

9 Land Use

9.1 Program Description

This section describes Zone 7's Land Use Monitoring Program for the 2014 WY (October 1, 2013 through September 30, 2014). Zone 7 monitors land use changes in the Valley as part of the long-range groundwater basin management program. The purpose of the program is to map and quantify Main Basin land use for areal recharge calculations (e.g., rainfall recharge, applied water recharge, and unmetered groundwater pumping for agriculture).

The Land Use Monitoring Program identifies significant changes in land use with an emphasis on changes in impervious areas and the volume and quality of irrigation water that could impact the volume or quality of water recharging the Main Basin. Land use data are derived from aerial photography (most recent available are June 2014), permit applications, field observations, and City and County planning documents. New development plans and their associated California Environmental Quality Act (CEQA) documentation are reviewed by Zone 7 staff to evaluate their potential impact to groundwater supply and quality. The potential supply impacts can be from new or increased pumping/losses or from a reduction in the Main Basin's recharge capacity.

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
- 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:

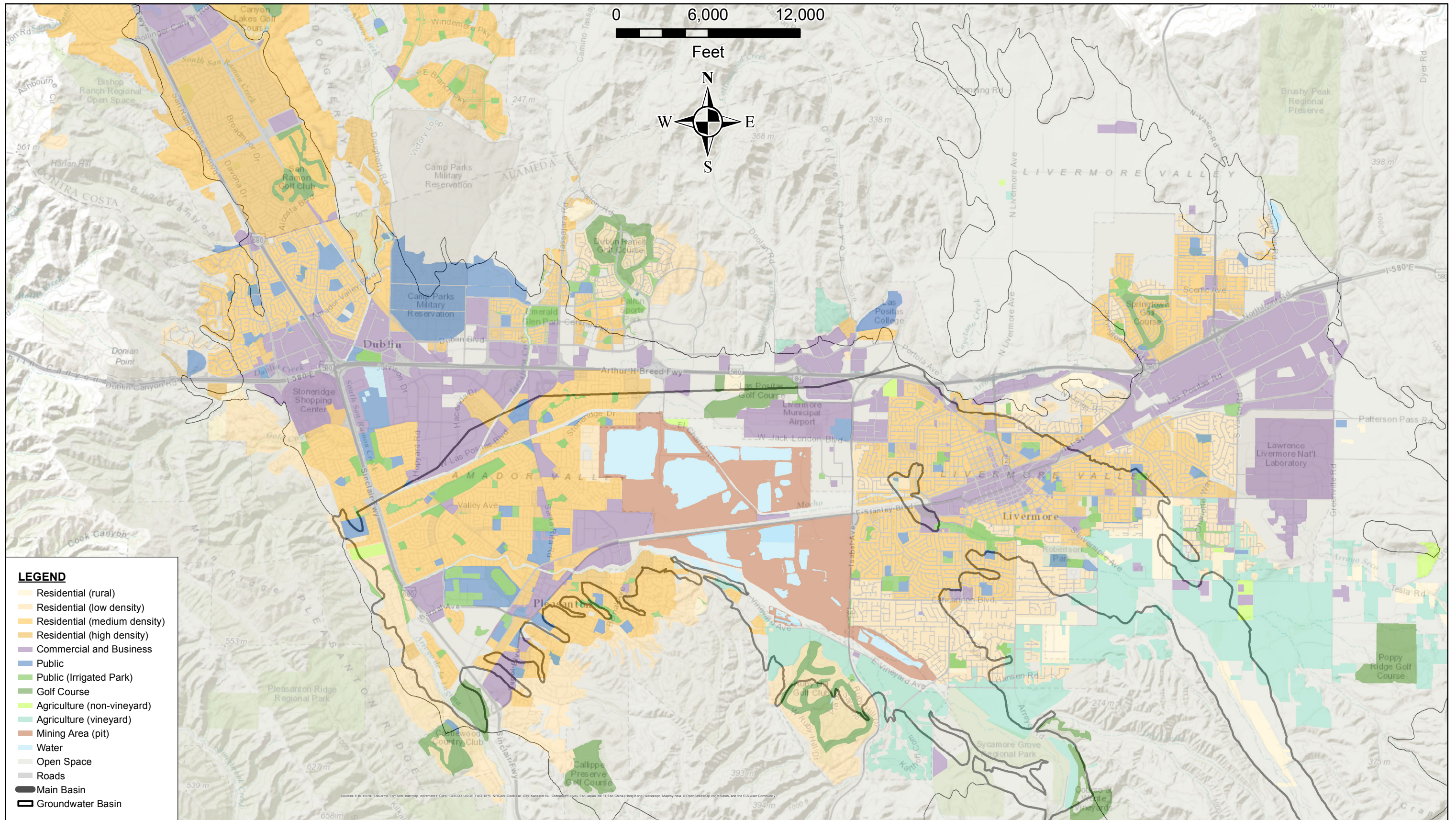
- Delivered (municipal) water
- Groundwater
- Recycled water

Land use categories and source water type 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 (*Section 10.3.2.2*).

9.2 2014 Results

The 2014 WY land use areas were mapped and are shown in *Figure 9-1*. For the 2014 WY, land use remained relatively unchanged from the 2013 WY, and in fact still remains very similar to the land use of the mid-2000s. The only major change in land use over the last two years was the addition of the commercial and residential development along El Charro and Fallon Roads, either side of Interstate 580, and the addition of some newly planted and irrigated vineyard in South Livermore.

No additional potentially significant impacts to the groundwater supply or quality were identified by Zone 7's project review efforts in the 2014 WY.



ZONE 7 WATER AGENCY
100 North Canyons Parkway
Livermore, CA

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REVIEWED: MK

FILE: E:\MONITOR\Land Use\2014WY\Fig09-1-LUMap2014.mxd

SCALE: 1 in = 6,000 ft

DATE: Apr 15, 2015

Figure 9-1
Livermore Valley Land Use
2014 Water Year
Livermore Valley Groundwater Basin