

# Inyo, LADWP plunge into water plan

## First efforts center on dumping 'On/Off' pump triggers and including aquifer levels in calculations

By Jon Klusmire 11-3-07  
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Inyo County and the Los Angeles Department of Water and Power are ready to take the plunge. Together. The first step to revise the Green

Book in an effort to improve groundwater pumping management is a huge leap away from the current system.

Instead of relying on vegetation's response to water levels, the LADWP and the county Water Department have decided the cornerstone of future groundwater management and pumping will be based on "depth to water" calculations that reveal exactly where groundwater levels are in relation to the top of the ground.

Although there will still be a hefty vegetation monitoring aspect to proposed changes in the Green Book's technical directions, measuring how

far the water table has dropped or risen and managing to maintain specified water table levels is a victory for the Inyo County Water Department.

At the start of the effort to revise the Green Book, Water Department Director Tom Brooks outlined a water-table-based groundwater management plan as a more flexible and more precise approach to managing groundwater and pumping.

At a meeting of the Inyo/L.A. Technical Group Thursday, work groups made up of staffers from both entities revealed some of the tasks being undertaken to update and re-

write the Green Book, which contains the technical standards and guidelines for managing pumping and groundwater management in Inyo County.

Currently, a complex set of factors go into "On/Off" procedures which, as the name implies, determine whether a well can be turned on and pump water, or be idled. The main components of the "On/Off" protocols involve soil moisture, vegetation coverage and other projections and calculations as laid out in the Long-Term Water Agreement.

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## WATER

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The first "work plan" outlines the effort to "develop new or improved operational trigger mechanisms for pumping wells," and states the consensus concerns with the current "On/Off" protocols:

"The On/Off procedures have conceptual deficiencies as well as methods and provisions that interfere with the practical implementation of the Green Book and associated management of groundwater pumping."

Putting that measured comment in more straightforward language was Aaron Steinwand, the science coordinator for the county Water Department: "None of us are very happy with it," he said of the On/Off methods, and both groups are working to improve the process by essentially "finding a substitute" method. That new approach would link pumping, depth-to-water and vegetation monitoring.

Brooks had noted previously that a system based on measurements of where the water levels are has some advantages over the current models that rely on vegetation and soil moisture models.

First, it's easy to find out the level of an aquifer. Using existing test wells or monitoring wells and technology already in use, the exact level of the groundwater can be determined. Plus, there isn't much room for subjective judgements when it comes to depth-to-water measurements; the water is either four feet below the surface, or 12 feet below the surface.

Then, as time goes on, the county and LADWP can try to manage pumping in order to hit an agreed-to target for the most ecological beneficial groundwater level for each wellfield. Those water levels can move up and down significantly over time because of recharge, runoff, pumping and other factors. But the key is that both agencies will be managing the wellfield and pumping plans with a common water-level target in mind that will, if set correctly, minimize environmental damage while providing reliable water supplies for LADWP. Those are the two primary goals of the Long-Term Water Agreement - avoid environmental impacts in the Owens Valley and provide a reliable supply of water for Los Angeles.

The water-table-based groundwater management effort is quite a contrast to the current operation. Objective, scientific measuring of groundwater levels differs



Finding a better method for allowing LADWP's water wells to pump water without imposing significant harm on the environment is the main task being undertaken during a revision to the Green Book. The technical manual for pumping and groundwater management is how the county and LADWP determine if wells, such as this one south of Big Pine, should be turned on or off. Photo by Jon Klusmire

dramatically from the current process where vegetation must be monitored and analyzed and determinations must be made about the relative health or lack of health of the vegetation, and whether there is more or less vegetation in each monitoring site.

The type of vegetation must also be tracked, and judgements made about the value of sagebrush versus grasses, for example.

The work plan for devising a new well trigger based mostly on groundwater measurements includes a number of steps, and is still a work in progress, noted both Brooks and Gene Coufal, manager of the LADWP Aqueduct Business Group. Staff members from both agencies are working jointly on the Green Book update, and they said

that if their research or new ideas take them in a different direction than what has been laid out, they will follow the best science and adjust the work plans as needed.

Brooks, in response to calls to allow comments and suggestions from the public on

the three Green Book work plans recently made public, said those comments could come at any time from anyone. "I'll take a good idea anytime I can get one,"

Brooks said.

Once again, though, Brooks and Coufal agreed that stopping the work process each time to allow the public to comment on the dozens of elements in the Green Book revision would slow the effort, which is slated to be complete in less than three years.

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- Tom Brooks,  
Director, Inyo County  
Water Department