Fresno City Council to hear about river-water deliveries

THE CITY BEAT GEORGE HOSTETTER

Posted by George Hostetter on May 16, 2015

Billions of gallons of water are coming to Fresno. The City Council on Thursday will figure out what to do with them.

The item before the council is simple: Should Fresno buy nearly 3,000 acre feet of water from Millerton Lake?

California, of course, is in the middle of a fourth straight year of terrible drought. Water is precious everywhere. Conservation is the name of the game. It's likely to be this way forever.

At the same time, the report going to the council from Public Utilities Director Thomas Esqueda sheds unexpected light on Fresno's water situation while raising a bunch of questions.

First, Esqueda's superb report.

Esqueda notes that Fresno meets the annual water needs of about 130,000 water customers (he calls them "accountholders"). This city of 510,000 people delivered 46.1 billion gallons in calendar year 2013 and 41.7 billion gallons in 2014.

Gov. Jerry Brown wants Fresno this year to cut its water consumption by 28% compared to 2013. As Esqueda notes, this means Fresnans this year must consume no more than 33.2 billion gallons.

At this point, allow me to put these figures into acre feet. An acre foot is about 326,000 gallons. It is standard unit of measurement in local water debate.

2013 -- 46.1 billion gallons -- 141,411 acre feet. 2014 -- 41.7 billion gallons -- 127,914 acre feet. 2015 -- 33.2 billion gallons -- 101,840 acre feet. (Our goal for the year; perhaps our new yardstick for decades to come.)

Fresno has entitlements to water from our two nearby lakes, Millerton and Pine Flat. When the lakes are full and there's a normal snowpack in the Sierra, we get about 60,000 acre feet from Millerton and about 120,000 acre feet from Pine Flat. Total: About 180,000 acre feet.

Obviously, 180,000 is a lot more than 141,411. It's nearly twice as much as 101,840. Let me emphasize that I know the 180,000 acre feet refers to normal rain eras, something we most definitely are not in now.

Esqueda and his recent predecessors at Public Utilities (Patrick Wiemiller and Martin McIntyre among them) have struggled to make full use of these 180,000 acre feet in a normal rain year. The reason for their woes is simple: River water is surface water (duh!), and surface water requires a higher level of treatment than groundwater (the aquifer) if it's to be consumed by humans.

You need a surface water treatment plant to make the quickest use of our river water. Fresno, for policy reasons too complex and contentious to go into here, had refused for decades to build enough treatment-plant capacity to make full and timely use of our river water.

Actually, for the longest time we refused to build any treatment-plant capacity.

Granted, another way to maximize our river water is put the stuff in ponding basins and let it percolate into the aquifer. The soil acts as a filter. We pump the water to the surface, give it a quick cleaning, then send it to consumers.

This is rather inexpensive and easy. It works fine as long as the aquifer is healthy.

And this is what Fresno has done. But we've never had enough ponding basins to handle 180,000 acre feet a year.

I hope you begin to get the picture as we develop the context for Esqueda's request this Thursday to the City Council.

On the one hand, Fresno is blessed with lots of water in normal rain years. We've got a dandy (if overused) aquifer. We've got big mountains to the east that have magnificent rivers. We've got a legal hold on a lot of that river water. For the most part, we've met our water needs with relatively little trouble.

On the other hand, we couldn't bring ourselves for 120 years to build surface water treatment plants even when we knew it was the smart thing to do. We couldn't bring ourselves to build enough ponding basins. We let tens of thousands of acre feet of our water go downstream in normal rain years with nary a tear.

Things began changing early in the 21st century during the first term of Mayor Alan Autry. City officials knew the old ways had to end. The big day was Sept. 16, 2004 when local leaders dedicated the new Northeast Surface Water Treatment Plant, located near Clovis North High School.

The plant's capacity was about 20 million gallons a day. Today, it's capacity is about 30 million gallons a day, although I get a sense from city documents that the plant's typical production is actually closer to the original 20 million gallons per day. Thirty million gallons is about 92 acre feet.

The city since then has also built a satellite surface water treatment plant on the east side of town, a plant that hasn't been used as regularly as the northeast plant. I gather from city documents that the satellite plant's capacity is four million gallons per day.

Let's assume the two plants can operate at the capacity of 30 million gallons a day (northeast plant) and four million gallons a day (satellite plant). Together, they could treat about 104 acre feet of river water per day.

Four things of note have happened in the last three months.

1.) The City Council on Feb. 26 approved a new rate plan to pay for a $429 million upgrade to the city's water system. The big-ticket item is a surface water treatment plant in southeast Fresno. The plant's capacity at some point should be 80 million gallons a day.

2.) Gov. Jerry Brown on April 1 issued an executive order mandating unprecedented cuts in water consumption by farmers and cities. That got state water regulators involved. Bottom line: Fresno must cut its consumption in 2015 compared to 2013 by 28%. Cities could face huge fines for failure to comply.

3.) The City Council on April 9 gave Wastewater Treatment Plant boss Steve Hogg the green light to build two satellite treatment plants, one near Granite Park in central Fresno, the other in Downtown. These plants are several years from going live. When they do, together they'll produce up to eight million gallons of recycled water per day suitable fo landscape irrigation. The satellite plants are part of a sophisticated recycled water system that City Hall is just now getting off the ground. When completed, the system is expected to deliver 25,000 acre feet of recycled water per year to various institutional/commercial/industrial customers now using potable (drinking) water.

4.) Farmers on Thursday, May 14, learned that they will get no regular deliveries from the Fresno Irrigation District. This is the first time in nearly a century that this has happened.

Where, you ask, am I going with this? After all, The Bee has reported these stories at length.

My point is simply to re-emphasize to you, the reader, key pieces of context as we head to Thursday's City Council

meeting and Thomas Esqueda's report.

* Fresnans really and truly agreed to fund those $429 million of water-system upgrades (including more ponding basins). That $200-million-plus surface water treatment plant really and truly is coming. When built, it'll be working on our behalf every year for decades and decades.

* Fresnans in the very near future will be able to fully exploit, for their own benefit, all or nearly all of those 180,000 acre feet of river water we get in normal rain years. And, yes, the rains will return.

* Fresnans in the very near future will be blessed with a recycled-water system that will produce 25,000 acre feet of guilt free water. That's water that we've already used in our homes and businesses, sent to the sewer farm, then cleaned to a degree that enables us to use it again. In other words, we'll soon have at our disposal an estimated 205,000 acre feet of water every year that the rains come in decent amounts.

* Fresnans in 2013 when we were (in theory) water-wasters of the worst kind used only about 141,000 acre feet. We have been ordered by Sacramento to cut that usage to 101,000 acre feet this year. We've been ordered to permanently change our water-consumption habits. Government is now using its power to deem almost all greenery at single-family residences (especially if the homes are on big lots) as violations of civic duty. Gov. Brown wants suburban lawns to disappear. That means they will.

* Lots of other water consumers in the Central San Joaquin Valley and throughout California aren't as fortunate as Fresno.

Back to Esqueda's report to the City Council.

Esqueda says Fresno this year is slated to get no water from Millerton Lake. However, he says city officials have been in talks with the Friant Water Authority and the federal Bureau of Reclamation. These talks have led to the proposed purchase of 2,990 acre feet of Millerton water.

The purchase is divided into two parts.

The first transaction is for 1,616 acre feet from the Friant Water Authority. The cost is $943,222.19. This works out to be $583.68 per acre foot. In a normal rain year, the city pays $64.19 per acre foot.

The second transaction is for 1,374 acre feet from the Bureau of Reclamation. The cost is $68,703.75. That works out to be $50 per acre foot.

Total things up and you have 2,990 acre feet to the price of $1,011,925.94, or about $338 per acre foot.

My first thought: It's always good to get more water in a drought.

My second thought: Do we still have to pay the Millerton Lake folks $21.40 per acre foot for 120,000 acre feet ($2,568,000) even in drought years when we don't get any regular deliveries? In other words, do we pay for nothing because we don't want to lose our entitlement to 120,000 acre feet when the rains return?

My third thought: Why is the Friant Water Authority water so much more expensive than the U.S. Bureau of Reclamation water?

But there's more to Esqueda's report.

He also notes that Fresno this year is getting 24,400 acre feet from Pine Flat.

That seems like a lot water. Don't get me wrong -- I'm not complaining. But I assumed we'd get zero from Pine Flat. Instead, we're getting a bit more than 20% of the amount we'd get in more normal times. How did this come to pass? And why are we getting 20% of our regular entitlement from Pine Flat (according to Saturday's Bee, the reservoir

currently holds 232,396 acre feet) and nothing of our regular allotment from Millerton Lake (185,606 acre feet, according to The Bee)? Are the downstream fish getting most of the Millerton Lake water?

Let's say the City Council agrees to buy the Millerton Lake water. That means Fresno in the 2015 drought year will get a total of 27,390 acre feet of river water. That's nearly nine billion gallons of water.

The plan is to take delivery of Pine Flat water until Sept. 30, then begin taking delivery of the Millerton Lake water on Oct. 1.

I'd been thinking that Fresno's northeast surface water treatment plant and its satellite treatment plant would be mothballed this year because of no river water. Instead, it looks like they'll be working pretty much 24/7 until the late fall. To my way of thinking, that's a miracle.

It also seems possible our impact on the groundwater level this year won't be any more severe than it was in the recent drought years, or at least not as severe as first feared.

If we cut our consumption to 101,840 acre feet this year, that means the 27,390 acre feet of river water will work out to be 26.9% of our water consumption.

In 2014, 27,390 acre feet would work out to be 21.4% of that year's total water consumption.

In 2013, 27,390 acre feet would work out to be 19.4% of that year's total water consumption.

You know what? Fresno even in the fourth year of a historic drought has surprising access to large amounts of water. And every day we're doing a better job of making better use of that water.

Here's my final question: Other than the fact that the Governor and Sacramento regulators insist that Fresnans conserve big time this year, what difference does it really make how much water we use in 2015?

We're filthy rich when it comes to water in normal rain years. Normal rain years will return. If they don't, we're doomed and it doesn't matter what we do in 2015.

Fresnans, at the urging of Mayor Ashley Swearengin and the City Council, rolled the dice on a $429 million upgrade of the water system and a huge recycled water system that costs millions. These actions all but guarantee that a Fresno that will have access in normal rain years to more than 200,000 acre feet of river water and recycled water, yet uses even in extravagant times only about two-thirds of that amount per year, will replenish its aquifer in a relatively short period.

Let's say the full replenishment of our aquifer would be 15 years if we really sacrifice in 2015, and 16 years if we sacrifice only a modest amount in 2015.

I'm not sure the Fresnans of 2050, blessed as they will be with a full aquifer and a great water system and superb water-consumption habits, will care one way or another.

Maybe city officials on Thursday will enlighten us.