

Here's how water changes hands, up to three times, between the Cape Fear and the faucet

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The majority of water in the region comes from the Cape Fear River, but it makes several stops before making to customers (Port City Daily photo / CFPUA)

[Editor's note: This article is part of an ongoing examination of the distribution, treatment, and delivery of drinking water in the Cape Fear region. Stay tuned for a look at the cost of that process in a future installment.]

SOUTHEAST N.C. — In general, water flows in the path of least resistance — but that's not the case when it comes to water distribution in Southeastern N.C. — between water utilities, authorities, and providers, finding where exactly our water comes from is a bit of a maze.

The Cape Fear River provides the majority of the water for the region. The Cape Fear Public Utility Authority, for example, gets about 80 percent of its water from the river.

"CFPUA has three water systems, one sourced from the Cape Fear River (Sweeney Water Treatment Plant, which provides about 80 percent of the drinking water we distribute) and two from groundwater (Richardson Water Treatment Plant (also called "the Nano Plant") and Monterey Heights)," CFPUA spokesman Vaughn Hagerty said.

But getting water from the river isn't always a direct process. For example, CFPWA gets its river-sourced water in two ways.

"Regarding how we get raw water from the Cape Fear River, we get it two ways: from LCFWASA and from our own Kings Bluff Pump Station. All of that is raw water. We can draw 10 million-gallons-per-day (mgd) from our own Kings Bluff Pump Station. We've been allocated 23 mgd from Lower Cape Fear Water and Sewer Authority (LCFWASA) prior to the completion of the second raw water line, which we're partnering with Brunswick County to build. With that new raw water line, an agreement already in place increases our allocation from LCFWASA by 15 mgd to 38 mgd (for a total of 48 mgd including the 10 from Kings Bluff)," Hagerty said.

Lower Cape Fear Water and Sewer Authority



The bulk of the region's water is sourced from the Cape Fear River at Kings Bluff Pump Station, located in Riegelwood in Columbus County. (Port City Daily photo/Johanna Ferebee)

The first level of service for most of the area water providers is the Lower Cape Fear Water and Sewer Authority.

“The Lower Cape Fear Water & Sewer Authority is responsible for providing wholesale regional raw water supply services to local governments and industry within its five-county service area comprised of Bladen, Brunswick, Columbus, New Hanover, and Pender Counties. The Lower Cape Fear Water & Sewer Authority is a self-supporting agency which depends on customer rates and fees to support its operations,” according to the authority’s website.

LCFWSA was created as the Wilmington-New Hanover County Water and Sewer Authority in 1970, but officials quickly decided to expand the services to a five-county region and rebranded the same year. Like CFPUA, LCFWSA is a government non-profit, with **board members** appointed by the governing bodies served by the authority (including Wilmington and New Hanover County).

CFPUA pays \$0.2717 per 1,000 gallons from LCFWASA — this is raw water from the river, it still has to be treated and made ready for other uses which lead to additional costs which are eventually paid for by the ratepayers.

“Raw water comes from LCFWASA and our Kings Bluff Pump Station as mentioned earlier. It’s important to remember that obtaining raw water and treating it are just two of the costs required to maintain a public water system. Others include the distribution system (water mains, storage tanks, pumps, etc.), everything that goes into monitoring and maintaining water quality and meeting regulatory requirements, maintenance, and customer service,” Hagerty said.

Despite being able to withdraw water from the river on its own, the amount of water required to provide the area with water requires CFPUA to utilize LCFWASA — but could CFPUA simply cut out the supplier and draw water on its own?

“CFPUA has the ability to draw 10 mgd of its own water from the river at our Kings Bluff Pump Station. That’s a fraction of what is required to meet demand. To go it alone would require lots of work and money to design, permit, and build pump station infrastructure. That doesn’t make sense when LCFWASA already has that infrastructure in place,” Hagerty said.

However, according to Hagerty, CFPUA does not even utilize its full 10 mgd withdraw rate it is provided. Instead, CFPUA pulls about 3.6 mgd on average for Kings Bluff, he said.

From one to the next

In New Hanover County the buck might stop with CFPUA for many, but the water provider does also offer bulk water services to Wrightsville Beach at a discounted rate.

Wrightsville Beach is generally its own water provider but an agreement took place earlier this year when CFPUA offered its services to the beach town after the discovery of PFAS were found in the town's water supply.

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“Under the agreement, CFPUA will provide as much as 45 million gallons of water each year to Wrightsville Beach to supplement the Town's regular groundwater supply. The agreement is only for the provision of water to Wrightsville Beach. The Town must pay for all costs to provide the water to its customers, including permits, infrastructure, meters, and billing. It is CFPUA's understanding from the Town that its customer's rates are unlikely to change should it approve the agreement,” according to CFPUA.



Wrightsville Beach sees an increase in water needed during summer months, but after a well in the town was taken off-line, the town entered into an agreement with CFPUA (Port City Daily/Courtesy Town of Wrightsville Beach)

In Brunswick County, water is provided by LCFWASA to Brunswick County Utilities — it is then treated and distributed to its customers — customers including water provider H2GO.

What's the big deal with H2GO?

H2GO, also known as Brunswick Regional Water & Sewer H2GO and formerly known as the North Brunswick Sanitary District, got its start back in 1987.

Its purpose was to provide water to the northern part of the county where utilities had not yet been installed — the Town of Leland was still two years away from even becoming a municipality.

Fast forward 30 years and Brunswick County's population surges in the northern part of the county with H2GO servicing a large portion of the growing population. This equates to millions of dollars in infrastructure and assets.

In the Town of Leland, things get even more complicated.

There are three water service providers in the town: Leland itself, H2GO, and Brunswick County Public Utilities.

But the fate of H2GO along with the Town of Leland's utilities has been in question for several years now thanks to an ongoing legal battle between Leland and the Town of Belville.

In 2017 H2GO was in talks to construct a new reverse osmosis plant to treat its water, a controversial move that could lead to the independence of the utility provider.

H2GO's former Chairman, John Crowder explained to **Port City Daily previously** the area's strained history boils down to differences about regionalization. "Overall, the county wants to be the only provider in Brunswick County — water and sewer. It's called regionalization. I'm not a fan of regionalization. Only when it's needed. And we do not need regionalization in Brunswick County."

But that is not just the opinion of one person, in July, Brunswick County commissioners **discussed regionalization** and taking over the ill-fated H2GO reverse osmosis plant.

So why does H2GO even want a reverse osmosis plant?

According to the utility provider, it is, "Primarily, to better manage water costs and rates for our customers. For the past 5½ years, H2GO has studied the comparative cost between building a reverse osmosis water treatment facility and continuing to purchase water from Brunswick County Public Utilities ... The reverse osmosis water treatment facility will not only provide a financial benefit to H2GO's customers, but it will also meet the growing water needs of H2GO's rapidly expanding customer base."

So why would H2GO not just continue to buy water from the county?

Well, according to the utility's website, "The cost to buy wholesale water is now at a point where the annual wholesale water payments to Brunswick County Public Utilities are greater than the annual cost to finance a new reverse osmosis water treatment facility. With H2GO's growing user base, increasing water demands, and an escalating PPI (increasing wholesale water rates), H2GO's wholesale water payments to Brunswick County Public Utilities will continue to increase; and will soon exceed the total cost to finance and operate the reverse osmosis water treatment facility."

The fate of H2Go is currently pending and a tentative interlocal agreement or 'Regional Solution' has been discussed.

A solution that would end the lawsuit between Belville and Leland, transfer all of Leland's water and sewer assets to H2Go (essentially taking the town out of the utility business), and completing the construction of the reverse osmosis plant — all of this could lead to independence from the county for H2Go.

Related: Leland ushers residents through sanitary district petition process, Belville unaware and mayor not happy

For now, the fate of the county's water providers remains unknown. But the Town of Leland has been working behind the scenes to move plans along, particularly in Brunswick Forest where town officials recently met with residents to encourage them to sign a petition to annex themselves out of the town's utility district and into H2Go's.

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