

High tech water management could save energy

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Watsonville participates in PG&E pilot project

The same technology used in air-traffic control systems is going to be applied to how Watsonville manages its water supply, with the goal of saving the city as much as \$100,000 a year in reduced energy consumption.

Watsonville and Santa Maria were selected from 113 cities from

Santa Cruz to Santa Barbara that were screened for participation in PG&E's PowerSaving Partners Program. The project will be administered by Envirotech Services Inc., an Oklahoma company with sights on expanding in California.

The program is PG&E's version

of "demand-side management bidding" — a process being implemented across the country, in which a utility solicits energy-saving proposals from other companies to offset the need to build new power plants. The pilot program was begun last September.

"We talked to a lot of different communities," said Dr. Blaine Reely, president of Envirotech. "Some (water) systems met the criteria, but (the cities) weren't interested. Some simply didn't meet the criteria." Watsonville met both conditions. Reely also credited the

enthusiasm of the city's Water Division manager. "John (McGuire) had the highest level of energy" for the program, Reely said.

"We're looking forward to saving on gas and electricity costs to the city," said McGuire. The department's current budget is \$4.4 mil-

lion.

He explained that, "The deeper the well, the more it costs (to pump out the water). Energy usage is directly proportional to the vertical distance (the depth) you have to move water."

McGuire said Watsonville was selected for the program because of its "almost closed basin, with no

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outside interference and enough properly-situated wells to provide pumping flexibility."

Using a computer model, Envirotech researchers will look at which and at what times wells are pumping groundwater, as well as fluctuating groundwater levels, over 12 monthly planning periods.

Groundwater resource-management systems will be developed and implemented after data is evaluated on the operational, environmental, economic, legal and political aspects of the city's water-supply system. Based on the analyses, a model will be developed that can be used to get the most for the least cost from the system.

The concept of groundwater management implies a balance between getting the water out of the ground at minimum cost while simultaneously protecting the groundwater supply. Envirotech's project proposal suggests that individually the two processes can't achieve this goal, but that linked together, an ideal scenario is possible.

Reely said his company's technology is perfectly suited for application to water systems. He also said the company's philosophy and McGuire's seemed to be the same: that technology can benefit the city, not only in terms of saving money, but also by enhancing the protection of the basin's groundwater supplies.

The program will not cost the city a cent. Envirotech will put up all the money, with a PG&E reimbursement based on how much money Watsonville saves.

The program is scheduled to start up the first of the year. Data will begin to be compiled next month. Envirotech has three years in which to install the energy-efficient equipment and measures outlined in its project proposal. PG&E will begin reimbursing the company as soon as the equipment is in and it has verified resultant energy savings.