Central Coast Hydrologic Region
Felton Area Groundwater Basin

California’s Groundwater
Bulletin 118

Felton Area Groundwater Basin

- Groundwater Basin Number: 3-50
- County: Santa Cruz
- Surface Area: 1156 acres (2 square miles)

Basin Boundaries and Hydrology
The Felton Area Groundwater Basin is mapped as the alluvium along the San Lorenzo River, Zayante Creek, Newell Creek, and Love Creek in the Santa Cruz Mountains in central Santa Cruz County. It includes portions of the communities of Felton, Mount Harmon, Olympia, Brackney and Ben Lomond. The basin boundary is the contact of the Quaternary alluvium with the surrounding Miocene marine sedimentary units (Jennings 1961). Elevation ranges from about 250 feet to 400 feet. The basin boundary confidence is considered low due to variations in thickness of the alluvium and the fact that most of the wells in the area (the basin and surrounding area) produce water from the underlying sedimentary rocks. Average precipitation values range from 43 to 45 inches.

Hydrogeologic Information

Water Bearing Formations
Based on a review of water well drillers reports on file in the San Joaquin District, the primary water bearing formations in the basin are the underlying sedimentary units. The Santa Margarita Sandstone and the Lompico Sandstone are reported to be the primary producing aquifers for wells used by SLVWD (Ellis 1993). In a report on the Scotts Valley area, the specific yield of the Lompico Sandstone was estimated at six percent and the Santa Margarita Sandstone at 12 percent (Todd Engineers 1996). No published information was found on the alluvial deposits above the sedimentary units.

Restrictive Structures
For wells developing water from the sedimentary units, the structural attitude of the water producing formations will very likely affect the production of water. The general area is also known to be crossed by faults which may affect groundwater occurrence and movement.

Recharge Areas
Groundwater recharge occurs from percolation of precipitation, seepage from streams, and subsurface flow from adjacent areas and formations. Groundwater movement is indicated to generally reflect the surface drainage (Ellis 1992).

Groundwater Level Trends
Hydrographs for six wells provided by SLVWD (2000) show water levels from 1981 to 2000 to be relatively constant but with a slight water level rise during the wet period of 1995 to 2000.

Groundwater Storage
No information on groundwater storage in the basin was found.

Last update 2/27/04
Groundwater Budget (Type C)
Information, specific to the basin, is insufficient due to the extent of the water bearing formations that provide groundwater outside of the basin area. Pumping records from SLVWD indicate that, on average, their agency pumped approximately 900 af per year from 1994 to 2000 (SLVWD 2000).

Groundwater Quality
Characterization. The primary ions in the groundwater in and around the basin are calcium and bicarbonate (Muir 1981). The range of TDS in six wells used by SLVWD was reported at 69 to 400mg/L (SLVWD 2000).

Impairments. Iron and manganese are reported at objectionable levels on a seasonal basis in several wells used by SLVWD (Ellis 1992 and SLVWD 2000).

Well Production Characteristics

<table>
<thead>
<tr>
<th>Well yields (gal/min)</th>
<th>Municipal/Irrigation</th>
<th>Average: 244 (six wells)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range: less than 50 – 825</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Total depths (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal/Irrigation</td>
</tr>
<tr>
<td>Average: 245 (nine wells)</td>
</tr>
</tbody>
</table>

Active Monitoring Data

<table>
<thead>
<tr>
<th>Agency</th>
<th>Parameter</th>
<th>Number of wells /measurement frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Lorenzo Valley Water District</td>
<td>Groundwater levels</td>
<td>6 Monthly</td>
</tr>
<tr>
<td>San Lorenzo Valley Water District</td>
<td>Miscellaneous water quality</td>
<td>Varies</td>
</tr>
<tr>
<td>Department of Health Services and cooperators</td>
<td>Title 22 water quality</td>
<td>2</td>
</tr>
</tbody>
</table>

Basin Management

Groundwater management: None

Water agencies

Public: San Lorenzo Valley Water District
Private: American Waters, (formerly Citizens Utilities Co. of California)
References Cited


Errata

Changes made to the basin description will be noted here.