PLAN AREA

(SUBTITLE PAGE)

5. DESCRIPTION OF THE PLAN AREA

§ 354.8. Each Plan shall include a description of the geographic areas covered, including the following information:

(a) One or more maps of the basin that depict the following, as applicable:

(1) The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.

(2) Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.

(3) Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.

(4) Existing land use designations and the identification of water use sector and water source type.

(5) The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.

(b) A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.

This section presents a description of the Plan Area and a summary of the relevant jurisdictional boundaries and other key land use features potentially relevant to the sustainable management of groundwater in the Livermore Valley Groundwater Basin (Basin). This section also describes the water monitoring programs, water management programs, and general plans relevant to the Basin and their influence on the development and execution of this Alternative Groundwater Sustainability Plan (Alt GSP).

5.1. Summary of Jurisdicational Areas and Other Features

5.1.1. Area Covered by the Plan

☑ **23 CCR § 354.8(a)(1)**
☑ **23 CCR § 354.8(b)**

The Plan Area (**Figure 5-1**) is the entire Basin, designated in the California Department of Water Resources (DWR) Bulletin 118 as Basin No. 2-10 and encompassing approximately 69,600 acres (109 square miles) in Alameda and Contra Costa counties. The area is referred to as the “Plan Area,” or simply “Basin” in this document and has not changed since submittal of the 2016 Alt GSP. As shown in **Table 5-A,** the Basin includes three Management Areas, which is further discussed in **Section 10**. Adjacent groundwater basins are the San Ramon Valley (Basin No. 2-07), a very-low priority basin that extends to the northwest in Contra Costa County, and the Sunol Valley (No. 2-11), which is a very-low priority basin to the southwest of the Basin.

Table 5-A. Groundwater Basin Management Area

Management Area	Size (acres)
Main Basin Management Area	19,800
Fringe Management Area	22,041
Upland Management Area	27,759
Total	**69,600**

5.1.2. Adjudicated Areas, Other Agencies, and Alternative Areas

☑ 23 CCR § 354.8(a)(2)
☑ 23 CCR § 354.8(b)

The Basin is not adjudicated and does not contain any areas that are not covered by this Alt GSP.

While the Alameda County portion of the Basin lies wholly within the Alameda County Flood Control and Water Conservation District, Zone 7's (Zone 7 Water Agency or Zone 7) Service Area, the northwestern portion of the Basin extends beyond the Zone 7 Service Area into Contra Costa County. In 2016, Zone 7 entered into a Memorandum of Understanding (MOU) with East Bay Municipal Utilities District (EBMUD), City of San Ramon, and Dublin San Ramon Services District (DSRSD) under which Zone 7 will serve as the Groundwater Sustainability Agency (GSA) for the Contra Costa portion of the Basin. Contra Costa County retains its authority as the well permitting agency for that area. Likewise, EBMUD retains its rights to continue to provide water service and the City of San Ramon remains as the primary land use agency.

Zone 7 supplies the majority of the water for the Tri-Valley Area (Valley, i.e., Dublin, Pleasanton, and Livermore); primarily through its four Retailers, including DSRSD, City of Pleasanton, City of Livermore, and California Water Company (Cal Water) (see **Section 3.2** and **Figure 5-2**). Three of these Retailers (DSRSD, City of Pleasanton, and City of Livermore) are public water supply agencies. Cal Water is a private water company providing water supply to portions of the City of Livermore. In addition to the treated water supplied by Zone 7, two of the Retailers (Pleasanton and Cal Water) have their own municipal groundwater supply wells. DSRSD and Livermore also provide recycled water for landscape irrigation to supplement treated water supply. The San Francisco Public Utilities Commission (SFPUC) supplies groundwater to the Castlewood Development in the western portion of Pleasanton. The Crane Ridge Mutual Water Company, a small private water purveyor, distributes potable water supplied by Cal Water to various domestic users in South Livermore. Alameda County Fairgrounds, in Pleasanton, is a small water system using groundwater.

5.1.3. Jurisdictional Boundaries

☑ 23 CCR § 354.8(a)(2)
☑ 23 CCR § 354.8(b)

The Basin is located mostly in Alameda County, with a northern extension into Contra Costa County. Cities overlying portions of the Basin include San Ramon, Dublin, Pleasanton, and Livermore (**Figure 5-3**). There are two Park Districts in the Valley: (1) the East Bay Regional Park District (EBRPD); and (2) the Livermore Area Recreation and Park District (LARPD).

According to the information made available by DWR's SGMA Data Viewer, there are no identified California Native American tribal lands within the Basin.

DWR presents information regarding U.S. Census Blocks, Tracts and Places that are defined as disadvantaged communities (DAC) or severely disadvantaged communities (SDAC) based on the median household income (MHI) of an area compared to the statewide MHI.[6] DAC communities are those with a MHI that is no more than 40% of the statewide MHI, and SDAC communities are those with a MHI that is no more than 20% the statewide MHI (California Code, Public Resources Code § 75005(g)). As shown on **Figure 5-3**, there are three block groups identified as DACs within the Basin. There are currently 2,598 disadvantaged households in the City of Livermore, with a total population of 6,678.

Based on application of DWR's SGMA Data Viewer, within the Plan Area there are several areas of California Department of Fish and Wildlife (CDFW) owned and operated lands and conservation easements, Nonprofit California Protected Area (CPA) holdings, and California Conservation Easements (CCE).

Other jurisdictions in the Basin include Camp Parks Military Reservation/Reserve Forces Training Area, located on the northern boundary of the Basin and operated by the Department of Defense/ United States Army. The facility is a semi-active mobilization and training center for army reserve personnel to be used in case of war or natural disaster. The site also includes a federal correctional institution. On the southern side of the Basin, the Lake Del Valle State Recreation Area and Shadow Cliffs Regional Recreation Area are operated by EBRPD. No tribal land is known to be located in the Basin.

5.1.4. Existing Land Use and Water Use Sector and Source

☑ 23 CCR § 354.8(a)(4)
☑ 23 CCR § 354.8(b)

5.1.4.1. Land Use Designations

Zone 7 monitors land use changes in the Valley as part of its long-range flood and water supply planning, which includes its Groundwater Management Program. The purpose of the Land Use Monitoring Program

[6] SGMA Data Viewer: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer

is to map and quantify Basin land use for areal recharge calculations (e.g., rainfall and applied water recharge) and to estimate unmetered agricultural groundwater pumping demands, and for consideration in water quality sustainability planning.

The Land Use Monitoring Program identifies significant changes in land use over time with an emphasis on changes in pervious areas and the volume and quality of irrigation water that could impact the volume or quality of water recharging the Basin. Land use data are derived from aerial photography (most recent available from May 2020), well permit applications, field observations, and City and County planning documents. New development plans and associated California Environmental Quality Act (CEQA) documentation are reviewed by Zone 7 staff to evaluate potential impacts to groundwater supply and quality.

For the purpose of Zone 7's Groundwater Management Program, primary land uses are mapped as polygons having one of the following designations:

- Residential (rural)
- Residential (low density)
- Residential (medium density)
- Residential (high density)
- Commercial and Business
- Public
- Public (Irrigated Park)
- Agriculture (vineyard)
- Agriculture (non-vineyard)
- Mining Area – Pit
- Water Body (including Chain of Lakes)
- Golf Course
- Open Space

Each individual land use polygon is also assigned one of the following sources of irrigation water based on Zone 7's understanding of the primary irrigation water source used for that particular area:

- Delivered (municipal) water
- Groundwater (non-municipal supply wells, e.g., private wells)
- Recycled water
- None

Land use categories are then assigned spatially to the groundwater model cells (500 feet by 500 feet), which are also the spatial units used for the areal recharge calculations (see **Appendix D**).

The 2020 Water Year (WY) land use areas are shown on **Figure 5-4**. For the 2020 WY, land use remained relatively unchanged from 2015 WY presented in the 2016 Alt GSP (*Zone 7, 2016e*), and in fact still remains quite similar to the land use of the mid-2000s.

Implementation of existing land use plans by various jurisdictions has important ramifications for water supply sustainability. Urban, rural, and agricultural growth tends to increase water demand, but land use policies and programs can support sustainable water supply planning including water conservation, conjunctive use of surface water and groundwater supplies, water recycling, and stormwater management.

Land use planning and water resource management are regularly and closely coordinated across the Basin. This ensures that implementation of land use plans, which can change water demands or affect sustainable groundwater management, is occurring in a context of open collaboration among land use planners and water agencies. Moreover, development of various water management plans, including this update to the Alt GSP, also has occurred through open collaboration. Such dynamic and interactive planning has been fundamental to sustainable groundwater management in the Basin.

As documented in **Section 5.3** all the cities overlying the Basin have developed General Plans that address water supply issues (as appropriate to their respective responsibilities) and all of the cities have established urban growth boundaries or urban limit lines. Alameda County's East County Area Plan provides numerous policies that indicate commitment to work with Zone 7, local water retailers, and cities toward comprehensive water planning.

5.1.4.2. Water Use Sectors and Sources

Each individual land use polygon on **Figure 5-4** is also assigned one of the following water uses:

- Delivered (municipal surface water/groundwater mix) Water
- Groundwater (non-municipal supply wells, e.g., private wells)
- Recycled Water
- None

These water-use sectors represent the source of irrigation water based on Zone 7's understanding of the primary irrigation water source used for that particular area. The "Delivered Water" areas are supplied by a mixture of imported surface water (see **Section 7.7.6**) and pumped groundwater from municipal wells (**Figure 5-5** and **Figure 5-6**). The proportion of these two sources at most locations will vary significantly, both spatially and temporally, and depends on a variety of factors including the availability of imported water supplies and the proximity to an existing municipal well. The areas designated as "Groundwater" are outside the municipal delivery system and rely on private domestic and/or irrigation wells. The "Recycled Water" areas are supplied by delivered water for drinking water but use recycled water for irrigation.

Groundwater in the Basin is used for agricultural, municipal, industrial, domestic and undifferentiated supply purposes. As illustrated in **Figure 5-5**, supply wells are distributed throughout the Basin with the greatest densities mostly in the central and southern portions of the Basin (i.e., Main Basin Management Area [Main Basin]). The Main Basin also is the locale of major municipal wells.

Currently the most pumping is for municipal supply purposes. Municipal pumpers include City of Pleasanton, Cal Water, the SFPUC and Alameda County Fairgrounds; DSRSD receives its quota of pumped groundwater through Zone 7 (see **Figure 5-2**). In 1992, Zone 7 Water Agency calculated the natural sustainable yield for the Basin at 13,400 acre-feet (AF) and collaborated with the Retailers to allocate the yield. As a result, each retailer is limited to an annual independent Groundwater Pumping Quota (GPQ), which is generally based on average historical uses and is pro-rated based on the agreed upon natural sustainable yield. Together, the Retailers are permitted to pump a total average of 7,214 AF annually per calendar year without paying recharge fees to Zone 7. Averages are maintained with a process of carry-overs (limited to 20% of the GPQ) and recharge fees for all groundwater pumping exceeding the GPQ and carry-over credit.

Zone 7 regularly monitors groundwater pumping for all large capacity wells; records of other metered pumping wells are obtained when available. Pumping volumes from significant wells without meters are estimated. Groundwater use in 2020 by pumpers other than Zone 7 is listed in **Table 5-B.** The listed average amounts for the municipal pumpers represent the respective GPQ; the remaining averages are estimated.

Table 5-B: Groundwater Pumping by Others

PUMPING BY OTHERS	2020 WY (AF)	AVERAGE (AFY)
Pleasanton	3,110	3,500
Cal Water	1,063	3,069
DSRSD†	645	645
SFPUC	322	450
Fairgrounds	321	310
Domestic Wells**	108	200
Golf Courses**	247	227
Agricultural Pumping**	112	400
TOTAL PUMPING	5,928	8,802

*Average based on annual Groundwater Production Quota
** Estimated
† Pumped by Zone 7 for DSRSD

Zone 7 also pumps groundwater for municipal purposes, accounting for salt management, demand peaks, and any shortage or interruption in its surface water supply or treatment. This is not a portion of the natural sustainable yield, but represents water that had been stored in the Basin as part of the Zone 7 artificial recharge program. Zone 7 pumping for 2020 WY is summarized in **Table 5-C.**

Table 5-C: Zone 7 Groundwater Pumping

ZONE 7 PUMPING BY WELLFIELD	2020 WY (AF)
Amador Subarea	8,485
*Mocho wellfield**	5,477
COL wellfield	3,261
Stoneridge Well	2,195
Bernal Subarea	813
Hopyard wellfield	813
TOTAL PUMPING	11,746

* Includes 645 AF of groundwater pumped for DSRSD and Pump to waste

A map showing the clusters of municipal wells in the Basin is provided on **Figure 5-6**. The map includes Zone 7 wells and production wells operated by SFPUC, the City of Pleasanton, and Cal Water.

Figure 5-7 illustrates the major uses of groundwater (agricultural, municipal, Zone 7) from 1974 through 2020. As indicated, agricultural uses accounted for a major portion of groundwater use in the late 1970s, but dwindled to a small amount by 1990, mostly reflecting the urbanization in the Basin. Urbanization also caused an increasing trend in municipal pumping until 1991. Thereafter, with the 1992 adoption of the GPQ process, groundwater use by municipal pumpers has remained relatively steady.

Zone 7 municipal pumping has been quite variable since 1974 reflecting Zone 7's broad management role in the Basin, including artificial recharge and management of groundwater storage, salt management and compensation for demand peaks, shortages or interruption in surface water deliveries. As previously mentioned, Zone 7 pumping is not part of the natural sustainable yield but represents water that had been stored through the Zone 7 artificial recharge program. The portion of total pumping represented by Zone is enumerated for each year; as indicated, Zone 7 pumping has ranged from zero (for example, in the wet years of the early 1980s) to more than 50 percent of total pumping. Significant drought years are highlighted, for example from 1987 to 1992 and from 2007 to 2009; the increasing pumping by Zone 7 from year to year in these droughts illustrates how Zone 7 used its stored groundwater to maintain supply. In the latest drought, Zone 7 pumping ranged from 56 percent (2012) to 22 percent (2015); urban demands declined overall in response to voluntary and then mandatory water use restrictions.

Some mining activities in the central portion of the Basin have caused groundwater losses due to export of moist gravels and groundwater that has been extracted from the quarry pits. Historically, a portion of the extracted groundwater was discharged into a stream without subsequent recharge; however, Zone 7 has worked with the mining companies to ensure that the pit-dewatered groundwater is now diverted to other existing ponds. The volume of the lost groundwater varied over time depending on the stage of mining in any given pit and the demand for aggregate resources (**Section 9.3.6.2**).

Groundwater pumping in the Fringe and Upland Management Areas (Fringe and Upland Areas) is minor relative to the Main Basin Management Area (Main Basin). Groundwater use in the Fringe Area is primarily for agricultural, domestic, and golf course irrigation. In the Upland Area groundwater is primarily used for domestic supply with minor pumping for agricultural uses. Estimated groundwater pumping in the Fringe and Upland Areas for an average WY is summarized in **Table 5-D**.

Table 5-D: Estimated Groundwater Pumping in the Fringe and Upland Management Areas in an Average WY

PUMPING BY OTHERS	FRINGE (AF)	UPLAND (AF)
Domestic Wells	85	178
Agricultural Pumping	77	92
TOTAL PUMPING	**728**	**217**

5.1.5. Well Density per Square Mile

☑ 23 CCR § 354.8(a)(5)
☑ 23 CCR § 354.8(b)

Figure 5-5 shows the distribution and density per square mile of water supply wells in the Basin, including industrial, municipal, agricultural, irrigation, domestic, and undifferentiated supply wells. The results are summarized below in **Table 5-E** below.

Table 5-E: Number of Wells by Management Area

Management Area	Domestic	Irrigation	Muni	Supply	Industrial	Total
Main	120	87	71	97	5	380
Fringe - Northwest	9	8	0	13	3	33
Fringe - Northeast	83	12	0	17	2	114
Fringe - East	56	4	0	1	0	61
Upland	287	61	4	84	0	436
TOTAL	555	172	75	212	10	1024

The last two categories include de minimis extractors. Well information was derived from Zone 7's database, which relies on permit records, field inspections, and property owner and driller reporting. All known active supply wells in the Basin are included on the map. Selection of the one-mile grid was performed automatically using geographic information system (GIS) software.

Figure 3-1 and Figure 5-2 show the service areas of the major water providers in the Basin, including EBMUD, DSRSD, Pleasanton, Livermore, and Cal Water. While these providers may use groundwater supply, none are wholly dependent on groundwater. Beyond their respective service areas, other beneficial users rely on groundwater. For the purposes of this map, an area in the Basin that is outside of the water utilities service areas is considered a groundwater dependent community. As shown on the map, groundwater dependent communities are present in the north-central and southeastern portions of the Basin, as well as a small pocket in the southwestern portion of the Basin (referred to as Happy Valley).

5.2. Water Resources Monitoring and Management Programs

§ 354.8. Each Plan shall include a description of the geographic areas covered, including the following information:
(c) Identification of existing water resource monitoring and management programs, and description of any such programs the Agency plans to incorporate in its monitoring network or in development of its Plan. The Agency may coordinate with existing water resource monitoring and management programs to incorporate and adopt that program as part of the Plan.
(d) A description of how existing water resource monitoring or management programs may limit operational flexibility in the basin, and how the Plan has been developed to adapt to those limits.
(e) A description of conjunctive use programs in the basin.

5.2.1. Existing Monitoring and Management Programs

☑ **23 CCR § 354.8(c)**

Zone 7 regulates more than half of the groundwater inflow and outflow from the Basin, managing the groundwater resources to provide a sustainable supply of high-quality water for residents of the Valley (mainly the Cities of Dublin, Pleasanton, and Livermore). Zone 7 serves as the lead for many of the water resource management programs and coordinates with groundwater resource programs of others in the Basin. A summary of such programs by others is provided in the following section. Key programs implemented by Zone 7 are also summarized herein and incorporated into the 2021 Alt GSP.

Zone 7 Monitoring and Management Programs

Zone 7 has been monitoring and managing the groundwater basin for over 50 years. Zone 7's groundwater management policies and programs were first compiled and described in the 2005 Groundwater Management Plan (GWMP; *Zone 7, 2005a*) and then again in the first Alt GSP (*Zone 7, 2016e*). These policies and programs, which are described in **Sections 8** and **14**, are updated in the Sustainable Groundwater Management Program annual reports, the most recent of which is located on the Zone 7 website[7]. Another important planning document included as an attachment is Zone 7's latest Urban Water Management Plan (UWMP; *Zone 7, 2021*, prepared every five years, 2020 UWMP is included as **Appendix K**). All these documents are also provided to the public on the Zone 7 website[8].

Zone 7 adaptively manages its groundwater supply with regard for current hydrologic conditions, water demands, water quality conditions, and future water supply/demand forecasts. As described in later

[7] https://www.zone7water.com/sites/main/files/file-attachments/gsp2020annrptfinal.pdf?1619988363
[8] http://www.zone7water.com/publications-reports/reports-planning-documents

sections and listed here, Zone 7 maintains the sustainability of the Basin through the following monitoring and management programs:

- Monitoring the long-term natural groundwater budget (described in **Section 9**),
- Monitoring programs for groundwater levels, including Groundwater Level Monitoring Program, Key Well Program, California Statewide Groundwater Elevation Monitoring (CASGEM)/SGMA Data Viewer program, Del Valle Water Rights and other programs (described in **Section 14.2.1**),
- Monitoring programs for water quality, including routine water quality sampling, municipal supply well sampling, Del Valley Water Rights sampling, Salt/Nutrient Management Plan, Toxic Site Surveillance, wastewater and recycled water use monitoring (described below and in **Section 14.2.4**),
- Monitoring of land surface elevations (described in **Section 8.7 and 14.2.5**),
- Monitoring of interconnected surface water (described in **Section 14.2.6**),
- Other monitoring programs including Climatological Monitoring Program, Surface Water Monitoring Program, and Chain of Lakes/Mining Area Monitoring Program (described in **Section 14.2.7**),
- Importing, artificially recharging, and banking surface water to meet future demands (described in **Section 9.3.4**),
- Implementing a conjunctive use program that maximizes use of the storage capacity of the Basin (described in **Section 15.2.1.3**), including long-term implementation of the Chain of Lakes,
- Managing groundwater pumping for sustainability (described in **Section 5.1.4**),
- Maintaining sustainable long-term groundwater storage volumes, even when total outflows exceed the natural sustainable supply (see **Section 9.3.3**),
- Promoting increased and sound recycled water use (see **Section 15.2.2.1**), and
- Identifying and planning for future supply needs and demand impacts, which is often analyzed using Zone 7's numerical groundwater model of the Basin (**Section 8.2.2**).

Zone 7 also prepares plans and conducts programs that are more directed toward protection and improvement of groundwater quality, including wastewater monitoring and plans that support water recycling.

- Zone 7 administers the Well Ordinance Program, which requires permitting for the construction, repair, reconstruction, destruction or abandonment of wells. Inspections are also completed as a part of the program.
- Zone 7 administers the Toxic Sites Surveillance (TSS) Program, which documents and tracks polluted sites across the Basin that pose a potential threat to drinking water and interfaces with lead agencies to ensure the Basin is protected. Information is gathered from state, county, and local agencies, as well as from Zone 7's well permitting program and the California State Water Resources Control Board's (SWRCB) GeoTracker website, and compiled in a GIS database.
- The 2004 Salt Management Plan (SMP) is a substantial 450-page document reflecting a cooperative effort to address the increase in total dissolved solids (TDS) observed in some portions of the Basin.

Implementation has included modifications to existing conjunctive use programs, plus development of the Zone 7 Mocho Groundwater Demineralization Plant (MGDP), which began operating in 2009 to strip salts from the produced groundwater and discharge them to the wastewater export pipeline that discharges treated wastewater to the San Francisco Bay.

- The 2015 Nutrient Management Plan (NMP, *Zone 7 2015c*) was conceived as an addendum to the SMP. Together, the NMP and SMP fulfill requirements of a joint Master Water Recycling Permit and the General Water Reuse Order adopted by the Regional Water Board and are consistent with the provisions of the State's Recycled Water Policy. Implementation of the NMP involves ongoing monitoring of nitrate in groundwater and coordination with land use agencies for Best Management Practices (BMP) requirements to manage nitrogen loading to the Basin, plus coordination with Alameda County Environmental Health (ACEH) for development of a Local Agency Management Program (LAMP) for onsite wastewater treatment systems (OWTS) that addresses certain high nitrate areas-of-concern (see next section).

As a water supply wholesaler, Zone 7 maintains close relationships with other groundwater users in the Basin and coordinates their actions with the groundwater monitoring and management activities of others. **Table 5-F** provides a summary of key cooperative programs; in addition, recent achievements of two programs are described in greater detail below.

Table 5-F: Summary of Cooperative Water Resource Management Programs

Water Resources Management Program	Other Local Agency	Zone 7 Cooperative Role
OWTS	ACEH	Reviews permit applications; Zone 7 approval is required in some cases
Toxic Sites Surveillance (TSS) Program	Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) and ACEH	Tracks progress of site investigation/cleanup and provides input to lead agencies
Surface Mining Permits	Alameda County Community Development Agency (ACCDA)	Reviews permit changes and provides input as a future owner
CASGEM	DWR	Monitors and reports groundwater elevations in Tracy Subbasin, San Joaquin Valley Basin
Water Quality/Groundwater Elevation Monitoring	Retailers (City of Pleasanton, City of Livermore, DSRSD, Cal Water Service), Lawrence Livermore National Laboratory (LLNL)	Data sharing of water quality and elevation data

Water Resources Management Program	Other Local Agency	Zone 7 Cooperative Role
Referral Process (Development Reviews/CEQA Reviews)	Cities of Pleasanton, Livermore, and Dublin, and Alameda Co.	Review proposed site plans and comment on existing infrastructure as well as potential impacts
South Bay Contractors	Alameda County Water District (ACWD) and Santa Clara Valley Water District (SCVWD)	Work with other water agencies on allocating water supply available for recharge
Integrated Regional Water Management	San Francisco Bay Area water agencies	Local representative
Liaison Committee	Cities, Retailers, DSRSD, Elected Officials	Local representative to provide input and information
Tri-Valley Potable Reuse Feasibility Study	Retailers	Evaluating feasibility of potable reuse for the Valley
Living Arroyos	Dublin, Livermore, Pleasanton	Partner to improving the urban streams and streamside habitats
Adopt a Creek Spot Program	Livermore, Alameda County, Livermore Valley Joint Unified School District, Friends of the Arroyos, and Living Arroyos	Work with several “adoptees” of creek spots in the area, and help facilitate the annual Tri-Valley Creeks to Bay event in September
Alameda Creek Fisheries Restoration Workgroup	17 Workgroup Members	Chair of the workgroup, funding partner, develop agendas, facilitate meetings, help guide the studies done on behalf of the workgroup, and seek ongoing collaboration from all stakeholders
Alameda Creek Watershed Forum	Various agencies and organizations with stewardship interests	Serves on the planning committee
Arroyo de la Laguna Agency Collaborative	Alameda and Contra Costa County Flood Control Districts, San Francisco Public Utilities Commission, Dublin, Livermore, Pleasanton, and San Ramon	Serves as unofficial facilitator of the Collaborative, and hosts quarterly meetings/calls

OWTS Program

ACEH and Zone 7 cooperate on the approval and permitting process for OWTS. ACEH issues permits for the operation, installation, alteration, and repair of OWTS throughout Alameda County. However, for certain OWTS projects in Upper Alameda Creek Watershed, Zone 7 review and approval is required. Zone 7 approval is required for the following types of OWTS projects:

- New septic systems constructed partially or fully for a commercial or industrial use;
- Conversion or expansion of existing septic systems to a commercial or industrial use; or
- New residential septic systems that discharge greater than one rural-residential-equivalence (RRE) of wastewater per five acres (and one RRE per 10 acres inside the NMP nitrate areas-of-concern, **Section 15.2.3.6**).

In 1982, the Zone 7 Board of Directors adopted the "Wastewater Management Plan for the Unsewered, Unincorporated Area of Alameda Creek Watershed above Niles (WWMP; *Zone 7, 1982*)" and its recommended policies (*Resolution No. 1037*). A separate policy was established in 1985 that prohibits the use of septic tanks for new developments zoned for commercial or industrial uses (*Resolution No. 1165*). This prohibition can be waived by the Zone 7 Board if "…it can be satisfactorily demonstrated to the Board that the wastewater loading will be no more than the loading from an equivalent rural residential unit (on a five-acre lot) and said septic tank(s) will be in compliance with all other conditions and provisions." Zone 7's wastewater policies were incorporated in the ACEH Local Area Management Plan (LAMP, *ACEH, 2018*, available at https://deh.acgov.org/landwater-assets/docs/OWTS-LAMP.PDF).

Tri-Valley Potable Reuse Feasibility Study

This recently initiated study is a joint effort by the Tri-Valley Water Agencies, including Zone 7 and the four Retailers (Cal Water, DSRSD, Livermore and Pleasanton). Zone 7's February 2016 Water Supply Evaluation Update underscored the need to pursue water supply options to enhance long-term water supply reliability for the Valley. Potential future water supply options identified in the Update included the California WaterFix, desalination, and potable reuse. In February 2016, participants in the Tri-Valley Water Policy Roundtable—which included elected representatives from Dublin, Livermore, Pleasanton, San Ramon, DSRSD, and Zone 7—agreed to proceed with a detailed study of potable reuse.

The primary goals of the study were to evaluate the feasibility of potable reuse for the Valley; to identify the most promising options based on technical, financial, and regulatory considerations; and, assuming that potable reuse is found to be feasible, to recommend next steps for the agencies. The options evaluated included groundwater recharge/injection, surface water augmentation, and connection upstream of the Zone 7 water treatment plants. Based on the book-end approach of considering alternatives, the major findings of this study (Carollo, 2018, available at https://www.zone7water.com/sites/main/files/file-attachments/potable_reuse_feasibility_study_may-2018.pdf?1619986611) were:

- Potable reuse for the Tri Valley is technically feasible. There were no fatal flaws identified by the technical evaluation;
- All alternatives increase water supply reliability, with the degree of benefit varying depending on yield and, to a limited extent, end use (e.g., via groundwater recharge versus raw water augmentation);
- All alternatives improve drinking water quality and some improve the overall Basin quality;
- There are good options available to site the Advanced Water Purification Facility; and
- Regulatory pathways exist for all options.

5.2.2. Operational Flexibility Limitations

☑ **23 CCR § 354.8(d)**

The above water resource monitoring and management programs are not expected to limit operational flexibility in the Basin and in fact are complementary management processes that have collectively resulted in Zone 7's on-going sustainable management of the Basin.

5.2.3. Conjunctive Use in Zone 7

☑ **23 CCR § 354.8(e)**

Since the 1960s, Zone 7 has actively embraced a "conjunctive use" approach to basin management by integrating local and imported surface water supplies with the local conveyance, storage, and groundwater recharge features. These features include local arroyos (which are also used as flood protection facilities during wet seasons) and two former quarry pits (Lake I and Cope Lake). Zone 7's "artificial recharge" operation involves releasing imported water supplies into the local "losing stream" arroyos to recharge the Basin.

A key component of Zone 7's conjunctive use program has been its artificial recharge program, which consists of releases of surface water to dry arroyos to recharge the Basin. The volume of artificial recharge is dependent on Zone 7's annual State Water Project (SWP) allocations, precipitation captured locally, and water supply operations plans. Typically, Zone 7 will commence artificial recharge operations during times of surplus imported water availability.

The location and timing of artificial recharge operations can be used as a water quality management tool as well as a temporal water storage activity. When practical to do so, Zone 7 prioritizes its SWP releases for recharge to occur in the spring and summer when TDS of the source water is low. Because each acre-foot that is subsequently pumped from the Basin (and not reapplied as irrigation) removes water with higher TDS, this can eventually improve the salinity of the Basin, helping achieve salt management objectives. The salt removal effectiveness of the conjunctive use is related to the difference in the TDS of recharge and pumped water and the annual volumes involved (see **Section 8.4**).

While groundwater pumping by the retailers is allocated to part of the "natural" sustainable yield (see above and **Section 9).** Zone 7's groundwater pumping and artificial recharge volumes are accounted for in the "conjunctive use" budget. Zone 7's annual groundwater production and artificial recharge operations vary with the availability of surface water, treatment plant capacity, and the available groundwater storage space.

Table 5-G below shows the artificial recharge and Zone 7's groundwater pumping totals for the 2020 WY. Since 1974, Zone 7 has artificially recharged 66,982 AF more than it has pumped (**Figure 5-7**). These totals do not include the water Zone 7 pumps for DSRSD (usually 645 acre-feet per year (AFY)), which is considered part of the "natural" demand.

Table 5-G: Conjunctive Use Supply and Demand, 2020 WY

Component	Estimated Sustainable Avg (AFY)	2020 WY (AF)	Percentage of Sustainable Average
Artificial Recharge	5,300	2,461	46%
Zone 7 Pumping	5,300	11,101	209%
Net Artificial Recharge	**0**	**-8,640**	**-163%***

AF = acre-feet
AFY = acre-feet per year
Avg = average
* = percent of Sustainable Artificial Recharge

5.3. Land Use Elements or Topic Categories of Applicable General Plans

§ 354.8. Each Plan shall include a description of the geographic areas covered, including the following information:

(f) A plain language description of the land use elements or topic categories of applicable general plans that includes the following:

(1) A summary of general plans and other land use plans governing the basin.

(2) A general description of how implementation of existing land use plans may change water demands within the basin or affect the ability of the Agency to achieve sustainable groundwater management over the planning and implementation horizon, and how the Plan addresses those potential effects.

(3) A general description of how implementation of the Plan may affect the water supply assumptions of relevant land use plans over the planning and implementation horizon.

(4) A summary of the process for permitting new or replacement wells in the basin, including adopted standards in local well ordinances, zoning codes, and policies contained in adopted land use plans.

(5) To the extent known, the Agency may include information regarding the implementation of land use plans outside the basin that could affect the ability of the Agency to achieve sustainable groundwater management.

☑ **23 CCR § 354.8(f)**

General plans affecting the Basin have been developed by Alameda and Contra Costa Counties and the cities of Dublin, Livermore, Pleasanton, and San Ramon. These general plans are described in further detail below.

5.3.1. Alameda County General Plan

☑ 23 CCR § 354.8(f)(1)
☑ 23 CCR § 354.8(f)(2)
☑ 23 CCR § 354.8(f)(3)

The Alameda County General Plan consists of several documents. These include countywide elements that apply to the entire unincorporated area; of these relevant elements include the Community Climate Action Plan (2000), Conservation Element (1994), and Open Space Element (1994). In addition, the General Plan includes three area plans; of these, the East County plan is relevant. The County also developed a South Livermore Specific Plan in 1993 primarily to promote and maintain the South Livermore Valley as a wine region.

The policies and programs of the East County Area Plan, approved by voter initiative in 2000, reflect close collaboration with Zone 7 Water Agency in regional water planning, sustainable land use planning, water recycling, and water conservation. Key policies are listed below.

- Policy 251: The County shall work with the Alameda County Flood Control and Conservation District (Zone 7), local water retailers, and cities to develop a comprehensive water plan to assure effective management and long-term allocation of water resources, to develop a contingency plan for potential short-term water shortages, and to develop uniform water conservation programs. The water plan should include a groundwater pump monitoring and cost allocation system in order to facilitate groundwater management and to recover the cost of purchased water stored in the Basin. In developing this plan, EBRPD shall be consulted regarding potential direct or indirect effects of water use on EBRPD recreation facilities.

- Policy 252: The County shall encourage Zone 7 to pursue new water supply sources and storage facilities only to the extent necessary to serve the rates and levels of growth established by the Initiative and by the general plans of the cities within its service area.

- Policy 253: The County shall approve new development only upon verification that an adequate, long-term, sustainable, clearly identified water supply will be provided to serve the development, including in times of drought.

- Policy 254: The County shall encourage Zone 7 and local water retailers to require new development to pay the full cost of securing, conveying, and storing new sources of water.

- Policy 255: The County shall encourage Zone 7 to maximize use of the Chain of Lakes for water supply development and groundwater management. Zone 7 is encouraged to stage implementation of the system so that each component may be utilized as it becomes available.

- Policy 256: The County shall discourage water service retailers from constructing new water distribution infrastructure which exceeds future water needs based on a level of development consistent with the Initiative.
- Policy 257: The County shall support more efficient use of water through such means as conservation and recycling and shall encourage the development of water recycling facilities to help meet the growing needs of East County.
- Policy 258: The County shall encourage Zone 7, water retailers, and cities to sign the California Urban Water Conservation Council's (CUWCC) MOU which binds parties to implement Best Management Practices where feasible.
- Policy 259: The County shall include water conservation measures as conditions of approval for subdivisions and other new development.
- Policy 260: The County shall require major projects to mitigate projected water consumption by applying one or more Best Management Practices that reduce water consumption off-site.
- Policy 261: The County shall encourage the efficient use of water for landscape irrigation, vineyards and other cultivated agriculture. To this end, the County shall encourage the use of recycled water, treated by the reverse osmosis or other process and meeting groundwater basin standards set forth by the Regional Water Quality Control Board, for agricultural irrigation.
- Policy 262: The County shall encourage Zone 7 and the water retailers to require separate service connections and meters where large quantities of water are used for special purposes such as golf courses and landscape irrigation so that consumption of water for these uses can be managed in times of drought. To this end, the County shall, if feasible, require the use of recycled water for golf courses and shall encourage use of recycled water for non-residential landscaping, irrigated agriculture, and groundwater recharge in accordance with Regional Water Quality Control Board adopted standards.
- Policy 263: The County shall continue to seek alternative methods for economic reuse of wastewater in addition to those already considered.

Implementation programs of the East County Plan include adoption by the County Board of Supervisors of the CUWCC's MOU to implement Best Management Practices; collaborative efforts by the County with appropriate agencies (e.g., County Agricultural Commission, Soil Conservation Service, and the University of California Experimental Station) to provide farmers with information about water conserving agricultural practices; and preparation and adoption of a water supply ordinance that provides for the distribution of recycled water in designated areas, including South Livermore Valley.

The County's Community Climate Action Plan, approved 2014, contains water conservation measures, including measures to require new landscaping projects to reduce outdoor use of potable water, to allow grey water use for subsurface irrigation, and to work with EBMUD and Zone 7 to redesign water bills to encourage water conservation.

5.3.2. Contra Costa County General Plan

☑ 23 CCR § 354.8(f)(1)
☑ 23 CCR § 354.8(f)(2)
☑ 23 CCR § 354.8(f)(3)

Contra Costa County's current General Plan was adopted in 1991 and has been reconsolidated twice, once for 1990-2005 and again for 2005-2020. The plan is currently being updated to cover through the year 2040. The updated General Plan will respond to current concerns about sustainability, environmental justice, and affordable housing.

The current General Plan includes a Conservation Element which addresses water resources. The adopted General Water Resources Policies are:

- 8-74. Preserve watersheds and groundwater recharge areas by avoiding the placement of potential pollution sources in areas with high percolation rates.
- 8-75. Preserve and enhance the quality of surface and groundwater resources.
- 8-76. Ensure that land uses in rural areas be consistent with the availability of groundwater resources.
- 8-77. Provide development standards in recharge areas to maintain and protect the quality of groundwater supplies.

5.3.3. City of Dublin General Plan

☑ 23 CCR § 354.8(f)(1)
☑ 23 CCR § 354.8(f)(2)
☑ 23 CCR § 354.8(f)(3)

The City of Dublin (Dublin) does not control the supply or the delivery of water to customers, control cost and pricing mechanisms related to water supply, or manage regional flood control facilities. However, the City of Dublin General Plan recognizes that Dublin works in collaboration with other agencies, notably Zone 7 and DSRSD, which provide these services, and therefore includes a Water Resources Element that reflects this reality. The scope of Dublin's influence extends mainly to promoting and encouraging water conservation among business and residential users, implementing Low Impact Development measures to help treat stormwater, and managing the stormwater runoff and pipelines that lead to flood control facilities. With regard to land use and growth, Dublin historically expanded to the west and east; currently, Dublin has established its Western Extended Planning Area (generally outside the Basin), consisting of steep terrain and oak woodlands, as open space. On the east, Dublin has established Urban Limit Lines along its eastern boundary to protect approximately 3,828 acres of land known as the Doolan-Collier

Canyons from development. Dublin also has a Development Elevation Cap, defined as the 770-foot elevation that represents the highest serviceable elevation for water service and urban development. This cap represents a limit on urban development potential.

5.3.4. City of Livermore General Plan

☑ 23 CCR § 354.8(f)(1)
☑ 23 CCR § 354.8(f)(2)
☑ 23 CCR § 354.8(f)(3)

The City of Livermore General Plan, first adopted in 2004 and subsequently amended, addresses water resource issues in its Infrastructure and Public Services element. Potable water and raw water for agricultural irrigation is provided to the City of Livermore (Livermore) from a variety of sources. Zone 7 is the water wholesaler, while Cal Water and Livermore Municipal Water provide retail service, and the San Francisco Hetch Hetchy water supply system provides water directly to Lawrence Livermore National Laboratory and Sandia National Laboratory. The City of Livermore General Plan presents an overall goal to provide sufficient water supplies and facilities to serve Livermore in the most efficient and financially sound manner, while maintaining the highest standards required to enhance the quality of life for existing and future residents. Objectives are to:

- Plan, manage and develop the public water treatment, storage and distribution systems in a logical, timely and appropriate manner,
- Require coordination between land use planning and water facilities and service to ensure that adequate water supplies are available for proposed development, and
- Identify potential water conservation and recycling opportunities that could be served by Livermore's existing recycled water system.

With regard to land use, Livermore is completely surrounded by an Urban Growth Boundary. This boundary is intended to protect existing agricultural uses and natural resources outside Livermore from future urban development. Livermore has had an evolving residential growth policy in place since 1976.

5.3.5. City of Pleasanton General Plan

☑ 23 CCR § 354.8(f)(1)
☑ 23 CCR § 354.8(f)(2)
☑ 23 CCR § 354.8(f)(3)

The City of Pleasanton (Pleasanton) General Plan, adopted in 2009, contains two overarching goals: to preserve Pleasanton's character and encourage sustainable development. This builds on the 1996 General Plan, which envisioned managed growth of Pleasanton consistent with a 29,000 unit residential cap and an Urban Growth Boundary. Consequently, residential and commercial development has been focused on infill sites. The 2009 General Plan includes a water element, which provides a regional overview of the watershed, water systems, wastewater systems, flood control, and stormwater management. Pleasanton receives water from Zone 7 and from its own wells. General Plan goals are to:

- Preserve and protect water resources and supply for long-term sustainability;
- Provide healthy water courses, riparian functions, and wetlands for humans, wildlife, and plants;
- Ensure a high level of water quality and quantity at a reasonable cost, and improve water quality through production and conservation practices which do not negatively impact the environment;
- Provide sufficient water supply and promote water safety and security;
- Provide adequate sewage treatment and minimize wastewater export;
- Minimize stormwater runoff and provide adequate stormwater facilities to protect property from flooding; and
- Reduce stormwater runoff and maximize infiltration of rainwater to improve surface and subsurface water quality.

5.3.6. City of San Ramon General Plan

☑ **23 CCR § 354.8(f)(1)**
☑ **23 CCR § 354.8(f)(2)**
☑ **23 CCR § 354.8(f)(3)**

The City of San Ramon (San Ramon) includes a northwestern portion of the Basin, but water supply is provided by EBMUD from non-groundwater sources. The San Ramon General Plan, adopted in 2015, includes a Growth Management Element that establishes San Ramon's first Urban Growth Boundary and encourages smart growth by promoting infill development and discouraging urban sprawl. Low Impact Development is promoted by San Ramon for its infill development; otherwise, San Ramon's General Plan has very little influence on the Basin.

5.3.7. Well Permitting Process

☑ **23 CCR § 354.8(f)(4)**

The construction, repair, reconstruction, destruction or abandonment of wells within Zone 7's service area is currently regulated by Alameda County General Ordinance Code, Chapter 6.88. Pursuant to an MOU with Alameda County, Zone 7 administers the associated well permit program within its service area including within the three incorporated cities: Dublin, Livermore, and Pleasanton. As a result, any planned new well construction, soil-boring construction, or well destruction must be permitted by Zone 7 before the work is started. Additionally, all unused or abandoned wells must be properly destroyed; or, if there are plans to use the well in the future, a signed statement of future intent must be filed at Zone 7. This program allows Zone 7 to protect the Basin from any negative impacts that would be threatened by poorly constructed wells.

A copy of the current Zone 7 drilling permit application is available to the public for download from the Zone 7 website[9]. Well construction and destruction permit requirements are determined on a case-by-case basis, but generally follow DWR's *California Well Standards* (Bulletins 74-81 and 74-90, *DWR 1990*).

In April 2015, Alameda County amended its Water Wells Ordinance to: (1) be more compliant with the State standards; (2) clarify the County's role and procedure for well permitting; (3) provide for additional protection of groundwater quality by incorporating local hydrogeologic considerations into the regulations; and (4) establish a means for the County to delegate administrative authority to regulate well construction work to others in certain service areas. In June 2015, Alameda County and Zone 7 entered into a MOU that delegates the administrative authority for issuing of water well permits to Zone 7 for all wells within Zone 7's service area. An Appeals Process for permit complaints for approval and adoption by the Zone 7 Board was started in the 2016 WY. The implementation of the County fee program for permits also started in the 2016 WY. This fee program offsets a portion of the cost for program administration and field inspections by Zone 7 personnel.

As provided in the Water Wells Ordinance, Special Requirement Areas have been defined within Zone 7's jurisdiction where:

- Soil boring permits are required for boreholes at 10 feet or greater depth, regardless of groundwater depth,
- Supply wells are prohibited, and
- Special well construction techniques are required for boreholes and monitoring wells to prevent vertical spreading of contamination.

In addition, five Special Requirement Areas are clearly identified on the Zone 7 website[10]; these are contamination sites where additional protection measures are required.

Well permitting in the Contra Costa County portion of the Basin is regulated by the *Contra Costa County Ordinance Code, Title 4, Article 414-4.8* and administered by the Environmental Health Division (EHD) of Contra Costa Health Services. EHD's Land Use Program reviews plans for well designs, issues construction permits and conducts inspections during the drilling to make sure wells will be installed or destroyed in a way that doesn't contaminate the county's groundwater. A permit from the EHD is required to construct, reconstruct or destroy a well, including water wells, monitoring wells, cathodic protection wells and soil borings.

[9] http://www.zone7water.com/business/permits-fees/36-public/content/64-well-drilling-and-destruction-permits

[10] https://www.zone7water.com/post/well-drilling-and-soil-boring-permits

5.3.8. Implementation of Land Use Plans Outside the Basin

☑ 23 CCR § 354.8(f)(5)

This Alt GSP assumes that no land use plans being implemented outside of the Basin will impact the implementation of this Alt GSP or prevent the Basin from continuing to achieve its Sustainability Goal.

5.4. Additional GSP Elements

§ 354.8. Each Plan shall include a description of the geographic areas covered, including the following information:
(g) A description of any of the additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.

☑ 23 CCR § 354.8(g)

This Alt GSP addresses the following additional Plan elements included in Water Code Section 10727.4 as follows.

5.4.1. Control of Saline Water Intrusion

Because the Basin is located far from coastal areas, seawater intrusion is not considered to be an issue; therefore, no control measures for saline water intrusion have been established (**Sections 8.5** and **13.3**).

5.4.2. Wellhead Protection

Zone 7 currently operates an ongoing robust Water Quality Monitoring Program (**Section 8.6**) that includes an evaluation of emerging contaminants such as PFAS compounds which could become threats to Basin water quality and viability of drinking water supply. Zone 7 also has several management programs that are designed to maintain and/or improve the basin water quality including the Salt and Nutrient Management Programs (**Section 15.2.3**).

5.4.3. Migration of Contaminated Groundwater

Zone 7 administers the TSS Program, which documents and tracks polluted sites across the Basin that pose a potential threat to drinking water and interfaces with lead agencies to ensure the Basin is protected. Information is gathered from state, county, and local agencies, as well as from Zone 7's well permitting program and the SWRCB's GeoTracker website, and compiled in a GIS database (**Section 8.6.7**).

5.4.4. Well Abandonment and Well Destruction Program

In April 2015, Alameda County amended its Water Wells Ordinance to: (1) be more compliant with the State standards; (2) clarify the County's role and procedure for well permitting; (3) provide for additional protection of groundwater quality by incorporating local hydrogeologic considerations into the regulations; and (4) establish a means for the County to delegate administrative authority to regulate well construction work to others in certain service areas. In June 2015, Alameda County and Zone 7 entered into a MOU that delegates the administrative authority for issuing of water well permits to Zone 7 for all wells within Zone 7's service area (**Section 15.2.3.1**).

Well permitting in the Contra Costa County portion of the Basin is regulated by the *Contra Costa County Ordinance Code, Title 4, Article 414-4.8* and administered by the Environmental Health Division (EHD) of Contra Costa Health Services. EHD's Land Use Program reviews plans for well designs, issues construction permits and conducts inspections during the drilling to make sure wells will be installed or destroyed in a way that doesn't contaminate the county's groundwater. A permit from the EDH is required to construct, reconstruct or destroy a well, including water wells, monitoring wells, cathodic protection wells and soil borings.

5.4.5. Replenishment of groundwater extractions

Zone 7 has long implemented conjunctive use projects and managed groundwater extractions in the Basin that have contributed to the recovery and stabilization of groundwater levels (see **Sections 5, 9** and **15**).

5.4.6. Conjunctive use and underground storage

Zone 7 has long implemented conjunctive use projects within the Basin that have contributed to the recovery and stabilization of groundwater levels (see **Sections 5, 9** and **15**).

5.4.7. Well Construction Policies

Well construction policies are detailed above in **Section 5.4.4**, above.

5.4.8. Groundwater Contamination Cleanup, Recharge, Diversions to Storage, Conservation, Water Recycling, Conveyance, and Extraction Projects

Significant details regarding matters related to contamination cleanup, recharge, diversions to storage, conservation, water recycling, conveyance, and extraction projects are provided in **Sections 8, 9** and **15**.

5.4.9. Efficient Water Management Practices

Zone 7's efficient water management practices are detailed in **Sections 9 and 15**.

5.4.10. Relationships with State and Federal regulatory agencies

As described herein, Zone 7 maintains productive working relationships with multiple State and Federal agencies, including DWR, the RWQCB, the SWRCB, etc. (**Table 5-F**).

5.4.11. Land Use Plans and Efforts to Coordinate with Land Use Planning Agencies to Assess Activities that Potentially Create Risks to Groundwater Quality or Quantity

Land use planning and water resource management are regularly and closely coordinated across the Basin. This ensures that implementation of land use plans, which can change water demands or affect sustainable groundwater management, is occurring in a context of open collaboration among land use planners and water agencies. Moreover, development of various water management plans, including this update to the Alt GSP, also has occurred through open collaboration. Such dynamic and interactive planning has been fundamental to sustainable groundwater management in the Basin.

5.4.12. Impacts on Groundwater Dependent Ecosystems (GDEs)

Several likely GDE areas have been identified in the Basin. Avoidance of impacts is addressed in **Section 13** and **Appendix F**.

5.5. Notice and Communication

§ 354.10. Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:
(a) A description of the beneficial uses and users of groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.
(b) A list of public meetings at which the Plan was discussed or considered by the Agency.
(c) Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.
(d) A communication section of the Plan that includes the following:
(1) An explanation of the Agency's decision-making process.
(2) Identification of opportunities for public engagement and a discussion of how public input and response will be used.
(3) A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.
(4) The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

Zone 7 developed its Stakeholder Communication and Engagement Plan (SCEP) in August 2020 to support fulfillment of public notice and communication requirements. The SCEP is available on the Zone 7's website(https://www.zone7water.com/sites/main/files/file-attachments/agsp_scep_2020-08-17.pdf?1619904615) and is included herein as **Appendix H**.

5.5.1. Beneficial Uses and Users of Groundwater

☑ **23 CCR § 354.10(a)**

As part of the SCEP, beneficial uses and users of groundwater in the Basin were identified (see SCEP Section 3). Additionally, a Stakeholder Constituency "Lay of the Land" exercise was developed which identified Basin stakeholders, key interests and issues, and the level of engagement expected with each stakeholder (see SCEP Table 2). This exercise will be updated during select phases of Alt GSP development and/or implementation.

The beneficial uses and users of groundwater are also listed in **Table 5-H**.

Table 5-H. Beneficial Uses for Surface Water and Groundwater

WATERBODY	MUN	AGR	IND	PROC	GWR	COMM	COLD	MGR	RARE	SPWN	WARM	WILD	REC-1 & -2
Arroyo del Valle	X				X		X	P	X	X	X	X	X
Shadow Cliffs Reservoir					X	X	X			X	X	X	X
Del Valle Reservoir	X					X	X			X	X	X	X
Arroyo Mocho					X		X	X		X	X	X	X
Tassajara Creek					X		P	X	X	X	X	X	X
Arroyo las Positas					X		X	X	X	X	X	X	X
Alamo Canal					X		P	X		X	X	X	X
South San Ramon Creek											X	X	X
Arroyo de la Laguna					X		X	X		X	X	X	X
Livermore Valley Groundwater Basin	X	X	X	X									

MUN – Municipal and domestic water supply
AGR – Agricultural water supply
IND – Industrial service water supply
PROC – Industrial process water supply
GWR – Groundwater recharge
COMM – Commercial and sport fishing
COLD – Cold freshwater habitat
MGR – Fish migration
RARE – Preservation of rare and endangered species
SPWN – Fish Spawning
WARM – Warm freshwater habitat
WILD – Wildlife habitat
REC-1 and REC-2 – Water contact and noncontact water recreation

One of the significant updates of the Alt GSP focused on improved delineation of GDEs in the Basin, as discussed in **Section 8.8**. To the extent that additional environmental users of groundwater are identified, they will be considered, and appropriate representatives will be engaged during implementation of the Alt GSP.

5.5.2. Public Meetings Summary

☑ 23 CCR § 354.10(b)

The list below identifies public meetings, workshops, and direct outreach specific to Alt GSP development. Detailed meeting minutes and materials are available on the Zone 7's website (https://zone7.docsonthecloud.com/WebLink/Welcome.aspx?cr=1).

5.5.2.1. Zone 7 Board Meetings

Zone 7 Board meetings are open to the public and are held on the third Wednesday of every month at 7:00 p.m. at Zone 7's offices, located at 100 North Canyons Parkway in Livermore. Due to the COVID-19 pandemic, and pursuant to the Governor's Executive Order (N-29-20), Board meetings have recently been held online. Video recordings of the meetings are available to the public and can be accessed through the Tri-Valley Community Television website (http://www.tri-valleytv.org/?q=node/59). Board meeting agendas and packets are posted to the Zone 7 website (http://www.zone7water.com/library/board-meetings).

Zone 7 has informed its stakeholders of key updates and decisions regarding the Alt GSP during public Board meetings. These meetings provide a key venue for public engagement and discussion and will be where comments on the Alt GSP will be documented and addressed, as appropriate. Presentation materials will be posted on the Zone 7 SGMA website (www.zone7water.com/altgsp). The following Board meetings discuss the Alt GSP:

- 17 June 2020
- 5 May 2021
- Nov 2021 to Board's Water Resources Committee (date to be determined).
- 15 Dec 2021 final ratification

The list above will be updated throughout Alt GSP development and/or implementation.

5.5.2.2. Stakeholder Workshops

Zone 7 has held Stakeholder workshops on the following dates:

- 6 Jan 2021
- Nov 2021 (date to be determined)

This list will be populated throughout Alt GSP development and/or implementation.

5.5.2.3. Direct Outreach

Zone 7 has conducted the following direct outreach efforts as part of development of the Alt GSP update:

- Zone 7 Open House (12 October 2019);
- Zone 7 sent out E Newsletter about groundwater management efforts supported with half million dollar grant (23 June 2020);
- Zone 7 published a dedicated webpage for the Alt GSP (16 October 2020);
- Zone 7 presented to the RWQCB (21 January 2021) and ACEH (3 February 2021) on the background of the Alt GSP and the salt and nutrient management tasks that will be included in the Alt GSP;
- Zone 7 sent out three letters (dated 3 September 2020, 5 April 2021, and 15 September 2021) to Stakeholders notifying them of the progress of the project.

The list above will be updated throughout Alt GSP development and/or implementation.

5.5.3. Comments Received Regarding the GSP

☑ 23 CCR § 354.10(c)

Table 5-I below summarizes the public comments received and Zone 7's response. Public comments received on the draft Alt GSP will be listed in **Appendix H** along with the Zone 7's responses.

Table 5-I. Public Comments on the Alt GSP and Zone 7 Responses

Public Comment	Zone 7 Response

Table 5-I will be updated as more comments are received during Alt GSP development and/or implementation.

5.5.4. Communication

The SCEP outlines the Zone 7's communication goals.

5.5.4.1. Decision Making Process

☑ 23 CCR § 354.10(d)

The SCEP Section 2.2 outlines the Zone 7's decision-making process. Key Alt GSP development and implementation decisions are made by the Zone 7's Board of Directors.

5.5.4.2. Public Engagement Opportunities

☑ 23 CCR § 354.10(d)(2)

The SCEP Section 5 discusses public engagement opportunities and how public input and responses will be handled. These opportunities include Zone 7 Board meetings, website communication, stakeholder outreach, the planned public hearing at which the draft Alt GSP will be available for public comments, and other direct outreach as identified in **Section 5.5.2** above.

5.5.4.3. Stakeholder Involvement

☑ 23 CCR § 354.10(d)(3)

The SCEP Section 4 discusses how Zone 7 encourages the active involvement of diverse social, cultural, and economic elements of the population within the Basin. Zone 7 has developed objectives that support a basic philosophy of working cooperatively with groundwater stakeholders in the Basin including the public, irrigation and domestic well owners, gravel mining companies, Tri-Valley Retail Group, water purveyors, and planning agencies. These objectives include:

- Develop information, policies, and procedures for the effective long-term management of the Basin;
- Inform the public and relevant governmental agencies of the Zone's water supply potential and management policies and to solicit their input and cooperation; and
- Work cooperatively with the gravel mining industry to implement the Chain of Lakes reclamation plan.

Zone 7 actively involves the public, stakeholders and local agencies in its planning and programs through meetings, data sharing, and online media. This approach was memorialized by Zone 7 as an explicit operational policy in the 1987 Statement on Groundwater Management. This statement, along with numerous examples of public involvement in the Zone 7 groundwater management program are also provided in the GWMP (see Section 4.3 and Appendix E of the GWMP), (Zone 7, 2005).

Consistent with this approach, Zone 7 has established positive ongoing working relationships with numerous other agencies involved in the Basin including, but not limited to DWR, RWQCB, Alameda County, Contra Costa County, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service (NOAA-NMFS), and the U.S. Army Corps of Engineers. Additional information on Zone 7's relationships and cooperation with other agencies in the Basin are also described in the SCEP (**Appendix H**).

For development of the 2004 SMP, Zone 7 assembled a Groundwater Management Advisory Committee including citizens and stakeholders and an independent Technical Advisory Group (including key stakeholders and water retailers). Similarly, the 2015 NMP was developed with support and input from the RWQCB, ACEH, ACCDA, Zone 7 Retailers, and other stakeholders and interested public. Most recently, the Tri-Valley Potable Reuse Feasibility Study was developed through a process involving a series of public Round Table discussions among representatives of Zone 7 and the Retailers, along with extensive outreach to the public, including a survey.

A major land use in the Valley is aggregate mining (see **Figure 5-4**), conducted by various mining companies. Groundwater is used for industrial mining purposes such as gravel washing and dust control (see locations of industrial wells in **Figure 5-5**). Most importantly, Zone 7 has worked closely with the mining companies in developing a quarry reclamation plan that recognized the importance of groundwater recharge and conveyance through the mining area. This resulted in the Chain of Lakes reclamation plan, wherein the mining area reclamation is being implemented to include a series of wet pits that will be owned and operated by Zone 7 for flood control and managed aquifer recharge. Zone 7 and the mining companies collaborate in groundwater and surface water (level and quality) monitoring.

Groundwater is also used for private domestic, golf course irrigation, and agricultural purposes (see **Figure 5-7**). Individual groundwater users have been active participants in Zone 7 GWMP, SMP, and NMP efforts; numerous private well owners participate in Zone 7 groundwater monitoring programs.

5.5.4.4. Public Notification

☑ **23 CCR § 354.10(d)(4)**

The SCEP Section 5 and 6 details the methodology that is being followed to inform the public on Alt GSP updates, status, and actions. This includes presenting key GSP development decisions and updates in an open and transparent fashion during public Zone 7 Board meetings, holding periodic stakeholder outreach efforts to communicate progress on the Alt GSP technical components to stakeholders, posting draft and interim deliverables on-line, and receiving input on upcoming decisions and work efforts. Zone 7 will publicize all Board meetings and any stakeholder workshops on its website (https://www.zone7water.com/) as well as provide email notice to the Zone 7 list of interested parties.

5.5.5. Interagency Coordination

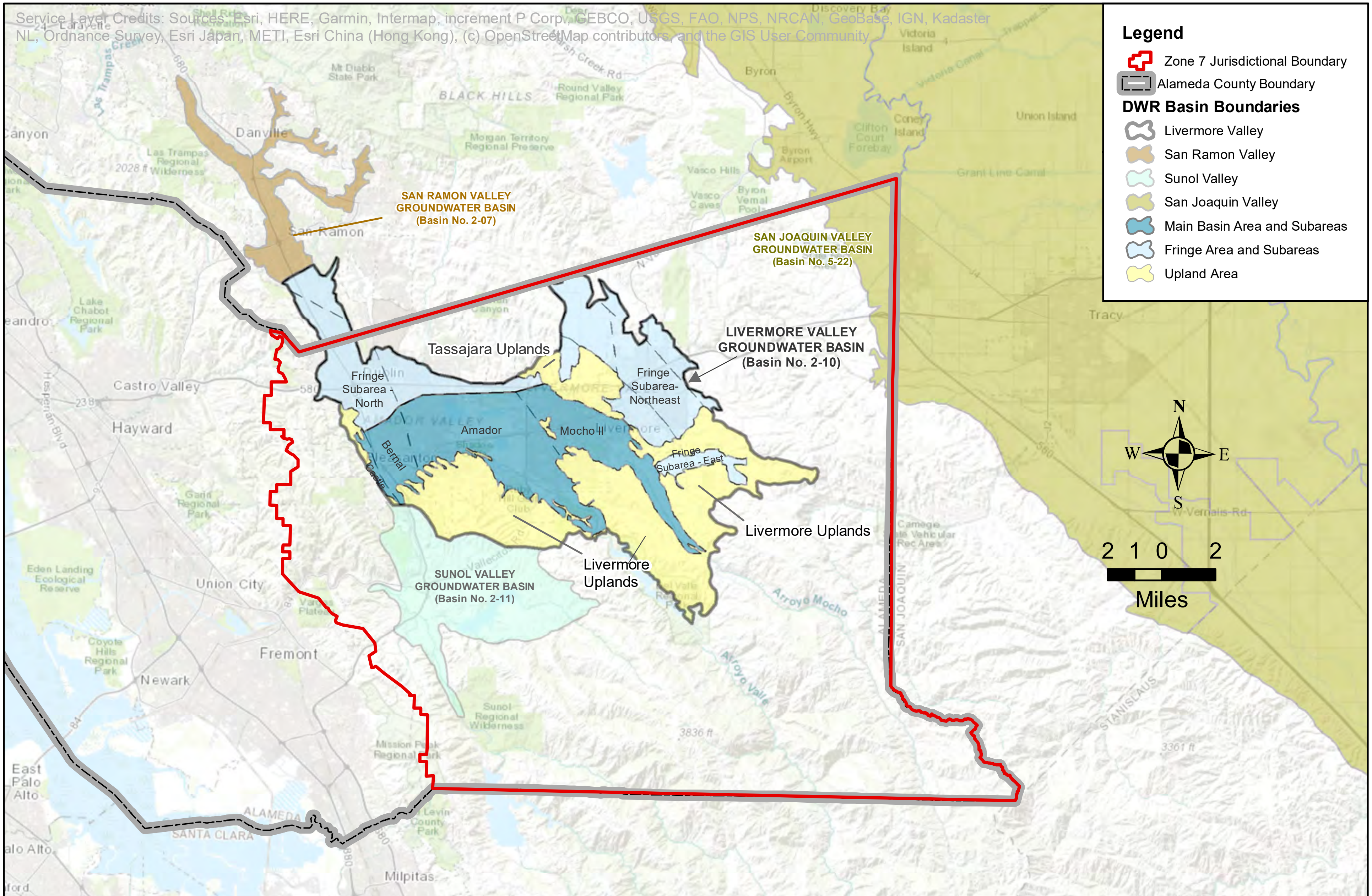
The SCEP Section 3 identifies different agencies that are stakeholders and discusses how Zone 7 maintains close coordination with these agencies within its service area.

Currently, Zone 7 is working actively with other local agencies in its designated role as the exclusive GSA for the Basin. Zone 7, EBMUD, San Ramon, DSRSD and Contra Costa County have a MOU under which Zone 7 will serve as the GSA for the Contra Costa portion of the Basin.

5.5.6. Interbasin Coordination

The Zone 7 service area overlies almost all of the Livermore Valley Groundwater Basin (DWR 2-10), all of the Sunol Valley Groundwater Basin (DWR 2-11), and a small section of the Tracy Subbasin in the adjacent San Joaquin Valley Groundwater Basin (DWR 5-22.15). The Sunol Valley Groundwater Basin and San Ramon Valley Groundwater Basin are designated as very low priority and is therefore not subject to SGMA. No GSA has been formed within these two basins. Consistent with its management responsibilities, duties, and powers, Zone 7 is designated in SGMA as the exclusive GSA within its boundaries and, in electing to be the GSA for the Basin, will continue to exercise its groundwater management authority consistent with the District Act and with SGMA. In the Tracy Subbasin, Zone 7 has executed a MOU with the San Luis & Delta-Mendota Water Authority (SLDMWA) to support SGMA compliance, and a GSP for that subbasin is anticipated in January 2022.

Zone 7 will continue to actively participate in interbasin coordinating with the neighboring basins and subbasins throughout the Alt GSP development process.



DATE: Oct 21, 2021

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Figure 5-1
Map of Plan Area
Livermore Valley Groundwater Basin

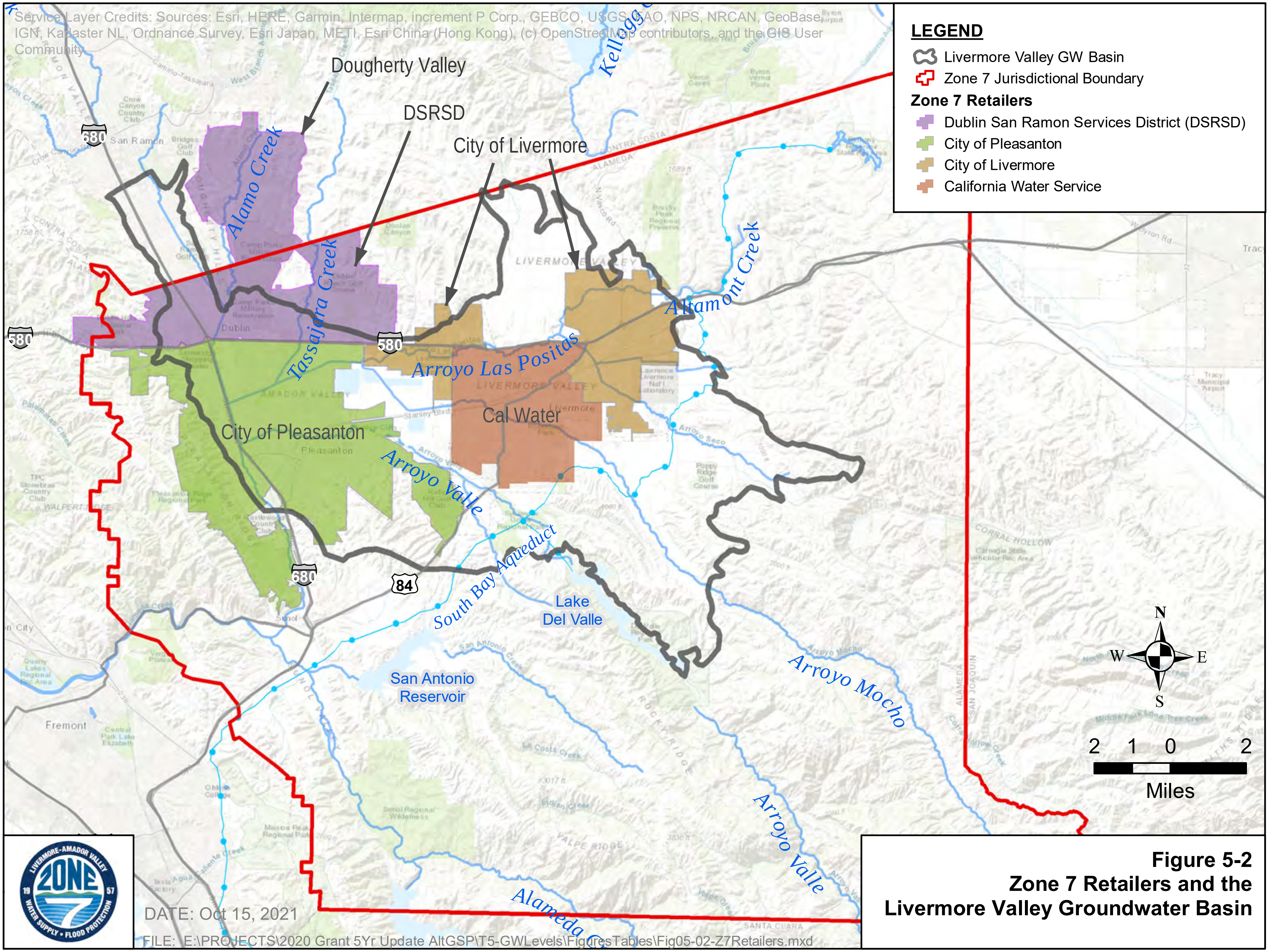


Figure 5-2
Zone 7 Retailers and the Livermore Valley Groundwater Basin

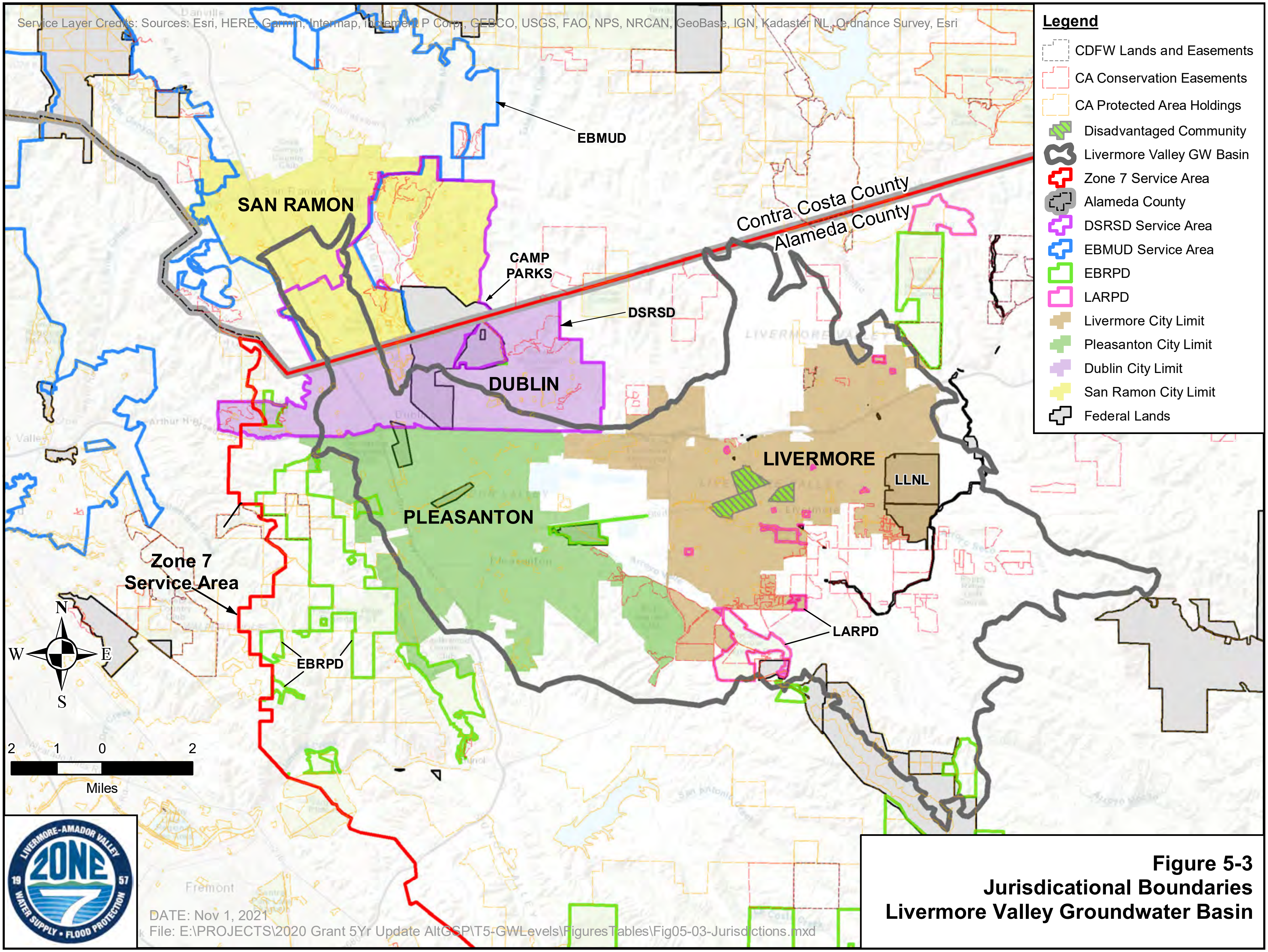


Figure 5-3
Jurisdictional Boundaries
Livermore Valley Groundwater Basin

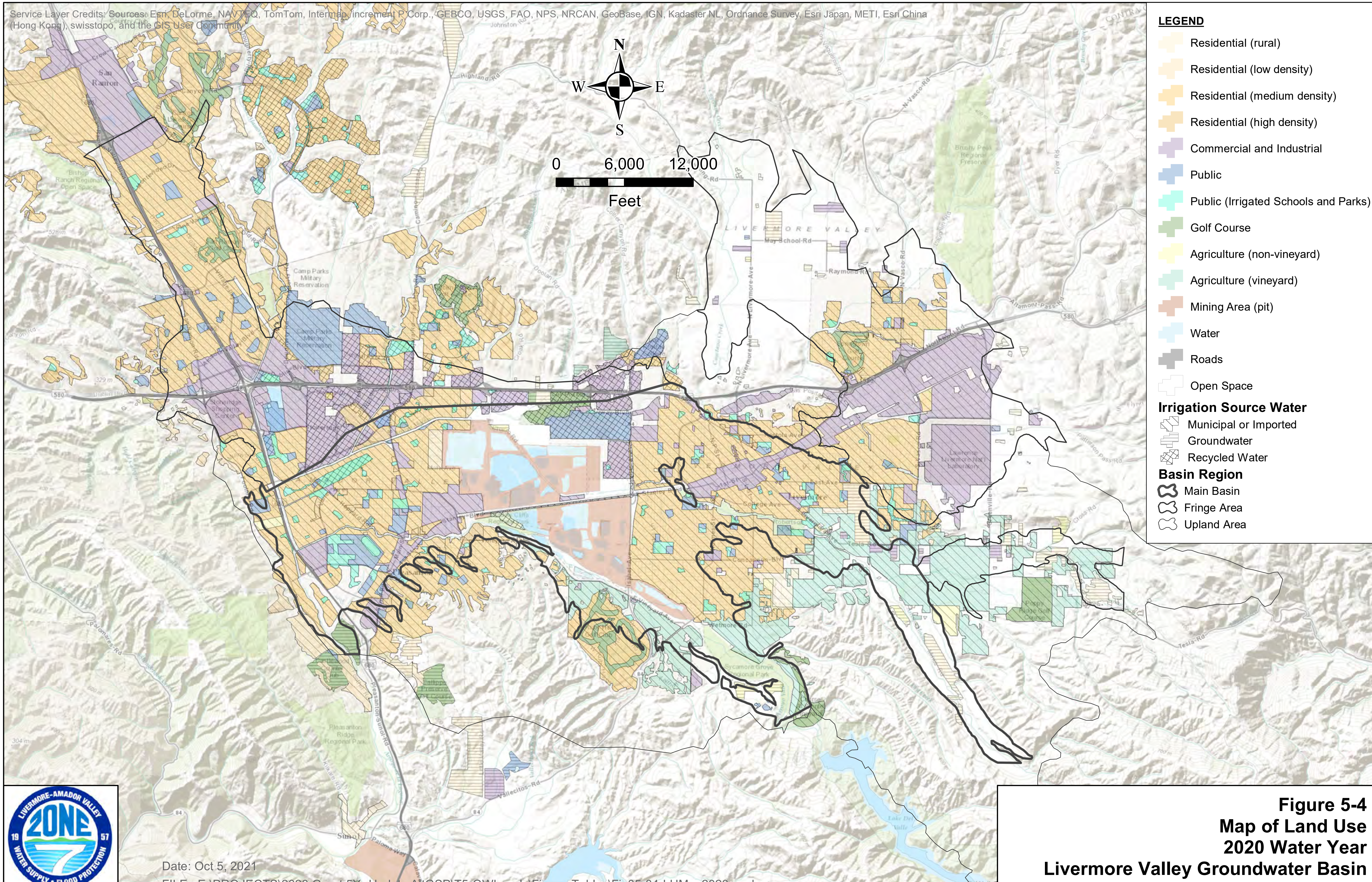


Figure 5-4
Map of Land Use
2020 Water Year
Livermore Valley Groundwater Basin

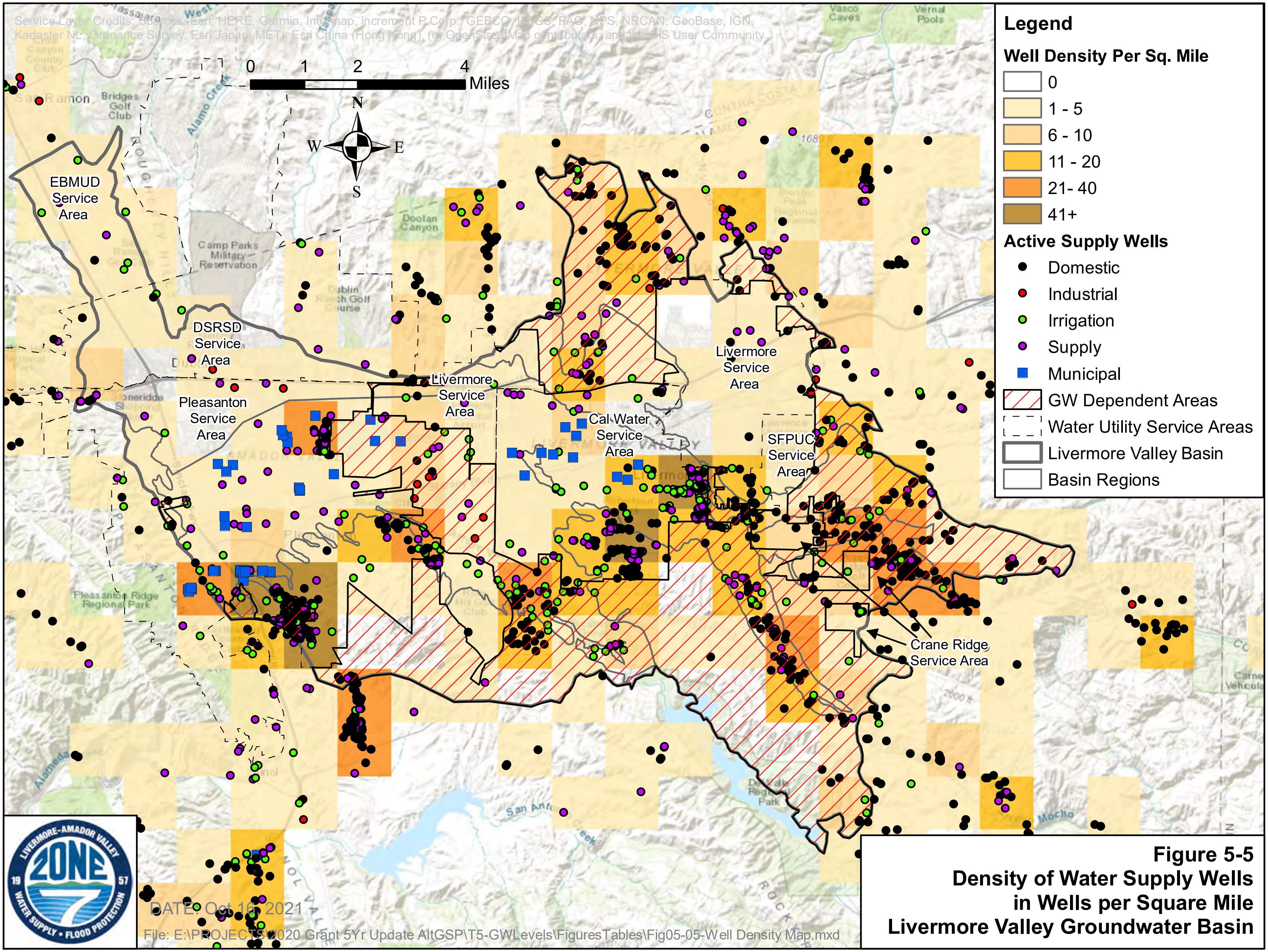


Figure 5-5
Density of Water Supply Wells in Wells per Square Mile
Livermore Valley Groundwater Basin

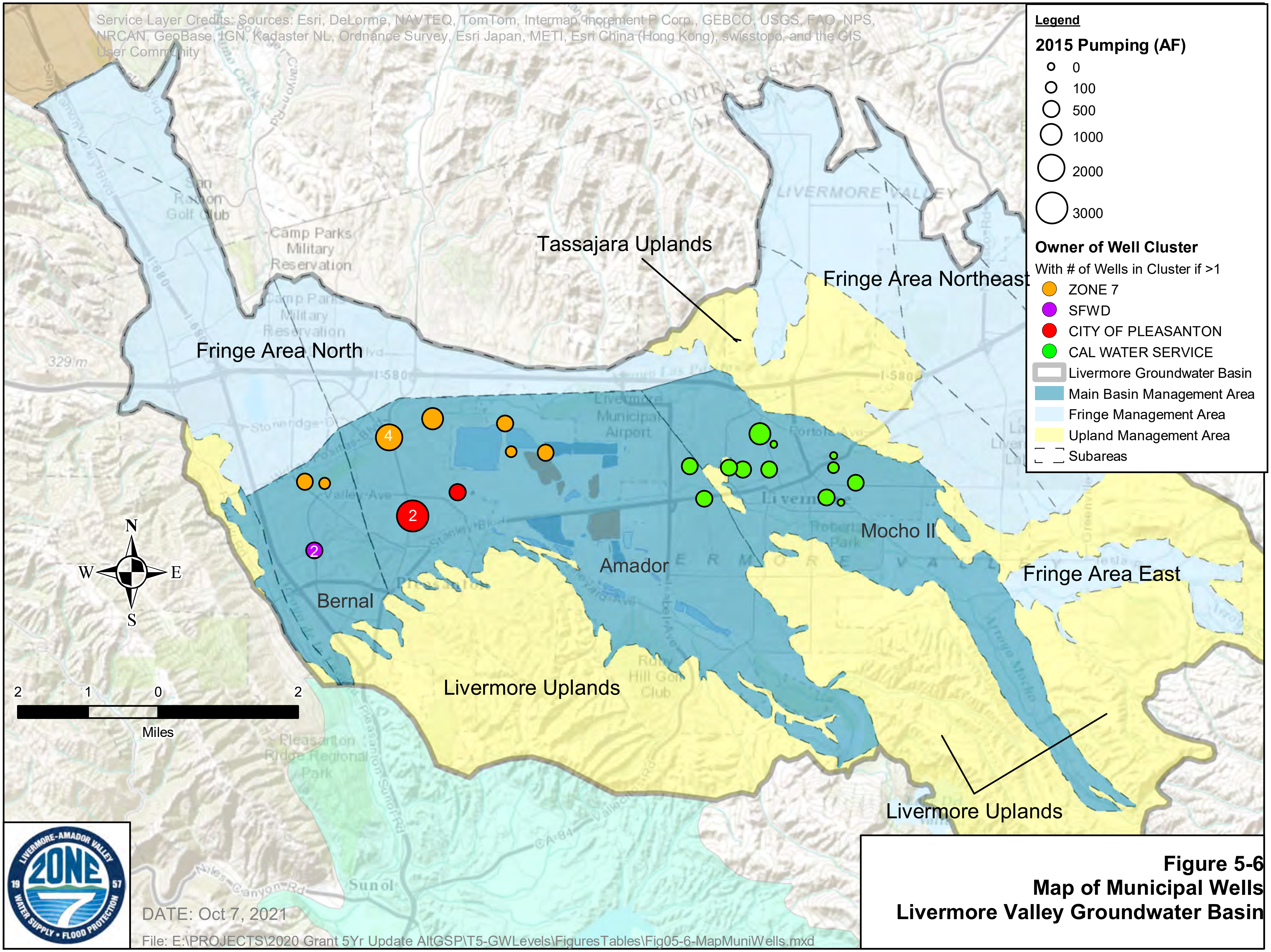
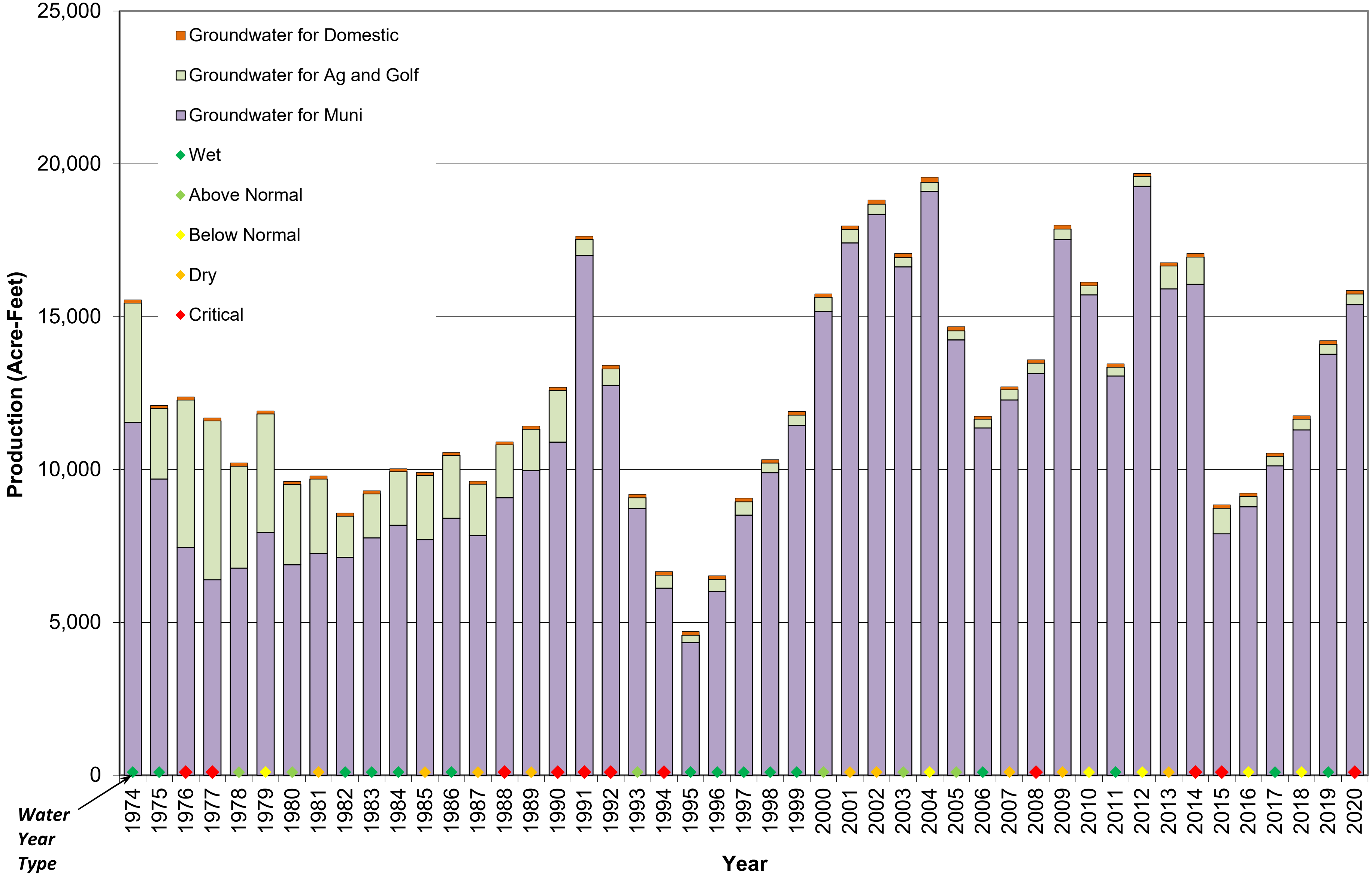


Figure 5-6
Map of Municipal Wells
Livermore Valley Groundwater Basin

FIGURE 5-7
GROUNDWATER USE FOR 1974 TO 2020 WATER YEARS
LIVERMORE VALLEY GROUNDWATER BASIN



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