

Fresno City Hall sees recharge basins as part of water solution

By George
Hostetter

Recharge basins figure to have a starring role as Fresno City Hall begins its series of water forums titled Recharge Fresno.

Ba-dum-chhhh!

Joking aside, those big holes with sandy bottoms may turn out to be one of the city's best arguments as it tries to convince Fresnans to foot a large bill for a revamped water system. They're key to replenishing the city's invaluable but over-burdened aquifer. They could be part of the answer to Fresno's chronic shortage of green space.

First things first.

City Hall on Monday will host the first of four public meetings on Fresno's water future. This one is at Hoover High School in northeast Fresno and will cover that free-market pillar, supply and demand.

The events continue every two weeks until early November, each with a different topic. The finale is at City Hall. The City Council at some point almost certainly will debate water-rate hikes.

Seeking consensus

These forums have a long and contentious pedigree. In essence, city officials decided they didn't want to test former Fresno County Supervisor Doug Vagim, a persistent and effective City Hall critic, by putting higher rates to a vote of the people. The forums are part of a legal settlement that could either end the Vagim-city conflict or merely serve as an intermission.

City Manager Bruce Rudd said he expects the meetings to build a community consensus on the need for improvements.

"The short-term satisfaction of lower rates will be forgotten if you can't turn on your tap and get enough water," Rudd said.

Each forum is two and a half hours -- a total of 10 hours of instructing, disputing, questioning and answering on water in a setting that, city officials promise, will be inclusive of the audience. But even 10 hours may not be enough. Anyone sitting through years of council workshops on water knows the issues are seemingly endless.

For example, the city's proposed \$410 million system upgrade of last summer included a \$225 million surface water treatment plant slated for southeast Fresno. This project got put on hold with the Vagim peace treaty, but uncertainties remain: Is the plant too big? Why the southeast? Is it little more than a developer gift?

The plant, Rudd said, "is the elephant in the room."

Importance of basins

But there's much more to City Hall's hopes. City officials are as passionate about infrastructure -- pipes, pumps, treatment, storage -- as they are the southeast plant.

And that includes recharge basins.

"The plan has always been to have some additional recharge capacity as the city grows," Assistant Public Utilities Director Martin Querin said. "That means recharge basins controlled by the city."

The math is a bit of a pain, but shows why recharge basins are central to the current water wars.

Querin said the city uses about 1,300 acres of recharge basins -- city-owned or in partnership with those belonging to the Fresno Metropolitan Flood Control District or Fresno Irrigation District. Most of the city's 300 or so acres are to be found in Leaky Acres, the system of ponds west of Fresno Yosemite International Airport.

The recharge-basin model is simple: The city pumps some of its allotted water from the San Joaquin or Kings rivers to a recharge basin. The water percolates into the ground. When needed, the water is pumped to the surface, treated and sent on its way to residents and businesses.

The problem is that Fresno, now with more than a half-million people, withdraws far more groundwater than it deposits in a typical year. The groundwater level has been dropping for decades. Such a dangerous trend line yields to no voter's anger.

Yet, city officials, while concerned, aren't in despair.

Fresno has contractual rights to about 60,000 acre-feet of water from the San Joaquin River and about 120,000 acre-feet from the Kings River. (An acre-foot is about 325,000 gallons and, in pre-conservation days, was viewed as the typical annual consumption of a family of four.)

That's roughly 180,000 acre-feet in Fresno's hands during a normal year of rain -- bought and paid for by ratepayers, city officials are quick to note. The city uses only 130,000 to 135,000 acre-feet a year, Querin said.

Treatment a key

Then why all this water heartburn?

Two reasons.

First, that 180,000 acre-feet (nearly 60 billion gallons) isn't easy to use. There are a ton of transportation and timing challenges in getting it to Fresno's taps. These will be explored during the forums. But for now, it's sufficient to note that the water must be treated before it's consumed. That's what surface water treatment plants do.

But Fresno now has only one such plant of significant size, located in the northeast part of town. City Hall's long-term goal is to double the size of the northeast plant and get the southeast plant built (the latter would be a third bigger than the expanded northeast plant). These two plants, running full steam and blessed with an appropriate system of delivery pipes, could treat 130,000 acre-feet a year.

All of Fresno's water needs met in a typical rain year with nothing but surface water plus 40,000 or 50,000 acre-feet left over -- the prospect of this has city officials giddy. They see Fresno becoming an economic powerhouse in a region increasingly desperate for water.

But that southeast surface water treatment plant has to get built and the northeast plant has to be expanded. The dream dies if the public doesn't buy into it.

The second reason for City Hall's water heartburn is tied to the recharge basins.

The current system of basins can handle about 50,000 acre-feet in a typical rain year. That doesn't mean the system handles exclusively river water belonging to the city. The Flood Control District and FID have their own water missions. These inevitably eat into how much Fresno-bought river water can be percolated into the aquifer.

The importance of the current basin system's limitations is this:

Fresno now has only one modest-sized surface water treatment plant online. The recharge basin system can't handle anywhere close to the 180,000 acre-feet that Fresno ratepayers buy in a typical year. That means Fresno watches 100,000 to 110,000 acre-feet of its precious water flow downstream to other users simply because the city can't find the political will to capture it.

City officials paint this picture as the ideal:

The surface water treatment plants get built (southeast) or expanded (northeast). The rains return. Conservation measures become second nature across the city. Surface water fulfills 100% of the city's annual needs.

The budding reclaimed water system at the wastewater treatment plant west of town takes off. Within a decade, Fresno is annually using 25,000 acre-feet of reclaimed water for things like landscaping (uses now met with normal sources of water). That leaves even more unused surface water.

The system of recharge basins grows. By how much? Nobody knows yet. But since City Hall's mantra is "make every drop count," the basins in a wet year might have to handle far more than 50,000 acre-feet. That would be exclusively water belonging to Fresno through its two river contracts.

All in all, that's a lot of water percolating into an aquifer that, except in dry years, would no longer suffer from a city of Fresno sucking hard on it.

And, the city manager said, there's no reason why those new Fresno-owned recharge basins shouldn't have park-like amenities.

"People could gather and enjoy the outdoors," Rudd said. "It would be a two-fer."

If you go

What: Recharge Fresno water forum

Topic: Fresno's water supply issues and needs

Where: Hoover High School, 5550 N. First St.

When: Monday, 6 p.m. to 8:30 p.m.

Contact George Hostetter: ghostetter@fresnobee.com, (559) 441-6272 or @George Hostetter on Twitter.

Copyright

© 2014 www.fresnobee.com and wire service sources. All Rights Reserved. <http://www.fresnobee.com>