

Dealing with valley water issues

The Santa Maria Valley sits on one of the greatest groundwater resources in the coastal region of the western United States.

The basin that underlies our valley contains approximately 2.5 million acre-feet of water in storage - 814 billion gallons.

Water quality and water quantity are the primary issues in any discussion of usage. In the late 1980s, I was part of an exhaustive communitywide effort to prepare a white paper that addressed these two items in the Santa Maria Valley.

Over the past 10 years, water purveyors have been engaged in legal battles to adjudicate the basin. It seems like a good time to review water basics for the valley.

The amount of water that can be extracted each year on a long-term basis without causing a decline in the basin is thought to be around 70,000 acre-feet. This is referred to as safe yield, when usage is equal to recharge.

Overdraft occurs when the basin is required to deliver more water than the safe yield. In 1990, prior to the delivery of State Water, the overdraft was believed to be around 20,000 acre-feet per year.

There are two major users of water within the basin. Agriculture is thought to utilize around 85 percent of the water available, and urban users are believed to use the remainder.

Since State Water deliveries commenced in 1997, it is now widely believed that the basin is in or nearly in balance, and that no overdraft is occurring.

A benchmark water quality standard utilized in the water industry is the concentration of total dissolved solids (TDS). In brief, TDS is comprised of all organic and inorganic compounds that exist in molecular form. TDS is often an indicator of dissolved salt compounds. The state has adopted a secondary standard for TDS of 500 parts per million (ppm).

A secondary standard is an aesthetic standard. This is meant to infer that the water poses no health risks but may not be at a standard that untreated usage continues.

Water pumped for domestic purposes in the valley ranges from 600 ppm to 800 ppm. Water delivered at that level of TDS caused many of the urban users to treat the water with water softeners.

Home water softeners require salt be utilized for the softening process. This salt eventually ends up back in the groundwater basin. Agricultural uses also add salt to the basin.

State Water has a TDS level of 230 to 300 ppm. By importing this higher-quality water, the health of the basin improves. Not only is the raw water lower in TDS, but because of a reduced need for water softening, less salt is added through the softening process.

A recent discussion with one of the farming interests located directly adjacent to the city's wastewater treatment plant confirms that TDS levels in that vicinity have declined.

The city of Santa Maria delivers the maximum amount of State Water that is available before blending in water from city wells. Both sources are of excellent quality when compared to all primary health standards.

The cost to import State Water has not been insignificant. Water throughout California is becoming more expensive. Due to the methods employed by the city to pay for and finance the importation of State Water, the city's rates are actually lower than some agencies, such as Lompoc, whose voters declined State Water.

As we look back at the voters' decision to import State Water, I believe it is clear there are significant improvements in water quality and water quantity, and at a cost that is reasonable to the consumer.

In future columns I will explain many of the water issues more thoroughly.

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October 11, 2007