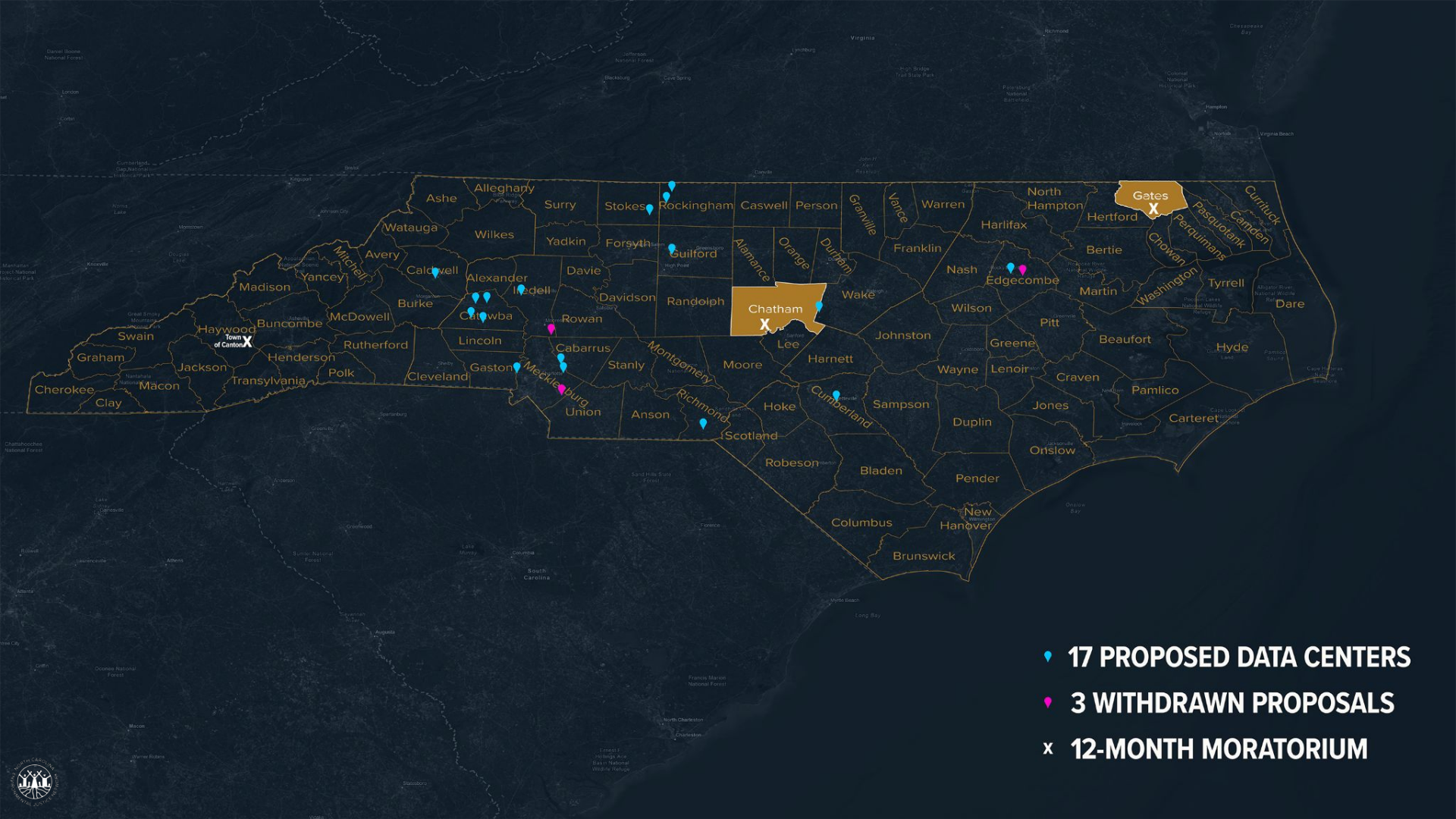
HEAVY FOOTPRINTS

THE NC DATA CENTER FIGHT
TWO NC CASE STUDIES

Dr. Rania Masri & Luma Kennedy

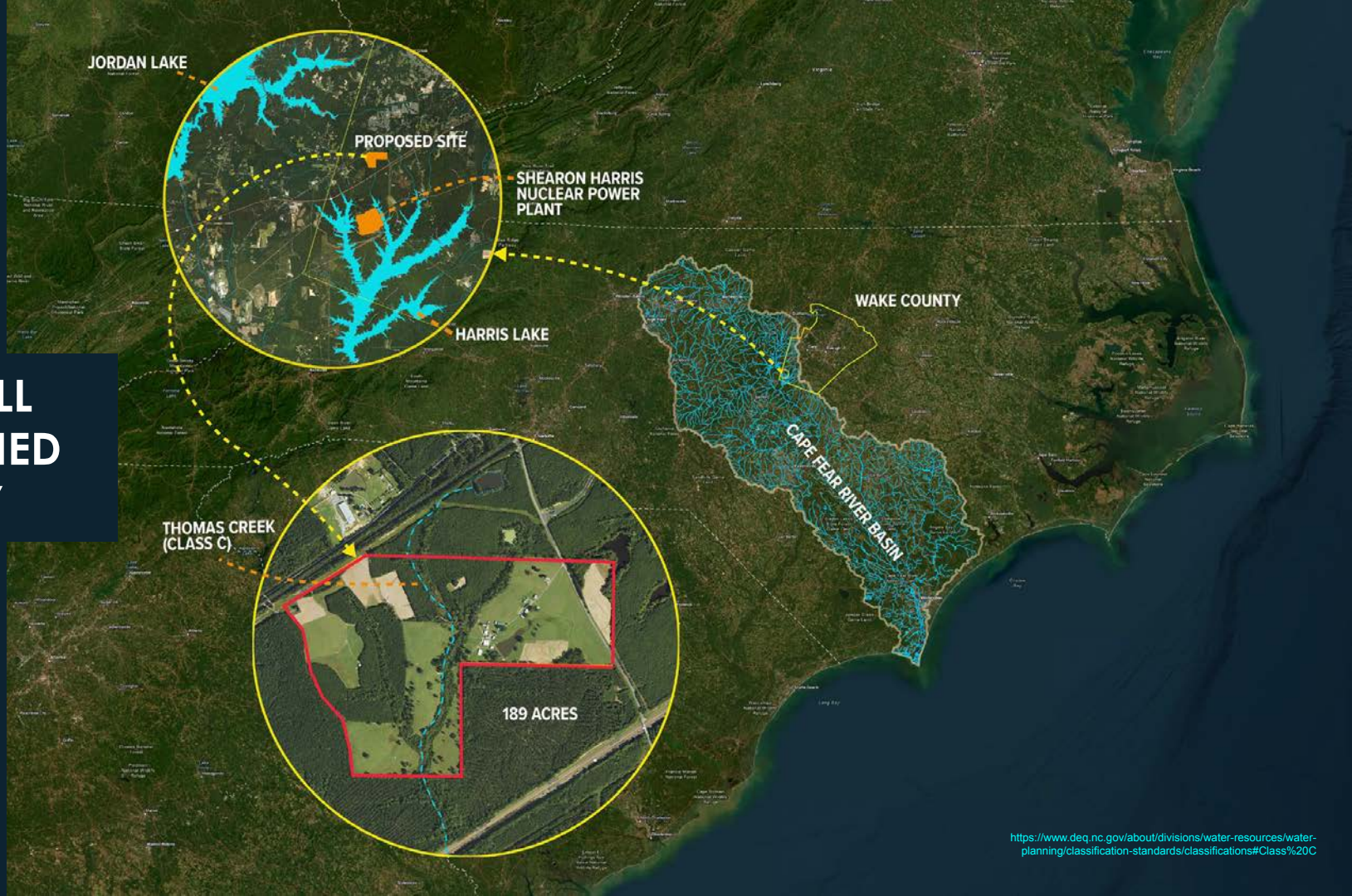
IMPACTS OF DATA CENTERS + Community Concerns

- Water Pollution + Consumption
- Air Pollution
- Energy Consumption
- Noise Pollution
- Runoff, Flooding + Non-Point Source Pollution
- Land Loss + Fragmentation of Natural Corridors
- Urban Heat Island Effect
- Unfair economic trade-offs



- 17 PROPOSED DATA CENTERS
- 3 WITHDRAWN PROPOSALS
- x 12-MONTH MORATORIUM

NEW HILL WATERSHED STORY



https://www.deq.nc.gov/about/divisions/water-resources/water-planning/classification-standards/classifications#Class%20C

PROGRESS?

The property was a farm for over 200 years, in the unincorporated town of New Hill in Wake County

Exaggerated tree sizes in these renderings are a tactic used to create an idealized, lush, and finished look that rarely matches the immediate reality of a project.

These buildings will stick out like a sore thumb for over a decade!

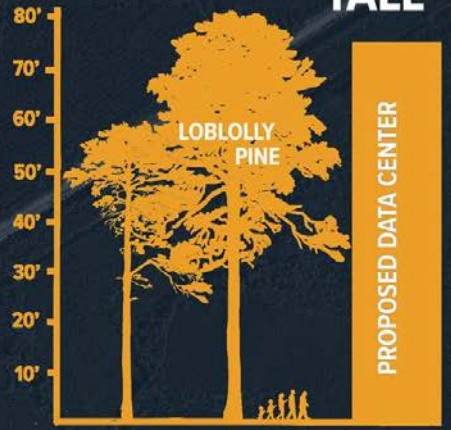
https://newhilldigitalcampus.com/

NEW HILL DATA CENTER DIMENSIONS

CURRENT SITE STATUS

NATELLI HOLDINGS PROPOSAL

75 FT TALL



~ 3.5 FOOTBALL FIELDS

ENERGY HUNGRY AT THE NEW HILL DATA CENTER

The energy requirement for this **300 MegaWatt** facility: **~ 200,000 NC homes running** continuously

similar to that of a city of **~ 400,000 people**

a city like Minneapolis or Raleigh

~ 1/3 the output of a nuclear power plant or a large coal plant at full capacity

= 10,000 Homes

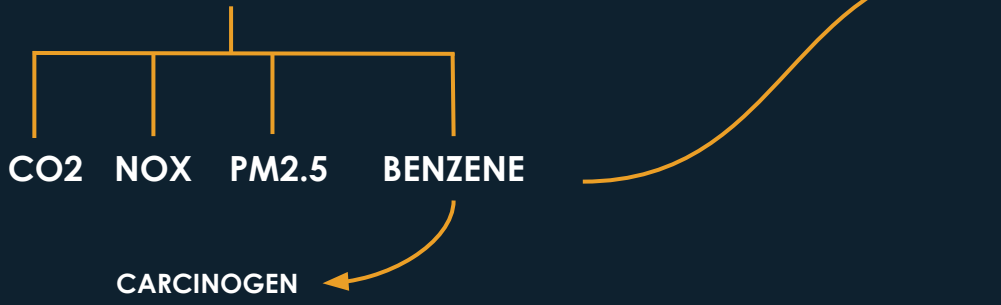
= 10,000 People

https://grokipedia.com/page/Shearon_Harris_Nuclear_Power_Plant
https://en.wikipedia.org/wiki/List_of_power_stations_in_North_Carolina

ENERGY HUNGRY AT THE NEW HILL DATA CENTER

AIR QUALITY + HUMAN HEALTH

Running generators for this 300 MegaWatt data center will use **diesel fuel**



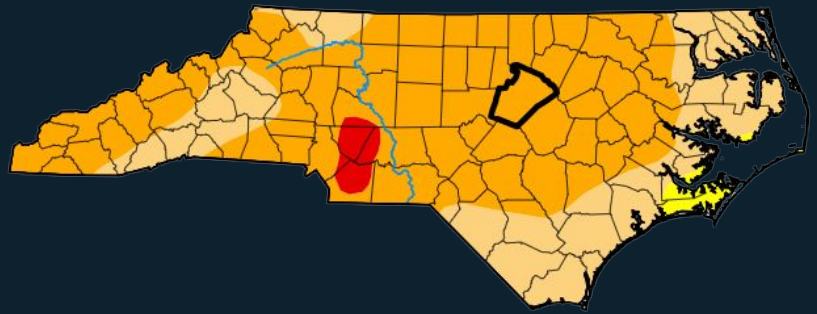
Lung Irritation

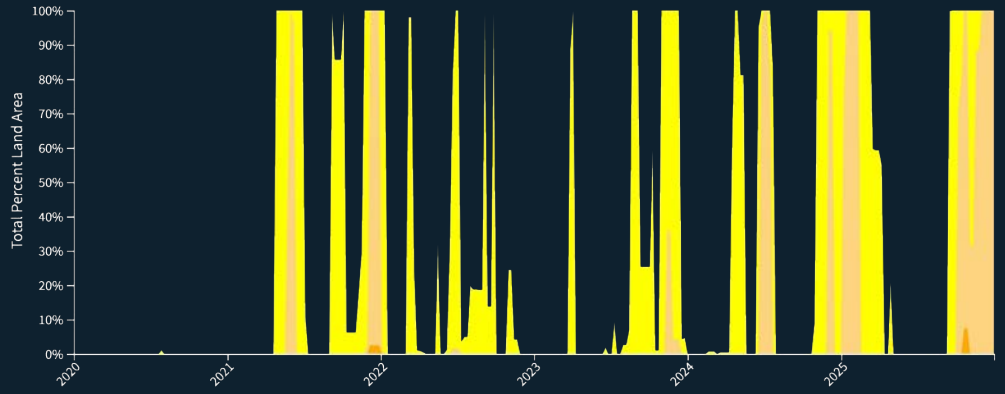
Asthma

Chronic Obstructive Pulmonary Disease (COPD)

Premature Death

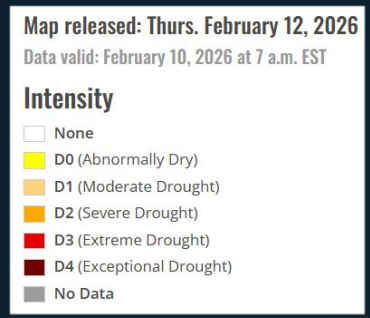
WATER THIRSTY AT THE NEW HILL DATA CENTER





The average household in Wake County consumes **~ 250 gal/day** of water

Proposed maximum use of **1 million gallons water/day (MGD)**. In reality due to summer weather = a max of **3 MGD of water**



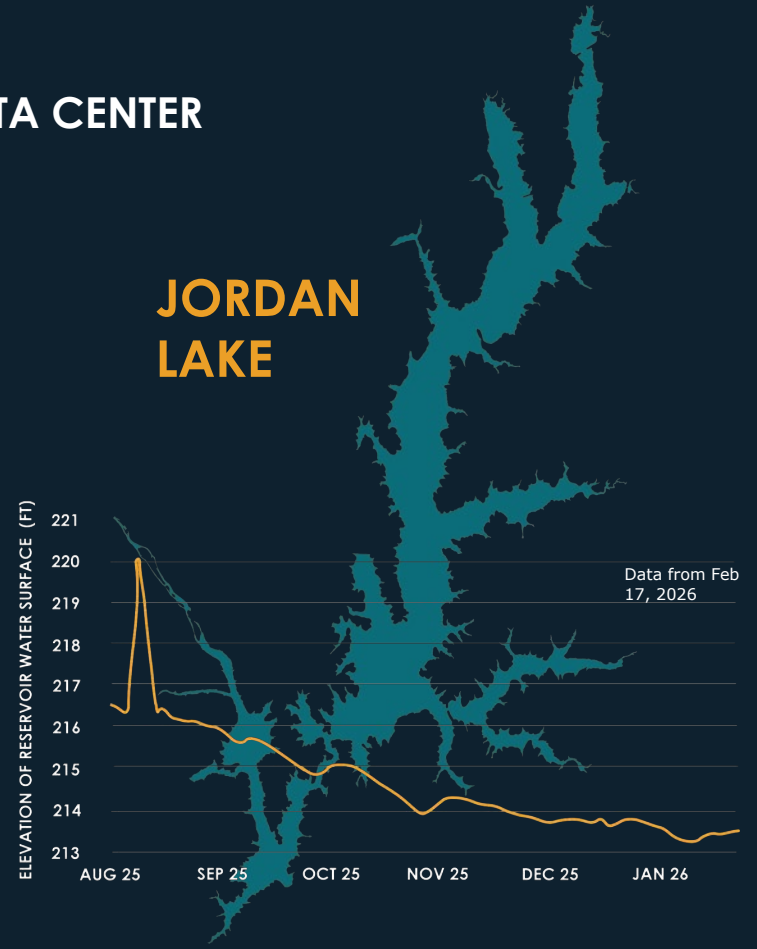
https://www.drought.gov/states/north-carolina/county/Wake

WATER THIRSTY AT THE NEW HILL DATA CENTER

Primary water supply **~ 700,000** residents in **10** counties + **27** municipalities

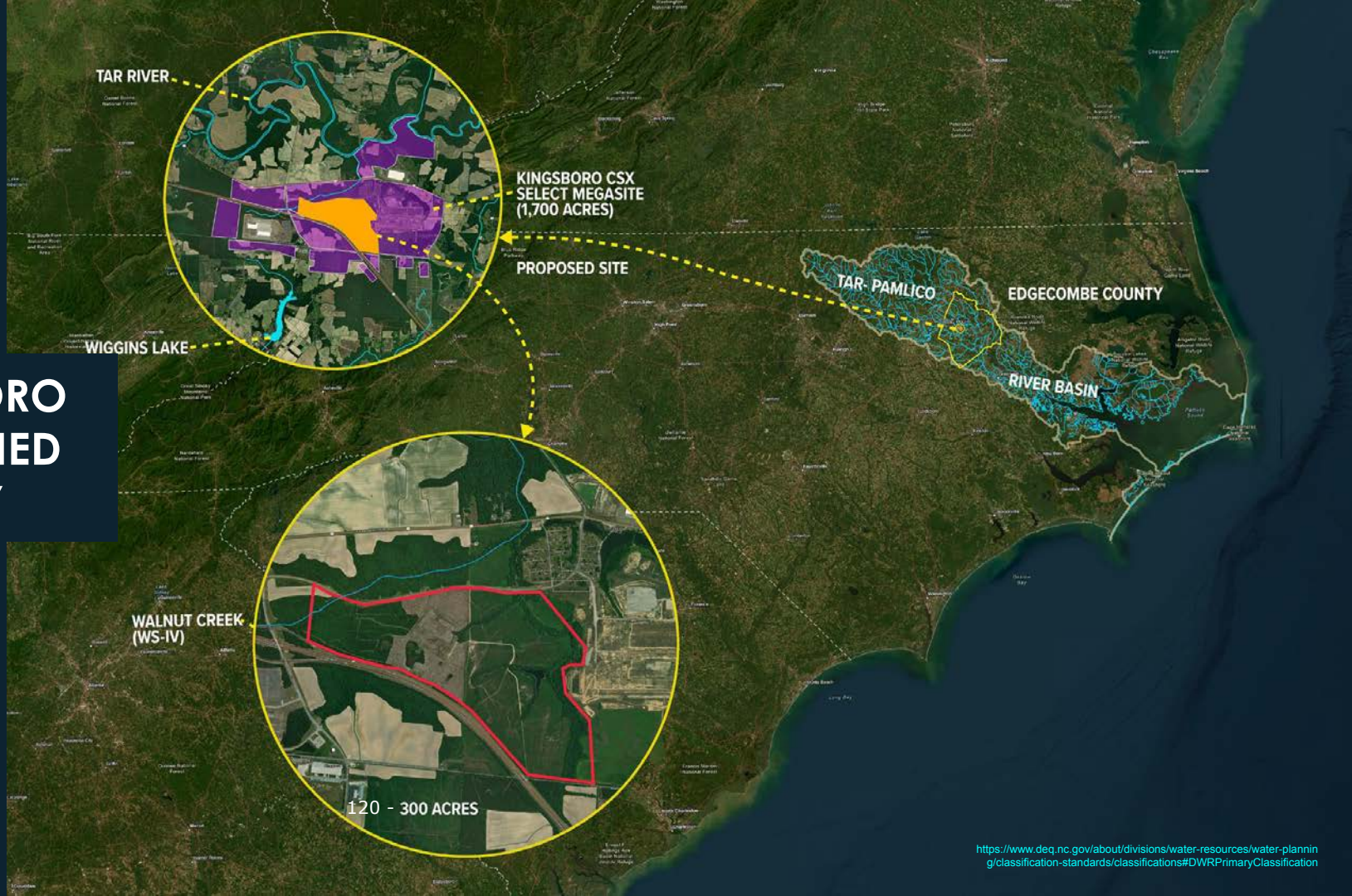
Jordan Lake levels dropped by **6.5 feet** since August 2025

Jordan Lake water supply is **91% allocated**, (*some reports say 100%*) but this area is experiencing consistent population growth!



https://nwis.waterdata.usgs.gov/usa/nwis/uv/?cb_00045=on&cb_00062=on&cb_62614=on&cb_62615=on&format=gif_default&site_no=02098197&legacy=1&period=&begin_date=2025-8-01&end_date=2026-01-21

KINGSBORO WATERSHED STORY



https://www.deq.nc.gov/about/divisions/water-resources/water-planning/classification-standards/classifications#DWRPrimaryClassification

ISSUE DATE: 07/16/2026

ONE FOUR TWO ARCHITECTURE

ARCO DESIGN/BUILD

KINGSBORO NETZERO DATA CENTER

DEVELOPER: DANIEL SHAFFER, ENERGY STORAGE SOLUTIONS, LLC 4462 MEADOWBROOK RD, ROCKY MOUNT, NC 27801

QVC BLVD ROCKY MOUNT, NC 27815

Energy Storage Solutions, LLC

OVERALL SITE PLAN

1-10

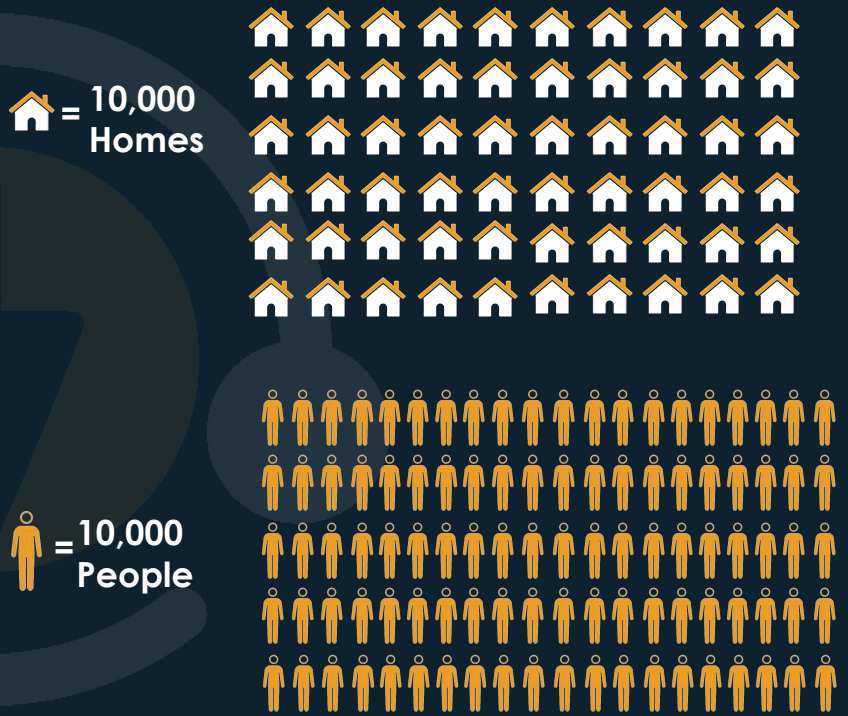
ENERGY HUNGRY AT THE KINGSBORO DATA CENTER

The energy requirement for this **900 MegaWatt** facility: ~ **600,000 NC homes running** continuously

similar to that of a city of **~ 800,000 - 1 Million people**

a city like San Francisco or Charlotte

~Total, continuous output of a single large nuclear reactor or a major coal-fired power plant



ENERGY HUNGRY AT THE KINGSBORO DATA CENTER

AIR QUALITY + HUMAN HEALTH

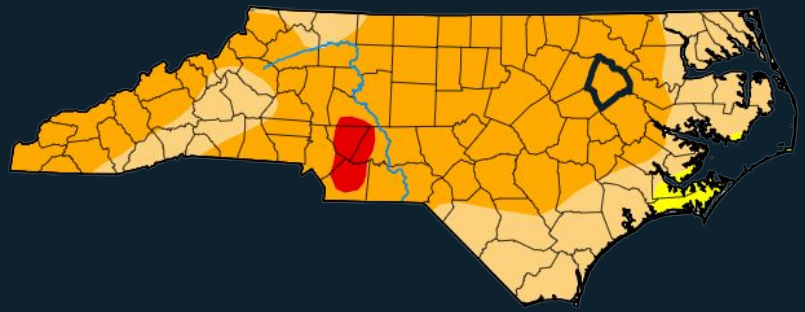
Running generators for this 900 MegaWatt data center will use **Natural Gas**

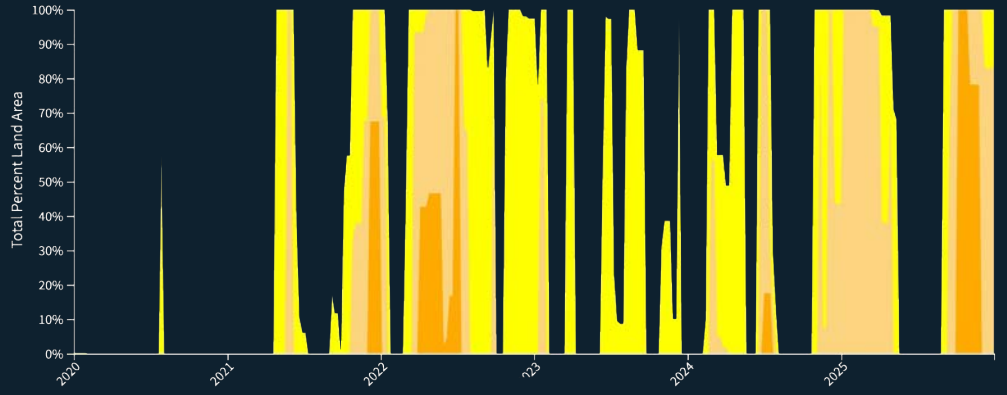
Volatile Organic Compounds (**VOCs**) and Hazardous Air Pollutants (**HAPs**): Including benzene, formaldehyde, toluene, and xylene. Nitrous Oxide (**N2O**) and Sulfur Dioxide (**SO2**)

Natural gas turbines use about **2,800 gallons of water** to generate one megawatt-hour of energy, according to the U.S. Energy Information Administration

https://www.eia.gov/todayinenergy/detail.php?id=56820#:~:text=Natural%20gas%20plants%20use%20a,19%2C185%20gal%2FMWh%20for%20coal.

WATER THIRSTY AT THE KINGSBORO DATA CENTER





The average household in Edgecombe County consumes **~ 133 gal/day** of water

City of Rocky Mount uses **1 million gallons/day**

Developer claims **up to 500,000 gallons/day**, but research shows data centers of this scale use **up to 5 million gallons/day**

Map released: Thurs. February 12, 2026

Data valid: February 10, 2026 at 7 a.m. EST

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

https://www.drought.gov/states/north-carolina/county/Edgecombehttps://www.ncwater.org/wudc/app/lwsp/search.php
https://www.ncwater.org/wudc/app/lwsp/search.php
https://www.eesi.org/articles/view/data-centers-and-water-consumption#:~:text=Data%20center%20developers%20are%20increasingly,energy%20usage%20by%20data%20centers.

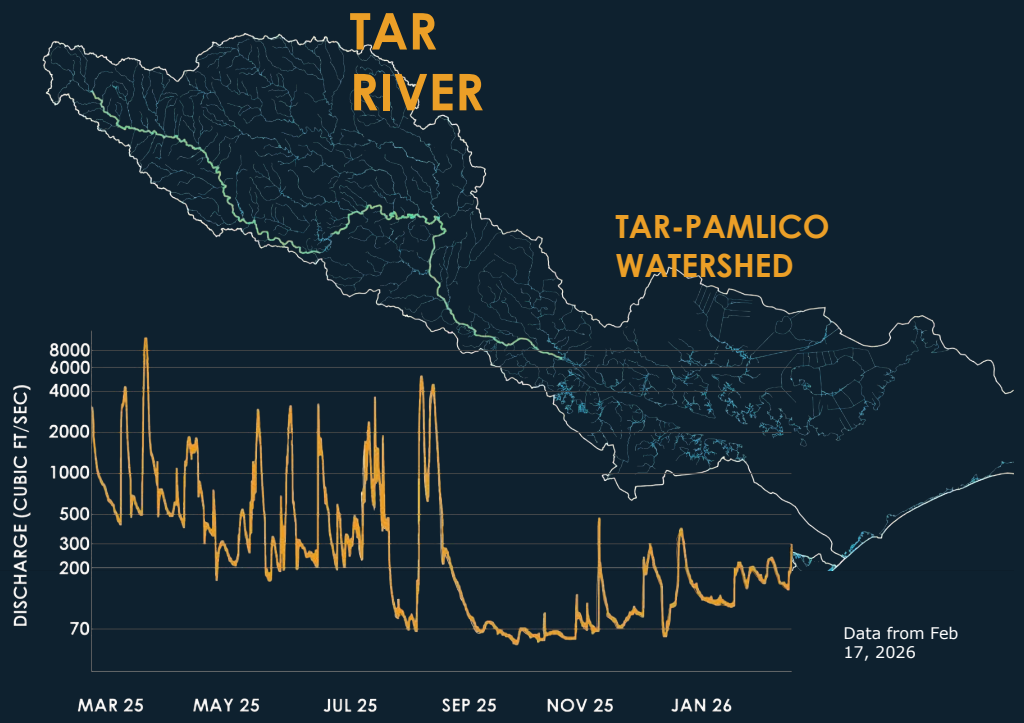
WATER THIRSTY? AT THE KINGSBORO DATA CENTER

The city of Rocky Mount operates **2 Water Treatment Facilities** for Nash + Edgecombe Counties, domestic + industrial customers

Combined permitted capacity of the plants is **26 MGD**
⇒ currently at **39% capacity** **(10 MGD)**

Agricultural operations pump water from the tar river

The normal or median discharge of the Tar River in Rocky Mount, NC, is **800-900 cubic FT/SEC**



https://waterdata.usgs.gov/monitoring-location/USGS-02082585/#dataTypeId=continuous-00065-0&period=P365D&showFieldMeasurements=true
https://www.rockymountnc.gov/458/Water-Treatment

Founded in 1998, the **North Carolina Environmental Justice Network (NCEJN)** is a grassroots, people of color-led coalition that builds power with systematically marginalized communities to resist climate, environmental, racial, and social injustice.

Sign Up for Our Newsletter

NORTH CAROLINA ENVIRONMENTAL JUSTICE NETWORK

Follow us on Social Media

North Carolina Environmental Justice Network

@ncej.network

info@ncejn.org

www.ncejn.com