

DATA CENTERS

RUNNING DRY



ALEXA WELCH EDLUND, TIMES-DISPATCH

A QTS data center in Sandston is seen, Wednesday, May 3, 2017.

Virginia DEQ warns of data center impact on groundwater supply

DAVE RESS
Richmond Times-Dispatch

The geologic formations that supply drinking water to hundreds of thousands of people in eastern Virginia don't hold enough water to meet the needs of the large data centers that developers are rushing to build in the state.

A new report from the Virginia Department of Environmental Quality says the groundwater aquifers east of Richmond couldn't handle a new data center that's one-tenth the size of the kind of data centers that developers have been building.

There's only one area east of Interstate 95, at the far end of the Northern Neck, where there's even enough groundwater to supply a 100-megawatt data center, the report says.

"Under current conditions, the [Virginia Coastal Plain] aquifer system has limited capacity for significant new withdrawals," the report concludes after modeling the impact of a 100-megawatt data center on groundwater supplies at locations in eastern Henrico County, James City County, Caroline County, Essex County, Chesapeake, the Northern Neck and the

Eastern Shore.

A 100-megawatt center is less than half the size of the QTS data center in eastern Henrico and a tenth the size of the facility Chesterfield County supervisors approved for the Meadowville Technology Park in 2024. These centers are supplied with water from county public utilities that draw from the James River and reservoirs.

Virginia hosts the world's largest concentration of data centers, which use huge amounts of electricity to power their servers, routers and other electrical equipment, as well as huge amounts of water to keep that gear from overheating.

Most data centers are located in Loudoun County to the west of eastern Virginia's main groundwater aquifers, but developers are eyeing other parts of the state, including the Richmond region and the area around Fredericksburg.

The DEQ study used water-use reports from Google and Fairfax County to come up with figures for data center water use that are far higher than what the Joint Legislative Audit and Review Commission used in its 2024 report on data center impacts on energy and the environment.

JLARC reported that 83% of individual data center facilities used about the same volume of water as an average large office building, or 6.7 million gallons a year.

Google said its Council Bluffs, Iowa, data center uses roughly 1 billion gallons annually.

The Fairfax County water utility said records show that data centers use 90 to 100 gallons of water per day per 1,000 square feet of building, which means a 100-megawatt facility needing 3.2 million square feet of space would use about 300,000 gallons daily. That would amount to more than 109 million gallons a year.

The DEQ report says even a relatively small data center located in James City County and drawing 120,000 gallons a day would affect groundwater levels up to 91 miles away.

A smaller data center in Caroline County, drawing 60,000 gallons a day, would affect groundwater levels up to 68 miles away.

A very small data center or industrial user located in eastern Henrico needing

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COURT

Clark case nears its close

Albemarle teacher expected to plead guilty in child porn case

HAWES SPENCER
The Daily Progress

The child pornography possession case against Albemarle County teacher Nicholas Clark appears headed for a negotiated conclusion as attorneys have told a judge that they are devising a plea deal.

"We're still working toward finalizing an agreement," defense lawyer Alexander Goodman told Judge Cheryl Higgins during a brief hearing Tuesday in Albemarle Circuit Court.

Goodman made a joint oral motion with a prosecutor to continue the case, saying the parties needed another four weeks to complete the agreement.

"The court will set it for entry of guilty



Clark

School teacher will end without a trial. Chief Deputy Commonwealth's Attorney Lawton Tufts appeared on behalf of the state to back the continuance.

Dressed in a green jail jumpsuit and sporting a full beard after nearly five months behind bars, Clark was led into

plea," Higgins replied.

With that, Higgins scheduled Clark's guilty plea hearing for Aug. 27.

Tuesday's hearing lasted only a few minutes but marked the clearest indication yet that the prosecution of the 29-year-old Woodbrook Elementary School teacher will end without a trial.

the courtroom by a bailiff from the holding area. He initially offered only a brief glance toward the eight friends and relatives, including his mother and stepfather, seated in the gallery.

His supporters, most or all of whom have attended earlier hearings, watched quietly as the lawyers discussed scheduling. When the proceeding concluded, Clark turned toward the gallery on his way back to the sally port leading to the Albemarle-Charlottesville Regional Jail. This time, he acknowledged the group with a gentle smile and a small nod before disappearing through the secure door.

Clark has remained jailed since his March 2 arrest on child pornography

charges. While there's been no suggestion that Clark touched any children, his sudden removal during the spring semester proved to be the opening chapter in a crisis that would engulf Albemarle County Public Schools.

That crisis intensified June 3, when a Hollymead Elementary School social and emotional learning coach, 37-year-old Michael Jay Swiney, was arrested on multiple sexual charges involving children. He faces 11 charges, including eight counts of aggravated sexual battery and four child victims. As physical allegations, the Swiney charges have ignited an intense

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