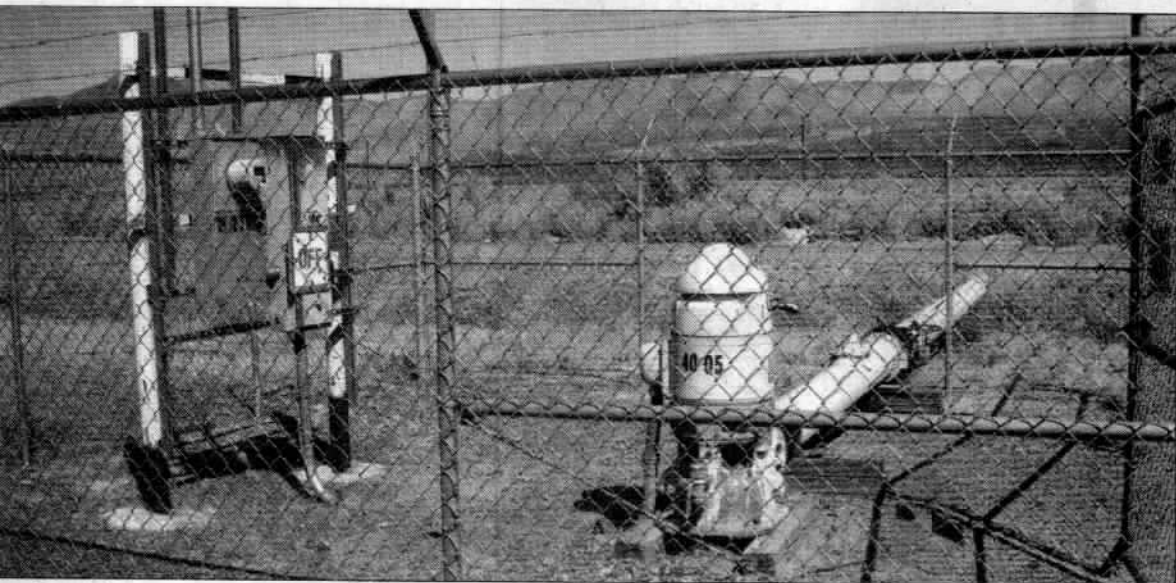


Headway made on Green Book update



County includes new protocols in draft revisions; LADWP still not likely to agree on all proposals

ENYO
REGISTER

By Jon Klusmire

Register Staff

7-20-05

Use a dip stick to measure the amount of water, then use a yard stick to measure the amount of vegetation.

That two-step operation is the basis of what might become a radical change in the approach to managing groundwater pumping in the Owens Valley.

yo County has proposed using the amount of water in an aquifer as one part of the formula that would determine the level and duration of groundwater pumping from wells such as this one south of Big Pine. Photo by Jon Klusmire

See PLAN, page 5

PLAN

Continued from front page

Inyo County Water Department Director Tom Brooks presented the outlines of a preliminary, draft pumping management protocol on Tuesday that, for the first time, includes the amount of water in an underground aquifer in the calculations that would determine how much water could be pumped from that aquifer.

The inclusion of a "depth-to-water" measurement in the draft, proposed pumping protocol was presented as part of the department's ongoing work to update the Green Book, the technical manual which outlines, in detail, the management guidelines and regulations that govern both groundwater and surface water management in the Owens Valley.

Besides groundwater levels, the preliminary pumping protocol proposes that after a wellfield has seen a certain amount of pumping that stresses vegetation, pumping would be curtailed until the vegetation comes back to life, literally, and grows back above baseline levels. Only then would pumping be allowed to resume and, once again, the amount of pumping could be partially determined by how much water is in the aquifer, and if plants' roots are reaching into that water.

Basing management of groundwater pumping, in part, on the amount of groundwater available is a common practice in most of the West, said Brooks. But aquifer levels and "depth-to-water" measurements are not mentioned in the Inyo-L.A. Long-Term Water Agreement or the Green Book.

That's one reason Brooks presented the proposed new protocols to the Board of Supervisors on Tuesday. He noted that the Water Department needed to know if it was going in the right direction, and one the supervisors were comfortable with, before devoting another massive amount of time to the proposal.

Brooks said the Water Department staff now has completed enough work on a wide range of potential Green Book revisions that it has "a substantial proposal" that could be presented to the Los Angeles Department of Water and Power.

"This is a good starting point," he said of the Green Book revisions crafted by the Water Department, "and they have merit."

However, they also involve policy questions that go beyond technical points. Brooks wanted the board to not only consider the potential policy changes that might spring from the draft, proposed pumping protocols, but also wanted the supervisors to be thinking about "what county policies are not negotiable" when it comes to the LTWA and the Green Book.

The supervisors will take at least two weeks to review the Water Department's work on the Green Book and the proposed new pumping protocols before offering their insights into where and how to proceed with the effort.

It will likely take some top-level policy decisions just to open talks about changing the Green Book, especially when it comes to the groundwater pumping provisions.

Brooks said after "informal talks" with the Bishop LADWP office, there appears to be some "irreconcilable differences" that cannot be worked out at the staff level. He said a meeting of the Standing Committee, which is made up of elected officials and staff from Los Angeles and Inyo County, would probably be needed to determine what direction talks would take regarding revising the Green Book.

Inyo County has tried to use "depth-to-water" measurements and calculations to critique and question LADWP's groundwater pumping plans. Consistently, LADWP has acknowledged the county research, but pointed out that the pumping plans are based on the guidelines in the Long-Term Water Agreement, and those guidelines do not include consideration of how much water is currently in an aquifer or wellfield, or the estimated impact of pumping on those water levels.

The LTWA relies on vegetation monitoring that drives "on/off" protocols for wells.

The proposed pumping protocols presented by Brooks would achieve the same overall goals of the LTWA, namely avoiding impacts created by groundwater pumping, providing Los Angeles with a steady, predictable water supply and getting the county and LADWP to "jointly manage" the valley's water resources.

Brooks said while the LTWA refers to the need to "mitigate" any impacts, "the preferred mitigation is to avoid impacts" in the first place.

So, instead of using the "on/off" protocols, the Water Department proposed a plan that would allow pumping, but entails "managed stress and managed recovery" in wellfields.

That would be accomplished by

creating a "target" for the depth of the water in an aquifer in a wellfield. That "target" would probably have water in or above the root zone of plants in the wellfield.

Then, LADWP could pump water until it hits the "floor" measurement. That amount of water reflects the level, which is unique to each wellfield, where water levels can be drawn down without creating permanent harm to vegetation. However, the key to not creating that harm is setting the "floor" level correctly, said Brooks, so it represents a level from which the aquifer and the vegetation can recover once pumping stops. The county has good data on how long it takes an aquifer to recover based on time and runoff and recharge, which would be used to set the "floor" number, he added.

So, LADWP could pump an aquifer down to the "floor" level, then there would be no more pumping until the water levels rose to and above the "target" level. Water would remain above that level, Brooks noted, until vegetation was shown to be responding to the high water table.

Or, LADWP can pump just enough water to keep the water levels from dropping below the first "target." Since that level of pumping would not impact vegetation, it could continue for as long as it didn't drop water levels below

the "target" level.

Brooks said the vegetation would be stressed when the water level drops below the "target" level at the root zones, but since most vegetation typically holds enough water moisture for about two years, there would be time for the vegetation to recover from the initial stress of a lower water table.

The plan would also be flexible. Instead of pumping to the "floor" in one year, for example, LADWP could pump less over several years. Or, if a high-runoff year increases water tables higher than the "recovery time" estimate, that extra water could be pumped without impacting the overall "recovery" timeline, Brooks noted.

He stressed that the examples he used were extremely basic and simple and only intended to get the general idea across, and that determining the exact water levels in aquifers and wellfields and other data would require a large investment of time by his staff.

The other key point about the proposed, preliminary pumping protocols, and the one that would make or break the entire scheme, is that the Water Department and LADWP would get together each year and study the data from the wellfields, and even individual wells, and make adjustments to either the two depth-to-water measurements (the "target" and the "floor"), pumping amounts or the

"recovery time" necessary before allowing pumping to resume.

That, Brooks pointed out, would be a complete change in how the two agencies now work. It has evolved that the county now functions as more of "a regulatory" agency that reacts to LADWP's pumping proposals.

Another key point of the new management proposal would include managing for grasses and alkali meadows. Brooks said that since the meadows require high water tables to keep green, if aquifers are supplying those meadow plants with enough water, shrubs, trees and other plants would more than likely also be getting enough groundwater.

By setting parameters for each wellfield, Brooks said the plan would give LADWP "flexibility" with its pumping program to meet those parameters, while keeping the county out of the nuts-and-bolts pumping details. "We have no business getting into DWP's operational decisions," said Brooks.

However, the plan could lead to LADWP changing the way it pumps certain wells and wellfields, said Brooks. Plus, over the long-term, LADWP might consider different well locations, new wells and other major modifications that would increase efficiency and seek to create wellfields that generate water and have minimal impact on aquifer levels and vegetation.