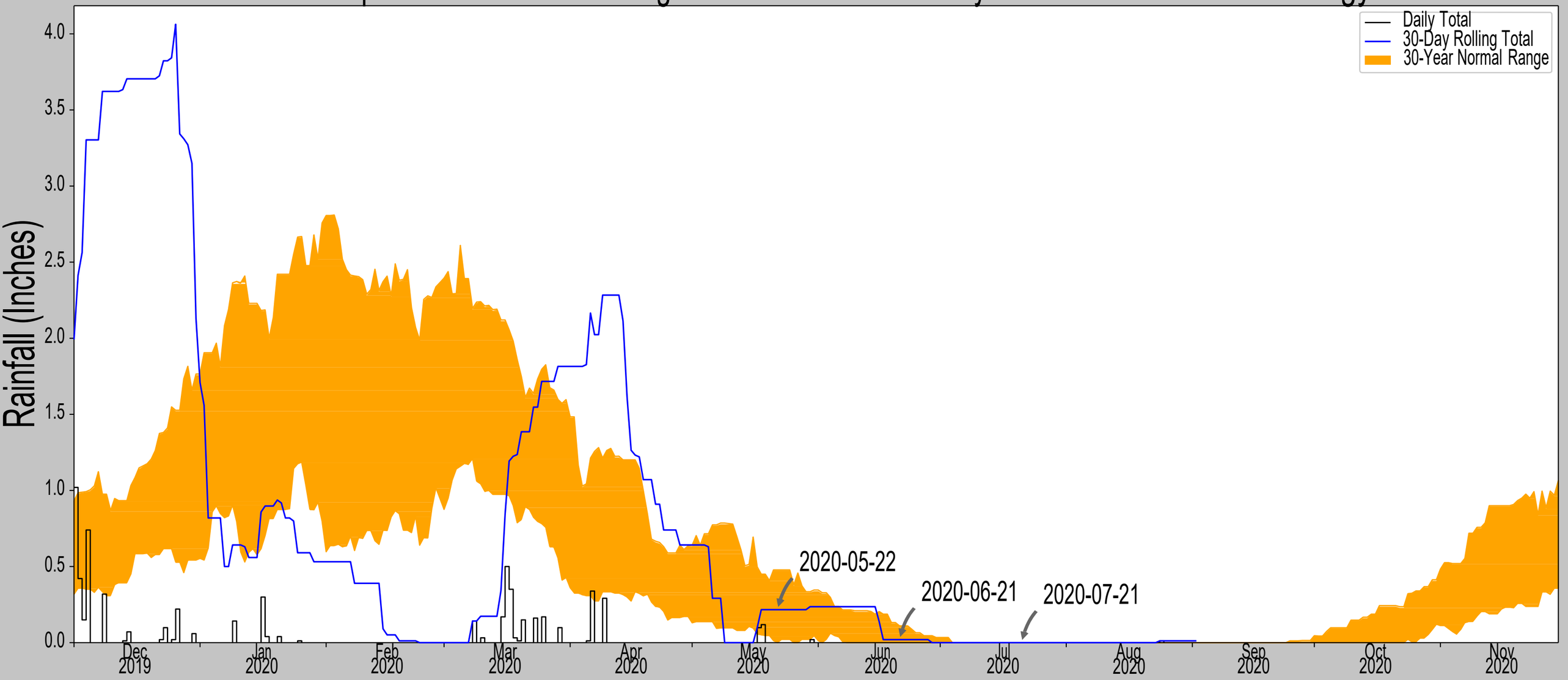
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	19.023	1195.568	31.304	10699	69
PINNACLES NM	36.4819, -121.1822	1307.087	6.2	208.363	4.082	544	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	13.701	115.516	7.748	109	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	34.374	334.348	26.961	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.778742, -121.171694
Observation Date	2020-07-21
Elevation (ft)	1628.56
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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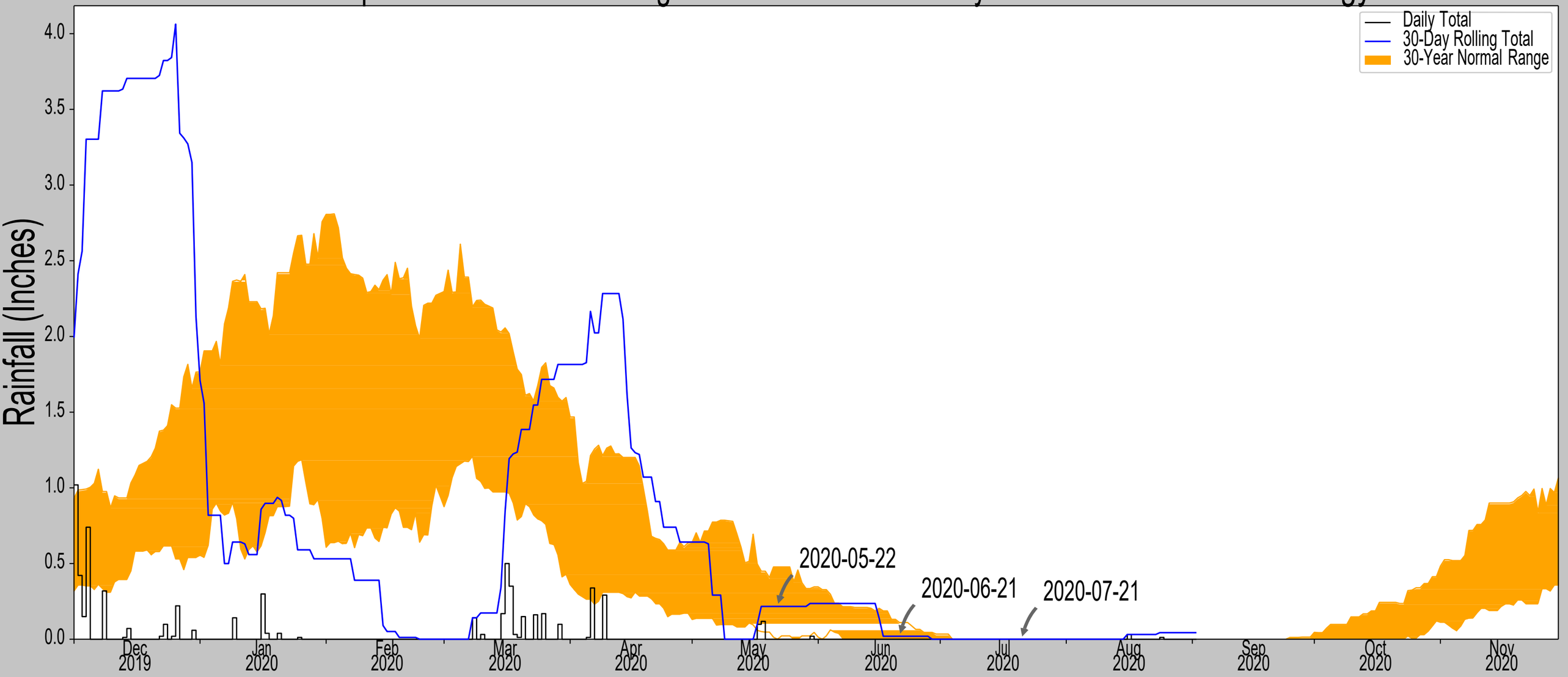
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	14.506	785.712	17.925	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	10.769	723.704	12.64	91	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	19.875	228.626	13.488	377	0
PINNACLES NM	36.4819, -121.1822	1307.087	20.518	321.473	15.829	5	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	11.557	1239.452	19.525	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.807275, -121.112041
Observation Date	2020-07-21
Elevation (ft)	2597.75
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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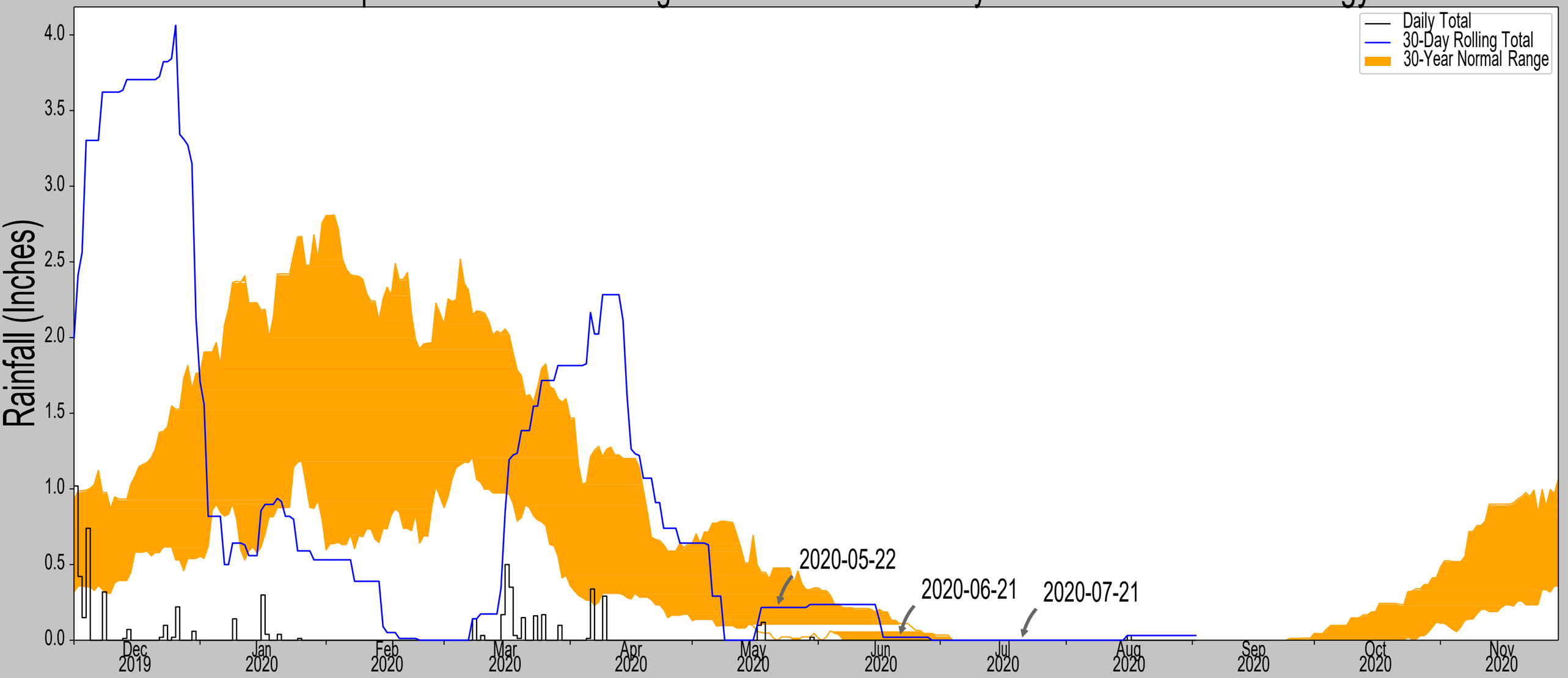
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	10.671	1754.902	23.529	10879	69
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	35.499	26.266	16.907	0	11
PANOCHE 2 W	36.6067, -120.8842	1399.934	18.744	1197.816	30.887	466	0
PAICINES 4 W	36.715, -121.3492	904.856	14.594	1692.894	31.273	2	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	48.629	297.881	36.369	2	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	14.197	2208.642	37.745	3	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.49432, -120.909276
Observation Date	2020-07-21
Elevation (ft)	3025.78
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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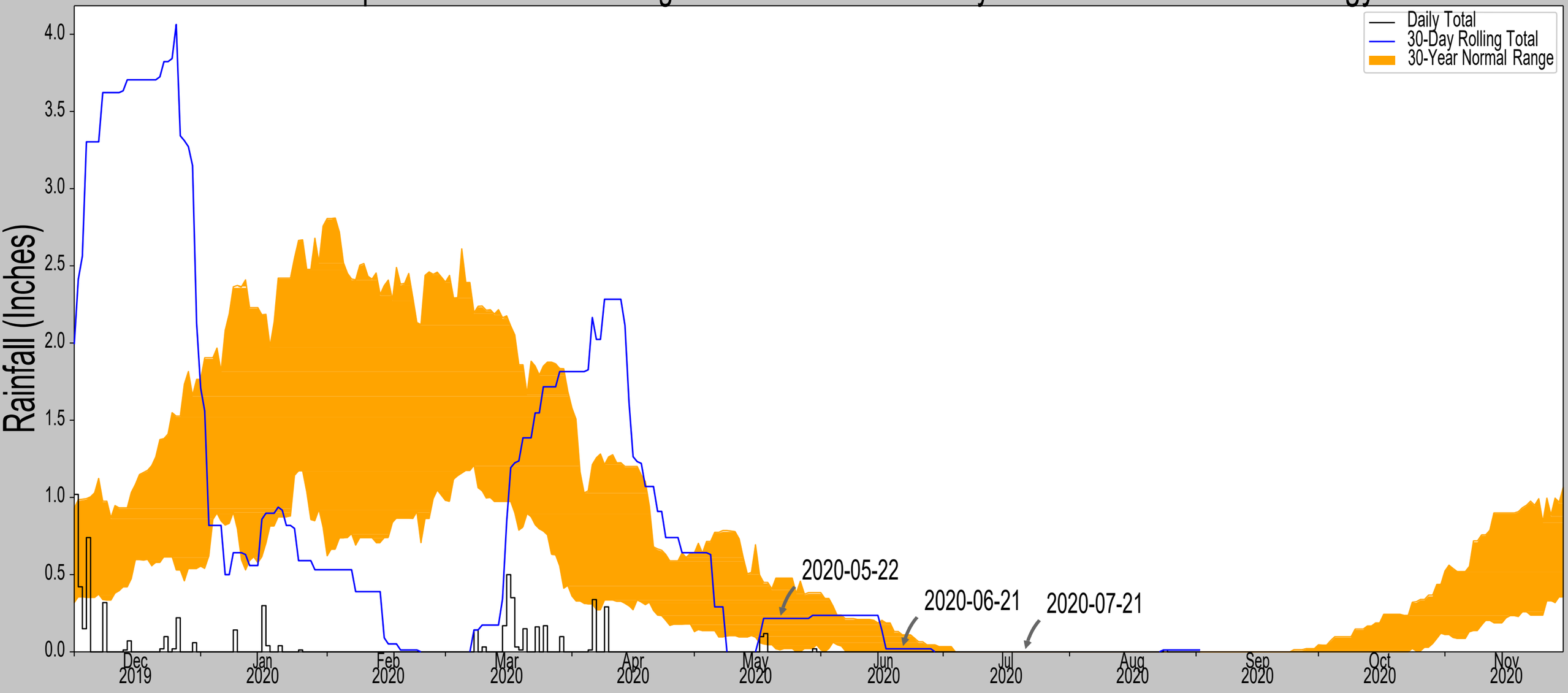
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	26.353	2182.932	69.386	10879	69
PANOCHE 2 W	36.6067, -120.8842	1399.934	7.888	1625.846	16.374	466	0
PRIEST VALLEY	36.1883, -120.6953	2299.869	24.267	725.911	28.536	4	0
PINNACLES NM	36.4819, -121.1822	1307.087	15.185	1718.693	32.932	3	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	59.388	401.764	50.585	0	11
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	37.328	1844.678	85.656	0	10

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.646875, -121.135587
Observation Date	2020-07-21
Elevation (ft)	1532.37
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

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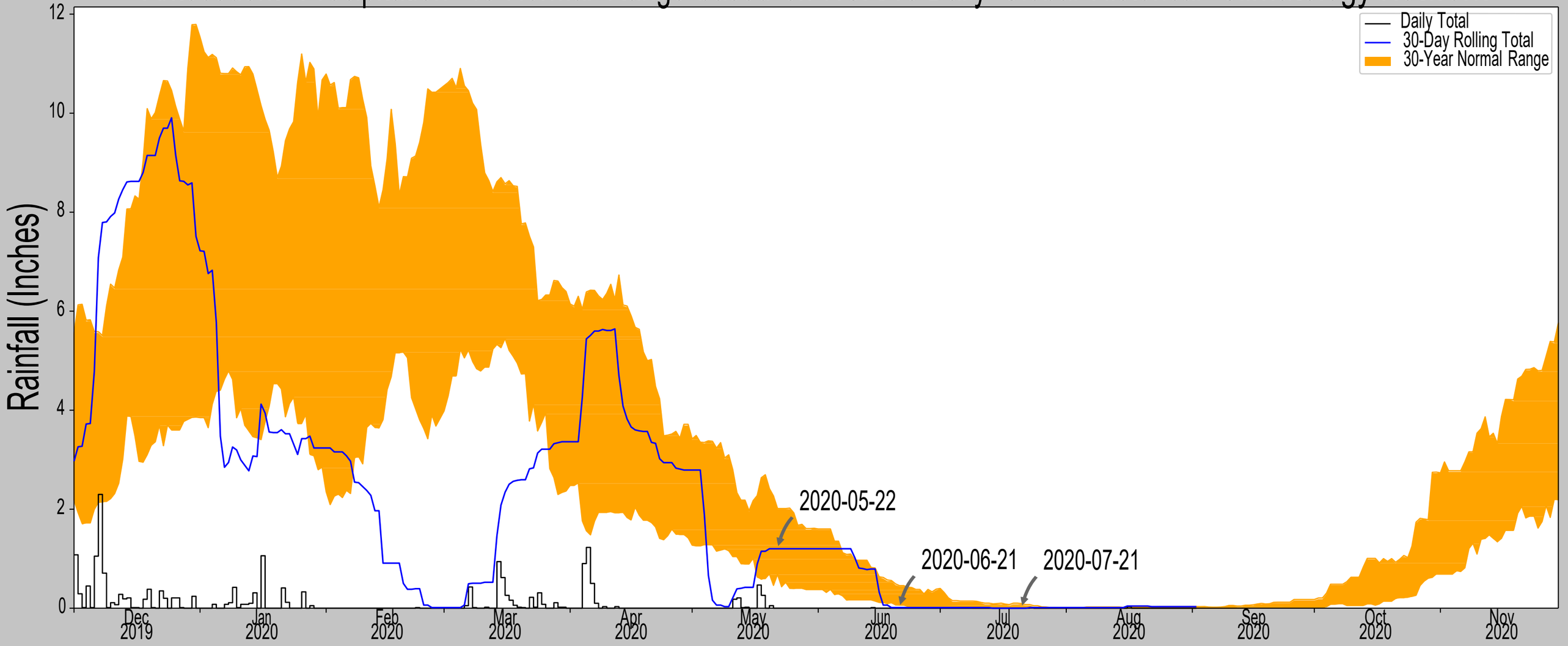
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	19.166	689.522	21.84	10879	69
PINNACLES NM	36.4819, -121.1822	1307.087	11.689	225.283	7.893	371	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	14.213	132.436	8.278	102	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	18.533	1143.262	29.528	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.164462, -121.301278
Observation Date	2020-07-21
Elevation (ft)	2023.36
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.092913	0.0	Normal	2	3	6
2020-06-21	0.065354	0.455118	0.011811	Dry	1	2	2
2020-05-22	0.683465	2.012598	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	49.686	246.653	34.614	8505	69
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	13.569	600.656	14.256	34	10
LOS GATOS 9.6 SSE	37.1039, -121.8696	2199.147	32.675	175.787	20.448	15	11
BLACK MTN 2 WSW	37.3167, -122.1667	2120.079	48.751	96.719	26.653	2407	0
LOS GATOS 6.1 S	37.1427, -121.9725	1731.955	36.994	291.405	27.428	16	0
BONNY DOON 2.0 NE	37.0681, -122.1329	1879.921	46.3	143.439	27.476	3	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	37.791	361.286	30.659	34	0
BOULDER CREEK 3.6 NE	37.1811, -122.0911	1724.081	43.499	299.279	32.593	12	0
SAN LUIS DAM	37.0533, -121.0578	276.903	15.459	1746.457	33.955	283	0
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	16.602	1776.313	36.961	2	0
GILROY	37.0031, -121.5608	193.898	18.136	1829.462	41.34	41	0

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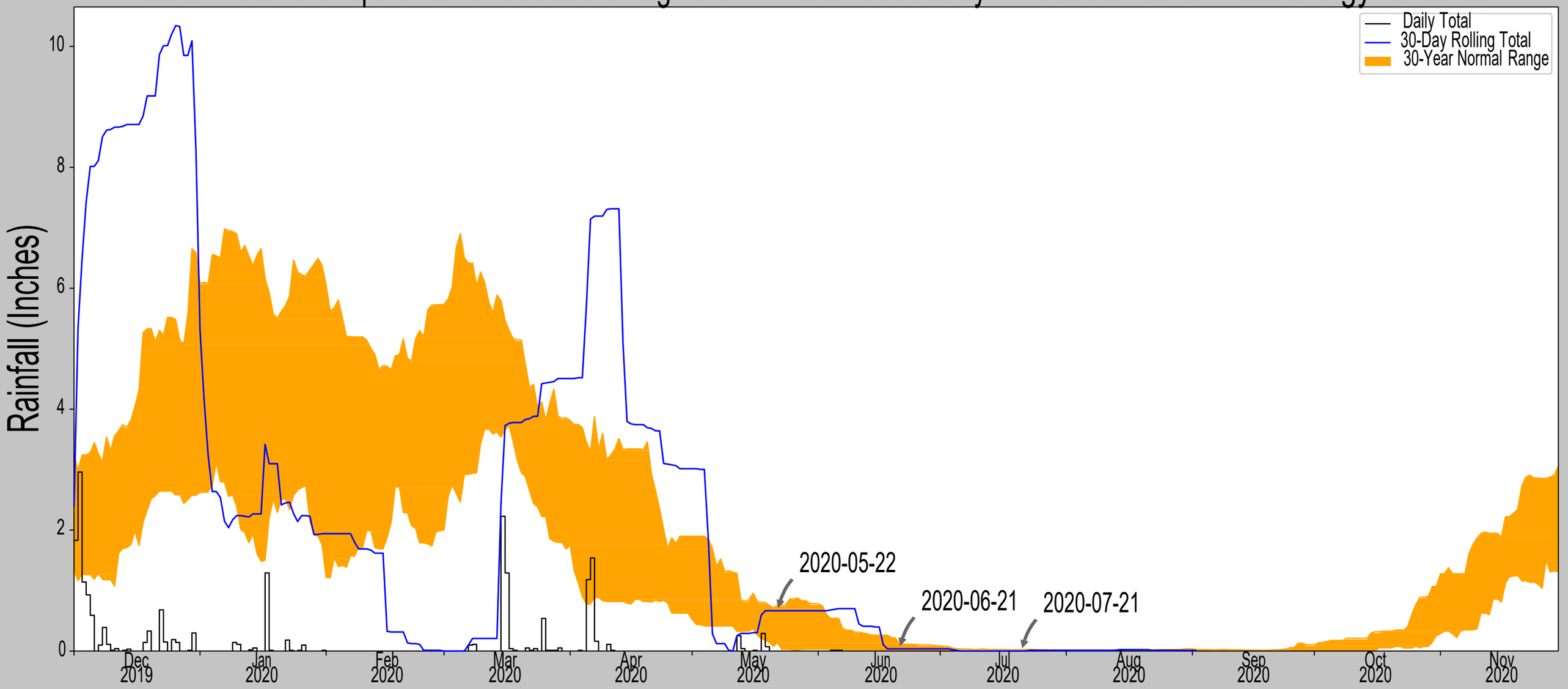
U.S. Army Corps of Engineers

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.983182, -121.719293
Observation Date	2020-07-21
Elevation (ft)	878.19
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.035433	Normal	2	2	4
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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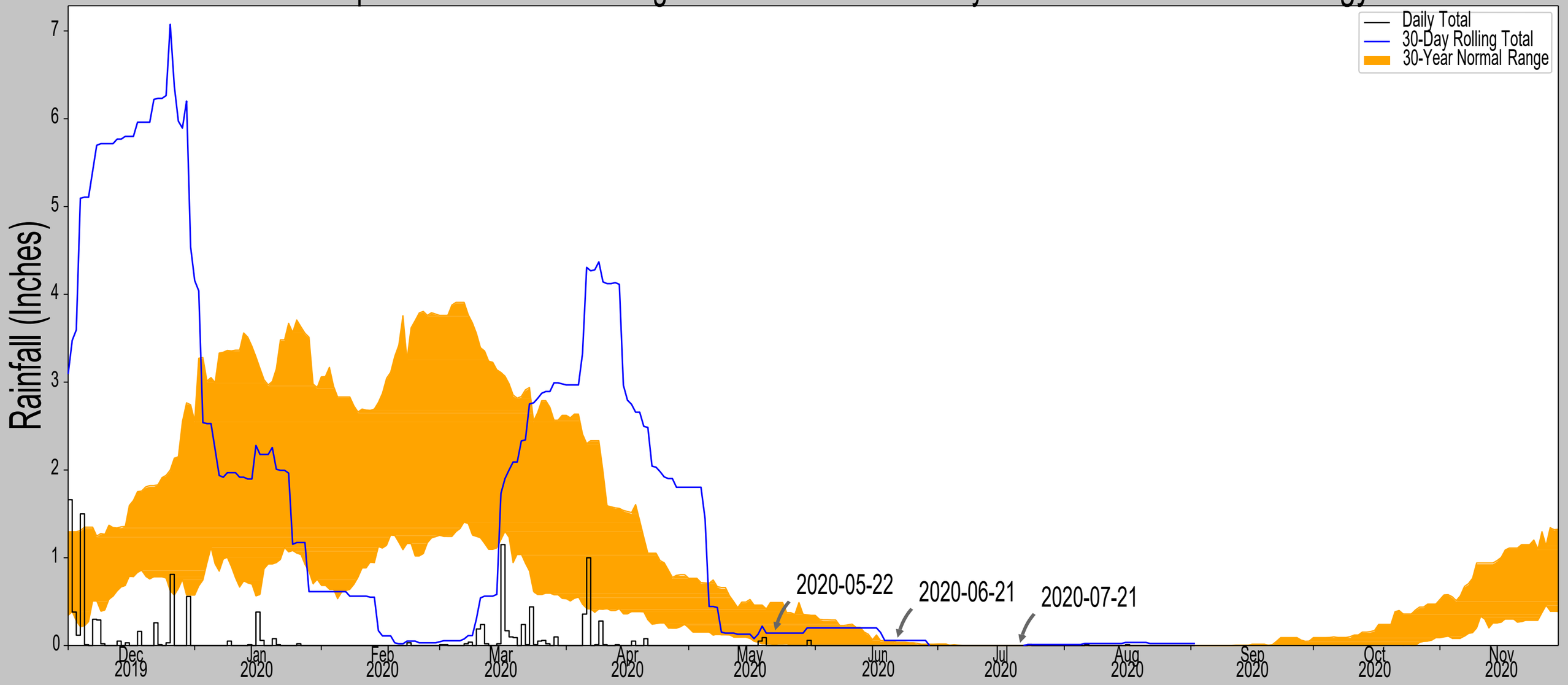
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	4.549	783.046	5.609	11002	79
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	5.036	718.085	5.882	345	11
APTOS 2.6 E	36.9961, -121.8536	382.874	7.466	495.316	7.058	1	0
GILROY	37.0031, -121.5608	193.898	8.854	684.292	10.043	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.388426, -120.942486
Observation Date	2020-07-21
Elevation (ft)	2268.87
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
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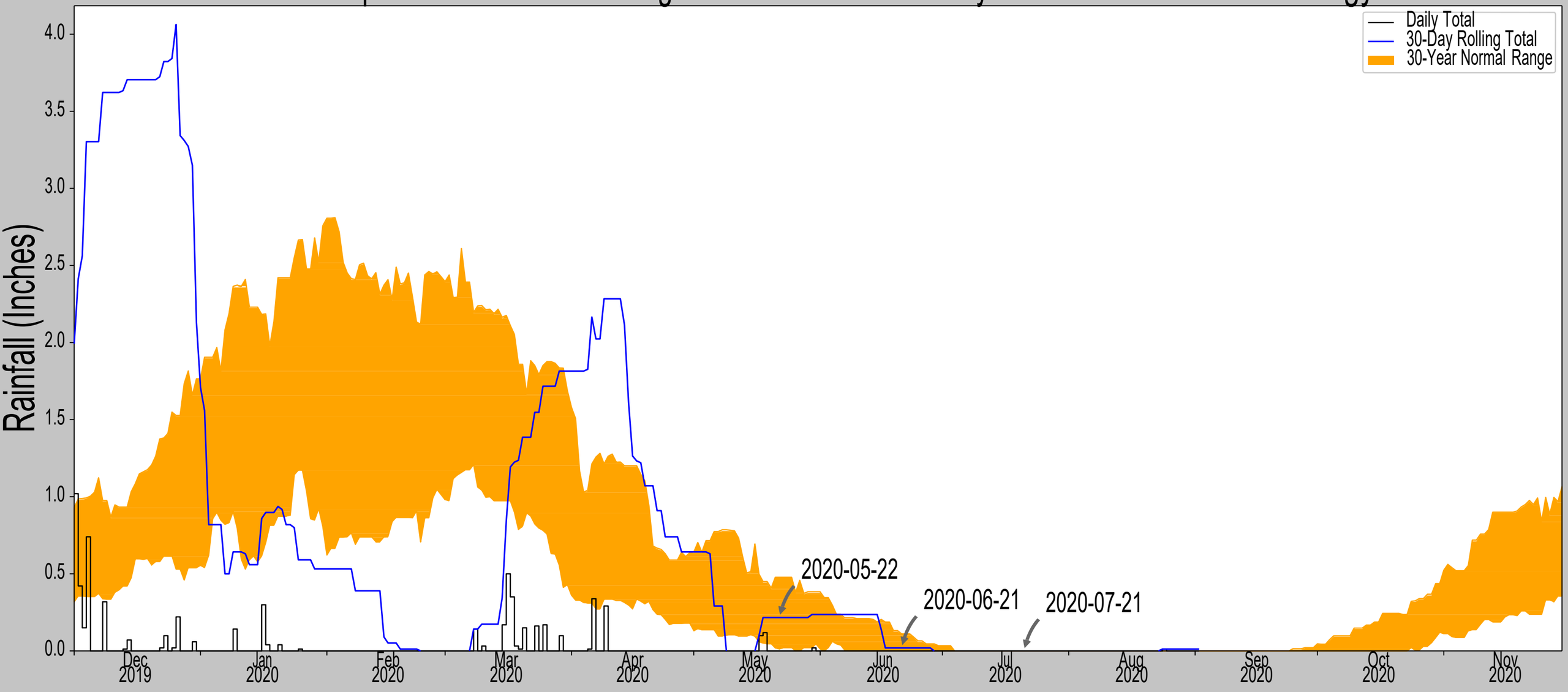
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	16.601	1948.988	39.826	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	19.512	30.999	9.385	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	15.425	868.936	20.345	349	0
PINNACLES NM	36.4819, -121.1822	1307.087	14.808	961.783	20.906	3	0
LOS GATOS 9.6 SSE	37.1039, -121.8896	2199.147	72.064	69.723	37.453	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.579021, -121.193415
Observation Date	2020-07-21
Elevation (ft)	1489.74
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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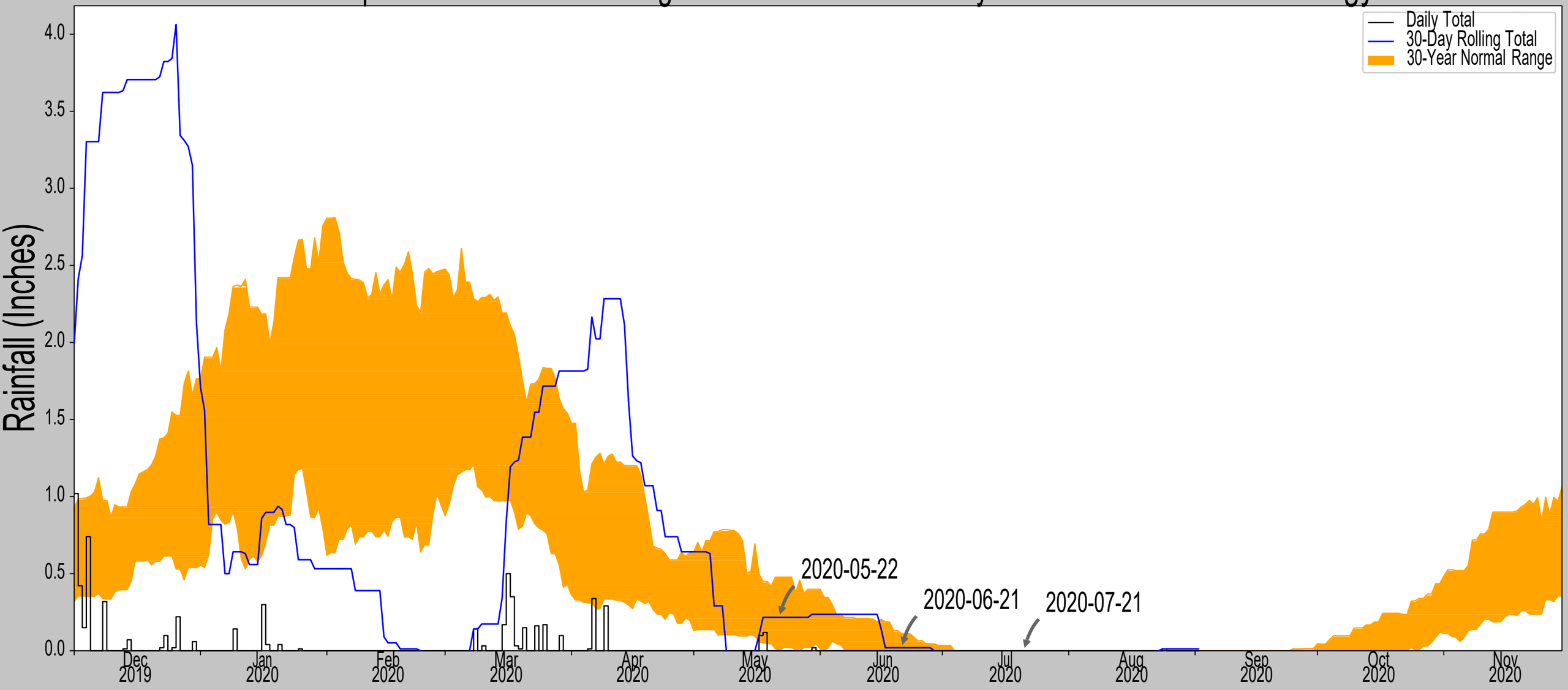
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	24.846	646.892	27.253	10879	69
PINNACLES NM	36.4819, -121.1822	1307.087	6.739	182.653	4.263	371	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	17.26	89.806	9.317	102	0
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	41.549	308.638	31.521	0	21

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.700227, -121.285917
Observation Date	2020-07-21
Elevation (ft)	656.83
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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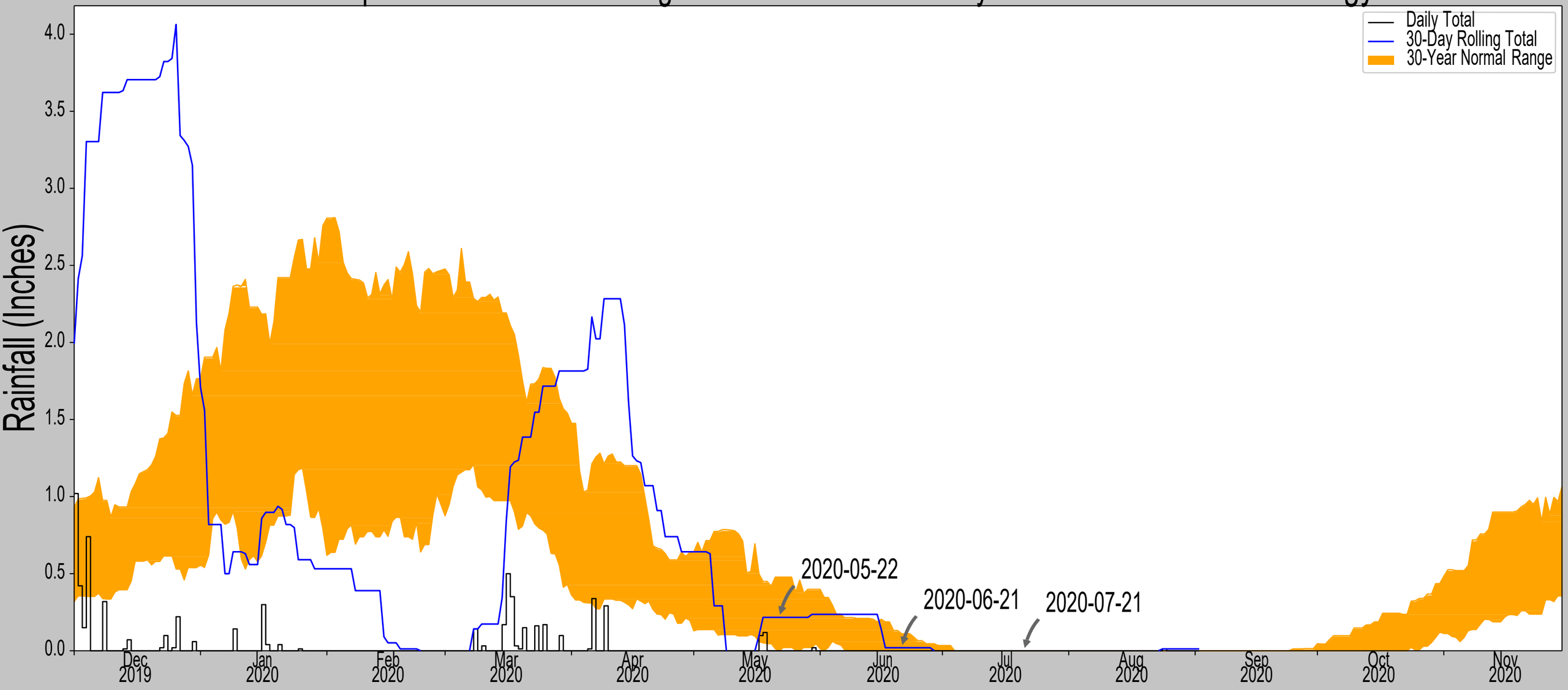
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	22.697	186.018	14.436	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	3.651	248.026	2.548	91	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	10.742	267.722	7.71	380	21
HOLLISTER 2	36.8483, -121.4214	274.934	12.684	381.896	10.552	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.771595, -121.390718
Observation Date	2020-07-21
Elevation (ft)	825.78
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.0	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

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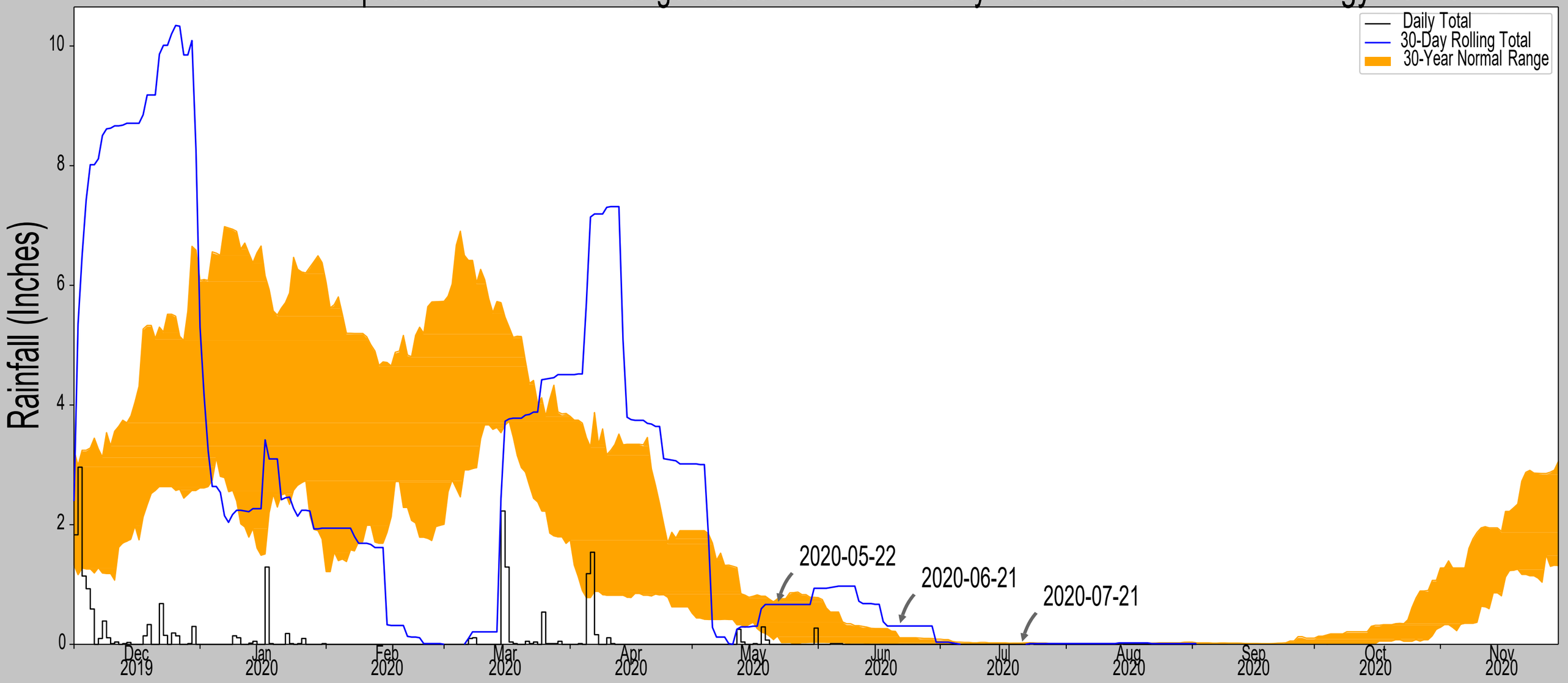
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	26.007	17.068	12.147	10879	69
PAICINES 4 W	36.715, -121.3492	904.856	4.536	79.076	2.4	91	0
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	5.082	436.672	4.506	380	21
HOLLISTER 2	36.8483, -121.4214	274.934	5.565	550.846	5.57	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.939314, -121.67064
Observation Date	2020-07-21
Elevation (ft)	677.36
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.307087	Wet	3	2	6
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
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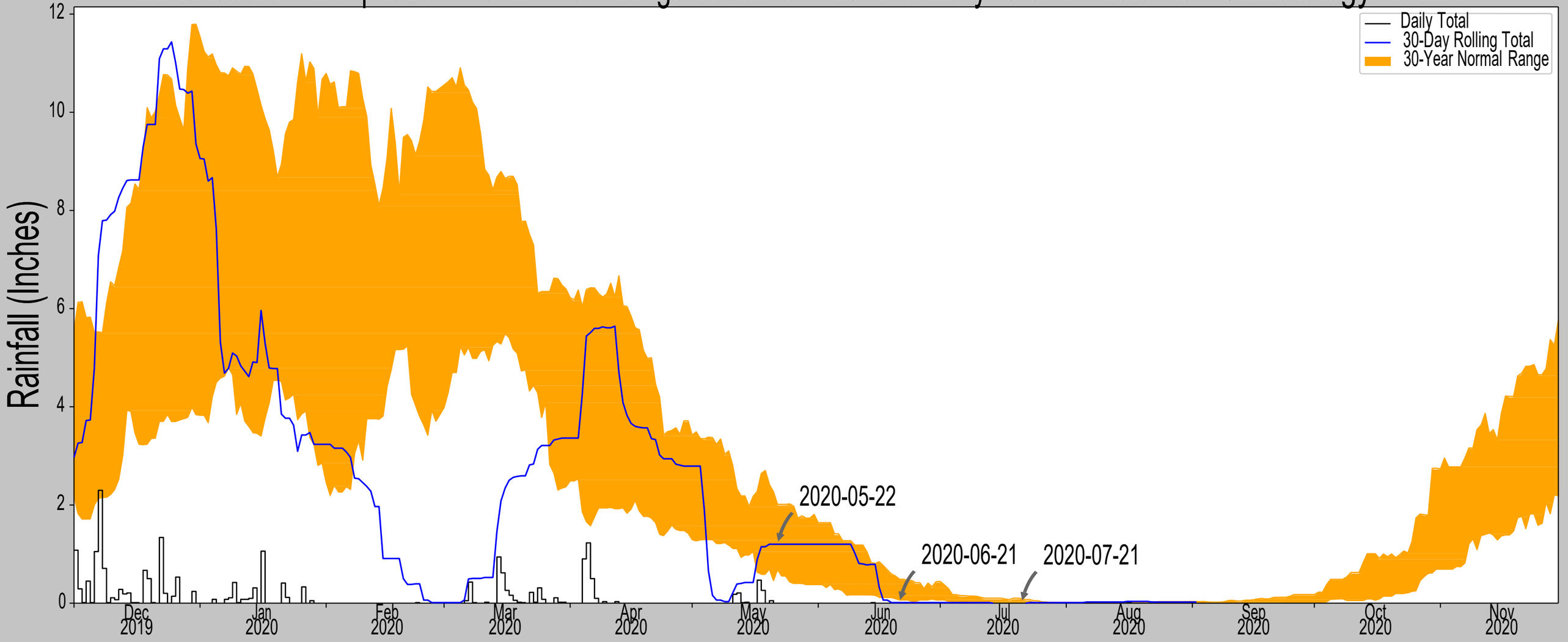
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	5.475	582.216	5.651	11002	79
AROMAS 2.0 SSW	36.85, -121.65	344.16	6.276	333.2	4.915	208	0
GILROY 2.0 S	36.9811, -121.572	221.129	6.164	456.231	5.586	0	1
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	6.519	517.255	6.306	138	10
GILROY	37.0031, -121.5608	193.898	7.496	483.462	6.997	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.107913, -121.825845
Observation Date	2020-07-21
Elevation (ft)	2548.22
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.092913	0.0	Normal	2	3	6
2020-06-21	0.077559	0.486614	0.011811	Dry	1	2	2
2020-05-22	0.683465	2.012598	1.200787	Normal	2	1	2
Result							Normal Conditions - 10

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
SKYLINE RIDGE PRESERVE	37.3133, -122.185	2270.013	24.33	278.207	17.717	8505	69
LOS GATOS 9.6 SSE	37.1039, -121.8696	2199.147	3.524	349.073	2.816	45	21
LOS GATOS 4 SW	37.1833, -122.0333	2415.026	12.557	133.194	7.323	88	0
MORGAN HILL 6.4 NE	37.1864, -121.5462	2624.016	16.328	75.796	8.585	4	0
LOS GATOS 6.1 S	37.1427, -121.9725	1731.955	8.429	816.265	10.673	16	0
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	9.504	886.146	12.699	34	0
BONNY DOON 2.0 NE	37.0681, -122.1329	1879.921	17.146	668.299	19.174	3	0
BOULDER CREEK 3.6 NE	37.1811, -122.0911	1724.081	15.459	824.139	19.697	12	0
APTOS 2.6 E	36.9961, -121.8536	382.874	7.876	2165.346	20.598	2	0
BLACK MTN 2 WSW	37.3167, -122.1667	2120.079	23.662	428.141	20.779	2319	0
LOS GATOS	37.2319, -121.9592	365.157	11.282	2183.063	29.706	313	0
WATSONVILLE MUNI AP	36.9356, -121.7886	160.105	12.068	2388.115	34.25	9	0
BEN LOMOND #4	37.0856, -122.0797	419.948	14.075	2128.272	36.289	2	0

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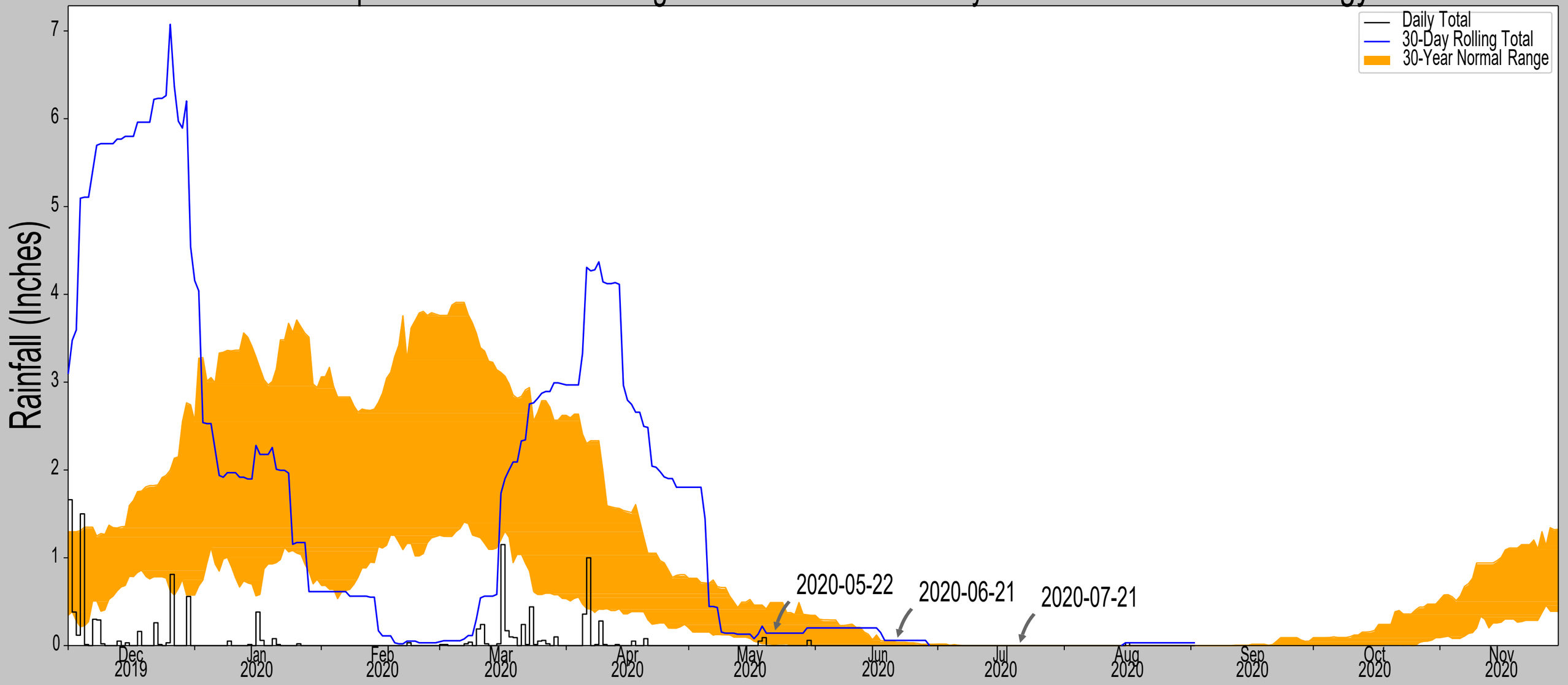
Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.27406, -120.675608
Observation Date	2020-07-21
Elevation (ft)	3160.59
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.037402	0.059055	Wet	3	2	6
2020-05-22	0.011811	0.489764	0.141732	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the
Antecedent Precipitation Tool
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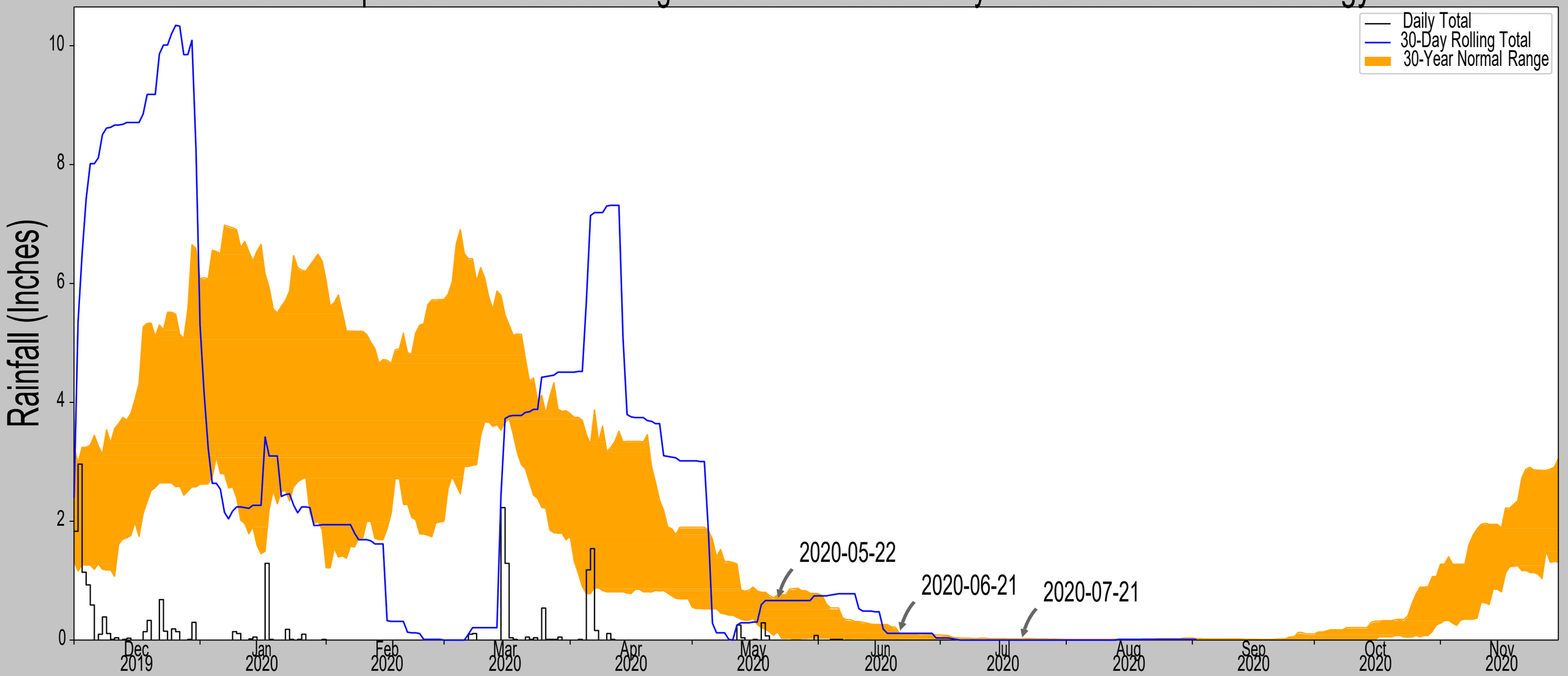
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
KING CITY	36.2069, -121.1378	319.882	26.171	2840.708	86.121	10699	69
PRIEST VALLEY	36.1883, -120.6953	2299.869	6.026	860.721	7.898	301	0
PANOCHE 2 W	36.6067, -120.8842	1399.934	25.742	1760.656	56.907	349	0
COALINGA	36.1356, -120.3606	669.948	19.999	2490.642	58.81	3	10
LOCKWOOD 3.6 NW	35.9808, -121.1174	1181.102	31.913	1979.488	77.532	0	11

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.073683, -121.763736
Observation Date	2020-07-21
Elevation (ft)	1500.04
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.020866	0.0	Normal	2	3	6
2020-06-21	0.008268	0.110236	0.114173	Wet	3	2	6
2020-05-22	0.137402	0.762205	0.665354	Normal	2	1	2
Result							Normal Conditions - 14

Figure and tables made by the **Antecedent Precipitation Tool** Version 1.0

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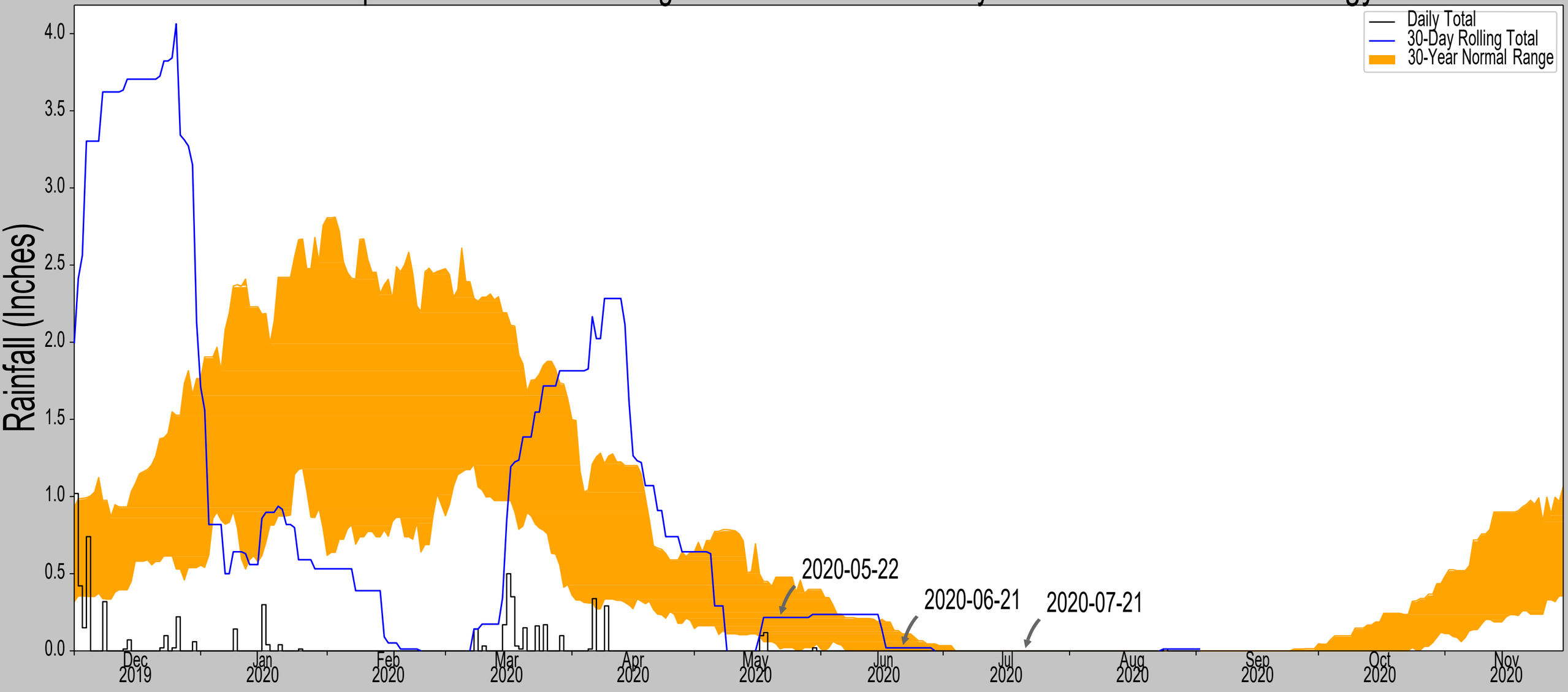
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
WATSONVILLE WTR WKS	36.9308, -121.7692	95.144	9.877	1404.896	18.321	11002	79
LOS GATOS 5.4 SSW	37.156, -121.9875	1662.074	13.577	162.034	8.31	210	11
APTOS 2.6 E	36.9961, -121.8536	382.874	7.301	1117.166	11.442	2	0
BOULDER CREEK 3.6 NE	37.1811, -122.0911	1724.081	19.501	224.041	13.144	1	0
WATSONVILLE MUNI AP	36.9358, -121.7886	160.105	9.625	1339.935	17.228	133	0
GILROY	37.0031, -121.5608	193.898	12.209	1306.142	21.441	4	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	36.893353, -121.182476
Observation Date	2020-07-21
Elevation (ft)	3568.78
Drought Index (PDSI)	Incipient drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30th %ile (in)	70th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2020-07-21	0.0	0.0	0.0	Normal	2	3	6
2020-06-21	0.0	0.110236	0.019685	Normal	2	2	4
2020-05-22	0.01378	0.477559	0.216535	Normal	2	1	2
Result							Normal Conditions - 12

Figure and tables made by the
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days (Normal)	Days (Antecedent)
LOS BANOS ARBURUA RCH	36.875, -120.9386	842.848	13.537	2725.932	42.993	10879	69
HOLLISTER 2.1 ESE	36.8422, -121.365	389.108	10.69	3179.672	38.801	380	21
HOLLISTER 5.4 NNE	36.9306, -121.3704	247.047	10.696	3321.733	40.342	2	0
MT HAMILTON	37.3436, -121.6425	4206.037	40.126	637.257	43.627	91	0

Latitude	Longitude	Date	PDSI Value	PDSI Class	Season	ARC Score	Antecedent Precip Condition
36.98529	-121.567	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.74919	-121.326	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.74628	-121.241	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.88268	-121.807	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.31741	-120.723	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.54107	-121.293	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
36.89498	-121.364	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.81503	-121.526	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.54874	-121.12	########	-0.6	Incipient d	Dry Seasor	15	Wetter than Normal
37.06328	-121.688	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.70234	-121.203	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.93516	-121.577	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.00907	-121.784	########	-0.6	Incipient d	Dry Seasor	17	Wetter than Normal
37.05497	-121.831	########	-0.6	Incipient d	Dry Seasor	13	Normal Conditions
37.12481	-121.742	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.0147	-121.544	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.93371	-121.746	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.73209	-121.133	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.43626	-120.916	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.83936	-121.189	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
37.10794	-121.635	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.608	-121.081	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.63179	-121.211	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.69037	-121.085	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.98853	-121.644	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.01235	-121.404	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.19731	-121.414	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
36.8144	-121.433	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.12939	-121.247	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
37.06196	-121.341	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.93646	-121.233	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.67359	-121.354	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
37.1036	-121.554	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.80932	-121.312	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.71737	-121.408	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.48093	-120.989	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.37433	-120.845	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.98748	-121.26	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.3844	-120.672	########	-1.78	Mild droug	Dry Seasor	15	Wetter than Normal
36.31699	-120.801	########	-0.6	Incipient d	Dry Seasor	15	Wetter than Normal
36.63532	-121.012	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.95319	-121.358	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.92312	-121.473	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.96017	-121.836	########	-0.6	Incipient d	Dry Seasor	17	Wetter than Normal
36.75621	-121.459	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.8562	-121.273	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions

36.32418	-120.616	########	-0.6	Incipient d	Dry Seasor	15	Wetter than Normal
37.12539	-121.369	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.88402	-121.663	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.99581	-121.474	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.07513	-121.225	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
37.04183	-121.612	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.38824	-120.773	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.59322	-121.284	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
37.01014	-121.33	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.69981	-120.983	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.43996	-120.817	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.55299	-121.029	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.68848	-121.467	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.86118	-121.471	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.73569	-121.049	########	-1.78	Mild droug	Dry Seasor	12	Normal Conditions
36.64597	-121.282	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.8667	-121.577	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.47688	-121.071	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.77874	-121.172	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.80728	-121.112	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.49432	-120.909	########	-1.78	Mild droug	Dry Seasor	12	Normal Conditions
36.64688	-121.136	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
37.16446	-121.301	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
36.98318	-121.719	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.38843	-120.942	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.57902	-121.193	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.70023	-121.286	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.7716	-121.391	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions
36.93931	-121.671	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.10791	-121.826	########	-0.6	Incipient d	Dry Seasor	10	Normal Conditions
36.27406	-120.676	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
37.07368	-121.764	########	-0.6	Incipient d	Dry Seasor	14	Normal Conditions
36.89335	-121.182	########	-0.6	Incipient d	Dry Seasor	12	Normal Conditions

WETS Table

WETS Station: GILROY, CA

Requested years: 1971 - 2000

Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	59.8	37.7	48.8	4.32	1.76	5.25	7	0.0
Feb	63.9	40.6	52.2	3.99	1.66	4.85	6	0.0
Mar	67.0	43.3	55.2	3.75	1.57	4.56	7	0.0
Apr	73.0	44.9	59.0	1.16	0.50	1.39	3	0.0
May	78.1	48.8	63.5	0.40	0.08	0.34	1	0.0
Jun	84.0	52.3	68.1	0.11	0.00	0.10	1	0.0
Jul	88.3	54.5	71.4	0.06	0.00	0.00	0	0.0
Aug	87.9	54.8	71.3	0.05	0.00	0.00	0	0.0
Sep	85.7	53.3	69.5	0.33	0.00	0.16	1	0.0
Oct	79.0	48.3	63.6	0.93	0.31	0.97	2	0.0
Nov	67.2	41.7	54.4	2.50	0.80	2.87	4	0.0
Dec	60.2	36.5	48.3	2.96	1.16	3.59	5	0.0
Annual:					17.25	25.33		
Average	74.5	46.4	60.5	-	-	-	-	-
Total	-	-	-	20.56			37	0.0

GROWING SEASON DATES

Years with missing data:	24 deg = 6	28 deg = 7	32 deg = 7
Years with no occurrence:	24 deg = 23	28 deg = 6	32 deg = 0
Data years used:	24 deg = 24	28 deg = 23	32 deg = 23
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	1/12 to 12/20: 342 days	2/20 to 11/27: 280 days
70 percent *	No occurrence	12/27 to 1/6: 375 days	2/11 to 12/6: 298 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1906			7.77	1.27	2.21	0.06		0.00		0.	2.29	10.	23.
1907	3.46	1.73	10.24	0.41	0.12	0.47	0.00	0.00	T	1. 80	0.00	5.44	23. 67
1909	12.80	6.41	4.41	0.00		0.04	0.00	0.00	0. 16	0. 54	2.00	6.33	32. 69
1911	M6.63	M2.19	M6.19	M1.99	M0.34	M0.07	0.00	0.00	0. 00	0. 58	M0. 64	M2. 04	20. 67
1913	M4.68	M0.05	2.18	M0.23	M0.83	M0.06	0.66	M0.08			M3. 26	10. 12	22. 15

										70			19
1915	4.84	5.65	1.34	1.19	1.57	0.00		0.00	MT		M0.52	5.01	20.12
1916	M12.68	0.80	M1.83					MT	MT	M6.28	M2.40	M8.80	32.79
1917	M1.42	M12.11			M0.10				MT		M0.41	M0.58	14.62
1918	M0.51	M3.79	M4.18	M2.43	M0.02								10.93
1919													
1920													
1921													
1922													
1923													
1924													
1925													
1926													
1927													
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1957						M1.95	MT	0.00	0.00	0.10	M1.52	0.38	M4.65	8.60
1958	5.17	4.18	7.67	7.07	0.37	0.08	0.00	0.00	0.50	0.03	0.19	0.72	25.98
1959	6.68	6.71	0.46	0.13	0.03	0.00	0.00	0.00	6.25	0.00	0.00	0.73	20.99
1960	4.21	7.31	0.74	2.05	0.25	0.00	T	0.00	0.10	T	3.34	1.25	19.25
1961	1.79	0.97	2.44	1.37	0.33	0.18	0.00	0.03	0.03	T	2.24	1.85	11.23
1962	3.26	9.66	2.43	0.41	T	0.02	0.00	T	T	2.13	0.48	2.36	20.75
1963	6.15	5.85	3.97	5.19	0.39	T	0.00	T	0.36	1.37	5.54	0.23	29.05

1964	4.04	0.12	1.75	0.38	0.58	0.49	0.00	0.05	0.09	1.19	3.01	8.40	20.10
1965	3.55	0.76	2.03	2.63	0.00	0.00	T	0.58	0.00	0.06	5.58	4.03	19.22
1966	1.61	1.62	0.12	0.54	0.25	T	0.38	0.00	0.15	0.00	4.29	5.69	14.65
1967	8.00	0.20	6.07	6.70	0.23	0.91	0.00	T	0.01	0.32	1.54	2.61	26.59
1968	3.23	1.68	2.92	0.00	0.25	0.00	0.00	0.02	0.00	0.72	2.39	4.28	15.49
1969	13.33	7.88	1.62	1.72	0.00	0.01	0.00	0.00	0.13	1.76	1.11	4.57	32.13
1970	8.99	2.49	2.85	0.36	0.00	0.17	0.00	0.00	0.00	0.41	5.80	5.67	26.74
1971	M1.77	0.57	1.52	1.49	0.17	0.00	0.00	0.02	0.05	0.06	1.59	5.67	12.91
1972	1.87	1.12	0.02	0.83	0.02	0.12	T	0.00	0.02	2.12	7.50	1.76	15.38
1973	5.96	7.48	3.15	0.36	T	0.00	0.00	0.00	0.02	1.61	5.84	4.03	28.45
1974	3.60	0.78	7.48	1.63	T	0.14	0.80	0.00	0.00	1.44	0.58	2.89	19.34
1975	0.34	5.24	6.06	1.77	0.01	0.00	0.04	0.37	T	1.90	0.19	0.20	16.12
1976	0.21	0.98	2.48	0.76	0.00	0.14	0.00	1.00	2.67	0.51	1.58	1.12	11.45
1977	1.30	0.93	1.36	0.00	1.38	0.37	0.00	0.00	0.22	0.03	0.54	5.04	11.17
1978	7.39	5.05	5.21	3.42	0.06	0.00	0.00	0.00	0.35	0.00	2.33	0.96	24.77
1979	4.18	5.44	2.75	0.51	0.12	0.00	0.10	0.00	0.00	2.06	1.14	5.05	21.35
1980	6.24	7.04	2.20	2.01	0.42	0.00	0.66	0.00	0.00	0.04	0.13	2.88	21.62
1981	6.60			0.62	0.02	0.00	0.00	0.00	0.01	2.41	5.70	4.55	19.91
1982	8.44	2.67	5.92	4.68	0.00	0.33	0.00	0.00	1.42	2.36	6.96	3.37	36.15
1983	7.73	6.04	7.74	3.27	0.22	0.00	0.00	0.08	0.99	0.41	6.03	5.25	37.76
1984	0.34	1.37	M1.68	0.60	0.00	0.00	0.09	0.00	0.00	1.11	6.22	2.02	13.43
1985	M0.70	2.53	4.49	0.37	0.06	0.11	0.00	0.00	0.11	0.95	M3.38	1.95	14.65
1986	2.63		6.07	0.65	0.47	0.00		0.00	1.27	0.08	0.03	M1.09	12.29
1987	1.97		3.15	0.34	0.00		0.00	0.00	0.01	0.70		3.27	9.44
1988	2.02	0.84		1.98	0.32	M0.36	0.00	0.00	0.00	0.00	2.46	M4.34	12.32
1989	1.34	1.01	3.63	0.23	0.15		0.00	0.00	1.56	0.10	1.15	0.01	9.18
1991	0.33	2.63	M11.96	0.29	0.07	0.05	0.00	0.05	0.10	2.02	0.62	2.88	21.00
1993	10.60	6.10	3.24	0.41	0.83	0.76	0.00	0.00	0.00	0.29	0.73	2.08	25.04
1995	11.17	0.46	8.96	1.96	0.72	0.47	0.01	0.00	0.00	0.00	0.30	5.91	29.96
1997	11.89	0.16	0.15	0.25	0.13	0.04	0.00	0.07	0.00	0.50	5.38	2.96	21.53

1998	6.88	13.18	2.33	1.43	1.53	0.04		0.00	0.00	0.55	2.51	1.98	30.43
1999		4.23	2.10	1.41	0.04	0.00	0.00	0.00	0.02	0.00	M1.55	0.16	9.51
2000	6.71	8.80	1.49	0.56	0.28	0.02	0.00	0.00	0.06	3.18	1.20	M0.25	22.55
2001	4.00	5.55	M1.09	1.11	0.00	0.01	0.01	0.00	0.05	0.28	3.81	7.19	23.10
2002	1.00	1.56	1.73	0.19	1.06	0.00	0.00	0.00	T	0.00	3.99	M7.83	17.36
2003	1.09	1.29	1.14	2.54	1.14	0.00	0.00	0.77	0.00	0.25	0.83	6.88	15.93
2004	2.78	5.60	0.54	0.29	0.22	0.00	0.00	0.00	0.16	3.43	0.77	5.96	19.75
2005	6.62	4.26	4.67	1.20	M0.16	0.67	0.01	0.00	0.00	0.03	0.45	6.36	24.43
2006	3.79	1.29	6.06	3.50	0.02	0.00	0.00	0.00	0.00	0.11	0.33	3.35	18.45
2007	1.11	5.33	0.13	1.10	0.05	0.00	0.00	0.00	0.51	0.78	0.70	1.46	11.17
2008	7.65	3.52	0.04	0.08	0.00	T	0.00	0.00	0.00	0.37	1.20	1.76	14.62
2009	1.38	5.44	1.88	0.78	0.66	M0.00	0.00	0.00	0.00	M6.57	M0.06	3.46	20.23
2010	5.12	M1.94	2.08	4.40	M0.49	0.00	0.00	0.00	0.00	M1.01	2.30	4.71	22.05
2011		M5.55	M7.03	M0.26	M0.88	M0.28	0.00	0.00	0.00	M0.45	M1.53	M0.05	16.03
2012	4.40	M1.07	3.16	1.02	0.00	M0.02	0.00	0.00	M0.00	0.49	2.78	M10.10	23.04
2013	0.64	0.37	M0.02	M0.27	M0.00	M0.00	0.00	M0.00	0.02	M0.00	0.62	0.62	2.56
2014	0.06	M4.45	M1.01	M2.19	M0.00	M0.00	M0.00	0.00	0.21	M0.43	M2.06	M8.67	19.08
2015	M0.00	M2.80	M0.05	M0.68	M0.00	M0.00	M0.00	M0.00	M0.00	M0.40	M1.72	M2.41	8.06
2016	M6.87	M0.10	M6.46	M0.00	M0.00	M0.00	M0.00	M0.00	M0.00	M3.23	M2.83	M0.87	20.36
2017	M6.72	M5.27	1.93	M1.39	M0.00	M0.00	M0.00	M0.00	0.00	0.13	1.42	M0.00	16.86
2018	M2.77	M0.00	M3.09	2.00	M0.00	M0.00	M0.00	0.00	M0.00	M0.00			7.86
2019	M4.80	8.94	M1.25		M0.00	M0.33	M0.04	M0.01	M0.00			M2.30	17.67
2020	M0.78	M0.00	3.10	M1.60	0.40	M0.00	M0.00	M0.03	M0.00				5.91

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2016-07-22

APPENDIX F

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gilroy Truck and Warehouse Project City/County: Gilroy/Santa Clara County Sampling Date: 07-21-2020

Applicant/Owner: Panattoni Development Company, Inc. State: CA Sampling Point: SP-1

Investigator(s): Robert F. Perrera Section, Township, Range: 4, T11S, R4E

Landform (hillslope, terrace, etc.): Basin floors Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C - Mediterranean California Lat: 37.00711667 Long: -122.54416667 Datum: NA

Soil Map Unit Name: Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA 14 NWI classification: FWEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Agi field currently plowed; 1998-2008 indicated area farmed for row crops (vegetable farm);NWI Classification: Fresh Water Emergent Wetland (FWEW)
APN 841-18-082 59.87 acres

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: None)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: None)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 3x3)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: None)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

✔ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Site is within constructed agricultural ditch is used to convey excess irrigation water and stormwater runoff off site. Vegetation within drainage ditch appears to be managed / removed by grading.

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR3/1	100					SiCL	Silty Clay Loam
4-13	10YR2/2	100					SiC	Silty Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ✔ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Ponding shown on Google Earth Pro 2-2018 imagery

Remarks:

Site is within a managed agricultural drainage ditch. Site is irrigated to grow farm crops.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gilroy Truck and Warehouse Project City/County: Gilroy/Santa Clara County Sampling Date: 07-21-2020

Applicant/Owner: Panattoni Development Company, Inc. State: CA Sampling Point: SP-2

Investigator(s): Robert F. Perrera Section, Township, Range: 4, T11S, R4E

Landform (hillslope, terrace, etc.): Alluvial fans Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C - Mediterranean California Lat: 37.00670000 Long: -122.54388889 Datum: NA

Soil Map Unit Name: Campbell silty clay, muck substratum NWI classification: FWEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Agi field currently plowed; 1998-2008 indicated area farmed for row crops (vegetable farm); NWI Classification: Fresh Water Emergent Wetland (FWEW); Sample area is an excavated and maintained agricultural drainage ditch.
APN 841-18-082 59.87 acres

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: None)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: None)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 3x3)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: None)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Site is farmed; sample point adjacent to constructed ditch used to convey excess irrigation water off site. Vegetation appears to be managed / removed by plowing for crop production.

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR3/1	100					SiCL	Silty Clay Loam
2-12	10YR2/2	100					SiC	Silty Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ✔ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Ponding shown on Google Earth Pro 2-2018 imagery

Remarks:

Adjacent to agricultural drainage ditch in cultivated field used to grow irrigated farm crops. Irrigation may create false positive wetland hydrology indicators based on lack of hydric soil indicators (see above).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gilroy Truck and Warehouse Project City/County: Gilroy/Santa Clara County Sampling Date: 07-21-2020

Applicant/Owner: Panattoni Development Company, Inc. State: CA Sampling Point: SP-3

Investigator(s): Robert F. Perrera Section, Township, Range: 4, T11S, R4E

Landform (hillslope, terrace, etc.): basin floors Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C - Mediterranean California Lat: 37.00516389 Long: -122.54388889 Datum: NA

Soil Map Unit Name: Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA 14 NWI classification: FWEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Agi field currently plowed; 1998-2008 indicated area farmed for row crops (vegetable farm); NWI Classification: Fresh Water Emergent Wetland (FWEW)
APN 841-18-082 59.87 acres

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: None)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: None)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 3x3)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. None			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Site is farmed; sample point adjacent to constructed ditch used to convey excess irrigation water off site. Vegetation appears to be managed / removed by plowing for crop production.

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	100					SiC	Silty Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ✔ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Ponding shown on Google Earth Pro 2-2018 imagery

Remarks:

Adjacent to agricultural drainage ditch in cultivated field used to grow irrigated farm crops. Irrigation may create false positive wetland hydrology indicators based on lack of hydric soil indicators (see above).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Gilroy Truck and Warehouse Project City/County: Gilroy/Santa Clara County Sampling Date: 07-21-2020

Applicant/Owner: Panattoni Development Company, Inc. State: CA Sampling Point: SP-4

Investigator(s): Robert F. Perrera Section, Township, Range: 4, T11S, R4E

Landform (hillslope, terrace, etc.): bassin floors Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C - Mediterranean California Lat: 37.00390556 Long: -122.54388889 Datum: NA

Soil Map Unit Name: Clear Lake clay, 0 to 2 percent slopes, occasionally flooded, MLRA 14 NWI classification: FWEW

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation ✔, Soil ✔, or Hydrology ✔ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Agi field currently plowed; 1998-2008 indicated area farmed for row crops (vegetable farm); NWI Classification: Fresh Water Emergent Wetland (FWEW)
APN 841-18-082 59.87 acres

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: None)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: None)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 3x3)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: None)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

Site is within constructed agricultural ditch is used to convey excess irrigation water and stormwater runoff off site. Vegetation within drainage ditch appears to be managed / removed by grading.

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR2/1	100					SiC	Silty Clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Sandy Loam (SL),Loamy Sand (LS); The parent material is sandy which has a natural Munsell soil color Value of 4-5 and low chroma in the 1-2 range.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ✔ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Ponding shown on Google Earth Pro 2-2018 imagery

Remarks:

Site within drainage ditch. Drainage ditch on perimeter of cultivated field used to grow irrigated farm crops. Row crops are irrigated by farmer.

APPENDIX G

Representative Onsite Photographs

Gilroy Project Site, July 21, 2020

SP-1 Looking south.

SP-3 Looking South.

Gilroy Project Site, July 21, 2020

PP-1A Looking north at outflow point of culvert. Start of Lower Miller Slough

PP-1B Looking south downstream at Lower Miller Slough.

Gilroy Project Site, July 21, 2020

PP-2A Looking north

PP-2C Looking east

Gilroy Project Site, July 21, 2020

PP-2C Looking south

PP-3A Looking east. Miller Slough/Llagas Creek to the north and Project site to the south.

Gilroy Project Site, July 21, 2020

PP-3B Looking west. Miller Slough/Llagas Creek to the north and Project site to the south.

PP-4A looking north at Miller Slough/Llagas Creek and culvert on north side.

Gilroy Project Site, July 21, 2020

PP-4B from trail looking south at Project site and wetland swale where pipe is.

PP-5 looking south along wetland swale.

Gilroy Project Site, July 21, 2020

PP-6 looking at wetland swale and one of many irrigation discharge points.

PP-7 Looking south along wetland swale at irrigation pipe junction.

Gilroy Project Site, July 21, 2020

PP-8 Looking south at wetland swale 12 inch culvert and larger roadside ditch culvert in background.

PP-9A Looking east up roadside ditch adjacent to large culvert.

Gilroy Project Site, July 21, 2020

PP-9B Looking west up roadside ditch

PP-10 Looking west up roadside ditch. Ends just before the light.

Gilroy Project Site, July 21, 2020

PP-11A Looking north up ditch. Purpose is unclear, may capture excess irrigation Water and surface water from adjacent trucking yard. No OHWM some indications of ponding.

PP-11B Looking at confluence of multiple ditches discharging into roadside ditch.

APPENDIX H
APPROVED JURISDICTIONAL DETERMINATION

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): Select.
ORM Number: (e.g. HQS-2020-00001-MSW).
Associated JDs: N/A or ORM numbers and identifiers (e.g. HQS-2020-00001-MSW-MITSITE).
Review Area Location[1]: State/Territory: California City: Gilroy County/Parish/Borough: Santa Clara
Center Coordinates of Review Area: Latitude 37.005480 N. Longitude 121.544837 W

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in Section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in Section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in Section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size		§ 10 Criteria	Rationale for § 10 Determination
N/A.	N/A.	N/A	N/A.	N/A.

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters):[3]				
(a)(1) Name	(a)(1) Size		(a)(1) Criteria	Rationale for (a)(1) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Tributaries ((a)(2) waters):				
(a)(2) Name	(a)(2) Size		(a)(2) Criteria	Rationale for (a)(2) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):				
(a)(3) Name	(a)(3) Size		(a)(3) Criteria	Rationale for (a)(3) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

Adjacent wetlands ((a)(4) waters):				
(a)(4) Name	(a)(4) Size		(a)(4) Criteria	Rationale for (a)(4) Determination
N/A.	N/A.	N/A.	N/A.	N/A.

[1] Map(s)/figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD Form.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
R-1	1,198	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1). And (b)(3) Ephemeral features, including ephemeral streams	• Ditch R-1 is constructed within a cut off portion of Miller Slough which was relocated along the northern edge of the Study Area between 1965 and 1973 according to historical Gilroy 7.5 minute series USGS topographic quad maps. Relocation by SCV Water included construction of Miller Creek Channel and levees. Levee construction cut stream flows off to the portion of the Miller Creek which runs from North to South across the Study Area. • The relocated drainage became ephemeral due to the construction of an upstream artificial feature (Miller Slough Levee) • Based on review of Google Earth Pro aerial imagery (1998 to 2018 and July 21, 2020 onsite observations the former stream channel was repurposed as a maintained agricultural drainage ditch. • Field indicator observations were made during typical precipitation years as determined using the APT. • Field indicators of surface water flow were observed present in the ditch. • There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. • Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.
R-2	967	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	• Ditch R-2 was constructed in uplands, is not a tributary, is not a natural stream, is not a relocated tributary, and was not constructed within tributaries or adjacent wetlands. • Field indicator observations were made during typical precipitation years as determined using the APT. • Field indicators of surface water flow were observed present in dry drainages. • There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. • Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.
R-3	1,048	linear feet	(b)(5) Ditch that is not an (a)(1) or (a)(2) water, and those portions of a ditch constructed in an (a)(4) water that do not satisfy the conditions of (c)(1).	• Ditch R-3 was constructed in uplands, is not a tributary, is not a natural stream, is not a relocated tributary, and was not constructed within tributaries or adjacent wetlands. • Field indicator observations were made during typical precipitation years as determined using the APT. • Field indicators of surface water flow were observed present in dry drainages. • There is no evidence of a seasonal (upper 24 inches) or high (upper 12 inches) water table otherwise crops could not be grown. • Based on the above observations surface water flowing or pooling only occurs in direct response to precipitation and is determined to be ephemeral.
C-1	12	linear feet	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not meet the other (b)(1) subcategories.	• Corrugated metal culvert which conveys seasonal ephemeral flows underground from agricultural drainage ditches which are excluded drainage ditches (R-1, R-2. & R-3).
C-2	135	linear feet	(b)(1) Water or water feature that is not identified in (a)(1)-(a)(4) and does not	• Concrete box culvert which conveys seasonal ephemeral flows underground from agricultural drainage ditches which are excluded drainage ditches (R-1, R-2. & R-3).

[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Excluded waters ((b)(1) – (b)(12)):[4]				
Exclusion Name	Exclusion Size		Exclusion[5]	Rationale for Exclusion Determination
			meet the other (b)(1) subcategories.	

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

☒ Information submitted by, or on behalf of, the applicant/consultant: Huffman-Broadway Group, Inc. September 2020. Aquatic Resources Delineation Report, Project Garlic Gilroy, Santa Clara County, California. Prepared for Steve Beauchamp, Senior Development Manager, Panattoni Development Company, Inc.

This information Select. sufficient for purposes of this AJD.

Rationale: N/A or describe rationale for insufficiency (including partial insufficiency).

☐ Data sheets prepared by the Corps: Title(s) and/or date(s).

☒ Photographs: Select. Google Earth Pro 1/1998 to 1/2018; ESRI mapping (see above referenced 2020 delineation report Appendix A, Figure 9)

☐ Corps site visit(s) conducted on: Date(s).

☐ Previous Jurisdictional Determinations (AJDs or PJDs): ORM Number(s) and date(s).

☒ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B*.

☒ USDA NRCS Soil Survey: NRCS Soil Resources Reports accessed 2020; see above referenced delineation report Appendix D

☒ USFWS NWI maps: USFWS National Wetlands Inventory Online Wetland Mapper, Review Date 7/2020 (see above referenced 2020 delineation report Appendix A, Figures 7a-7c)

☒ USGS topographic maps: USGS Gilroy (1955; rev.1993),and Chittenden (1955; rev.1993) Quadrangles

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	USGS NHD mapping ((see above referenced September 2020 delineation report Appendix A, Figures 4, 5 & 6)
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	N/A.
State/Local/Tribal Sources	N/A.
Other Sources	National Wetland Plant List (California List)

B. Typical year assessment(s): The Antecedent Precipitation Tool Version 1.0 (APT) was used to determine if the Study Area climatic / hydrologic conditions when field investigation occurred (July 21, 2020) was representative of a typical year based on a rolling thirty-year period for the three month time frame prior to the start of the field investigation. Based on the results of the analysis it was determined that the amount of precipitation the Study Area received 90 days prior to the site visit was within the normal range expected for a typical year.

C. Additional comments to support AJD: N/A or provide additional discussion as appropriate.

BIOLOGICAL RESOURCES REPORT
PROJECT GARLIC
GILROY, CALIFORNIA

Prepared for:

Panattoni Development Company, Inc.
8775 Folsom Boulevard, Suite 200
Sacramento, CA 95826
Contact: Steve Beauchamp

Prepared by:

HUFFMAN-BROADWAY GROUP, INC.
828 Mission Avenue
San Rafael, CA 94901
Contact: Gary Deghi
Telephone: (415) 925-2000 ▪ Fax: (415) 925-2006

November 2020

TABLE OF CONTENTS

LIST OF ATTACHMENTS

ATTACHMENT 1. Figures

ATTACHMENT 2. Tables

This report should be cited as: Huffman-Broadway Group, Inc. 2020. *Biological Resources Report, Project Garlic, Gilroy, California.* San Rafael, California. 21 pp. plus attachments. Prepared for Panattoni Development Company, Inc., Sacramento, California. November 2020.

1.0 EXECUTIVE SUMMARY

Introduction. On behalf of Panattoni Development Company, Inc., Huffman-Broadway Group, Inc. (HBG) has prepared a Biological Resources Report for Project Garlic in Gilroy, California. It is expected that this Biological Resources Report will be used in decision-making with respect to the documentation necessary for the project pursuant to the California Environmental Quality Act (CEQA).

Panattoni Development Company is proposing to develop existing 59.7-acre site at the northeast corner of Pacheco Pass Highway (State Route 152) and Camino Arroyo in the City of Gilroy, California. The project site is located at 1445 Pacheco Pass Highway (State Route 152) in the City of Gilroy, California. The project site is bordered on the north by a Santa Clara Valley Water District (SCVWD) channel known as Upper Miller Slough, on the west by retail development and agricultural land, on the east by industrial development, and on the south by Pacheco Pass Highway (State Route 152). Historically Miller Slough passed through the project site, but with the construction of the levee along Upper Miller Slough, flow was directed to Llagas Creek rather than through the project site. A remnant agricultural ditch in the historic alignment of Miller Slough that originates on the site is all that remains of Miller Slough on the property.

The project applicant is proposing to subdivide the project site into three lots to be developed in three phases: Phase 1 – development of a 33.7-acre lot and for the proposed 141,360 square foot delivery station; Phase 2 – development of a 20.4-acre lot for the proposed 266,220 square foot Industrial building; and Phase 3 – a 5.6 acre future Commercial Outparcel.

The objective of this study was to provide a determination of the potential for the Study Area to support sensitive habitats as defined by state or federal regulation and/or pursuant to the California Environmental Quality Act (CEQA) or for the Study Area to support special status species of flora and fauna. The objective of the study is also to determine if construction of the proposed project would result in potentially significant biological impacts and, if so, to recommend mitigation measures to reduce biological impacts to levels of insignificance as defined by CEQA guidelines.

HBG's analysis included: (1) a review of pertinent literature on habitat characteristics of the site, including species of plants and animals expected to utilize the Project Site and a review of planning documents referencing ecological aspects of the site, (2) review of the California Natural Diversity Data Base (CNDDB) to determine if any populations of endangered, threatened, or rare species have occurred historically or are currently known to exist in the project vicinity; (3) field surveys of the site conducted by HBG biologists during July and October of 2020, and (4) an evaluation to determine whether the proposed construction would result in impacts to sensitive habitats or special status species.

Findings. The project site contains disturbed areas that have been affected by previous cultivation and that are currently used for growing row crops. Nonnative/ruderal (disturbed) grassland vegetation is present along the margin of the agricultural fields, adjacent to Upper Miller Slough, and as understory along the banks of Upper Miller Slough. A row of trees forms the northern property boundary and some remnant riparian habitat occurs along Upper Miller Slough. The project is subject to review requirements of the Santa Clara Valley Habitat Plan (SCVHP) that maps the land cover type of the site as "Grain, Row Crop, Hay and Pasture, Disked/Short-Term Fallowed." Adjacent Upper Miller Slough is mapped as "Coastal and Valley Freshwater Marsh."

Two sensitive habitats were found on or in the vicinity of the project site. Although no wetland habitat types were mapped for the property in the SCVHP, an Aquatic Resources Delineation conducted by HBG found wetlands/waters within the historical alignment of Miller Slough and the drainage ditches along the eastern project boundary and southern boundary along Highway 152. These ditches would be subject to the Porter-Cologne Act jurisdiction of the Central Coast Regional Water Quality Control Board (CCRWQCB) and the Fish and Game Code Section 1602 jurisdiction of California Department of Fish and Wildlife (CDFW). An additional sensitive habitat found in the project area is the riparian corridor of Upper Miller Slough that is required by the SCVHP to have a 35-foot development setback from the limit of the riparian corridor at the top of bank.

The only special status species of animal noted in the CNDDB from near the subject property with a potential for occurrence at the site or in the immediate vicinity are burrowing owl (*Athene cunicularia*) and tricolored blackbird (*Aegelaius tricolor*). Surveys for burrowing owls and suitable burrowing owl habitat on the project site and in the vicinity showed that burrowing owls do not occur in the vicinity. HBG conducted an assessment for suitable habitat to support a tricolored blackbird nesting colony as required by the SCVHP, and no suitable nesting habitat for the species was found on the site or in the immediate vicinity. The site provides no habitat that could support special status species of plants.

Impacts and Mitigation Measures. No impacts would occur to special status species of plants or animals. A 35-foot development setback is provided from Upper Miller Slough as required by the SCVHP so no direct or indirect impacts to riparian habitat of the slough results from the project. Construction of culvert improvements and four entrance driveways on the north side of Highway 152 would be necessary within ditches subject to Porter-Cologne Act jurisdiction of the CCRWQCB and Fish and Game Code Section 1602 jurisdiction of CDFW, and would require a Waiver of Waste Discharge from the CCRWQCB and a Lake and Streambed Alteration Agreement from CDFW. If construction is proposed during the bird nesting season (February 1 through August 31), breeding bird nesting surveys are recommended to ensure compliance with the federal Migratory Bird Treaty Act and the California Fish and Game Code.

2.0 PROPOSED PROJECT

2.1 Project Location

Panattoni Development Company is proposing to develop existing 59.7-acre site at the northeast corner of Pacheco Pass Highway (State Route 152) and Camino Arroyo in the City of Gilroy, California. The project site is Assessor's parcel number 841-18-069 located at 1445 Pacheco Pass Highway (State Route 152) in the City of Gilroy, California. The approximate center point of the project site is latitude 37.005480 North and longitude 121.544837 West. The existing site, currently zoned C3-M2/PUD and currently being used for agricultural purposes. The site can be accessed off of State Route 152 to Camino Arroyo and Renz Lane. The location of the Project Site is shown in Figure 1. Figure 2 shows the location of the site on the Gilroy 7.5-minute USGS quadrangle map, and Figure 3 shows an aerial photo of the Project Site.

A Santa Clara Valley Water District (SCVWD) channel known as Upper Miller Slough (also referred to in some publications as the Ronan Channel or the West Branch of Llagas Creek) borders the site on the north. Further to the north beyond Upper Miller Slough is additional agricultural land. The site is bound by retail development and agricultural land on the west and industrial development to the east. Pacheco Pass Highway (State Route 152) borders the site to the south and additional commercial and industrial developments are located to the south of the highway.

Upper Miller Slough flows east into Llagas Creek which flows from north to south to the east of the adjacent industrial facility. An agricultural ditch originating on the site follows the historical alignment of Miller Slough through the site and flows through culverts under Highway 152 to Lower Miller Slough which flows to a confluence with Llagas Creek southeast of the site and then on to the Pajaro River.

2.2 Project Description

The project applicant is proposing to subdivide the project site into three lots to be developed in three phases:

Phase 1 – Development of 33.7-Ac lot and for the proposed 141,360 SF Delivery Station

Phase 2 – Development of 20.4-Ac lot for the proposed 266,220 SF Industrial building

Phase 3 – 5.6 Ac future Commercial Outparcel.

The proposed project site plan is shown in Figure 4.

Phase 1 will include construction of a 141,360 square-foot last mile delivery station which will consist of 16,824 square feet of office and 124,526 square feet of warehouse. The site improvements will include associated parking, landscaping, utilities, stormwater management

and lighting improvements. The building will consist of 15 recessed docks to the north and van loading area to the east. Associate parking is provided to the south of the building whereas van parking spaces are provided to the east and west of the building. The Phase 1 site will have access from Renz Lane to the west and from Pacheco Pass Highway via two proposed driveways. The eastern driveway aligns with Cameron Boulevard and will be a signalized entrance to the site.

Phase 2 will include construction of a 266,220 square-foot Industrial building which will consist of 10,000 square feet of office and 256,220 square feet of warehouse. The site improvements will include associated parking, landscaping, utilities, stormwater management and lighting improvements. The building will consist of 50 recessed docks and trailer parking to the east and, associate car parking to the north and south. The Phase 2 site will have access from Pacheco Pass Highway via two proposed driveways.

Phase 3 will include future commercial development that is not currently planned. It is applicant's understanding that the commercial project, when proposed, will require Site Plan and Design Review which will require staff level approval. The Phase 3 site will have access from Camino Arroyo. Construction of the driveway and utility stubs to the commercial are included in the scope of the project

The project also proposes Class I bike trail along northwestern property line providing connection between the future master-planned Bike Trail along Llagas Creek and existing bike lanes along Renz lane. The proposed project is designed to avoid impacts to the existing agricultural ditch (a ditch originating on the site that runs north-south through the middle of the site within the historic alignment of Miller Slough). The project is also designed to avoid high transmission electric poles that exist on site.

3.0 REGULATORY BACKGROUND

The following is a description of federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

FEDERAL

Clean Water Act-Section 404

The U.S. Army Corps of Engineers regulates discharges of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). "Discharge of fill material" is defined as the addition of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2(f)). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency are responsible for implementing the Section 404 program. Section 404(a) authorizes the Corps to issue permits, after notice and opportunity for comment, for discharges of dredged or fill material into waters of United States (WOTUS). Section 404(b) requires that the Corps issue permits in compliance with EPA guidelines, which are known as the Section 404(b)(1) Guidelines. Specifically, the Section 404(b) (1) guidelines require that the Corps only authorize the "least environmentally damaging practicable alternative" (LEDPA) and include all practicable measures to avoid and minimize impacts to the aquatic ecosystem. The guidelines also prohibit discharges that would cause significant degradation of the aquatic environment or violate state water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 C.F.R. §328.3(b)).

Furthermore, Jurisdictional Waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 C.F.R. §328.3(e)).

Tidal waters are also under the jurisdiction of the Corps. The landward limits of jurisdiction in tidal waters extend to the high tide line…"or, when adjacent non-tidal waters of the United States are present, to the limits of jurisdiction for such non-tidal waters" (33 C.F.R.§328.4(b)) High tide is further defined to include the line reached by spring high tides and other high tides that occur with periodic frequency (33 C.F.R.§328.3(d)).

SWANCC and Rapanos. In the U.S. Supreme Court decision *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC), No. 99-1178 (2001),* some isolated wetlands may be excluded from the Corps' Section 404 jurisdiction because they are (1) non-tidal, (2) non-navigable, (3) not hydrologically connected to navigable waters or adjacent to such waters, and (4) not subject to foreign or interstate commerce. Subsequent to SWANCC, the U.S. Supreme Court decided on *Rapanos v. United States* and *Carabell v. United States*, 126 U.S. 2208 (2006) (herein referred to as Rapanos) which resulted in 2007, guidance was given to EPA regions and Corps districts to implement the Supreme Court's decision which addresses the jurisdiction over waters of the U.S. under the Clean Water Act. The Rapanos guidance requires the Corps to conduct detailed analysis of the functions and values of wetlands and other waters of the U.S. potentially onsite and in some cases offsite, to determine if there is a nexus to traditional navigable waters and to evaluate the significance of the nexus to the traditional navigable water. Neither the Court nor the recently-issued guidance draw a clear line with respect to the geographic reach of jurisdiction, particularly in drainages where flows are ephemeral and where wetlands are adjacent to but not directly abutting relatively permanent water.

National Wetland Protection Rule. The NWPR has four categories of jurisdictional waters and twelve categories of excluded waters/features. There is no standalone interstate waters category and no case-specific significant nexus analysis. Key changes were made for defining tributary, adjacent wetland, ditches, lakes, ponds and impoundments. New definitions for defining typical year versus normal, perennial, intermittent, ephemeral, snowpack, and ditches. No change was made to the definition of wetlands or the methodology for defining wetlands. Under the NWPR WOTUS include:

(a)(1) Territorial seas and traditional navigable waters
(a)(2) Tributaries
(a)(3) Lakes and ponds, and impoundments of jurisdictional waters
(a)(4) Adjacent wetlands

Waters/Features "excluded" from the WOTUS Definition [33 CFR 328.3(b)]

1. Waters not listed as WOTUS
2. Groundwater
3. Ephemeral features
4. Diffuse stormwater run-off
5. Ditches not identified as WOTUS
6. Prior converted cropland (PCC)
7. Artificially irrigated areas

8. Artificial lakes and ponds
9. Water-filled depressions incidental to mining or construction activity
10. Stormwater control features
11. Groundwater recharge, water reuse, and wastewater recycling structures
12. Waste treatment systems

Clean Water Act-NPDES Requirements

In 1972, the Clean Water Act was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The 1987 amendments established a framework for regulating municipal, industrial, and construction-related storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water from construction projects that encompass one or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. The California State Water Resource Control Board has developed a general construction storm water permit to implement this requirement.

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The FESA establishes an official listing process for plants and animals considered to be in danger of extinction, requires development of specific plans of action for the recovery of listed species, and restricts activities perceived to harm or kill listed species or affect critical habitat (16 USC 1532, 1536).

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3) Taking can result in civil or criminal penalties. Federal regulation 50 CFR 17.3 further defines the term “harm” in the take definition to mean any act that actually kills or injures a federally-listed species, including significant habitat modification or degradation. Additionally, FESA prohibits the destruction or adverse modification of designated critical habitat. In the Service’s regulations at 50 CFR 402.2, destruction or adverse modification is defined as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.

The ESA also requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or adversely modify critical habitat (16 USC 1536). Therefore, the ESA is invoked when the property contains a federally listed threatened or

endangered species that may be affected by a permit decision. In the event that listed species are involved and a Corps permit is required for impacts to jurisdictional waters, the Corps must initiate consultation with USFWS (or the National Marine Fisheries Service, NMFS) pursuant to Section 7 of the ESA (16 USC 1536; 40 CFR § 402). If formal consultation is required, USFWS or NMFS will issue a biological opinion stating whether the permit action is likely to jeopardize the continued existence of the listed species, recommending reasonable and prudent measures to ensure the continued existence of the species, establishing terms and conditions under which the project may proceed, and authorizing incidental take of the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. On December 22, 2017, the U.S. Department of Interior's Office of the Solicitor issued Memorandum M-37050, which states an interpretation that the Migratory Bird Treaty Act does not prohibit the accidental or "incidental" taking or killing of migratory birds. In response to the Trump Administration's attempted changes to the MBTA, eight states, including California, filed suit in September of 2018, arguing that the new interpretation inappropriately narrows the MBTA and should be vacated. In December of 2018, California issued new guidance specifying that state law includes "a prohibition on incidental take of migratory birds, notwithstanding the recent federal reinterpretation of the Migratory Bird Treaty Act" by the Department of Interior. On August 11, 2020 the Southern District of New York ruled in favor of the long-standing interpretation of the MBTA to protect migratory birds, reinstating the historical ban on incidental take.

Fish and Wildlife Coordination Act

The USFWS also has responsibility for project review under the Fish and Wildlife Coordination Act. This statute requires that all federal agencies consult with USFWS, NMFS, and the state's wildlife agency (California Department of Fish and Wildlife, CDFW) for activities that affect, control, or modify streams and other water bodies. Under the authority of the Fish and Wildlife Coordination Act, USFWS, NMFS, and CDFW review applications for permits issued under Section 404 and provide comments to the Corps about potential environmental impacts.

STATE

California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW) when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable

and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that 'overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

Section 401 of the Federal Clean Water Act/Porter Cologne Water Quality Act

Pursuant to section 401 of the Federal Clean Water Act, projects that require a Corps permit for the discharge of dredge or fill material must obtain water quality certification that confirms a project complies with state water quality standards before the Corps permit is valid. State water quality is regulated/administered by the State Water Resources Control Board and its nine Regional Water Quality Control Boards (RWQCB). The state also maintains independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Act.

The California State Water Resource Control Board has developed a general construction storm water permit to implement the requirements for the federal National Pollution Discharge Elimination System (NPDES) permit. The permit requires submittal of a Notice of Intent to comply, fees, and the implementation of a Storm Water Pollution Prevention Plan.

CDFW Species of Special Concern

CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened. Even though not formally listed under FESA or CESA, such plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of "Species of Special Concern" developed by the CDFW. CDFW has also designated special-status natural communities which are considered rare in the region, support special status species, or otherwise receive some form of regulatory protection. Documentation pertaining to these communities, as well as special status species (including species of special concern), is kept by CDFW as part of the California Natural Diversity Data Base (CNDDB).

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act (NCCP) program, which began in 1991 under the California Natural Community Conservation Planning Act, is broader in its orientation and objectives than CESA and ESA; these laws are designed to identify and protect individual species that are already listed as threatened or endangered and their habitats. The primary

objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land use (CDFG 2003).

Santa Clara Valley Habitat Plan

The *Santa Clara Valley Habitat Plan* (ICF International 2012) is both a habitat conservation plan (HCP) intended to fulfill the requirements of the federal Endangered Species Act and a natural community conservation plan to fulfill the requirements of the California Natural Community Conservation Planning Act (NCCP Act). The plan was prepared by ICF in a collaborative effort by the "Local Partners": County of Santa Clara (County), the Santa Clara Valley Water District, the Santa Clara Valley Transportation Authority (VTA) and the cities of Gilroy, Morgan Hill, and San Jose. The San José City Council adopted the *Habitat Plan* on January 29, 2013.

The *Santa Clara Valley Habitat Plan* (SCVHP) provides a framework for promoting the protection and recovery of natural resources, including endangered species, while streamlining the permitting process for planned development, infrastructure, and maintenance activities. The *Habitat Plan* allows the Local Partners to receive endangered-species permits for activities and projects they conduct and for those under their jurisdiction. Eighteen animal and plant species are covered by the *Habitat Plan*. The Santa Clara Valley Habitat Agency (Habitat Agency) is the agency primarily responsible for executing the requirements of the *Habitat Plan*, federal and state endangered species permits, and the Implementing Agreement (the legal document between the Wildlife Agencies and Co-Permittees to implement the Plan). The City of Gilroy, among others, is responsible for *Habitat Plan* compliance with respect to private development projects within its jurisdiction and for ensuring that its own public projects are carried out in conformance with the Plan.

California Department of Fish and Wildlife-Lake and Streambed Alteration Agreement

Section 1602 of the California Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify CDFW of such proposed activity. CDFW may propose reasonable modifications, based on the information contained in the notification form and a possible field inspection, CDFW may propose reasonable modifications in the proposed construction as would allow for the protection of fish and wildlife resources. Upon request, the parties may meet to discuss the modifications. If the parties cannot agree and execute a Lake and Streambed Alteration Agreement, then the matter may be referred to arbitration.

California Department of Fish and Wildlife Fish and Game Code 3503 and 3503.5

The State of California has incorporated the protection of nongame birds and birds of prey, including their nests, in Sections 3800, 3513, 3503, and 3503.5 of the California Fish and Game (CFG) Code. Section 3503 of the Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird. Section 3503.5 makes it unlawful to take or possess birds of prey (hawks, eagles, vultures, owls) or destroy their nests or eggs.

California Department of Fish and Wildlife Fully Protected Animal Species

The classification of Fully Protected was an effort by the State of California in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Most Fully-Protected species have also been listed as threatened or endangered species under state endangered species laws and regulations. Species classified as Fully Protected Species by the CDFW may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock (as per California Fish and Game Code Section 3511(a)(1)).

City of Gilroy General Plan

In addition to federal and state regulations, the development of the property must be accomplished consistent with the land use designations and natural resource and other policies of the newly revised City of Gilroy General Plan 2040.

OTHER STATUTES, CODES, AND POLICIES AFFORDING LIMITIED PROTECTION

California Native Plant Society

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2014: https://www.cnps.org/cnps/rareplants/inventory/). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings: https://www.cnps.org/cnps/rareplants/ranking.php

California Rare Plant Rank 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere.
California Rare Plant Rank1B:	Plants rare, threatened, or endangered in California and elsewhere.
California Rare Plant Rank 2A:	Plants presumed extirpated in California, but more common elsewhere.
California Rare Plant Rank 2B:	Plants rare, threatened, or endangered in California, but more numerous elsewhere.
California Rare Plant Rank 3:	Plants about which more information is needed – a review list.
California Rare Plant Rank 4:	Plants of limited distribution – a watch list.

4.0 EXISTING BIOLOGICAL SETTING

The project involves the construction of two industrial buildings on a 59.7-acre site located at 1445 Pacheco Pass Highway (State Route 152) in Gilroy, California. The project site is located on the parcel northeast of the intersection of Pacheco Pass Highway (State Route 152) and Camino Arroyo in the City of Gilroy, California. The site can be accessed off of State Route 152 to Camino Arroyo and Renz Lane. The location of the Project Site is shown in Figure 1. Figure 2 shows the location of the site on the Gilroy 7.5-minute USGS quadrangle map, and Figure 3 shows an aerial photo of the Project Site.

A Santa Clara Valley Water District (SCVWD) channel known as Upper Miller Slough (also referred to in some publications as the Ronan Channel or the West Branch of Llagas Creek) borders the site on the north. Further to the north beyond Upper Miller Slough is additional agricultural land. The site is bound by retail development and agricultural land on the west and industrial development to the east. Pacheco Pass Highway (State Route 152) borders the site to the south and additional commercial and industrial developments are located to the south of the highway.

The description of the biological setting for the property is based on field visits to the site by HBG Senior Environmental Scientist Gary Deghi and Senior Wetland Scientist Robert Perrera in July and October of 2020. Gary Deghi visited the site on July 21 and October 2, 2020 for purposes of conducting observations of the composition and distribution of plant species, wildlife observations, identification of sensitive habitats, and a comparison of site characteristics for similarity to sites known to support special status species within the area. A visit to the site by Robert Perrera was conducted on July 21, 2020 for the purpose of completing a wetland delineation for the property.

A majority of the land within the project boundary is used for the production of agricultural row crops. The project site is one of a few remaining agricultural fields originally part of a larger ranch holding. The project site is essentially flat at an elevation of approximately 180 feet above mean sea level with slopes ranging from zero to two percent. Soil survey information for the Project Area was obtained from the National Resources Conservation Service Web Soil Survey (NRCS 2020). Two different soil types were mapped by NRCS within the Project Area (see Figure 5). These soils are the Campbell silty clay, muck substratum and Clear Lake clay, 0 to 2 percent slopes, occasionally flooded. A soil map of the property is shown in Figure 5.

4.1 Climate

Like other portions of northern California, Gilroy experiences a Mediterranean climate characterized by warm, dry summers and cool, wet winters. Based on “WETS Station Gilroy, CA” precipitation and temperature data for the period of record (1971 – 2000), the average annual precipitation amount received in the vicinity of Gilroy is 20.56 inches of rainfall and 0.0 inch received as snow. The wettest month, in which average monthly rainfall exceeds 4.0 inches, is January (4.32 inches) with the lowest average amount occurring in August (0.05). Record data

also indicates that the annual average daily temperature is 74.5° F. Average high and low temperatures range between 71.4 and 48.3° F with the coldest months typically including December and January where temperatures are in the high 40s and the hottest months being July and August where temperatures are in the low 70s.

4.2 Hydrology

A USGS topographic map from 1973 (see Figure 6) shows the former course of Miller Slough, originating northwest of what is now the proposed project site and then passing through the project site. The portion of Miller Slough bordering the project site to the north was channelized and is now a Santa Clara Valley Water District (SCVWD) channel known as Upper Miller Slough (also referred to in some publications as the Ronan Channel or the West Branch of Llagas Creek). With the construction of the levee along the northern border of the project site that confines flows to Upper Miller Slough, water flows within Upper Miller Slough have been cut off from the project site and exclusively flow east into Llagas Creek. Llagas Creek is located east of the adjacent industrial facility and flows south under Highway 152 to the Pajaro River which eventually flows into the Pacific Ocean near Watsonville. Upper Miller Slough and Llagas Creek carry a substantial amount of run-off from western and northern Gilroy and the hills west of Gilroy. The location of these stream courses in the project area is shown if Figure 7.

The project site is bisected by an agricultural irrigation drainage ditch referred to as Miller Slough due to its current position within the historic alignment of Miller Slough through the site. This irrigation ditch (aka Miller Slough) originates on the project site as the southern levee protecting Upper Miller Slough prevents continuous flow of water from Upper Miller Slough onto the project site. The ditch (Miller Slough) within the site collects irrigation water and stormwater run-off from within the project site, and flows south to connect with roadside drainage ditches on the north side of Highway 152, and then flows through culverts under Highway 152 to Lower Miller Slough (a channel referred in some publications as the Princevalle Channel) which flows to its confluence with Llagas Creek south of the Gilroy Foods Plant.

Figures 8, 9, and 10 identify US Geological Survey (USGS) National Hydrography Dataset (NHD) Hydrologic Unit Code (HUC) watershed and subwatersheds at and adjacent to the site. The Study Area primarily lies within the “Pajaro” 8-digit NHD HUC watershed (18060002). More specifically, the site lies in the HUC NHD 10-digit subwatershed of the Pajaro watershed “Llagas Creek” (1806000203) and in the NHD HUC 12-digit subwatershed “Lower Llagas Creek” (180600020303).

The FEMA Rate Map City of Gilroy 060304 indicates the Study Area is in Zone X which has a 0.2% Annual Chance Flood Hazard.

4.3 Plant Communities

Vegetation communities are assemblages of plant species growing in an area of similar biological and environmental factors. Vegetation communities and habitats at the project site were identified based on the currently accepted List of Vegetation Alliances and Associations (or Natural Communities (CDFW 2010). The list is based on A Manual of California Vegetation,

Second Edition (Sawyer and Keeler-Wolf 2009), which is the National Vegetation Classification applied to California. The project site contains two habitat types: Non-native Grassland and Cropland.

The project site contains disturbed areas that have been affected by previous cultivation and that are currently used for growing row crops. Nonnative/ruderal (disturbed) grassland vegetation is present along the margin of the agricultural fields, adjacent to Upper Miller Slough, and as understory along the banks of Upper Miller Slough. The edges of the agricultural fields are vegetated with a number of non-native, weedy plants that include bull mallow (*Malva nicaeensis*), bull thistle (*Cirsium vulgare*), sow thistle (*Sonchus oleraceus*), field bindweed (*Convolvulus arvensis*), pepperweed (*Lepidium latifolium*), star thistle (*Centaurea solstitialis*), and others. A row of trees lines the northern border of the site. Vegetation along this border include trees such as valley oak (*Quercus lobata*), Coast live oak (*Quercus agrifolia),* Fremont's cottonwood (*Populus fremontii*), box elder (*Acer negundo*) and California sycamore (*Platanus racemosa*), with understory species including milkweed (*Silybum marianum*) and grasses, most notably wild oat (*Avena fatua*). Plants found along the eastern border of the site include California blackberry (*Rubus ursinus*), elderberry (*Sambucus* sp.), and a variety of ornamental shrubs. An agricultural ditch originating on the site and extending south through the site and drainage ditches along the eastern and southern boundaries have sparse vegetation consisting of species such as barnyard grass (*Echinochloa crus-galli*), bearded spangletop (*Leptichloa fusca* ssp. *fascicularis*), tall flat-sedge (*Cyperus eragrostis*), and Bermuda grass (*Cynodon dactylon).*

The row of trees forming the northern border of the site is below the toe of slope of the levee to the north protecting the site from Upper Miller Slough. The public use trail is found at the top of the levee bank. Remnants of disturbed riparian woodland remain along the north side of the levee along the bank of Upper Miller Slough. Vegetation on the banks of the levee includes a variety of small trees, shrubs, herbaceous plants and grasses. Plants growing on the banks of the levee on either side of the public use trail include scattered small trees of Coast live oak, elderberry, and walnut (*Juglans* sp.); shrubs such coyote brush (*Baccharis pilularis*) and California rose (*Rosa californica*); herbaceous plants such as California blackberry, pepperweed, star thistle, bull mallow, sweet fennel (*Foeniculum vulgare*), plantain (*Plantago* sp.), native California poppy (*Eschscholzia californica*), and various thistles (*Cirsium* sp.); and grasses such as wild oat and Harding grass (*Phalaris aquatica*). The channel of Miller Slough is vegetated with grasses adapted for wet conditions. Vegetation in the channel is dominated by Harding grass and includes species such as rough cocklebur (*Xanthium strumarium*), curly dock (*Rumex crispus*), and rabbitsfoot grass (*Polypogon monspeliensis*).

4.4 Animal Populations

The project site provides limited habitat for wildlife species, mostly those adapted to open areas and farm fields and disturbed environments. Grasses and herbaceous plants within the Project Site provide limited nesting and roosting sites for birds, and cover and foraging habitat for species of birds, mammals, reptiles and amphibians. The row of trees along the northern border of the project site (including valley oak, Coast live oak, walnut, Fremont's cottonwood,

box elder, and California sycamore) provide suitable substrate for nesting birds and could potentially provide roosting sites for a number of species of bat known to occur in the general area.

Upper Miller Slough runs north of and adjacent to the proposed Project Site. The riparian habitat along Upper Miller Slough provides shelter and cover for a variety of wildlife species such as amphibians, reptiles, birds and mammals. Canopy riparian trees and other vegetation provide nesting substrates for a number of bird species as well as foraging areas for both migratory and resident species. As with many riparian systems, the creek at this location provides a movement corridor for wildlife adapted to urban environments such as those found in the project area. Upper Miller Slough empties into Llagas Creek at a location just northeast of the Project Site.

The SCVHP reports that common native fish species found in the Pajaro River Watershed including Uvas, Llagas, and Pacheco Creek, include resident rainbow trout and anadromous steelhead (*Oncorhynchus mykiss*), hitch (*Lavinia exilicauda*), California roach (*Lavinia symmetricus*), Sacramento blackfish (*Orthodon microlepidotus*), Sacramento sucker (*Castosomus occidentalis*), threespine stickleback (*Gasterosteus aculeatus*), Sacramento pikeminnow (*Ptychocheilus grandis*), riffle sculpin (*Cottus gulosus*), and prickly sculpin (*Cottus asper)* (ICF International 2012).

A number of wildlife species were documented at the Project Site during the field review conducted by Gary Deghi of HBG on July 21 and October 2, 2020. Bird species documented in the farm fields and surrounding weedy areas of the project site during these visits included mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia)*, killdeer (*Charadrius vociferous),* Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris)*, northern mockingbird (*Mimus polyglottos)*, black phoebe (*Sayornis nigricans),* tree swallow (*Tachycineta bicolor*), and savannah sparrow (*Passerculus sandwichensis*). Turkey vulture (*Cathartes aura*), and red-tailed hawk (*Buteo jamaicensis*) also flew over the site during the survey. Other species found in trees and shrubs along the northern and eastern property boundaries included acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Dryobates nuttalli*), American robin (*Turdus migratorius*), California scrub-jay (*Aphelocoma californica*), California towhee (*Melozone crissalis),* house finch (*Haemorhous mexicanus*) and house sparrow (*Passer domesticus*). All species documented at the site are common to abundant in the region and would be expected in the non-native grassland habitat present at the site.

No amphibians were documented on the property but species would likely include Pacific treefrog (*Pseudacris regilla*), among others. Reptiles such as western fence lizard (*Sceloperus occidentalis),* Pacific gopher snake (*Pituophis catenifer)* and common garter snake (*Thamnophis sirtalis elegans)* may also be present. The only observed evidence of mammals on the site were dens for Botta's pocket gopher (*Thomomys bottae*). Other expected mammals would be those adapted to disturbed, urban environments such as Virginia opossum (*Didelphis virginiana*),

black-tailed jackrabbit (*Lepus californicus*), deer mouse (*Peromyscus maniculatus*), striped skunk, (*Mephitis mephitis*), and raccoon (*Procyon lotor*).

A visit to the riparian habitat of Upper Miller Slough revealed the greater species diversity present there. Most of the bird species found on the Project Site were found along the creek, but additional species noted along the creek during brief surveys on July 21 and October 2, 2020 included great egret (*Ardea alba*), California quail (*Callipepla californica*), Northern flicker (*Colaptes auratus*), Bewick's wren (*Thryomanes bewickii*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), Lincoln's sparrow (*Melospiza lincolnii*), and American goldfinch (*Spinus tristis*). Scattered dens of California ground squirrel (*Otospermophilus beecheyi*) were found on the banks of Upper Miller Slough adjacent to the project site and a colony of California ground squirrel was found on the north bank of Upper Miller Slough east of the Project Site near the confluence with Llagas Creek.

4.5 Sensitive Habitats

4.5.1 Wetlands

Regulatory Background. In the summer of 2020, HBG conducted an investigation at the proposed Project Site to assess whether aquatic resources are present and potentially subject to US Army Corps of Engineers (Corps) and US Environmental Protection Agency (US EPA) regulation under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344) or Corps jurisdiction under Section 10 of the Rivers and Harbors Act (RHA) (33 U.S.C. 403). HBG conducted this study in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the *Corps' 1987 Wetlands Delineation Manual* (Corps Delineation Manual), the *Corps' 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Regional Supplement) and supporting Corps and US EPA guidance documents including recent guidance to include the new *Navigable Waters Protection Rule* that became effective June 22, 2020. The client has submitted a request to the San Francisco District of the Corps for an "Approved Jurisdictional Determination" (AJD) pursuant to applicable Corps guidance documents.

The HBG investigation included an assessment of whether aquatic resources are present that are potentially subject to state regulatory jurisdiction of the Central Coast Regional Water Quality Control Board (CCRWQCB) under the Porter-Cologne Act or the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW) under Fish and Game Code Section 1602. The review included an investigation of existing landforms, vegetation, hydrology, and soil conditions, but consisted of a preliminary review of the area for wetland habitats.

Figure 11 provides USFWS National Wetlands Inventory (NWI) mapping of the project area. The mapping shows a linear aquatic feature running in an approximate North to South direction through the Study Area. This feature is labeled "PEM1Cx" which is a palustrine emergent hypersaline seasonally flooded excavated wetland (Huffman-Broadway Group 2020). This aquatic feature is consistent with the former alignment of Miller Slough through the project site.

Site Evaluation. HBG conducted a field study on July 21, 2020 at four sampling locations to:

1. Determine the presence or absence of vegetation, hydric soil, and hydrology indicators of wetland conditions as defined by the Corps methodology;
2. Determine if field indicators of wetland conditions may be "significantly disturbed" or "naturally problematic;" and
3. Within any non-tidal drainage or depressional area found, determine if indicators of an ordinary high water mark (OHWM) are present and document the location(s) of the OHWM.

The only areas within the project site with a potential to support wetlands or other waters of the U.S. subject to USACE jurisdiction or that would potentially found to be subject to CCRWQCB jurisdiction under the Porter-Cologne Act would be excavated drainage ditches dug within the project site (i.e., the agricultural drainage ditch within the historic alignment of Miller Slough) or in drainages around the borders of the site. The agricultural drainage ditch within the historic alignment of Miller Slough was constructed within a portion of Miller Slough cut off from Upper Miller Slough in the late-'60s/early-'70s by channelization of Miller Slough and construction of the levee along the northern property boundary. This is now an ephemeral drainage repurposed as a maintained agricultural ditch. Both the drainage ditch along the eastern property boundary and the roadside drainage ditch along the north side of Highway 152 were constructed in uplands and are not tributary, natural stream or relocated tributary, and not constructed in tributaries or adjacent wetlands.

Although these ditches contained hydrologic indicators as wetlands, none showed evidence of hydrophytic vegetation or hydric soils. Excavated drainage ditches exhibited bed and banks and showed field indicators of an Ordinary High Water Mark along their banks. These drainages direct stormwater surface water flows within the project area in a southerly direction to an off-site culvert which allows water from the site to flow under Pacheco Pass Highway to Lower Miller Slough. Based on the field observations which were made during a typical year, it is highly likely that the drainages only function to convey surface water flows in direct response to rainfall and therefore are classified as having ephemeral flow characteristics as defined by the NWPR.

Following the analysis procedures in the Corps' *Interim Navigable Waters Protection Rule* it was determined that none of the aquatic resources identified in the wetland delineation are potentially CWA jurisdictional waters of the US., and all are potentially excluded from jurisdiction under the NWPR. The potential wetlands evaluated as described above and found to be excluded from CWA jurisdiction are shown in Figure 12. It was also determined that the ditches listed above are not subject to River and Harbors Act Section 10 jurisdiction because they are non-tidal streams and are not on the San Francisco District's Section 10 waters list (Huffman-Broadway Group 2020).

Although excluded from USACE jurisdiction under the CWA, the agricultural ditch on the project site within the historical alignment of Miller Slough and the drainage ditches along the eastern project boundary and southern boundary along Highway 152 would all be subject to the Porter-Cologne Act jurisdiction of the CCRWQCB and the Fish and Game Code Section 1602 jurisdiction of CDFW. Any work within these drainages would require authorization in the form of a Waiver of Waste Discharge Requirements from the CCRWQCB and a Lake or Streambed Alteration Agreement from CDFW.

4.5.2 Riparian Corridors

Riparian Corridor Policies. Riparian corridors are protected by policy in the *Santa Clara Valley Habitat Plan* (SCVHP). The SCVHP defines "riparian habitat" as riparian vegetation associated with river, stream, or lake banks and floodplains. Condition 11 requires that stream setbacks be required for all covered activities occurring near streams and riparian areas to minimize effects on covered species. The point from which a stream setback is measured is, in general, the top of bank or the edge of riparian vegetation, whichever is greater. All covered activities must adhere to both the applicable existing local regulations and the requirements of the SCVHP. Approved development proposals in the City of Gilroy that are deemed covered projects in the SCVHP are subject to the its requirements and conditions.

There are two types of streams as defined in the SCVHP.

- A Category 1 stream has sufficient flow to support covered species and riparian habitat. These streams include perennial streams and some intermittent streams. These streams are typically larger than ephemeral drainages and support movement of covered species along the length of the stream. The ability of these streams to also support healthy riparian habitats bolsters the ecological value of the stream. Inside the Urban Service Area, the SCVHP states that "… the setback for Category 1 streams is 100 feet, although for parcels with slopes greater than 30 percent the setback is increased by 50 feet, and if the site supports riparian vegetation, the setback "is equal to either the riparian edge plus a 35-foot buffer or the setback as defined above, whichever is greater."

- A Category 2 stream may not have sufficient flow to support covered species and riparian habitat. These streams include all ephemeral streams and some intermittent stream reaches. These reaches provide minimum support of water-quality functions and primary breeding habitat for covered species. Category 2 streams are not specifically mapped as part of the SCVHP. They include both identified streams (named creeks and USGS blueline creeks) that are not classified as Category 1 streams and other unmapped streams that meet certain criteria. The setback for all Category 2 streams is 35 feet regardless of location or slope. In addition, if the site supports riparian vegetation, the setback is extended to include the riparian edge plus a 35-foot buffer.

If a watercourse is not mapped by the SCVHP it will be classified as a Category 2 stream, and covered by Plan if it meets the following criteria:

1. the watercourse is hydrologically connected to a waterway above and below the site or is connected to a spring, headwaters, lake, and/or bay,
2. the watercourse is within a defined channel which includes a bed, bank, and exhibits features that indicate actual or potential sediment movement,
3. the watercourse occupies a specific topographic position.

Gilroy City Code guidelines are spelled out in Chapter 27A, Water Resources Protection Guidelines and Standards and requires a 50-foot riparian setback measured from the top of bank. The Final EIR for Rancho San Ysidro-Machado Subdivision (City of Gilroy 2010) for the same project site indicates that the required setback from the SCVWD channel would be 50 feet from the high water mark. Current City procedure regarding creek setbacks is to comply with requirements of the SCVHP.

Site Evaluation

According to requirements of the SCVHP, the riparian setback from Upper Miller Slough would be 35 feet as measured from the top of bank or edge of riparian vegetation, whichever is greater. Based on field surveys by HBG, the limit of the riparian corridor of Upper Miller Slough was established at the top of bank of the levee, more specifically at the northern extent of the public use pathway that extends along the channel just beyond the top of bank. As a Category 1 stream, the setback requirement from Llagas Creek would be 100 feet. Llagas Creek is more than 100 feet from any location on the project site. The required 35-foot riparian setback from Upper Miller Slough is shown in the project site plan in Figure 4.

The agricultural ditch within the former alignment of Miller Slough is an ephemeral drainage originating on the project site. According to the SCVHP, “unmapped ephemeral streams will only be subject to the required setback if the criteria for defining a watercourse are met for hydrologic connectivity, channel form, and topographic position.” There is no hydrological connection to Miller Slough to the north and the subject ditch originates on the project site, so all three criteria for the definition of a watercourse are not satisfied. Therefore, the SCVHP setback requirements would not apply to the ditch running north-south through the site along the historic alignment of Miller Slough through the property as there is no hydrological connection to Miller Slough to the north.

4.5.3 Sensitive Habitat Summary

Sensitive habitat on the project site includes wetlands/waters within the historical alignment of Miller Slough and the drainage ditches along the eastern project boundary and southern boundary along Highway 152 would all be subject to the Porter-Cologne Act jurisdiction of the CCRWQCB and the Fish and Game Code Section 1602 jurisdiction of CDFW. An additional sensitive habitat found in the project area is the riparian corridor of Upper Miller Slough (mapped as Coastal and Freshwater Marsh in the SCVHP) that requires a 35-foot development setback from the limit of the riparian corridor at the top of bank.

4.6 Special Status Species

Special status species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Title 14, California Code of Regulations Section 15380. Special status species also include those species listed by CDFW as Species of Conservation Concern which face extirpation in California if current population and habitat trends continue. Many bird species are categorized as Bird Species of Conservation Concern by the USFWS. Although CDFW and USFWS Species of Concern generally have no special legal status, they are given special consideration under CEQA. The CEQA also considers impacts to plant species on California Native Plant Society (CNPS) Lists 1 and 2 as special status species and impacts to these species as well as those described above to be significant.

The CDFW maintains records for the distribution and known occurrences of special status species and sensitive habitats in the California Natural Diversity Database (CNDDB). The CNDDB is organized into map areas based on 7.5 minute topographic quadrangle maps produced by the U.S. Geological Survey (USGS). All known occurrences of special status species are mapped onto quadrangle maps maintained by the CNDDB. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat. The project site is located near the southern edge of the Gilroy 7.5 minute quadrangle map.

Tables 1 and 2 present a list of special status plants and animals, respectively, that have been reported by the CNDDB in the project vicinity within 10 miles of the site. An evaluation of the potential for all potential sensitive species to occur at the site is included in Tables 1 and 2.

Special Status Plant Species

A list of special status plants with potential to occur on the property was developed from the CNDDB. A complete list of special status plant species occurring in the vicinity of the property is included in Table 1. The table includes all species of flora mentioned in the CNDDB within approximately ten miles of the site.

The SCVHP requires that plant surveys be conducted in areas where occurrences of rare plants are most likely to occur. Such surveys are required in a variety of habitats occurring on serpentine soils and in areas that are within 0.25 miles of a known occurrence of a rare plant covered under the SCVHP. Serpentine soils do not occur on the project site, and the CNDDB shows no known occurrences of special status plant species within 0.25 miles of the project site.

A number of special status plant species listed in Table 1 are known to occur in the Gilroy area. Although some of the rare plants noted in Table 1 are possible in the surrounding areas, all the

species included in Table 1 require habitat conditions that are not found at the subject property. The project site is an agricultural field used for many years for the growing of row crops and is surrounded by small areas of non-native grassland vegetated with weedy species. The project site is not suitable habitat for native species and is not expected to support special status species of plant.

Special Status Animal Species

Animal species noted in the CNDDB as occurring within a 10-mile radius of the site, or that are known to occur in the general vicinity based on the knowledge of HBG biologists, are discussed in Table 2. The only special status species of animal noted in the CNDDB from near the subject property with a potential for occurrence at the site or in the immediate vicinity are burrowing owl (*Athene cunicularia*) and tricolored blackbird (*Aegelaius tricolor*). None of the other animal species discussed in the table have the potential to occur on the site. This finding is made based on the habitat requirements of species listed in the table and is based on field review of habitats present at the site and the immediate vicinity and an evaluation of the suitability of on-site habitats to support these species.

Burrowing Owl

Background. Burrowing owls are small terrestrial owls commonly found in open grassland ranging from western Canada to portions of South America. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. In California, burrowing owls most commonly use burrows of California ground squirrel, but they also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers during migration. While foraging, owls will perch on raised burrow mounds or other topographic relief such as rocks, tall plants, fence posts, and debris piles to attain better visibility. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or, alternatively, presence of "decoration" at or near a burrow entrance which can include molted feathers, cast pellets, prey remains, eggshell fragments, or excrement.

The burrowing owl is a U.S. Fish and Wildlife Service (USFWS) bird species of conservation concern and a California Department of Fish and Wildlife (CDFW) species of special concern (CDFW 2011). CDFW adopted survey protocol and mitigation guidelines for burrowing owls as described in a March 7, 2012 Staff Report (CDFW 2012).

The status of burrowing owl in the San Francisco Bay Area was summarized by Albion Environmental (2000) in a discussion included in the SCVHP. Nesting burrowing owls in the greater San Francisco Bay Area, and the South Bay area in particular, are a dwindling resource. In the early 1990s there were an estimated 150–170 breeding pairs in the San Francisco Bay Area, representing a 53% decline from the previous census period of 1986–1990.More recent numbers indicate that, if anything, the downward trend is increasing. In those estimates it was assumed that 75% of the San Francisco Bay Area burrowing owl population occurred in Santa

Clara County and nearly all of those owls were congregated around the southern edge of the San Francisco Bay. Surveys in the early 1990s revealed that about a third (43–47 pairs) of Santa Clara County breeding pairs occurred inside what is now the Santa Clara Valley Habitat Plan study area (ICF International 2012).

SCVHP Policy. According to SCVHP Condition 15, burrowing owl habitat surveys are required within areas mapped in the SCVHP as occupied nesting habitat. Habitat surveys in occupied nesting habitat are required in both breeding and non-breeding seasons and require that a qualified biologist map areas with burrows (i.e., areas of highest likelihood of burrowing owl activity) and all burrows that may be occupied (as indicated by tracks, feathers, egg shell fragments, pellets, prey remains, or excrement) on the project site. This mapping is to be conducted throughout the project footprint as well as all accessible areas within a 250-foot radius from the project footprint.

Surveys are not required in sites that are mapped as potential burrowing owl nesting or mapped only as overwintering habitat. The project site is mapped in the SCVHP as potential or overwintering habitat rather than occupied habitat, therefore, habitat surveys are not required. It should be noted, however, that avoidance measures, including preconstruction surveys, apply to all projects that affect any burrowing owl habitat, regardless of whether surveys are required by SCVHP Condition 15. If burrowing owls are present, the SCVHP requires a number of avoidance and minimization measures.

Potential Occurrence on the Project Site. Even though habitat surveys for burrowing owl are not required by Condition 15 given the mapping in the SCVHP, the site and surrounding area were investigated for burrowing owls and burrowing owl habitat during site reconnaissance by HBG biologists on July 21 and October 2, 2020. No burrowing owls were observed on the project site by HBG biologists during the field visits. In addition, the biologists found no California ground squirrels or ground squirrel burrows on the development site, only dens of Botta's pocket gopher which would not be occupied by burrowing owl. A lack of ground squirrel burrows suggests that the habitat currently does not support burrowing owl and is currently not suitable to support burrowing owl. During the July and October 2020 field surveys, HBG noted the presence of ground squirrel burrows along the south bank of Upper Miller Slough north of the project site, but investigation of each of the burrows during the July and October 2020 field reviews for either burrowing owl or sign of use by burrowing owl found no evidence of occupation by burrowing owls. A colony of ground squirrels was observed along the north bank of Upper Miller Slough near its confluence with Llagas Creek but no burrowing owls were observed at this colony. The nearest documented burrowing owl sighting in the CNDDB is approximately 4.5 miles southeast of the project site.

Tricolored Blackbird

Background. Tricolored blackbird is listed as endangered under the California Endangered Species Act. Tricolored blackbird is also currently designated as a state species of special concern and is designated by the USFWS as a Bird Species of Conservation Concern. Tricolored

blackbird is a highly colonial nesting species that breeds near freshwater, preferably in emergent wetlands with tall, dense growth of cattails or tules. Even when the preferred nesting substrates are available, other vegetation may be used for nesting including sedges, nettles, willows, thistles, mustard, blackberry, wild rose, foxtail grass or barley. Since the 1970s with declines in populations, nesting in cereal crops and dairy silage has been documented. Tricolored blackbird foraging areas include rangeland, fields of alfalfa or cut hay, or irrigated pastures with an abundance of insects.

SCVHP Policy. The SCVHP Condition 17 requires surveys related to tricolored blackbird if the project-specific verified land cover map as mapped in Section 6.8.3 shows that the project area is within 250 feet of any riparian, coastal and valley freshwater marsh (perennial wetlands), or pond land cover types. If a project meets this criterion, a qualified biologist will conduct a field investigation to identify and map potential nesting substrate. Nesting substrate generally includes flooded, thorny, or spiny vegetation (e.g., cattails, bulrushes, willows, blackberries, thistles, or nettles). If potential nesting substrate is found, the project proponent may revise the proposed project to avoid all areas within a 250-foot buffer around the potential nesting habitat and surveys will be concluded. If nesting tricolored blackbirds are present, the SCVHP requires a number of avoidance and minimization measures.

Potential Occurrence on the Project Site. The land cover map in the SCVHP maps the northern portion of the project site as within 250 feet of Upper Miller Slough (mapped as Coastal and Valley Freshwater Marsh). Approximately 6.5 acres of the project site are within a mapped area that is within 250 feet of potentially suitable habitat for a tricolored blackbird nesting colony requiring that at a qualified biologist conduct a field investigation to identify and map potential nesting substrate for tricolored blackbird.

HBG conducted an evaluation of the habitat conditions with Upper Miller Slough to determine if nesting substrate for a tricolored blackbird nesting colony is present in the project area that could be subject to indirect impacts as a result of the project. Preferred nesting habitat for tricolored blackbird was found not to be present as vegetation that typically provides suitable substrate for a tricolored blackbird nesting colony was not observed. As referenced in the SCVHP, suitable tricolored blackbird nesting habitat typically consists of certain vegetation to include cattails, bulrushes, willows, blackberries, thistles, or nettles. As detailed in Section 4.3 (Plant Communities), dominant vegetation within the channel of Upper Miller Slough includes species such as Harding grass along with rough cocklebur, curly dock, and rabbitsfoot grass which would not be conducive to tricolored blackbird nesting. Although sparse growth of some thistles and blackberries is present, no cattails, bulrushes, or willows, which are preferred nesting substrates, are present. Suitable nesting habitat for tricolored blackbird does not occur within 250 feet of the project site. The nearest documented tricolored blackbird nesting colony in the CNDDB is approximately 4 miles southeast of the project site.

5.0 BIOLOGICAL IMPACTS AND MITIGATION MEASURES

5.1 Standards of Significance

According to CEQA Guidelines (Appendix G), the project would be considered to have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife and Game or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2 Impacts and Mitigation Measures

1) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special Status Plants. The SCVHP requires that plant surveys be conducted in areas where occurrences of rare plants are most likely to occur. Such surveys are required in a variety of habitats occurring on serpentine soils and in areas that are within 0.25 miles of a known occurrence of a rare plant covered under the SCVHP. Serpentine soils do not occur on the project site, and the CNDDB shows no known occurrences of special status plant species within 0.25 miles of the project site.

The proposed project would not result in any significant adverse impacts on special status plant species. The project site is an agricultural field used for many years for the growing of row crops and is surrounded by small areas of non-native grassland vegetated with weedy species. The project site is not suitable habitat for native species and would not be expected to support special status species of plant. All the species included in Table 1 require habitat conditions that are not found at the subject property. The project would not substantially reduce the number or restrict the range of a rare, endangered or threatened plant species.

Burrowing Owl. According to SCVHP Condition 15, burrowing owl habitat surveys are required within areas mapped in the SCVHP as occupied nesting habitat. Surveys are not required in sites that are mapped as potential burrowing owl nesting or mapped only as overwintering habitat. The project site is mapped in the SCVHP as potential or overwintering habitat rather than occupied habitat, therefore habitat surveys are not required. The SCVHP indicates that avoidance measures, including preconstruction surveys, apply to all projects that affect any burrowing owl habitat, regardless of whether surveys are required by SCVHP Condition 15.

Field surveys conducted by HBG found no burrowing owls or ground squirrel burrows that could be occurpied by burrowing owl on the project site. Potentially suitable burrowing owl nesting and overwintering sites can be found along the banks of Upper Miller Slough, but investigation of each of the burrows during the July and October 2020 field reviews for either burrowing owl or sign of use by burrowing owl found no evidence of occupation by burrowing owls. Surveys for burrowing owl or burrowing owl habitat are not required for the project site according to criteria of the SCVHP, and field surveys that were, however, conducted by HBG found no evidence of occupation by burrowing owls on the project site or in the project vicinity. Burrowing owls do not occur in the project vicinity, therefore, no impact to burrowing owl is expected during construction of the project.

Tricolored Blackbird. No impact to tricolored blackbird nesting colonies would occur as a result of the proposed project. The project site is located within 250 feet of a riparian corridor (Upper Miller Slough) and thus SCVHP Condition 17 requires a field investigation to map potential nesting sites for tricolored blackbird. Preferred nesting habitat for tricolored blackbird was found not to be present as vegetation that typically provides suitable substrate for a tricolored blackbird nesting colony was not observed in Upper Miller Slough. Suitable nesting habitat for tricolored blackbird does not occur within 250 feet of the project site. No direct or indirect impacts to tricolored blackbird nesting colonies would occur as a result of construction of the proposed project.

2) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

The project site is bordered on the north by a channelized SCVWD channel known as Upper Miller Slough. A levee constructed along the northern border of the project site separates flows within Upper Miller Slough from the project site, directing flows within Upper Miller Slough to

Llagas Creek. The project site is bisected by an agricultural irrigation/drainage ditch referred to as Miller Slough due to its current position within the historic alignment of Miller Slough through the site. This irrigation ditch originates on the project site and flows south to connect with roadside drainage ditches on the north side of Highway 152, and then flows through culverts under Highway 152 to Lower Miller Slough, which flows to its confluence with Llagas Creek.

Upper Miller Slough would be protected by a 35-foot setback as required by the SCVHP and as measured from the top of bank. None of the construction necessary for the proposed project would encroach within the riparian setback for Upper Miller Slough (see Figure 4). The required setback at Llagas Creek would be 100 feet, and all construction is proposed well outside the setback for Llagas Creek. SCVHP setback requirements would not apply to the ditch running north-south through the site along the historic alignment of Miller Slough through the property as there is no hydrological connection to Miller Slough to the north.

The project would not encroach into the riparian setback for any watercourse as established by criteria within the SCVHP, therefore, no direct or indirect impacts to riparian habitat would result from implementation of the proposed project. No construction is proposed within Miller Slough (the agricultural ditch within the project site) according to the project site plan (Figure 4). Even though technically not required by the SCVHP, a 35-foot setback from the agricultural ditch is also included within the applicant's plans. Recreational trails are exempt from the stream setback requirements of the SCVHP, therefore, the construction of the bike trail connector at the north end of the site near Upper Miller Slough would not be inconsistent with SCVHP requirements.

Culvert improvements and road crossings (driveways into the project from Highway 152) requiring construction work within the drainage ditch along Highway 152 are necessary, and would be constructed only after receiving Waste Discharge Requirements from the CCRWQCB and a Lake and Streambed Alteration Agreement from CDFW, as explained in response to Item #3.

No direct or indirect impacts would occur to any riparian corridor as a result of the proposed project.

3) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? Although excluded from USACE jurisdiction under the CWA, the agricultural ditch on the project site within the historical alignment of Miller Slough and the drainage ditches along the eastern project boundary and southern boundary along Highway 152 would all be subject to the Porter-Cologne Act jurisdiction of the CCRWQCB and the Fish and Game Code Section 1602 jurisdiction of CDFW. Any work within these drainages would require authorization in the form of a Waiver

of Waste Discharge Requirements from the CCRWQCB and a Lake or Streambed Alteration Agreement from CDFW.

Construction activities within the roadside ditch on the north side of Highway 152 adjacent to the project site are necessary to provide for roadway access into the project from the highway and to construct improvements to the culvert that passes drainage from the project site and the roadside drainage under Highway 152 to Lower Miller Slough. The location of the culvert improvements and four roadway access points into the project site from Highway 152 are shown in the site plan in Figure 4. The four entrance driveways into the project site are proposed to be constructed during the Phase 1 portion of the project. All necessary culvert improvements will be constructed on the north side of Highway 152. The roadside watercourse along the north side of the highway is excluded from federal Clean Water Act jurisdiction but would be subject to state jurisdiction under the Porter-Cologne Act and Section 1602 of the Fish and Game Code. The culvert improvements and construction of crossings for the four entrance driveways will require the Waiver of Waste Discharge from the CCRWQCB and the Lake and Streambed Alteration Agreement from CDFW.

Impact 1: Construction of a culvert improvements and four entrance driveways on the north side of Highway 152 would be necessary within the Porter-Cologne Act jurisdiction of the CCRWQCB and the Fish and Game Code Section 1602 jurisdiction of CDFW, and would require a Waiver of Waste Discharge from the CCRWQCB and a Lake and Streambed Alteration Agreement from CDFW.

> **Mitigation Measure 1**: Prior to work within the roadside watercourse on the north side of Highway 152, the project applicant will apply for and obtain a Waiver of Waste Discharge Requirements from the CCRWQCB and a Lake and Streambed Alteration Agreement from CDFW. If mitigation for impacts to the drainages is required by CCRWQCB and/or CDFW, a mitigation plan will be developed as part of the permit process with the agencies.

4) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project site is an agricultural field used for many years for the growing of row crops and is surrounded by small areas of non-native grassland vegetated with weedy species. Although some bird species adapted for open fields and disturbed areas were observed on the site, and other wildlife adapted to urban environments are expected, the project site itself provides little habitat for wildlife. A row of trees that includes valley oak, Coast live oak, Fremont's cottonwood, walnut, box elder, and California sycamore could provide suitable roost sites for bats, but the project plan does not call for the removal of these trees. The construction as planned on the property would not result in substantial change in animal populations at the site.

Nesting Birds. Nesting bird species protected by the federal Migratory Bird Treaty Act or California Fish and Game Code could be impacted during project construction. Work related to construction involving the removal of vegetation during the February 1 to August 1 breeding season of birds could result in mortality of nesting avian species if they are present. Many species of raptors (birds of prey) are sensitive to human incursion and construction activities, and it is necessary to ensure that nesting raptor species are not present in the vicinity of construction sites.

Little habitat for nesting birds is found within the proposed project footprint, however, a row of trees along the northern property boundary that includes valley oaks, Coast live oaks, box elder, and others, were shown to support a number of bird species during field surveys conducted in the summer of 2020 by HBG. These trees provide suitable nesting substrate for a number species. Many of the bird species observed on the property during the summer of 2020 could nest in these trees along the northern boundary or within shrubs (mostly landscaping) along the eastern property boundary separating the site from the adjacent industrial use. Although these trees and shrubs would not be removed to accommodate the project, if active nests were present in this vegetation during construction operations on the project site, indirect impacts could occur to nesting bird species protected by the Migratory Bird Treaty Act or the California Fish and Game Code as a result of construction activity on portions of the project adjacent to these areas.

Impact 2: The removal of vegetation during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present.

> **Mitigation Measure 2:** If construction is to be conducted during the breeding season (February 1 to August 31), a qualified biologist should conduct a pre-construction breeding bird survey in areas of suitable habitat within 15 days prior to the onset of construction activity. Nesting bird surveys should cover the project footprint, but also the south bank of Upper Miller Slough, the row of trees along the northern property boundary, and the landscaping along the eastern property boundary. If bird nests are found, appropriate buffer zones should be established around all active nests to protect nesting adults and their young from direct or indirect impacts related to project construction disturbance. Size of buffer zones should be determined per recommendations of the qualified biologist based on site conditions and species involved. Buffer zones should be maintained until it can be documented that either the nest has failed or the young have fledged.

Water Quality. Construction activities will occur in areas adjacent to and east of Miller Slough, but water quality impacts to Miller Slough would not be significant for several reasons. Impacts of soil migration during construction from the Project Site to the sensitive habitat along Miller Slough is not expected to be significant as the riparian habitat of Upper Miller Slough is not hydrologically connected to the project site because of an intervening levee/public use path and is protected by a 35-foot setback as required in the SCVHP. Moreover, lower reaches of

Miller Slough that connect with Llagas Creek will be protected as the applicant intends to employ Best Management Practices to control erosion and migration of soil offsite.

The requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will be required and will provide additional assurance that water quality of Miller Slough, Llagas Creek and other nearby waterways are not affected by onsite construction activities. In particular, silt fence and straw wattles will be installed along portions of the Project Site to maintain levels of water pollutants migrating offsite. In addition, vegetation will only be cleared from the permitted construction footprint. Areas cleared of vegetation, pavement, or other substrates should be stabilized as quickly as possible to prevent erosion and runoff.

Grading, excavation, placement of fill material and other ground-disturbing activities associated with construction activities within the Project Site will not promote erosion that would allow elevated levels of sediment to wash into Miller Slough and into aquatic areas downstream, resulting in potential impacts to fish and wildlife resources. Indirect impacts to resident animal populations within Miller Slough would not result from the proposed project due to elevated turbidity levels from increased sedimentation or increases in other contaminants in stormwater runoff.

5) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project would not conflict with any local policies related to protection of natural resources. No trees are present on the Project Site so no trees would need to be removed to accommodate the proposed project. All work would take place consistent with requirements of the SCVHP and the General Plan and Zoning Ordinance of the City of Gilroy.

6) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

A check with the Santa Clara Valley Habitat Agency Geobrowser tool shows that the Project Site is within the Agency's Habitat Plan Permit Area. The applicant will submit necessary applications to the City of Gilroy and Santa Clara Valley Planning Agency for the project, including the Santa Clara Valley Habitat Plan Application for Private Projects and the Santa Clara Valley Habitat Plan Coverage Screening Form.

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ATTACHMENT 1.

Figures

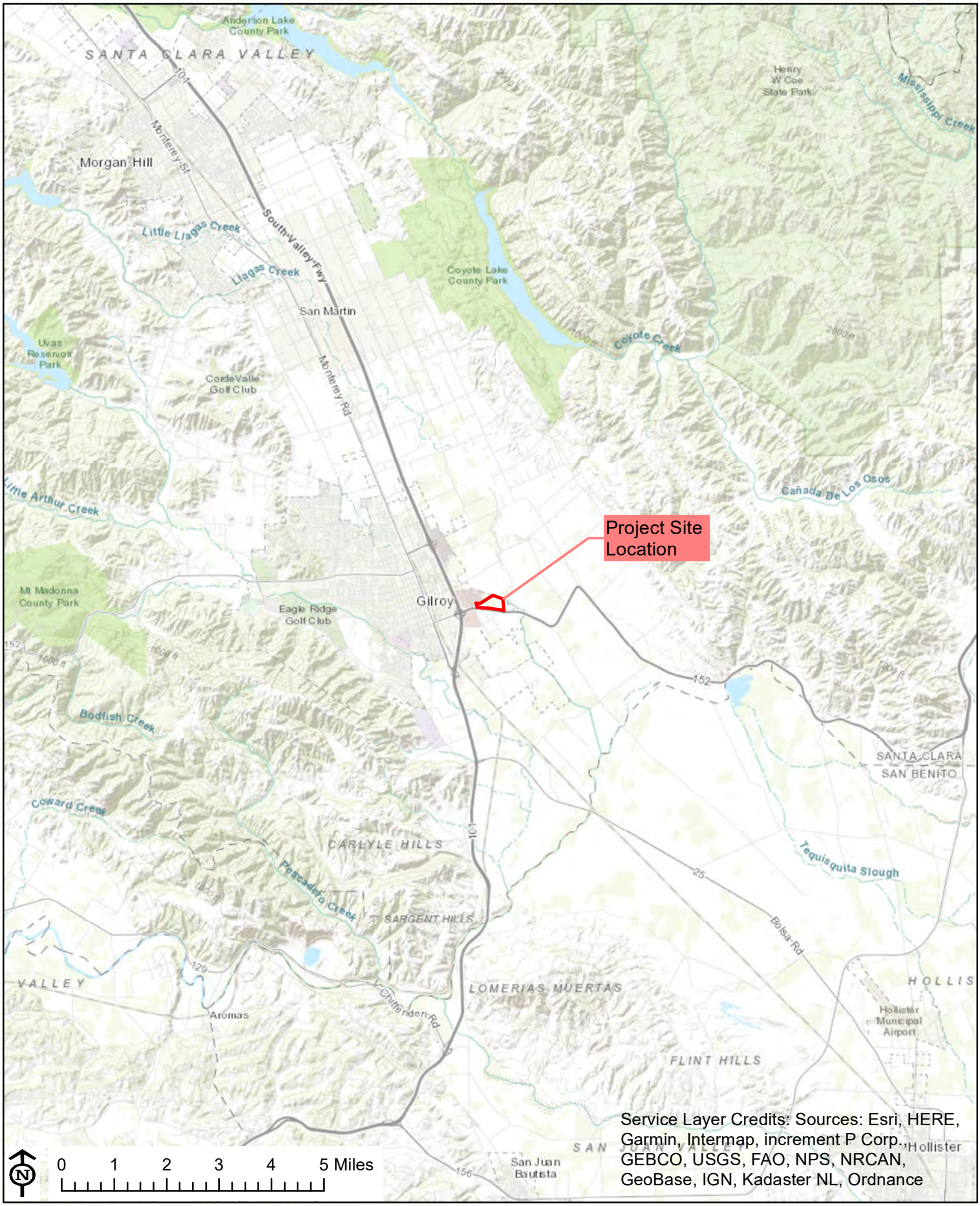

Figure 1. Project Site Location Map

Project Garlic

Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.

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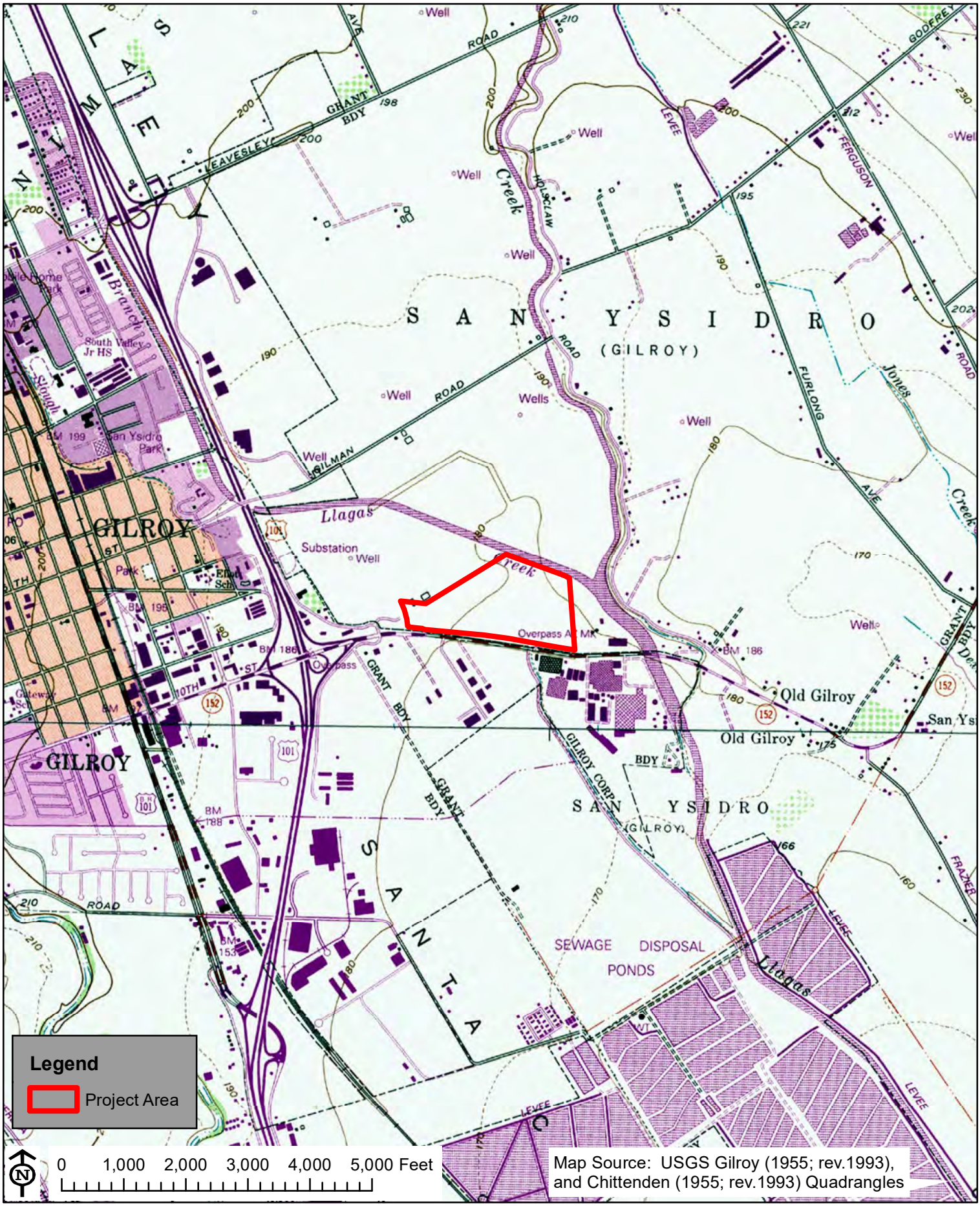

Figure 2. USGS Topographic Map of the Project Area

Project Garlic
Gilroy, Santa Clara County, California

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Figure 3. Aerial Imagery of the Project Site

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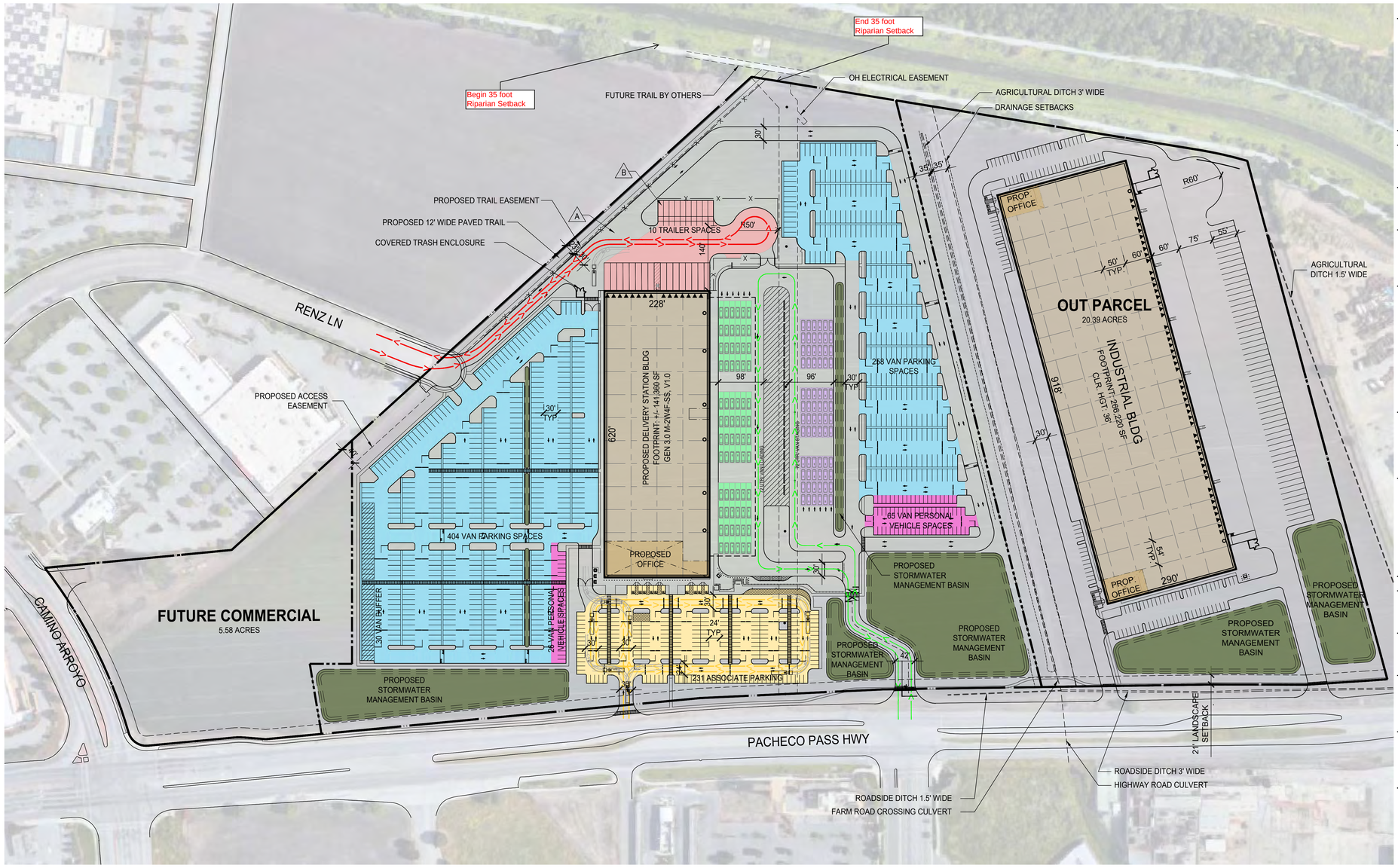

PROJECT DATA:	PROPOSED DELIVERY STATION	
SITE AREA:		
GROSS:		59.695 AC
		2,600,327 SF
OUT PARCEL:		242,995 SF
DETENTION BASIN	@ 6%	150,629 SF
NET:		50.66 AC
		2,206,703 SF
DELIVERY STATION BLDG:		141,360 SF
BUILDING USE:		
WAREHOUSE		124,536 SF
OFFICE	@ 12%	16,824 SF
COVERAGE:		
GROSS:		5%
NET:		6%
PARKING REQUIRED:		
WAREHOUSE	1/5000 SF	25 STALLS
OFFICE	1/300 SF	56 STALLS
TOTAL		81 STALLS
PARKING PROVIDED:		
ASSOCIATE STALLS:		231 STALLS
		@1.63/1000 SF
REQ. ACCESSIBLE		*7 STALLS*
UTR/ VAN LOADING:		72 STALLS
UTR/ VAN STAGING:		72 STALLS
VAN SPACES:		692 STALLS
PERSONAL VAN SPACES:		91 STALLS
TRAILER SPACES		10 STALLS
TRUCK DOCKS:		
▲ DOCK-HIGH DOORS		15
O GRADE-LEVEL DOORS		6

PROJECT DATA:	INDUSTRIAL BUILDING	
SITE AREA:		
GROSS:		20.386 AC
		888,009 SF
DETENTION BASIN	@ 9%	79,363 SF
NET:		18.56 AC
		808,646 SF
INDUSTRIAL BLDG.		266,220 SF
BUILDING USE:		
INDUSTRIAL		256,220 SF
OFFICE	@ 4%	10,000 SF
COVERAGE:		
GROSS:		30%
NET:		33%
PARKING REQUIRED:		
WAREHOUSE	1/5000 SF	51 STALLS
OFFICE	1/300 SF	33 STALLS
TOTAL		85 STALLS
PARKING PROVIDED:		136 STALLS
		@1.02/2000 SF
REQ. ACCESSIBLE		*5 STALLS*
TRAILER SPACES		56 STALLS
TRUCK DOCKS:		
▲ DOCK-HIGH DOORS		50
O GRADE-LEVEL DOORS		2

DEVELOPMENT STANDARDS:

ZONING:	M-2
MAX. COVERAGE:	60%
MAX. HEIGHT:	75 FT
BUILDING SETBACKS:	
FRONT:	26 FT
SIDE:	0 FT [1]
REAR:	0 FT
LANDSCAPE SETBACKS:	[3]
FRONT:	21 FT
SIDE:	5 FT [2]
REAR:	5 FT
OFF-STREET PARKING:	
STANDARD:	9X18
COMPACT:	n/a
COMPACT %:	n/a
DRIVE AISLE:	25 FT
FIRE LANE:	26 FT
OVERHANG:	2 FT
TREE WELL:	5 FT
REQ. PARKING RATIO BY USE:	
WAREHOUSE:	1/5000 SF
MANUF.:	1/350 SF
OFFICE:	1/300 SF

NOTES:
1 31 feet when street facing.
2 21 feet when street facing.
3 Minimum 8ft landscape buffer when adjacent to commercial or residential uses.

PARKING BREAKDOWN - GEN3.0 M 2W4F V1.01

PARKING	REQUIRED	PROPOSED	GAP
AUTO PARKING STALLS (18' X 9')			
ASSOCIATE PARKING SPACES	172	174	+2
SUPPORT SPACES	15	15	0
DSP MANAGER SPACES	32	32	0
VAN DRIVER PERSONAL SPACES	72	91	+19
TOTAL AUTO PARKING STALLS	291	312	+21
ACCESSIBLE PARKING STALLS			
ACCESSIBLE AUTO	7	8	+1
ACCESSIBLE VAN	2	2	0
TOTAL ACCESSIBLE PARKING STALLS	9	10	+1
VAN PARKING STALLS (27' X 11')			
STANDARD VAN PARKING SPACES	511	518	+7
VAN PERSONAL VEHICLE SPACES	144	144	0
VAN BUFFER SPACES	30	30	0
TOTAL VAN PARKING STALLS	685	692	+7
LOADING & STAGING AREA			
VAN LOADING SPACES	67	72	0
VAN STAGING SPACES	72	72	0
TRUCK YARD			
TRAILER / BOX TRUCK LOADING	15	15	0
TRAILER PARKING SPACES	13	10	-3

LEGENDS

ASSOCIATE TRAFFIC

FLEX TRAFFIC

TRUCK TRAFFIC

SITE DEVIATION TABLE

KEY NOTE	DEVATION FROM SKETCH/PROTOTYPE	DEVIATION	DESCRIPTION	REASON
A	PROTOTYPE	TRUCK YARD FENCE	NO SECURITY FENCE	VAN ACCESS DRIVE INTERSECTS DOCK ACCESS
B	PROTOTYPE	TRAILER PARKING	REDUCED TRAILER PARKING BY THREE STALLS	SITE GEOMETRY CONSTRAINS STALL LAYOUT

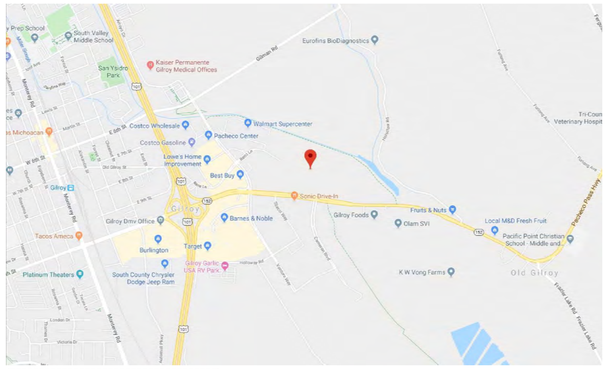

Figure 4. Conceptual Site Plan

Project Garlic
Gilroy, Santa Clara County, California

PANATTONI®

scheme: SSA SITE CONCEPT 13.7

Conceptual Site Plan

Camino Arroyo & Renz
Gilroy, CA

WARE MALCOMB

DAL20-0001-00
10.15.2020

SHEET
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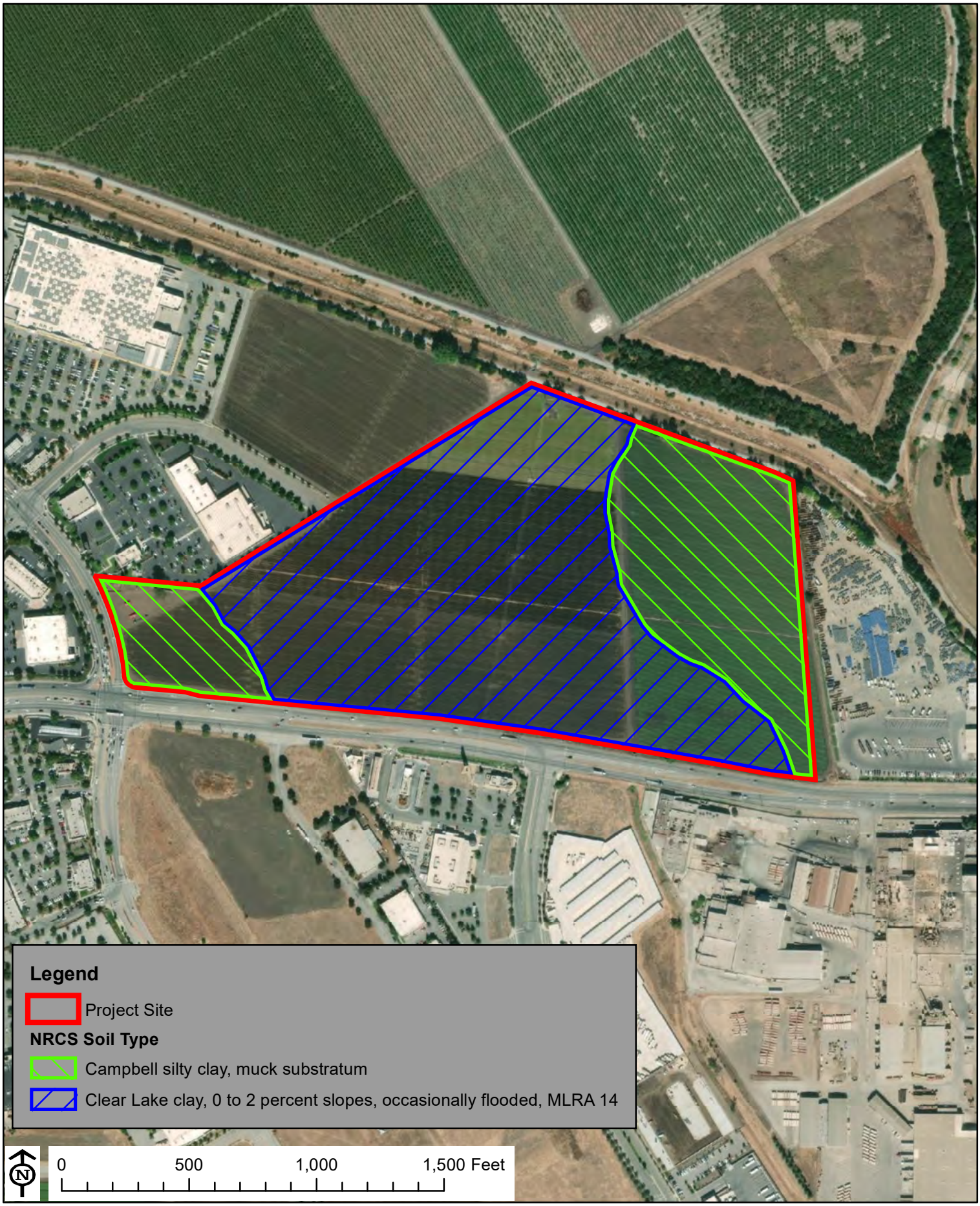
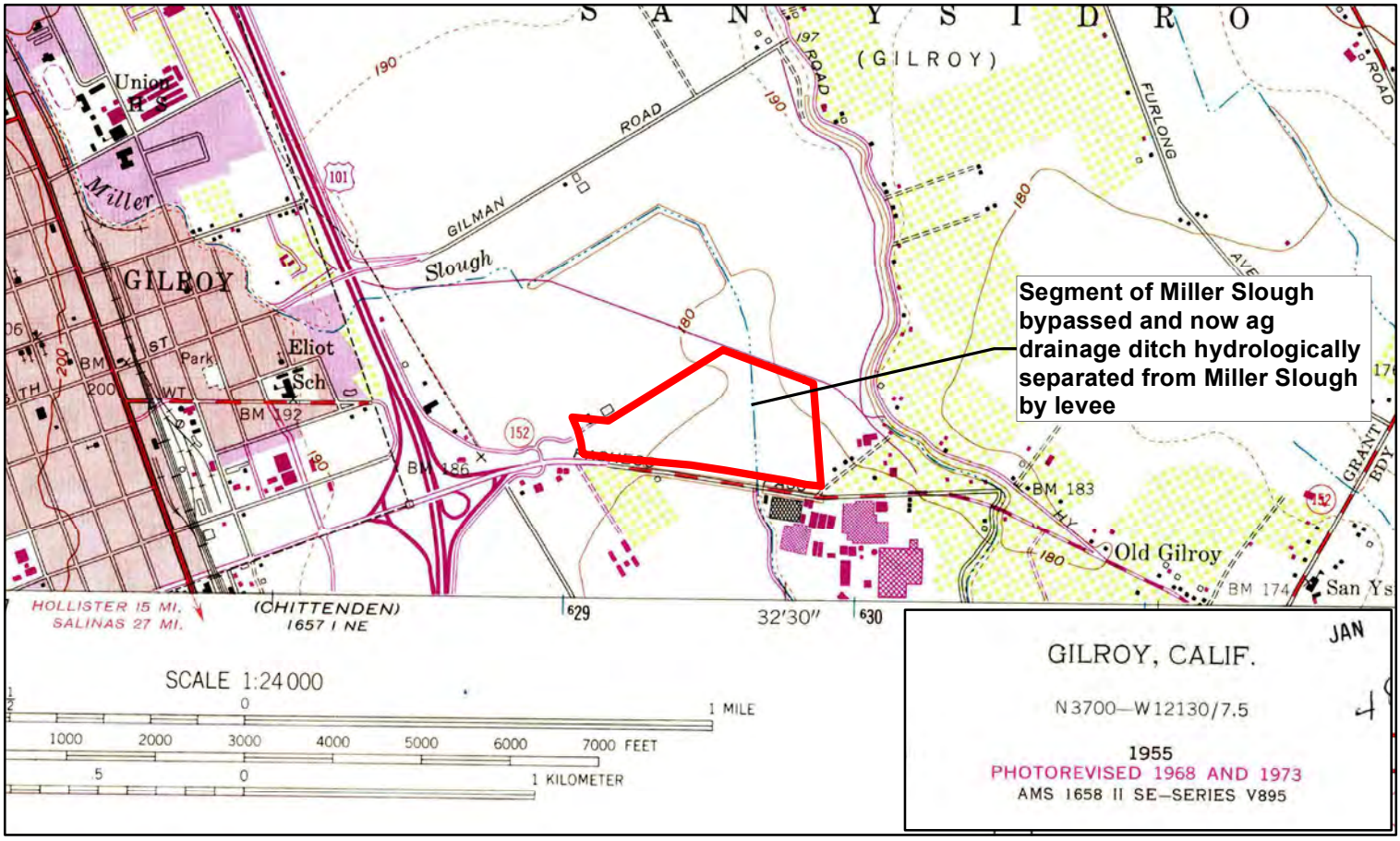


Figure 5. Soil Map of the Project Site
Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS



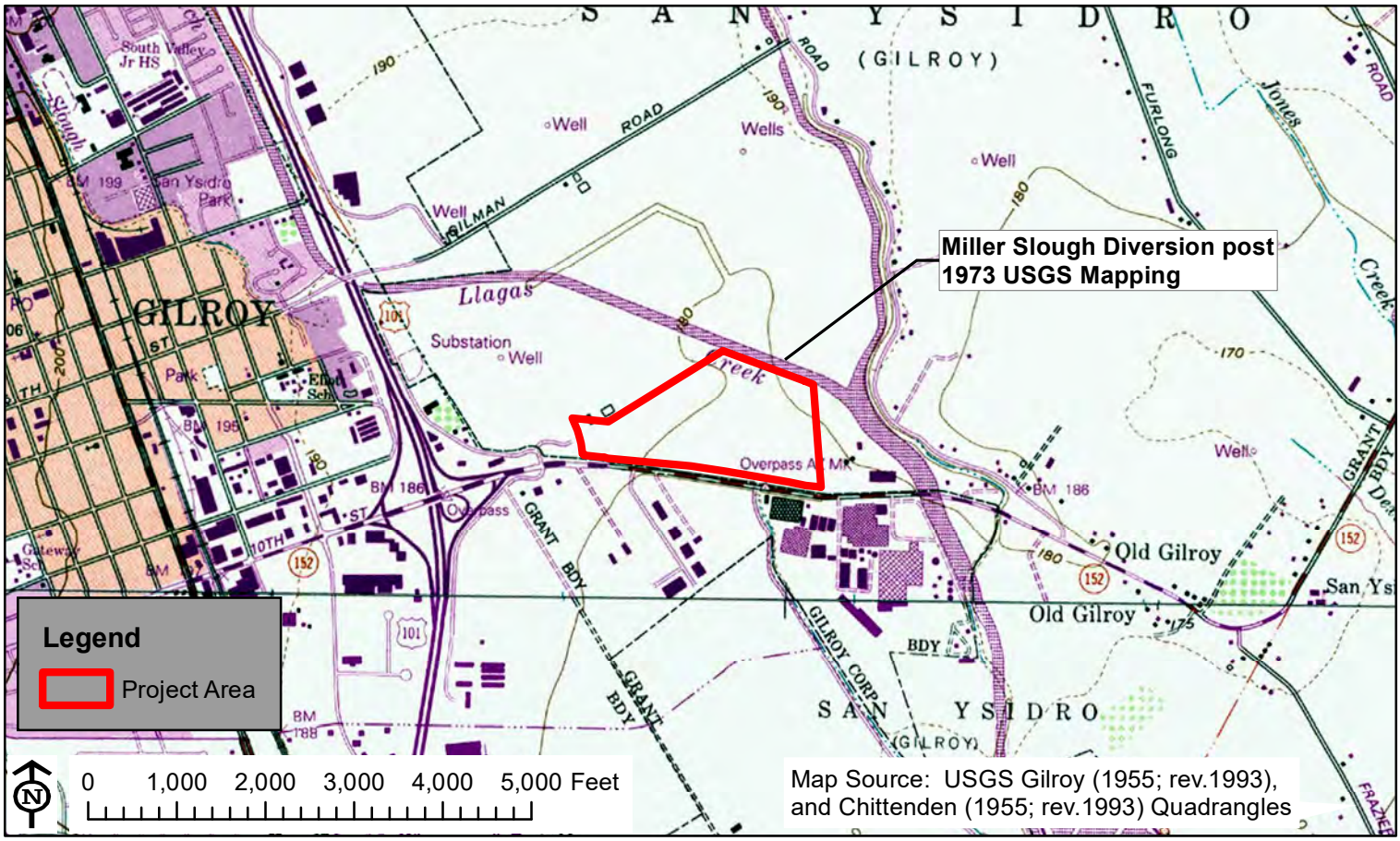


Figure 6. Historical Alignment of Miller Slough in the Project Area

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
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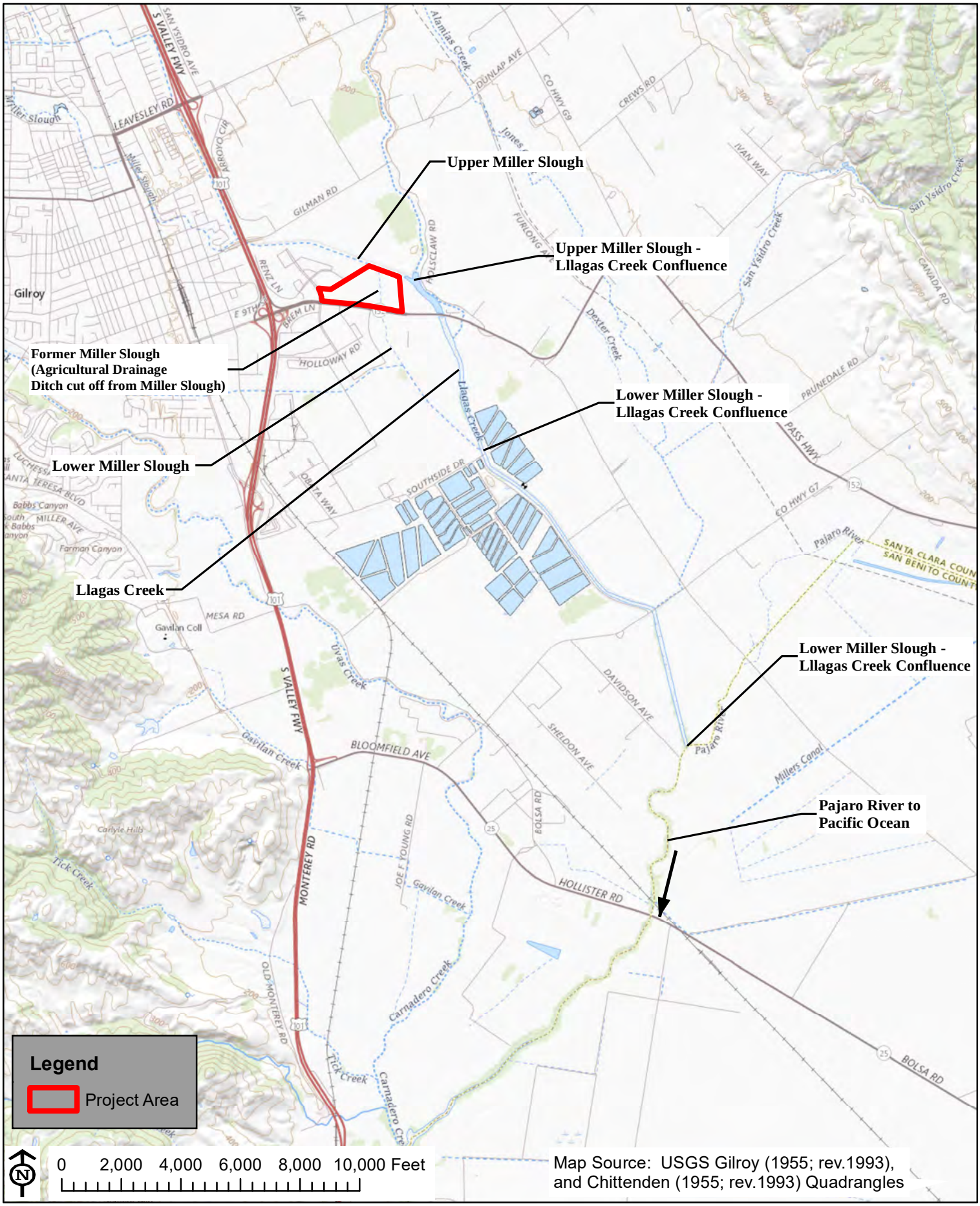

Figure 7. Current Location of Watercourses in the Project Area

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
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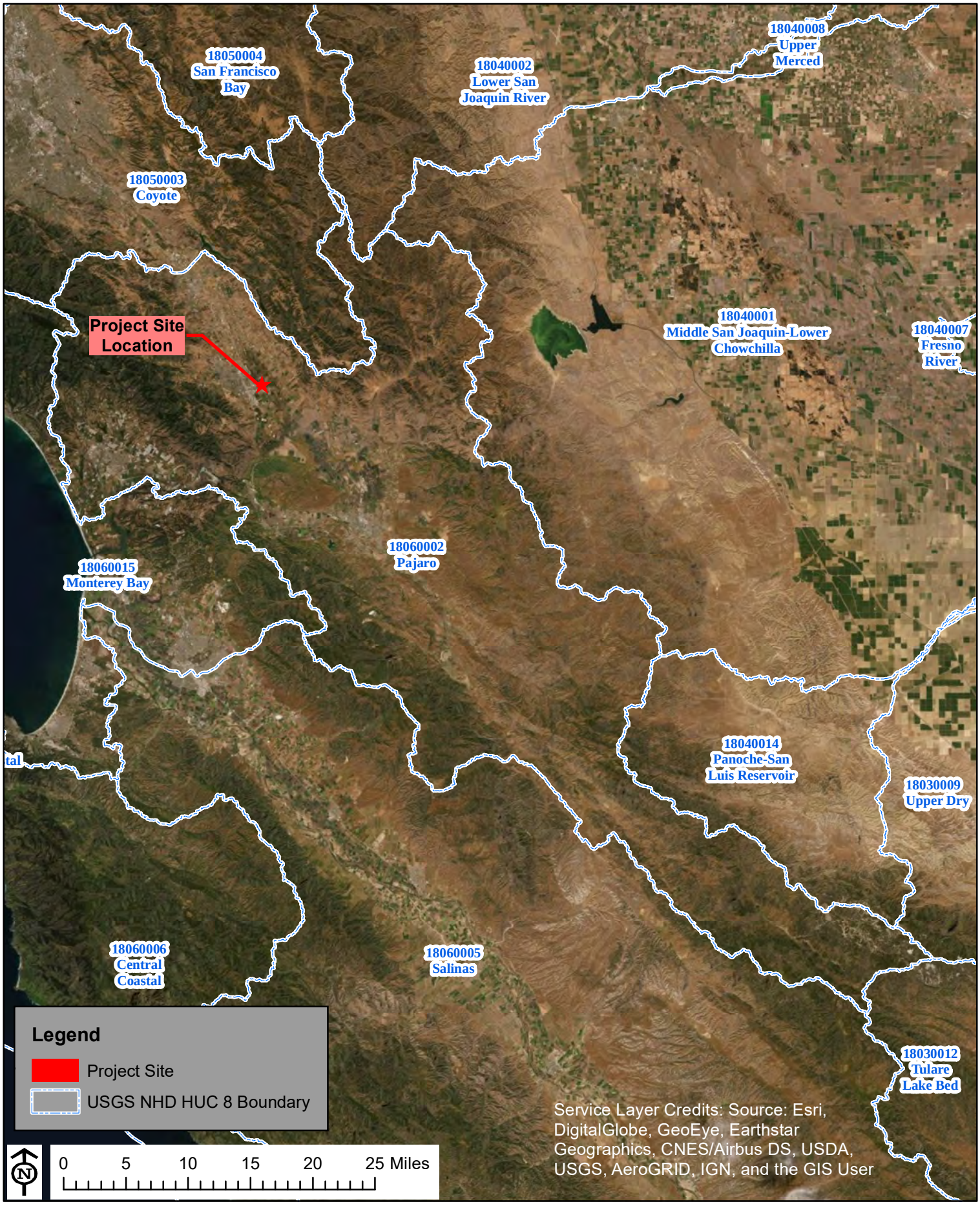

Figure 8. USGS HUC 8 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

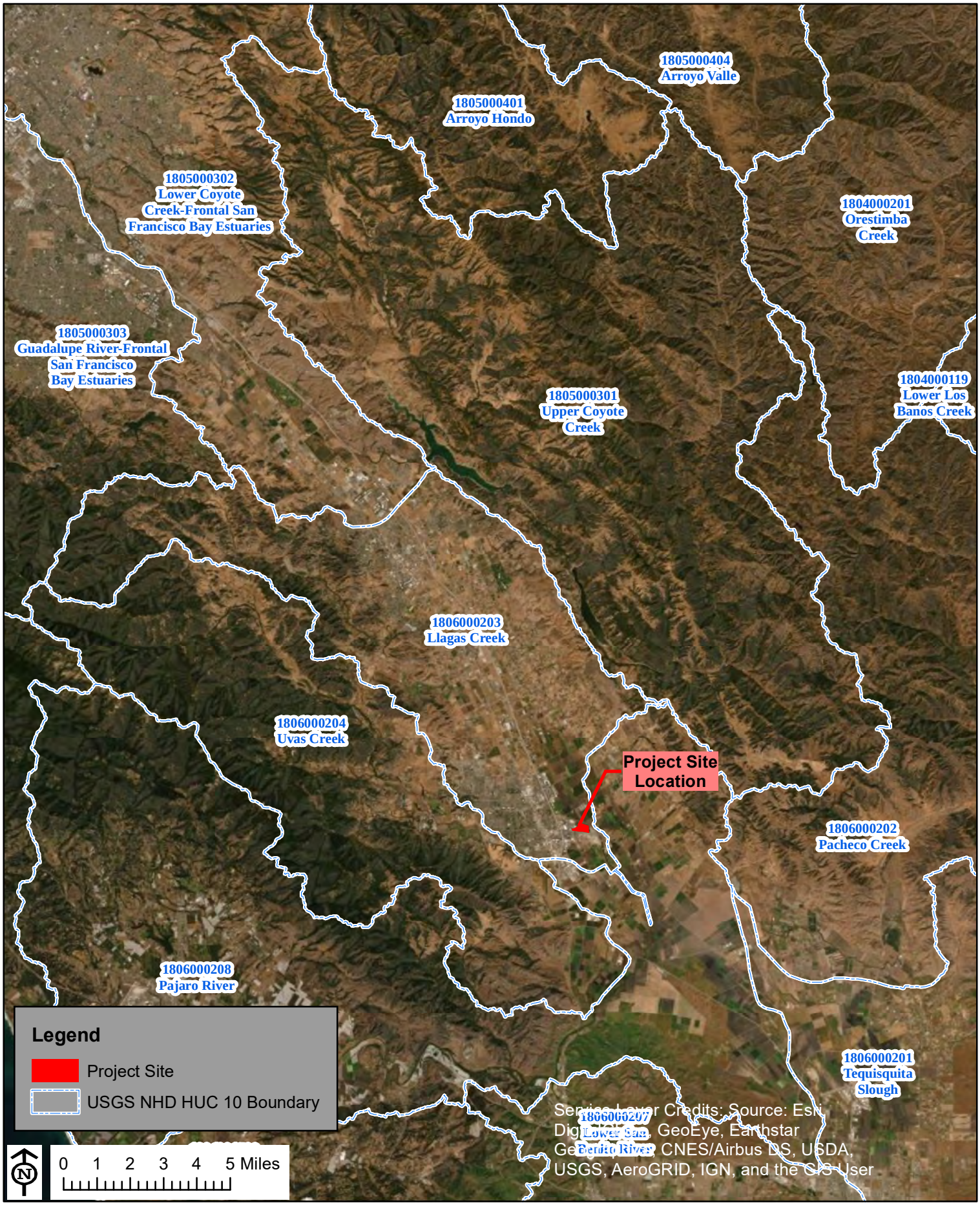

Figure 9. USGS HUC 10 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

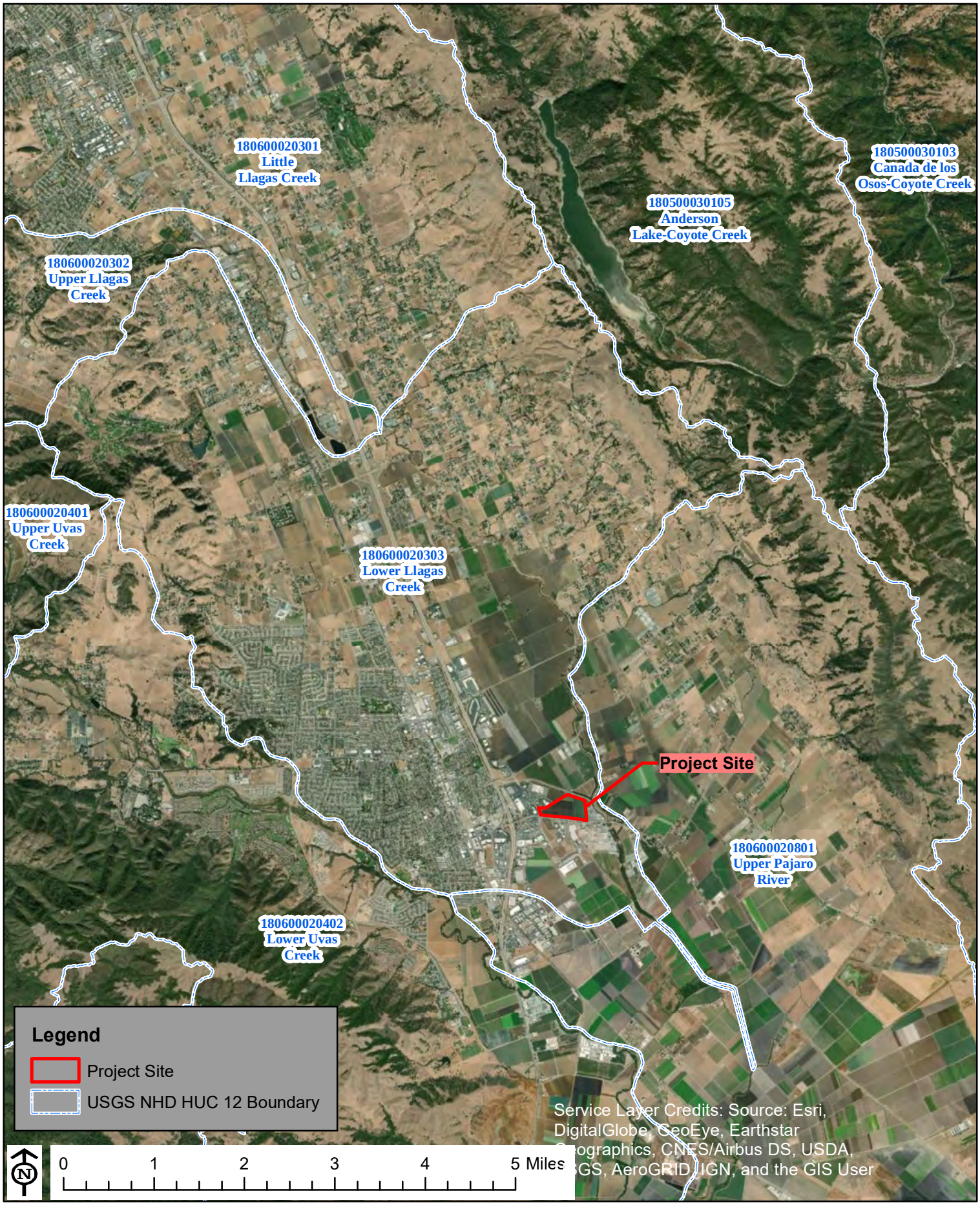

Figure 10. USGS HUC 12 Hydrologic Units

Project Garlic
Gilroy, Santa Clara County, California

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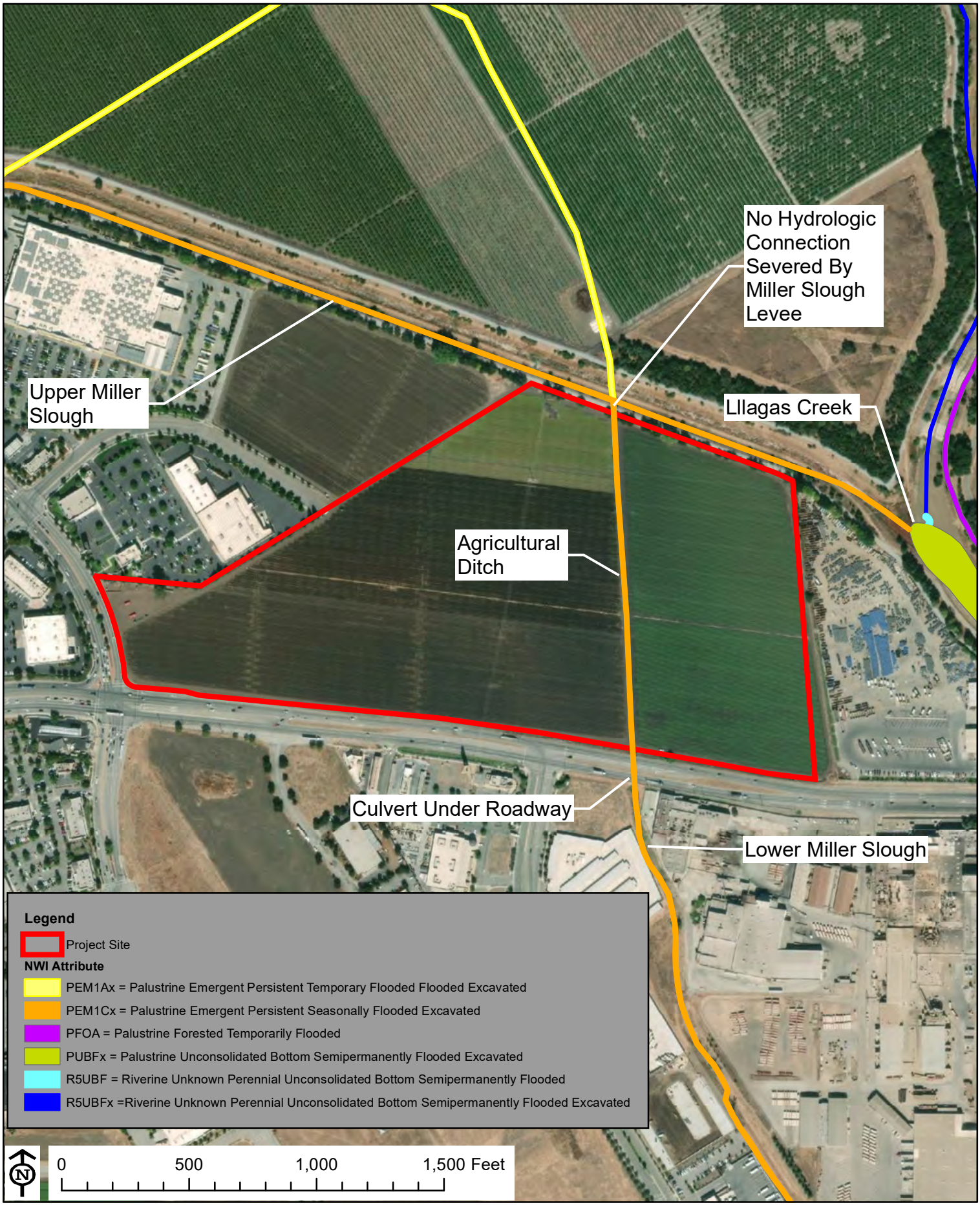

Figure 11. USFWS National Wetlands Inventory Mapping

Project Garlic
Gilroy, Santa Clara County, California

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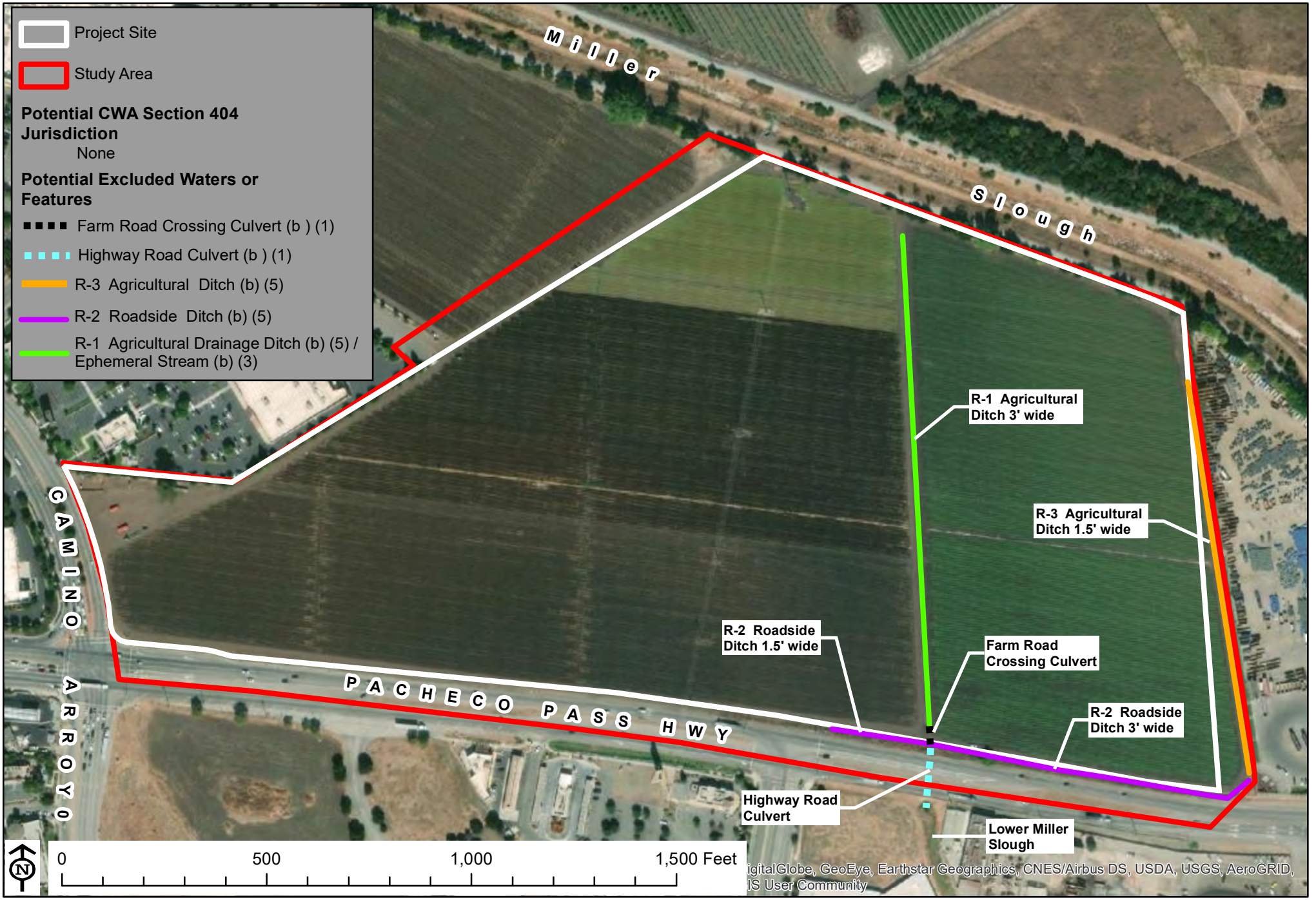

Figure 4. Potential Wetlands Found on the Project Site
Project Garlic
Gilroy, Santa Clara County, California

Huffman-Broadway Group, Inc.
ENVIRONMENTAL REGULATORY CONSULTANTS

ATTACHMENT 2.

TABLES

Table 1. Special Status Plants Known to Occur in the Vicinity of the Project Area, Santa Clara County, California

SCIENTIFIC NAME	STATUS[2] FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Anderson's manzanita (*Arctostaphylos andersonii*)	-/-/1B.2	Broadleaved upland forest, chaparral, North Coast coniferous forest, open sites, redwood forest. 180-800m.	Not present. Suitable habitat is not present at the site.
San Joaquin spearscale (*Atriplex joaquiniana*)	--/--/1B.2	Chenopod scrub, meadows, playas, valley and foothill grassland and vernal pools. Usually in seasonal alkali wetlands or alkali sink scrub with *Distichlis*, *Frankenia*, etc. 1-835m.	Not present. Suitable habitat is not present at the site.
Big-scale (California) balsamroot (*Balsamorhiza macrolepis var. macrolepis*)	--/--/1B.2	Chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentinite. 90-1555m.	Not present. Suitable habitat is not present at the site.
Chaparral harebell *(Campanula exigua)*	--/--/1B.2	Rocky sites, usually on serpentine in Chaparral. 90-1375 m.	Not present. Suitable habitat is not present at the site.
Pink creamsacs *(Castilleja rubicundula var. rubicundula)*	--/--/1B.2	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland. Found in openings in chaparral or grasslands on serpentine soils. 20-915 m.	Not present. Suitable habitat is not present at the site.
Hospital Canyon larkspur (*Delphinium californicum ssp. Interius)*	--/--1B.2	Found in cismontane woodland, chaparral and coastal scrub. Wet, boggy meadows and openings in chaparral and in canyons. 195-1095 m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS[2] FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Santa Clara Valley dudleya *(Dudleya abramsii ssp. setchellii)*	FE/--/1B.1	Valley and foothill grassland and cismontane woodland. Found on rocky serpentine outcrops and on rocks within grassland or woodland. 60-455m.	Not present. Suitable habitat is not present at the site.
Hoover's button-celery *(Eryngium aristulatum var. hooveri)*	--/--/1B.1	Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 3-45m.	Not present. Suitable habitat is not present at the site.
Fragrant fritillary *(Fritillaria liliacea)*	--/--/1B.1	Coastal scrub, valley and foothill grassland, coastal prairie, often on ultramafic soils. 3-410m.	Not present. Suitable habitat is not present at the site.
Loma Prieta hoita *(Hoita strobilina)*	--/--/1B.1	Found in mesic sites and in serpentine within chaparral, cismontane woodland, and riparian woodland.60-975m.	Not present. Suitable habitat is not present at the site.
Smooth lessingia *(Lessingia micradenia var. glabrata)*	-/-/1B.2	Found in serpentine and often on roadsides within chaparral and cismontane woodland.120-420m.	Not present. Suitable habitat is not present at the site.
Arcuate bush mallow (*Malacothamnus arcuatus*)	--/--/1B.2	Found in gravelly alluvium in chaparral. 80-355m.	Not present. Suitable habitat is not present at the site.
Hall's bush mallow (*Malacothamnus hallii*)	-/-/1B.2	Found in chaparral, sometimes in serpentine. 10-550m.	Not present. Suitable habitat is not present at the site.
Woodland woollythreads (*Monolopiagracilens*)	--/--/1B.2	Chaparral, valley and foothill grasslands (serpentine), cismontane woodland, broadleaved upland forests, North Coast coniferous forest. Found in grassy sites in openings in sandy to rocky soils. May have a weak affinity to serpentine. 100-1200m.	Not present. Suitable habitat is not present at the site.

SCIENTIFIC NAME	STATUS[2] FED/STATE/CNPS	HABITAT/RANGE	OCCURRENCE
Prostrate vernal pool navarretia (*Navarretia prostrata)*	--/--/1B	Found in mesic and alkaline sites within Coastal scrub, valley and foothill grassland with vernal pools. 15-700m.	Not present. Suitable habitat is not present at the site.
California alkali grass *(Puccinellia simplex)*	--/--/1B.2	Found in meadows and seeps, chenopod scrub, and vernal pools in foothill grasslands. Found in alkaline, vernally mesic sinks, flats, and lake margins. 1-915 M.	Not present. Suitable habitat is not present at the site.
Most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*)	--/--/1B.2	Found on serpentine outcrops and ridges and slopes within chaparral, valley and foothill grassland, and cismontane woodland. 95-1000m.	Not present. Suitable habitat is not present at the site.
Saline clover (*Trifolium depauperatum* var. *hydrophilum*)	--/--/1B.2	Found in mesic alkaline sites in marshes and swamps, valley and foothill grassland and vernal pools. 0-300m.	Not present. Suitable habitat is not present at the site.

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Gilroy 7.5 Minute Quadrangle Map and surrounding areas, information August 2020

2. Status Codes:

FE	Federal-listed Endangered
FT	Federal-listed Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
CE	California State-listed Endangered
CT	California State-listed Threatened

CR	California Rare
FP	California Fully Protected
CSC	California Species of Special Concern

California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.
California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.
California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.
California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.
California Rare Plant Rank 3: Plants about which more information is needed – a review list.
California Rare Plant Rank 4: Plants of limited distribution – a watch list.

CNPS Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Table 2. Special Status Animal Species that have been Reported in the Vicinity of the Project Area, Santa Clara County, California

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
INVERTEBRATES			
Crotch bumble bee (*Bombus crotchii*)	--/--	Found in coastal California east to the Sierra-Cascade Crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia* and *Eriogonum*.	Not present. Suitable habitat is not present at the site.
Bay checkerspot butterfly (*Euphydryas editha bayensis)*	FT/-	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. *Plantago erecta* is the primary host plant; *Orthocorpus densiflorus* and *O. purpurscens* are the secondary host plants.	Not present. Suitable habitat is not present on site.
FISH			
Steelhead – South-Central CA Coast ESU *Oncorhynchus mykiss)*	FT/--	Well-oxygenated streams with riffles; loose, silt-free gravel substrate. This ESU includes coastal basins from the Pajaro River south to, but not including, the Santa Maria River.	Not present. Suitable habitat is not present at the site. May occur in Llagas Creek, which will not be impacted by the project.
AMPHIBIANS			
California giant salamander (*Dicamptodon ensatus*)	--/CSC	Known from wet coastal forests near streams and seeps. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults are found in wet forests under rocks and logs near streams and lakes.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
California tiger salamander (*Ambystoma californiense*)	FT/CT,CSC	Found in annual grasslands and grassy understory of valley-foothill hardwood habitats in central and northern California. Needs underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water source for breeding.	Not present. Suitable habitat is not present at the site.
Santa Cruz black salamander *(Aneides niger)*	--/CSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz and Santa Clara Counties. Adults are found under rocks, talus, and damp woody debris.	Not present. Suitable habitat is not present at the site.
California red-legged frog (*Rana draytonii)*	FT/CSC	Mostly in lowlands and foothills in/near permanent sources of deep water but will disperse far during and after rain. Prefers shorelines with extensive vegetation.	Not present. Suitable habitat is not present at the site.
Foothill yellow-legged frog (*Rana boylii*)	--/CSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying.	Not present. Suitable habitat is not present at the site.
REPTILES			
Western pond turtle (*Emmys marmorata*)	--/CSC	Associated with permanent or nearly permanent water in a wide variety of habitats. Requires basking sites. Nests found up to 0.5 miles from water.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
Coast horned lizard (*Phrynosoma blainvillii*)	--/CSC	Found in a wide variety of habitats. Most common in lowlands along sandy washes with scattered low bushes. Uses open areas for sunning, bushes for cover, patches of loose soil for burial. Needs an abundant supply of ants and other insects.	Not present. Suitable habitat is not present at the site.
BIRDS			
Northern Harrier (*Circus cyaneus*) [nesting]	--/CSC	Coastal salt marsh and freshwater marsh; nests and forages in grasslands; nests on ground in shrubby vegetation, usually at marsh edge.	Not present. Suitable habitat is not present at the site.
Swainson's hawk (nesting) *(Buteo swainsoni)*	--/CT	Nests in trees and riparian stands; summer migrant to Central Valley. Suitable foraging areas include grasslands, pastures, alfalfa and other hay crops, and certain grain and row croplands.	Not present. Suitable nesting habitat is not present on site.
White-tailed kite (*Elanus caeruleus*) [nesting]	--/FP	Open grassland and agricultural areas throughout Central California.	Not present. Suitable habitat is not present at the site.
Sharp-shinned hawk (*Accipiter striatus*) [nesting]	--/WL	Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter.	Not present as a nesting species. Suitable nesting habitat is not present at the site. May forage at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
Cooper's hawk (*Accipiter cooperii*) [nesting]	--/WL	Nests primarily in deciduous riparian forests; forages in open woodlands.	Not present as a nesting species. Suitable nesting habitat is not present at the site. May forage at the site.
Golden eagle (*Aquila chrysaetos*) [nesting and wintering]	BCC/FP,WL	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.	Not present. Suitable habitat is not present at the site.
American peregrine falcon (*Falco peregrinus anatum*)	Delisted,BCC/Delisted, FP	Nests in woodland, forest and coastal habitats, on cliffs or banks, and usually near wetlands, lakes, rivers, sometimes on human-made structure. In non-breeding seasons found in riparian areas and coastal and inland wetlands.	Not present. Suitable habitat is not present at the site.
Merlin (*Falco columbarius*) [wintering]	--/WL	Breeds in Canada, winters in a variety of California habitats, including grasslands, savannahs, wetlands, etc.	Not present. Suitable wintering habitat is not present at the site.
Long-billed curlew (*Numenius americanus*) [nesting]	BCC/WL	Breeds in wet meadows in northeastern California. Winters on the coast and in the Central Valley in coastal estuaries, upland herbaceous areas and croplands.	Not present. Suitable nesting habitat is not present on site.
Burrowing owl (*Athene cunicularia*)	BCC/CSC	Found in open dry annual or perennial grasslands, deserts and scrublands characterized by low growing vegetation. This species is a subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Not present. No burrowing owls or evidence of occupation by burrowing owls was found on the site or in the vicinity during field surveys.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
Least Bell's vireo (Vireo belli pusillus)	FE/CE	Summer Resident of mainly Southern California in low riparian in the vicinity of water or in dry river bottoms below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, or mesquite.	Not present. Suitable habitat is not present at the site.
Bank Swallow *(Riparia riparia)* (nesting)	--/CT	A migrant found primarily in riparian and other lowland habitats in California west of the deserts. In summer, restricted to riparian areas with vertical cliffs and banks with fine-textured or sandy soil, into which it digs its nesting holes.	Not present. Suitable habitat is not present at the site.
Loggerhead shrike (*Lanius ludovicianus*)	BCC/CSC	Habitat includes open areas such as desert, grasslands and savannah. Nests in thickly foliaged trees or tall shrubs. Forages in open habitats, which contain trees, fence posts, utility poles, and other perches.	Not present. Suitable habitat is not present at the site. Species could occur in the area.
Yellow warbler (*Setophaga petechia*) [nesting]	BCC/CSC	Breeds in deciduous riparian woodlands, widespread during fall mitigation.	Not present. Suitable nesting habitat is not present at the site. May occur as a fall migrant along Upper Miller Slough.
Grasshopper Sparrow (*Ammodramus savannarum*)	--/CSC	Found in dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
Tri-colored blackbird (*Agelaius tricolor*) [nesting colony]	BCC/CCE,CSC	Breeds near freshwater, usually in tall emergent vegetation. Requires open water with protected nesting substrate. Colonies prefer heavy growth of cattails and tules. Uses grasslands and agricultural lands for foraging.	Not present. Suitable habitat for a nesting colony is not present at the site or in the general vicinity.
MAMMALS			
Townsend's big-eared bat *(Corynorhinus townsendii)*	--/CCT,CSC	Found in desert scrub and coniferous forests. Roost in caves or abandoned mines and occasionally are found to roost in buildings.	Not present. Suitable habitat is not present at the site.
Pallid bat *(Antrozous pallidus)*	--/CSC	Found in deserts, grasslands, shrub lands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts in rocky areas primarily in oak woodland and ponderosa pine habitats; forages in open areas.	Not present. Suitable habitat is not present at the site.
Hoary bat (*Lasuirus cinereus*)	--/--	Prefers open habitats with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees.	Not present. Suitable habitat is not present at the site.
San Joaquin kit fox *(Vulpes macrotis mutica*)	FE/CT	Found in annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing and a suitable prey base.	Not present. Suitable habitat is not present at the site.

SPECIES	STATUS FED/STATE	HABITAT	OCCURRENCE ON THE PROJECT SITE
American badger (*Taxidea taxus*)	--/CSC	Drier open stages of most shrub, forest, and herbaceous habitats; needs sufficient food, friable soils and open, uncultivated ground.	Not present. Suitable habitat is not present at the site.

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Gilroy 7.5-Minute Quadrangle Map and surrounding areas, information dated August 2020

2. Status Codes:

FE Federal-listed Endangered
FT Federal-listed Threatened
FPE Federally Proposed Endangered
FPT Federally Proposed Threatened
FC Federal Candidate
BCC USFWS Bird Species of Conservation Concern

CE California State-listed Endangered
CCE Candidate for CA State-listed Endangered
CT California State-listed Threatened
CR California Rare
FP California Fully Protected
CSC CDFW Species of Special Concern
WL CDFW Watch List Species

E M C

Planning for Success.

February 23, 2021

Kraig Tambornini, Senior Planner
City of Gilroy
Community Development Department, Planning Division
7351 Rosanna Street
Gilroy, CA 95020

Re: Project Garlic – Peer Review of Biological Resource Documents

Dear Kraig,

This letter documents a peer review of reports prepared to address potential biological and aquatic (wetland) resources occurring at or within the vicinity of the proposed Project Garlic site in the City of Gilroy, in Santa Clara County, California:

- *Biological Resources Report, Project Garlic, Gilroy, California,* Huffman-Broadway Group, Inc. 2020;
- *Aquatic Resources Delineation Report, Project Garlic, Gilroy, California,* Huffman-Broadway Group, Inc. 2020

The purpose of the peer review is to determine if the reports provided were conducted according to professional standards, comprehensively address biological and aquatic resources with the potential to occur on or in the vicinity of the project site, and are adequate for inclusion in a legally-defensible environmental document.

The peer review included a Project Gilroy site visit by EMC Planning Group biologist Patrick Furtado on February 9, 2021.

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Biological Resources Report Summary

1. The *Biological Resources Report* was prepared by the Huffman-Broadway Group (HBG) in 2020 and is based on field visits in July and October of 2020.

2. The *Biological Resources Report* contains a comprehensive description of the habitat conditions on the project site and in the surrounding area and includes a list of the habitat types and plant and animal species observed during field visits.

3. The *Biological Resources Report* lists all sensitive biotic resources with potential to occur on the project site including the distribution and known occurrences of special-status species and sensitive habitats in the project area in the California Natural Diversity Database.

4. The field visits by HBG biologists did not find suitable habitat on the project site for any special-status plant or animal species. However, ground squirrel burrows that could provide habitat for burrowing owl (*Athene cunicularia*) were observed by HBG immediately adjacent to the project site along the Miller Slough levee.

5. The *Biological Resources Report* fully reviews the project's requirements under the Santa Clara Valley Habitat Plan including the required 35-foot development setback from the Upper Miller Slough riparian corridor.

6. The *Biological Resources Report* includes a comprehensive discussion of potential impacts (impact analysis) to special-status species and sensitive habitats and provides recommendations for project avoidance and minimization.

Aquatic Resources Delineation Report Summary

1. The *Aquatic Resources Delineation Report* was also prepared by HBG in 2020 and is based on field visits in July of 2020.

2. The *Aquatic Resources Delineation Report* contains all components of a complete wetlands delineation report as required by the U.S. Army Corps of Engineers (USACE) including methodology, maps, field data sheets, and a description of results and conclusions.

3. The field visit by HBG found the aquatic resources on the site to consist of irrigation ditches that are likely to be excluded from jurisdiction by the Navigable Waters Protection Rule.

Issue Areas

Biological Resources Report

HBG biologists concluded that the only special-status species with a potential for occurrence at the site or in the immediate vicinity are burrowing owl and tricolored blackbird (*Aegelaius tricolor*). HBG biologists conducted surveys for burrowing owls and suitable burrowing owl habitat on the project site and in the vicinity in July and October 2020 and found that burrowing owls do not occur on the project site. However, ground squirrel burrows that could provide habitat for burrowing owl were observed immediately adjacent to the project site along the Miller Slough levee. HBG conducted an assessment for suitable habitat to support a tricolored blackbird nesting colony, and no suitable nesting habitat for the species was found on the site or in the vicinity. HBG biologists also found that the site provides no habitat that could support special-status species of plants.

Based on the site visit conducted on February 9, 2021 by EMC Planning Group biologist Patrick Furtado and a review of all relevant documents, we agree with the conclusion that suitable habitat for special-status plant and animal species does not occur on the site. However, due to the nearby presence of ground squirrel burrows along the Miller Slough levee, the following pre-construction surveys for burrowing owl will be included in the initial study, as follows:

Pre-construction Burrowing Owl Surveys: Prior to issuance of a grading permit, to avoid/minimize impacts to burrowing owls potentially occurring within the project site, the applicant shall retain a biologist qualified in ornithology to conduct surveys for burrowing owl. The approved biologist shall conduct a two-visit (i.e., morning and evening) presence/absence survey at areas of suitable habitat on and adjacent to the project site boundary no less than 14 days prior to the start of construction or ground disturbance activities. Surveys shall be conducted according to the methods for take avoidance described in the Burrowing Owl Survey Protocol and Mitigation Guidelines (California Burrowing Owl Consortium 1993) and the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If no burrowing owls are found, a letter report confirming

absence will be prepared and submitted to the City of Gilroy Planning Department and no further mitigation is required. If surveys locate occupied burrows in or near construction areas, consultation with the California Department of Fish and Wildlife (CDFW) shall occur to interpret survey results and develop a project-specific avoidance and minimization approach.

Aquatic Resources Delineation Report

The *Aquatic Resources Delineation Report* included an analysis of the regulatory background regarding possible wetlands on the project site. The HBG investigation also provided U.S. Fish and Wildlife Service National Wetlands Inventory mapping of the site with an aquatic feature running north to south through the project site consistent with the former alignment of Miller Slough.

HBG conducted a wetland delineation field study in July 2020 to determine the presence of wetland vegetation, hydric soils, and hydrology at the project site. They concluded that the agricultural drainage ditches were the only areas within the project site with the potential to support wetlands or waters of the United States under jurisdiction of the USACE or the Central Coast Regional Water Quality Control Board (CCRWQCB) under the Porter-Cologne Act. Although these ditches showed evidence of hydrologic flow, they did not contain evidence of hydrophytic vegetation or hydric soils.

HBG concluded that these drainage ditches are ephemeral, originate on the project site, and are cut off from Miller Slough by the construction of the levee along the project site's northern boundary. They are therefore likely excluded from jurisdiction under the USACE's *Navigable Waters Protection Rule.* However, HBG also concluded that these drainage ditches would likely be subject to the Porter-Cologne Act and the jurisdiction of the CCRWQCB and would also require a Lake and Streambed Alteration Agreement from CDFW.

Based on the site visit conducted on February 9, 2021 by EMC Planning Group biologist Patrick Furtado and a review of all relevant documents, we agree with the conclusion that the Project Gilroy site drainage ditches are likely excluded from jurisdiction by the USACE's *Navigable Waters Protection Rule* but likely subject to jurisdiction by CCRWQCB and CDFW.

Conclusions

The biological and aquatic resource documents were prepared consistent with professional standards. All necessary components of these analyses were present including complete discussions of the regulatory setting, methodology, mapping, baseline environmental conditions, results of field surveys, and impact analysis. The reports provide comprehensive and accurate review and analysis of the biological and aquatic resources found at the project site and provide avoidance and minimization measures to minimize impacts to sensitive species and habitat. It is our professional opinion that no additional analysis of biological resources is needed in order to prepare an adequate CEQA document.

I hope this peer review meets your needs at this time. If you have any questions, please contact me at furtado@emcplanning.com.

Sincerely,

Janet Walther

Janet Walther, MS
Principal Biologist

Patrick Furtado

Patrick Furtado, MS
Associate Biologist

References

California Burrowing Owl Consortium. 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines.*

California Department of Fish and Wildlife (CDFW). 2012. *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency.