Cape Fear Firebird

The Light of Save the Cape

November 28, 2016

The shadows sway and seem to say tonight we pray for water, cool water;
And way up there he'll hear our prayer and show us where there's water, cool, clear water.
~Bob Nolan

Aquifer Anxiety

In mid-October, the Cape Fear region was subject to restrictions on water use, due to a massive leak in the main pipe bringing water to treatment plants. The stewards of our water supply worked diligently to make repairs, completing those repairs last week.

At the same time the State Ports Authority and the Department of Transportation worked just as diligently on a plan that could destroy a major source of water for the region.

The three-county Cape Fear area receives only part of its water from the system that draws water from the Cape Fear River in Bladen County and brings it to a treatment plant. The remainder is groundwater, drawn from wells. Three of New Hanover County's four water systems use groundwater. Brunswick County's system draws from 17 wells. Private wells throughout all three counties of the region serve rural areas and industrial users.

That groundwater comes from the Castle Hayne aquifer. Extending throughout the coastal region, it's the most important groundwater source in North Carolina. It is called "Castle Hayne" because its highest elevation, 22 feet below sea level, is at Castle Hayne in New Hanover County.

That elevation makes it accessible, but also vulnerable. The aquifer crosses the Cape Fear River just below Wilmington; the top is only 25 feet below sea level. Alas, the shipping channel has been dredged to 44 feet below sea level at that crossing point–cutting a 500-foot wide trench into the Castle Hayne aquifer to a depth of 19 feet. Now the Ports Authority wants to dredge five feet deeper, part of a grand plan to accommodate massive container ships from Asia, bringing us things we used to make ourselves. As if North Carolina was an island, without access to ports in other states.

But doesn't penetration by the existing channel cause the aquifer to leak into the river now? Well, yes. But so far, the aquifer has been recharged by rainwater at a rate sufficient to make up that leakage as well as domestic and industrial withdrawals. The system is in balance. Barely.

In the next ten years, 60,000 more people will move to the region, and make tea, take showers, and flush toilets. New industry will draw groundwater. There is already official concern that increased consumption will upset the balance, causing the flow to reverse, drawing salt water from the river into our water supply. That salt water intrusion would be severally exacerbated by additional dredging. Salt water would come out of spigots all over the region.

For the sake of what? Bigger ships from Asia? We'll be taking a closer look at that project.