

Nipomo basin groundwater takes sizable drop

By Mike Hodgson/Associate Editor

Water in the Nipomo groundwater basin dropped 27 percent from April to October last year, from 93,000 acre-feet to 66,000 acre-feet, according to figures released Thursday by the Nipomo Community Services District.

While the drop surprised district officials, no one is sure if the decrease is relatively normal or an aberration.

However, the October level is just 6,000 acre-feet above the level many experts believe would result in saltwater intrusion from the ocean.

That intrusion could have devastating effects on the aquifer, because areas invaded by saltwater could no longer be used to store potable water, said Bruce Buel, NCSO general manager.

"It just was mind-boggling," Buel said of the storage analysis conducted by Science Applications International Corp., headquartered in San Diego. "We didn't expect half of that, much less nearly 30,000 acre-feet."

This marks the first time the district has taken storage level measurements in October and compared them to measurements taken in April.

"We're trying to understand the storage of the basin," Buel said, noting the district has been measuring water levels in the groundwater basin since 1975.

"So we have a 32-year record of water level measurements. This is literally the first time we've calculated water storage in the fall.

"We were quite surprised," he said. "We believed and expected water in storage would decrease in the six-month interval, but we were surprised it decreased as much as it did."

San Luis Obispo County records the water levels in 52 wells, most of them private and inactive, so they are not pumping water at the time the measurements are taken, which could affect the readings.

To compute the storage in the groundwater basin, SAIC feeds those levels into a computer that creates an isohyral, or contour, map of the water levels in the aquifer.

Using those figures in a formula including sea level and bedrock level, analysts can compute the number of acre-feet stored in the basin, Buel said.

An acre-foot is about 326,000 gallons - enough to cover a football field one foot deep - and is the amount of water generally needed to supply the annual needs of four to 10 people in an urban environment.

With more water now being drawn out of the Nipomo aquifer - a subregion of the Santa Maria Valley Groundwater Basin that stretches from Santa Maria to the Five Cities area - NCSO officials are worried.

Not only is the community exceeding its supply of water for current uses, but not enough water is available for full build-out of the community. And saltwater intrusion also could mean less storage space for potable water, further reducing future supplies.

To deal with the looming water shortage, NCSD is forging ahead on a plan to buy surplus State Water from the city of Santa Maria for short-term needs, and is planning to build a desalination plant for long-term needs.

At the same time, the district is hammering out emergency water-shortage regulations that would trigger voluntary conservation measures at Stage 1.

Increasingly stringent mandatory measures - enforced by rate surcharges, fines and even jail time - would apply to stages 2 through 4.

A storage level of 70,000 acre-feet or less would trigger Stage 2 conservation measures, but Buel said that even if the regulations were in place, the 66,000 acre-feet recorded in October would not initiate a Stage 2 warning.

Instead, any decision on the level of severity would be made after the April figures are computed, usually in May. That's because groundwater levels are expected to be higher in spring and lower in fall.

"It wouldn't make sense to impose water conservation restrictions in October because we would expect levels to be lower," Buel said. "This midpoint (measurement) is sort of the 'canary in the coal mine' sort of deal."

He added, "If we have a barn-burner of a winter with lots of rain, levels could be back up by spring."

A meeting to explain the proposed emergency water shortage regulations and obtain public feedback is set for 6:30 p.m. Jan. 30 at Nipomo High School on North Thompson Road.

If, as expected, the regulations are approved by NCSD directors as early as April, they would become immediately effective, Buel said.

If the April groundwater measurements are received by May 1 and show a deficiency, the district could determine the water shortage stage May 14, and conservation measures could kick in as early as May 18, he said.

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