

Meeting Minutes



South Hillsborough Wellfield – Balm Civic Association Meeting

Jan. 26, 2022

6:30 p.m.

SouthShore Regional Library

Attendees: Warren Hogg, Tampa Bay Water
Danielle Keirse, Tampa Bay Water
Jeffrey Trommer, WSP
Brandon Moore, Tampa Bay Water
Lorrie Belovich, Tampa Bay Water
Joey Schultz, Tampa Bay Water
Michelle Robinson, Dialogue Public Relations
8 Balm Civic Association residents

1. Purpose of the Meeting

The Balm Civic Association requested that Tampa Bay Water share the results of the aquifer performance test and provide an update on the proposed South Hillsborough Wellfield.

2. Meeting Summary

Brandon Moore opened the meeting by welcoming attendees and thanking the Balm Civic Association for the invitation. He introduced Warren Hogg, Tampa Bay Water's interim chief science and technical officer, who presented a PowerPoint presentation (see attached) and answered questions.

Mr. Hogg took questions throughout the presentation. Following is a summary of the questions received and answers provided. Comments are noted at the end of the summary.

Is the desalination plant still having problems?

No. The facility was rehabilitated in 2007 and is currently providing about 16 million gallons per day.

Regarding the desalination plant, are you monitoring for contamination, like the Piney Point incident?

Yes. The Department of Environmental Protection and the Environmental Protection Commission of Hillsborough County have multiple monitoring points in Tampa Bay, and we have access to the data. Additionally, we monitor the water before it comes into the desalination facility. If there is any concern with water quality in the Bay, we can simply turn the plant off.

Does the desalination plant have an NPDES permit? Does it require monitoring for compliance?

Yes, we do have a National Pollutant Discharge Elimination System, or NPDES, permit for the desalination plant. The twice-as-salty seawater left over from the desalination process is blended with the power plant's cooling water, achieving up to a 70-to-1 dilution ratio. We monitor salinity both instream and at the mouth of the discharge canal. By the time the blended water reaches the discharge canal, there is no measurable difference in salinity.

You mentioned you provide water to the region. Is it true that Pinellas County doesn't have any water sources? Is all our water going to Pinellas County and St. Petersburg?

Water from this proposed wellfield would stay locally because the demands in this area are increasing and will be supplemented by other water in the regional system. There is one wellfield that straddles Pinellas and Hillsborough counties. It provides about 15 million gallons per day to Pinellas County, which is a percentage of the total 60 million gallons of water they use per day on average. The rest of the water they receive comes from wellfields in Pasco and Hillsborough counties or from our desalination plant or surface water sources.

However, a significant portion of water that comes from Hillsborough County serves Hillsborough County. Hillsborough County currently uses approximately 71 million gallons per day on average, and with anticipated growth, is currently expected to use 91 million gallons per day by 2040.

Isn't it true that Pinellas County has no water and drained the wellfields in Pasco County?

Before 1998, before the formation of Tampa Bay Water, some members that we serve had their own wellfields and some subscribed to water from the West Coast Regional Water Supply Authority wellfield. The actual average pumping rate from those combined permits was around 160 million gallons per day, which was not an environmentally sustainable quantity.

With the formation of Tampa Bay Water, those governments sold their wellfields to the regional utility. We developed alternative water supplies, like river water and desalinated seawater, so we could gradually reduce wellfield pumping. We have kept production from those 11 wellfields below 90 million gallons per day for the past 10 years, and as a result, the environment has recovered. Water levels in lakes and wetlands have fully recovered, and our permit was just renewed for 90 million gallons per day for the next 10 years.

Are your monitoring effort results available to the public?

Yes. Our website, www.tampabaywater.org, has reports and information on the Recovery Assessment. Additionally, each month, Tampa Bay Water posts its board agenda package on the website. It contains reports on water production, water quality, environmental monitoring and more. Information is also available on the Southwest Florida Water Management District's website at www.watermatters.org.

Desalination seems like a feasible option. Why aren't you considering building more desalination plants? Why doesn't Pinellas County build their own desalination facility?

We are considering expanding our existing desalination plant, as it would be more cost-effective to expand what we have before building something new. But we have and will continue to explore additional desalination in the future. We did evaluate a second desalination plant that would have been co-located with the Anclote Power Plant on the Gulf of Mexico, near the Pinellas/Pasco border. However, desalination is a complicated and highly mechanical process. It costs about twice as much as surface water and about four times as much as groundwater. Desalination also has its own environmental considerations as it is highly energy intensive, and the concentrate discharge must be blended back into the environment in such a way as not to harm sea life. Co-locating with a power plant provides blending water, but a stand-alone plant would require intake and discharge pipes to be built on either the Gulf of Mexico or Tampa Bay.

Will the switch from coal to natural gas at TECO have an effect on the desalination plant?

Yes. TECO's changes mean that Tampa Bay Water needs to make some changes as well, since our desalination plant uses TECO's cooling water for both our intake and to blend our discharge. We're adding a new intake tunnel and pumping station and may have to make some additional changes in the future.

Why can't Pinellas take care of their own needs?

Pinellas County isn't the reason for this proposed project. In fact, Pinellas County's water demand has gone down recently, but Hillsborough County's has gone up. Tampa Bay Water was formed to take a regional approach to water supply. We supply the water needed by all our members, and all members share in the cost of supplying that water. That means Pinellas pays for the water it uses, but also shares in the cost of water for fast-growing counties, like Hillsborough.

If you can't supply the water, you need to control your growth. We all have our own wells. We saw what happened in Plant City with dried up wells and sink holes. There are other alternatives you should consider.

This project is a small wellfield, approximately 6 million gallons per day, to meet a portion of Hillsborough County's growing water needs. Other alternatives are being considered, including a new pipeline to carry up to 65 million gallons per day of alternative water supplies from our regional system, expanding our desalination plant, expanding our surface water plant, and conservation.

As for growth, Tampa Bay Water has no authority to limit growth. That responsibility is with local city and county governments.

Why can't you stop Mosaic? You should give them the reclaimed water and keep the source waters for the residents.

Tampa Bay Water has no regulatory authority. The Florida Department of Environmental Protection and Hillsborough County Environmental Protection Commission are responsible for permitting Mosaic's activity. Hillsborough County Water Resources could address providing reclaimed water to industrial users.

Mining activities strip away the land and expose the aquifer. Who is protecting the aquifer from that activity?

Water use permits are issued by the Southwest Florida Water Management District. Questions about industrial and mining activity should be directed to your local elected officials, the Florida Department of Environmental Protection and the Water Management District.

I have a pond, wells and three springs on my property, and the pressure is gone. We are surrounded by decommissioned mines. How can you say this won't affect our water?

With the 250-foot-thick confining layer between the aquifers and the minimal drawdown predicted for this project, we do not anticipate any impacts to lakes, wetlands, springs or permitted domestic and agricultural wells. In fact, the Southwest Florida Water Management District will not issue a permit for this wellfield if it will impact surface water or other existing legal users.

The recharge wells are injecting sewage water, correct?

No. The recharge wells are injecting highly treated wastewater. It meets many, but not all, drinking water standards. Hillsborough County injects the highly treated reclaimed water into a saltwater zone of the aquifer to help slow saltwater intrusion. It creates pressure in the aquifer which would allow freshwater to be withdrawn several miles inland.

How are you monitoring aquifer levels? Where are you monitoring?

The Southwest Florida Water Management District has dozens of monitoring wells throughout Hillsborough County. Tampa Bay Water has access to this data, along with data from its own monitoring wells in around the South-Central Hillsborough Regional Wellfield. A groundwater monitoring plan for the South Hillsborough Wellfield will include monitoring wells on the site, regional District monitoring wells in the area around the proposed wellfield and the SHARP recharge wells.

What is the quality of the water going into the recharge wells? Are there regulations about the water quality?

Hillsborough County Water Resources Department could provide more information on the reclaimed water quality, but it is treated to public reclaimed water standards. The injection wells are permitted by the Florida Department of Environmental Protection, which requires certain water quality standards for injection wells.

What type of samples does the County collect on the reclaimed water? Is it a grab sample?

Tampa Bay Water does not operate the County's SHARP injection wells. Hillsborough County Water Resources Department could provide more information, but it is a grab sample.

What happens if there is a bad sample in the SHARP project? Does the water have to be boiled? And what about all the people with drinking water wells near those SHARP wells?

No. The County injects highly treated reclaimed water into a salty zone of the aquifer (not into a drinking water zone). It is injected much deeper than the level at which residents have drinking water wells. The reclaimed water migrates westward, away from the proposed freshwater withdrawals.

How deep are your proposed wells and are they all on ELAPP property?

The test well is approximately 900-950 feet deep, and we expect the other wells to be drilled to a similar depth. We are planning four withdrawal wells on the parcel purchased by ELAPP and three on the property purchased by Hillsborough County Water Resources, plus the test well.

What are you going to do with the wells that are already there?

The agricultural wells that are on the parcels purchased by Hillsborough County cannot be used for potable supply wells because drinking water well construction has different requirements than agricultural wells. However, they may be suitable for monitoring wells, but that would be subject to discussions with the County and the Water Management District.

All the wells you are planning are within a 1-mile radius and you're pumping 6 mgd. How can you confirm it won't affect water levels?

Our modeling shows only 3 feet of drawdown in the Floridan Aquifer in the center of the proposed pumpage. Water levels in this area fluctuate 10-15 feet on a regular basis. However, the Water Management District will carefully review our data and modeling and will not issue a permit if there are predicted impacts or if there is not a net benefit to the aquifer.

Regarding monitoring water levels, you said the average drop is 3 feet. During what conditions did you run the test well? What happens during the dry season? And will there be more than one test well?

We pumped the test well at average conditions. We pumped 2 million gallons per day from the test well for approximately two weeks. Then we took the data from that into our model. Maximum drawdown in the Upper Floridan aquifer of 3 feet together with the 10 -15 feet of fluctuation from wet season to dry season will not impact nearby wells. With the 250-foot-thick confining layer between the aquifers and the minimal drawdown predicted for this project, we do not anticipate any impacts to surface water features. If the Water Management District disagrees with these results in its careful review of our permit, or if there is not a net benefit to the aquifer, they will not issue a permit.

If this project is approved, we will test each new well as it is installed. The data from each new well will be added to our model, so we can build our knowledge base and confirm our previous modeling as we build the wellfield.

Will the permit be limited?

Yes. In fact, being in the Southern Water Use Caution Area (SWUCA) is a hard limit, because no pumping is allowed without an offset that benefits the aquifer.

With all the development and paving in the area, will there be enough recharge to the aquifer?

When the County permits new development or new roads, they require retention ponds and other similar features to collect water so it can seep into the ground.

There are two holes on the property now, are those test wells?

There is a test well and three monitoring wells on the small ELAPP parcel located near the South Fork Amenity Center.

You say this won't affect our wells but the wells you are proposing are 400 yards from my well.

The Southwest Florida Water Management District will not issue a permit for this wellfield if it will impact surface water or other existing legal domestic or agricultural wells. However, we do have a domestic well mitigation policy. It requires that we investigate any water-level related complaint in the vicinity of our wellfields and mitigate if we caused the problem.

Given your test, what are the automatic cut-off triggers? What if you start to see sink holes? What about freeze events, when the farmers need to pump to protect their crops?

During freeze events, Tampa Bay Water stays in close communication with the Water Management District. If needed, Tampa Bay Water can reduce its pumping in freeze events. The utility has a flexible system and can provide water from other sources, to minimize pumping during a freeze event. Likewise, if there is a sinkhole reported in close proximity to our proposed wells, we would stop pumping until a full investigation is performed.

How do we know you won't take more than 6 million gallons per day in the future? Is there a limit?

Our proposed wellfield quantity is directly correlated to Hillsborough County's SHARP project. If the County installs five SHARP wells, we anticipate our wellfield would be limited to 6.15 million gallons per day because some water must be left as a benefit to the aquifer. If the County expands SHARP, we may be able to increase up to 9 million gallons per day, but the SWUCA truly is the limiting factor. There must be a net benefit to the aquifer.

What happens if my well dries up?

As part of the any permit issued from the Southwest Florida Water Management District, Tampa Bay Water would be responsible for investigating and mitigating any wells affected by wellfield pumping if the proposed project is built.

You fixed it (my friend's well in Plant City) but now they have horrible smelly sulfur water.

Tampa Bay Water's permits now require that we mitigate for water quality concerns as well for wells that we mitigate by modifying an existing well or drilling a new well.

This is a follow up from the webinar – can you confirm the injection amount versus the withdrawal amount?

If Hillsborough County builds all the injection wells that we discussed, they would be putting about 10 million gallons of reclaimed water per day into the brackish, coastal zone of the aquifer. Our withdrawal amount is less than we previously discussed. Our modeling shows that we could withdraw about 6 million gallons per day and still achieve a net benefit to the aquifer.

Why can't we take the reclaimed water, treat it and send it back into the system?

Tampa Bay Water and other local governments have looked at ways to beneficially reuse reclaimed water for drinking water since the mid-1990s. Some local governments use reclaimed water to reduce demand by building extensive reclaimed water irrigation networks. Others use it to rehydrate wetlands or apply it to sprayfields so it can slowly percolate into the aquifer. Our next Long-term Master Water Plan will explore things like adding reclaimed water to the reservoir or the desalination plant, but as we stand here today, drinking water regulations have not yet fully changed to accommodate those

uses. And we would need to work closely with the community to determine if future proposals are acceptable to the public.

We think what you are planning is a stop-gap measure. You need to weigh all the alternatives. Long-term solutions should be considered – like conservation.

Agreed. We have many other programs that we could have included in our presentation tonight, but knew you were most interested in the proposed South Hillsborough Wellfield. We are looking at long-term solutions, including a new pipeline to carry up to 65 million gallons per day of alternative water supplies to southern Hillsborough County. In 2020, we also launched new regional water conservation program that is designed to save up to 11 million gallons per day over the next 10 years. Every drop of water that we save is less new water that we must develop.

I know about the water savings programs for toilets and aerators, but for someone who does his own plumbing, it's too expensive to pay a plumber to get a rebate. It's not worth it.

That is a concern we've heard over the past year, and as a result, we've changed the program to allow residents to self-install a toilet and still qualify for the rebate, if you have the appropriate receipts and paperwork.

When you talk about water treatment, I think of the plant in Ruskin that smells awful. Are you proposing something like that?

No. That is a wastewater treatment facility. Drinking water treatment plants typically don't have an odor. Some have facilities that remove hydrogen sulfide, and the older technologies did smell like hydrogen sulfide gas. However, Tampa Bay Water now uses ozone to remove hydrogen sulfide, and that process is relatively odor free.

Have a question about water capacity. How are you planning for the worst conditions and to maintain capacity for more growth in the area?

Tampa Bay Water works closely with its member governments to plan for long-term growth and to plan for drought. We track population growth with agencies like Plan Hillsborough and the University of Florida's Bureau of Economics and Business Research. Every five years, we update our long-term Master Water Plan, which looks at demand, supply, conservation and more for the next 20 years.

Other areas around us are also growing and draining the aquifer. How are you planning for all of that? All the surrounding areas will have a cumulative effect on the regional system.

The long-term statewide water resource planning is a function of the Southwest Florida Water Management District. Residents are correct to note that water supply developments in Polk or Manatee counties can affect Hillsborough County, and that is why the Water Management District must take a holistic view to water supply in the region and the state.

3. Comments/Suggestions

- Why don't you force businesses to use the reclaimed water (like for irrigation) and save the water for the residents?
- Ask the regulating agency to regulate water usage for yards and developments.
- We don't want the water injected. They should use it for irrigation and other uses like they do in other counties. You could just let the reclaimed water perk down naturally.

- Based on what you said, is our next step to talk to SWFWMD and the county commission? The county commissioners were invited tonight but no one responded.
- ELAPP owns land on both sides of the Little Manatee River. You should think about damming it as the next large water supply project.
- Shelly Lakes are spring fed and routinely flood. The owner has tried to sell the property in the past. You should look at this as a possible option.

4. Comment Forms

Three comments were completed as follows. All three identified themselves as local residents; two of the three identified themselves as local business owners.

Residents were asked whether they disagreed or agreed with four statements. Following are the statements and the responses.

The information provided was helpful and informative. 2/3 agree, 1/3 neutral

I now have a better understanding of the need for the proposed wellfield. 1/3 agree, 2/3 neutral

I now understand how the County's aquifer recharge program ensures a net benefit to the aquifer. 1/3 agree, 2/3 neutral.

I now understand how Tampa Bay Water's board of directors selects projects for design and construction. 1/3 agree, 1/3 disagree, 1/3 neutral.

Space was provided for additional input or comments for the project team. Following is the input received:

- Information was good. Most concerned about quality of area well water and impact to the environment/water levels.
- Whole lot more water out there in the bay, in the gulf, that could be desalted. No danger of sinkholes or pissed-off taxpayers. Safer for all.

The meeting concluded at 8:15 p.m.