

Geothermal plant may threaten Mammoth groundwater

By Chris Clarke, KCET

A 33-megawatt geothermal power plant approved in August by the Bureau of Land Management and U.S. Forest Service has the town of Mammoth Lakes worried about its drinking water supply.

Ormat Technologies' Casa Diablo IV Geothermal Energy Project would draw 29,000 acre-feet of extremely hot water per year from deep within the rock layers of the tectonically active region, using up to 16 newly drilled wells.

But that geothermally heated aquifer lies beneath the cold water aquifer from which Mammoth Lakes draws its drinking water, and locals are worried that the Ormat's pumping could draw down the cold water aquifer: a troubling prospect in this drought as locals become increasingly dependent on groundwater.

Most of the water pumped by Ormat will be reinjected into the geothermal aquifer, so that aside from losses to steam and leakage, the actual volume of water in the hot aquifer may not change by much. But the reinjected geothermal water will be much cooler. The Mammoth Community Water District (MCWD), which serves the resort town of 8,000 or so residents with drinking water and wastewater services, has expressed concerns that reinjecting cooler water into the geothermal aquifer might reduce pressure in that aquifer, resulting in a drawdown of the cold water aquifer above it.

That would mean less potable groundwater within reach of MCWD's wells. And that's a problem. For the last two years, with spring snowmelt much reduced, the water district has been forced to increase its reliance on pumping as its surface water sources like Mammoth Creek have dwindled.

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