

# BRYAN - BULLOCH GROUNDWATER SUSTAINABILITY PROGRAM

April 14, 2025



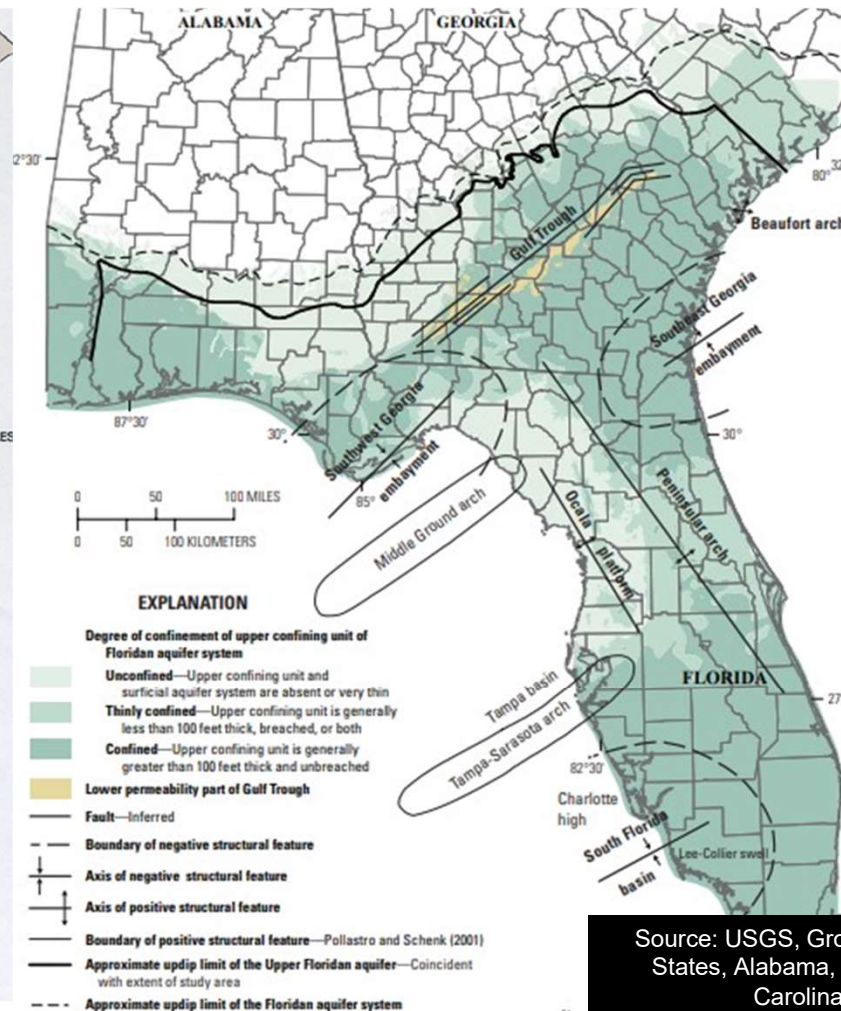
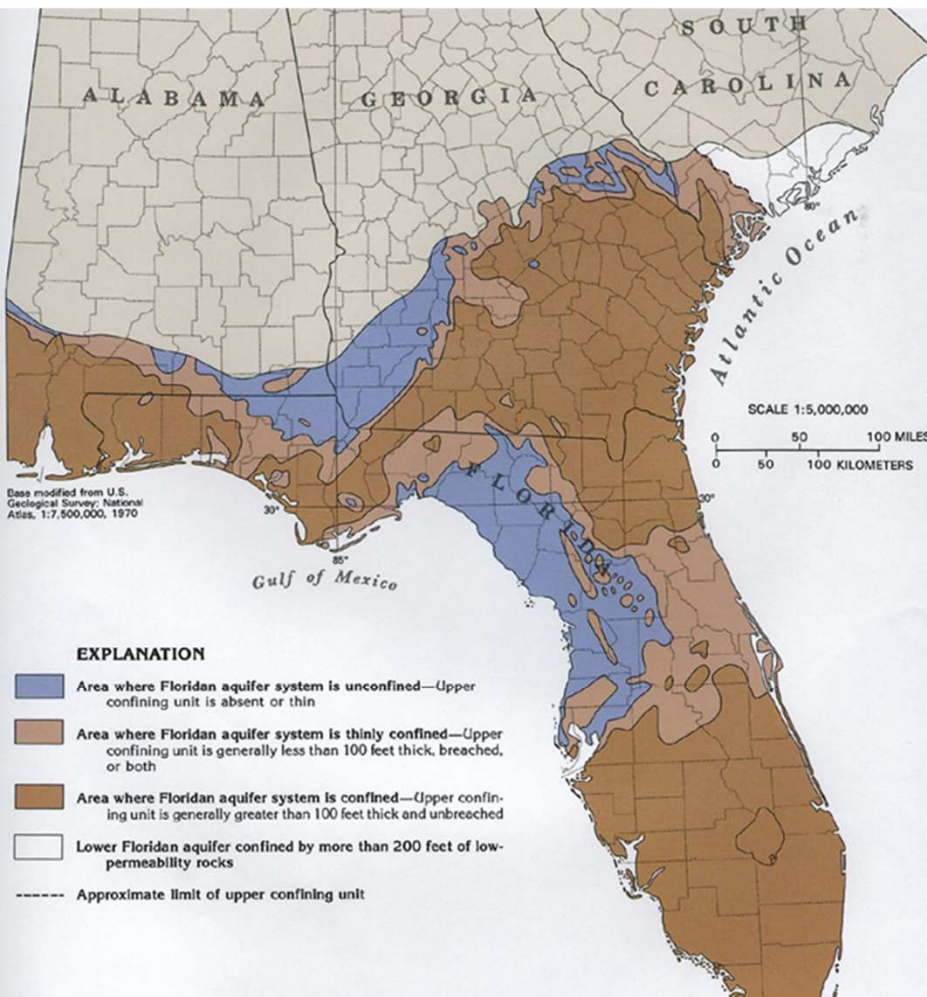
# Background - Groundwater Use Permits

- **Permit No. 016-0013** - Bryan County to utilize 3.5 million gallons per day (mgd) on a monthly average and 3.5 mgd on an annual average
- **Permit No. 016-0014** - Bulloch County to utilize 3.5 million gallons per day (mgd) on a monthly average and 3.125 mgd on an annual average
- **Special Conditions**
  - To Address Short-Term Impacts
    - Well Mitigation - *“create a joint municipal managed fund, which may include contributions from other entities, to address any potential significant impacts to existing Floridan aquifer wells in an area defined by a circle with a 5-mile radius from the center point at the I-16 and Highway 119 interchange”.*
    - Annual Reporting to GA EPD
    - GSP Program adopted by Bulloch and Bryan Counties, 2024
  - To Address Long-Term Impacts
    - Surface Water or other Alternative Supply within 25-years
    - Annual Reporting to GA EPD
    - State Grants and Loans provided to fund surface water alternative supply



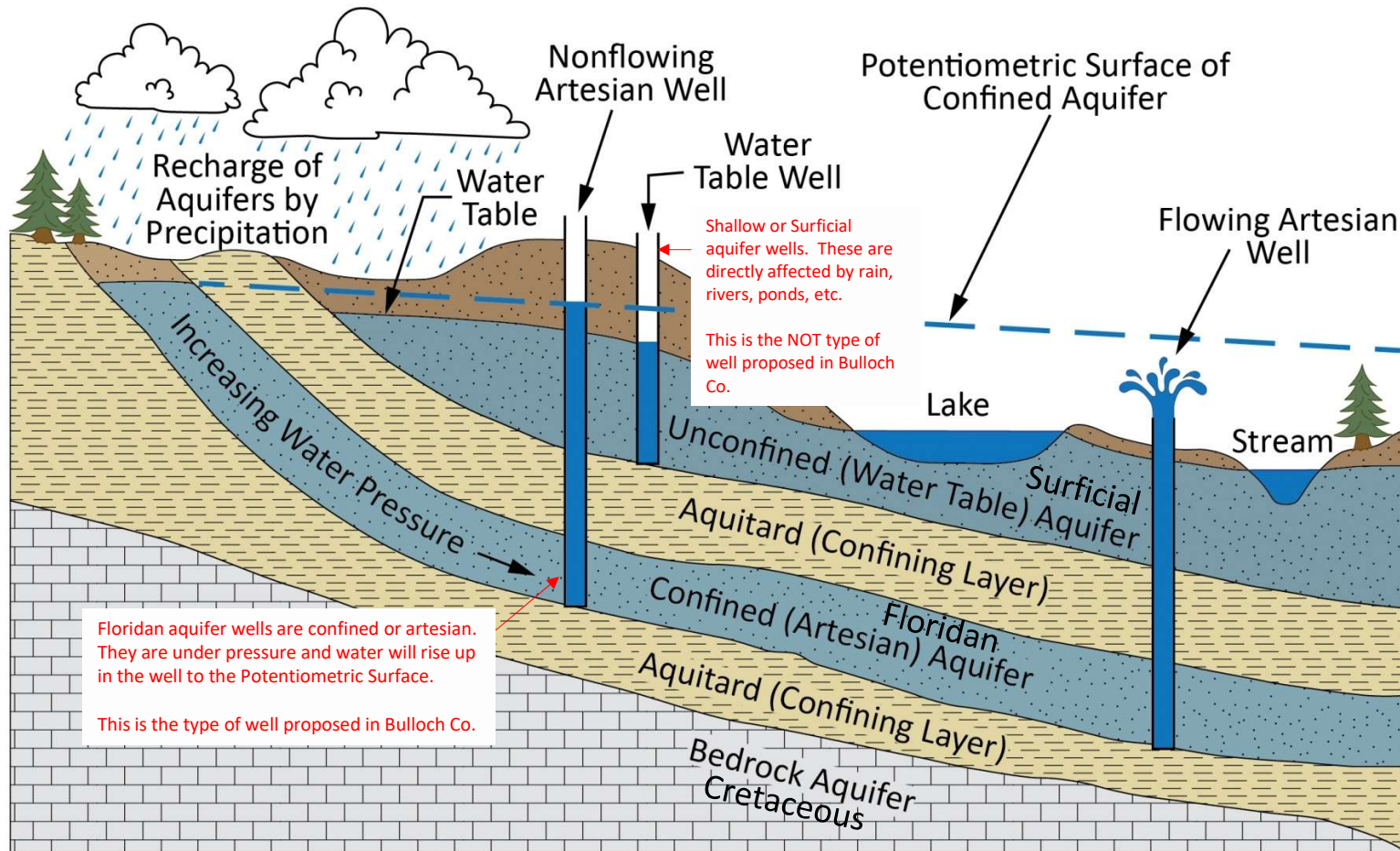


# Background - Floridan Aquifer



Source: USGS, Groundwater Atlas of the United States, Alabama, Florida, Georgia and South Carolina; HA 730-G, 1990

# Background - Floridan Aquifer



Modified from Source: Utah Geological Survey

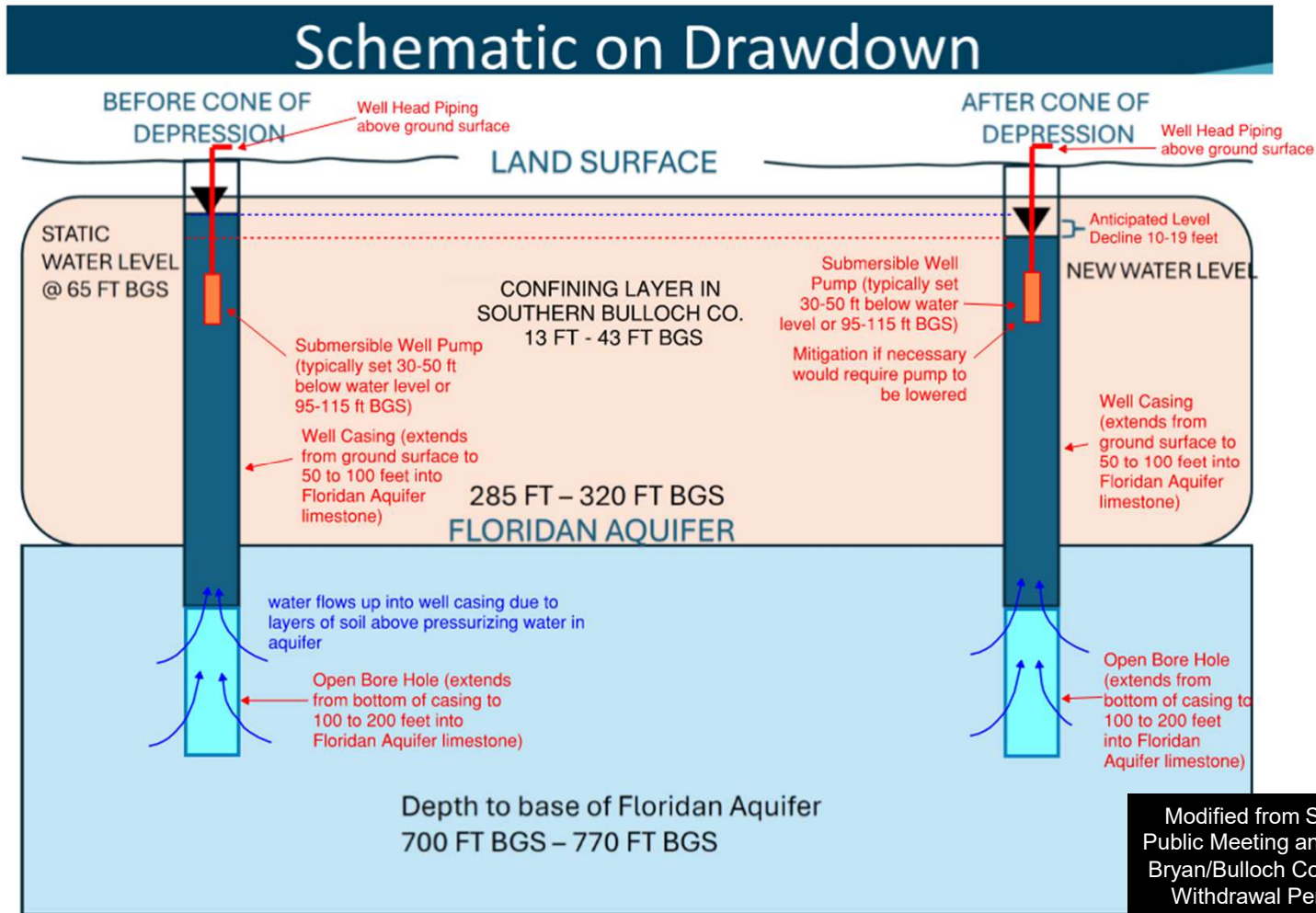
# Potential Impact to Existing Wells

- **GA EPD Modeling** – Two independent simulations performed based on proposed withdrawal limits:
  - 4 wells pumping simultaneously with a combined total of 6.625 mgd
  - Simulations assumed continuous pumping at max permitted limits, 24 hours per day / 7 days per week
- **Reality**
  - Pumping will not be a maxed permitted limits for +5 years
  - HMGMA and Battery will ramp up over next 1-2 years to approximately 4 mgd
  - Approximately 2.625 mgd is anticipated future demand for residential and commercial growth in the area

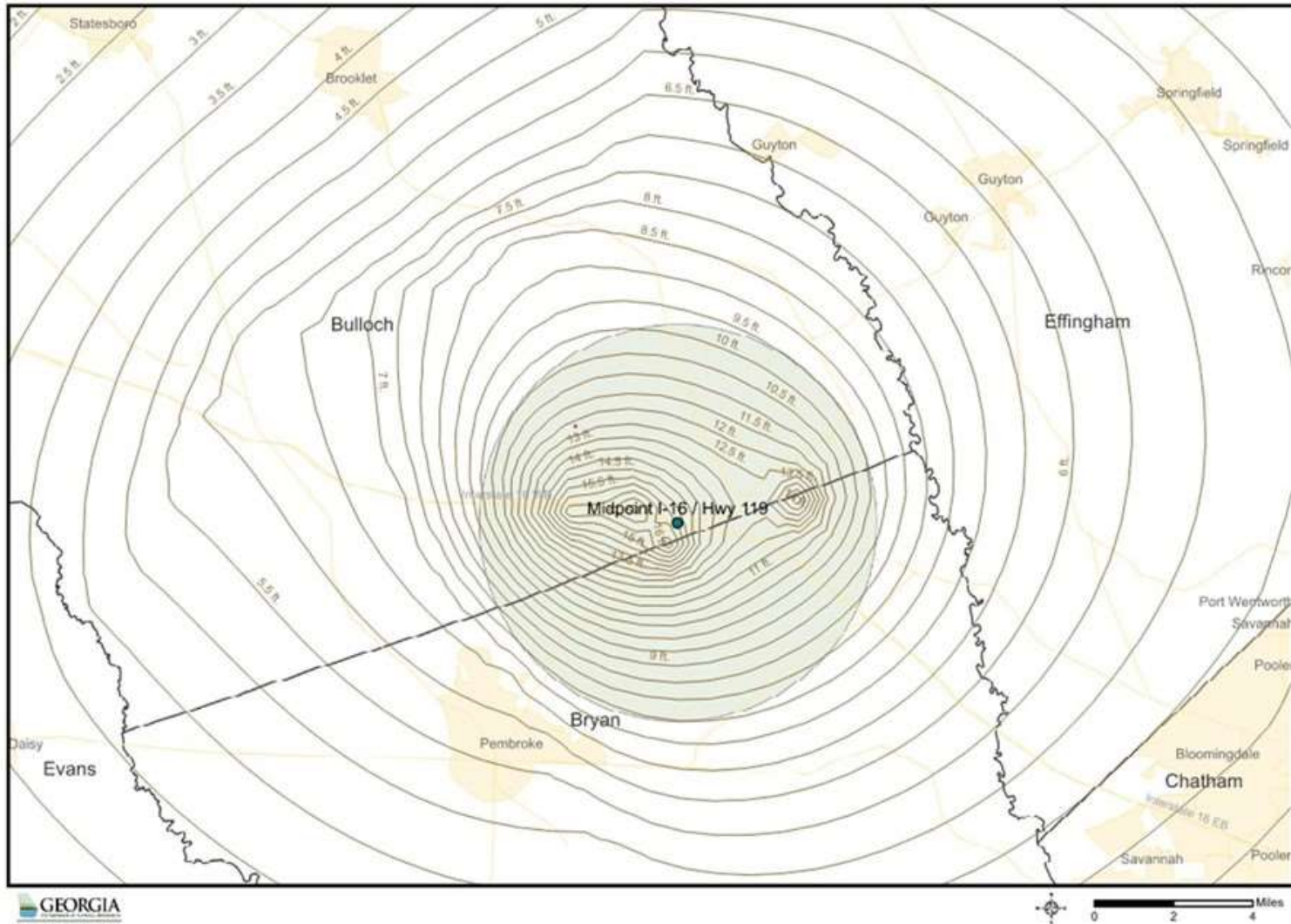




# Potential Impact to Existing Wells



# Simulated Drawdown from Proposed Withdrawal



Source: Groundwater Sustainability Program, December 2024

# Addressing Short-Term Impacts

- **Groundwater Sustainability Program (GSP)**
- **Special Condition Requirements:**
  - Define and identify objectives for GSP
  - Joint Mitigation Fund to pay for the administration of the GSP and implement mitigation measures
  - Develop Mitigation Fund mechanisms
  - Create dedicated public information sources
  - Develop eligibility criteria for existing wells to receive mitigation
  - Develop mitigation measures to address potential impacts





# GSP Framework

- Joint Program formed by Bryan and Bulloch Counties
- Each shall appoint a Well Mitigation Manager
  - Responsible for administering the GSP's operations
  - Responsible for mitigation in his/her respective County, each play a backup roll to assist the other, as needed, to ensure goals of GSP are met
  - Bulloch County Manager – James Pope
  - Bryan County Manager – Paul Teague
- Establish and impanel an Advisory Committee to provide recommendations on program administration, goals, and other related matters



# GSP Advisory Committee Members

Bulloch	Bryan
Dr. Frank Davis, III, MD	Chris Foldesi, PG
Doug Lambert	John Peterson
Dr. Francisco J. Cubas, PhD	J. W. Youmans



# An Evolving Program

- Lessons will be learned through the implementation of the Mitigation Program and associated Mitigation Plans and opportunities to refine the Mitigation Program are expected
- Costs to mitigate wells, provide interim drinking water supplies, and administration may also evolve over the implementation horizon
- The GSP intends the Mitigation Program and Mitigation Plans to be iterative and evolve as new information, funding, and efficiencies are understood; and input from the Advisory Committee is provided.





# Stakeholder Outreach

- Created a dedicated GSP Website, which includes general information about the GSP, the Floridan aquifer, and information about groundwater withdrawals and how they affect water levels in existing wells [bryanbullochgsp.org](http://bryanbullochgsp.org)
- Publication of Mitigation Tracks, claims process, and list of licensed well drillers on Bryan County, Bulloch County, and the new GSP website
- Door hangers, flyers, and mailings to property owners within the Mitigation Area
- Email notification to well owners who register their well with GSP following Mitigation Plan adoption
- Social media posts and other public outreach as determined by GSP



## Stakeholder Outreach (cont.)

- One workshop following adoption of the Mitigation Program to notify the public of the resources, claims process, and opportunities available to support existing well owners
- GSP Well Mitigation Managers shall host a meeting with the Advisory Committee to discuss Mitigation Plan implementation at least once every six months (Initial meeting April 14<sup>th</sup>, 2025)
- Updates on Mitigation Program progress at the GSP's Advisory Committee meetings (frequency and schedule to be determined by Well Mitigation Managers)



# Proactive Mitigation

- Well Registration:
  - Non-mandatory registration period established by March 1, 2025
  - Create a baseline record existing wells in the event of future claim
  - Data on well location, depth, pump set point, water level, maintenance history, etc.
  - May help identify at-risk wells prior to withdrawals from proposed wells
  - Well Registration web-link: <https://arcg.is/OCHnq0>
- Specific investigations:
  - Larger irrigation wells, may perform pre-mitigation assessment, determine pump depth, water levels, etc.
- Monitoring:
  - GSP may jointly monitor and study of well water levels with educational institutions (Georgia Southern University)
  - GSP will develop a notification-proactive warning system to notify well owners prior to potential impacts based on well monitoring data collected





# Eligibility & Mitigation Tracks for the GSP

- Eligibility:

- Existing well drilled on or before April 1, 2025, or the date in which the first of the four proposed Bryan and Bulloch Wells is placed into operation, whichever occurred last
- Within the 5-mile radius of I-16 and Highway 119 Interchange (Mitigation Area - see map)

- Drinking Water Well Mitigation Track:

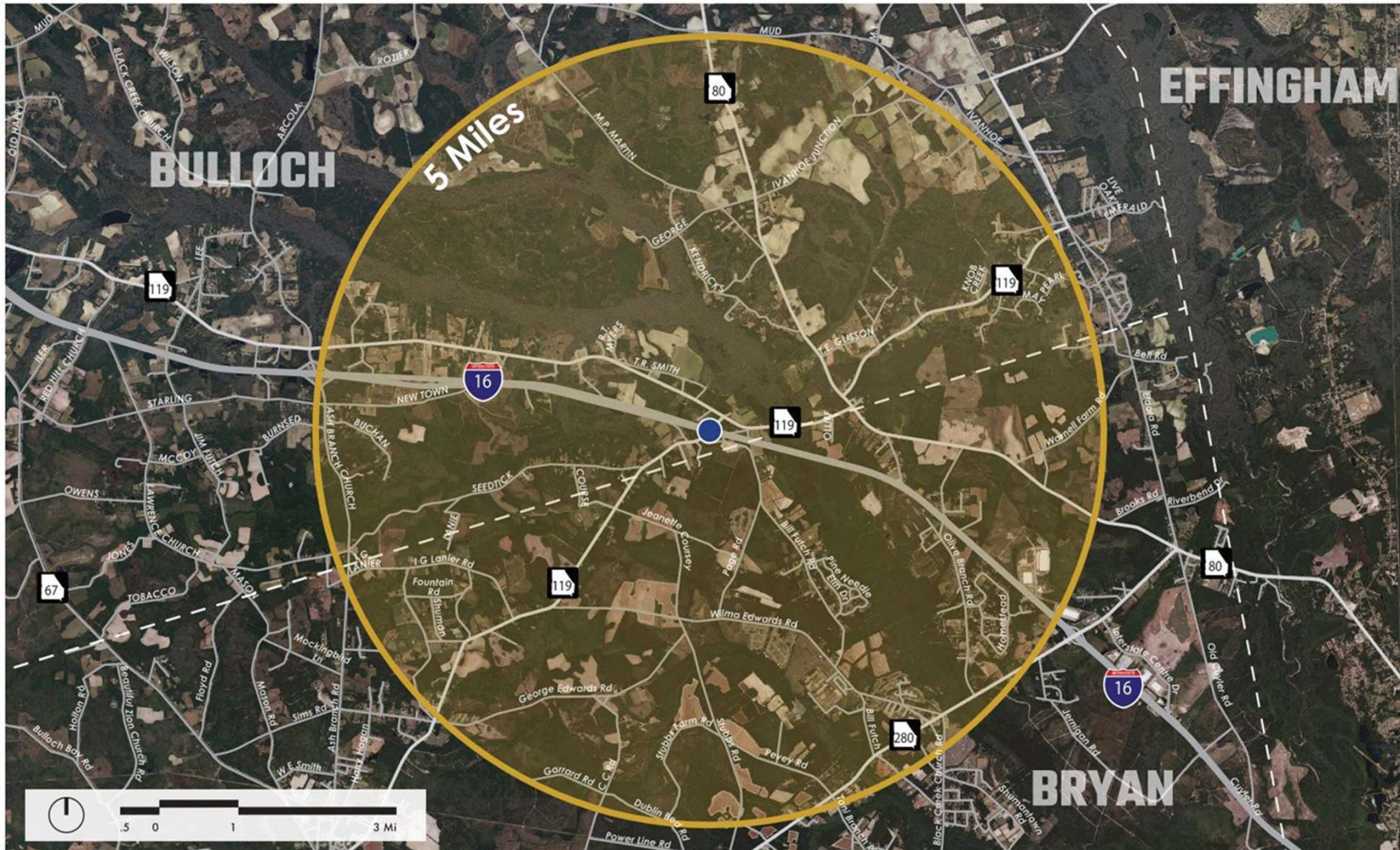
- Private domestic wells (permitted or unpermitted by Georgia Department of Public Health (DPH))
- Qualifying private drinking water well owners will be eligible to receive emergency/interim water supplies
- Privately owned community wells and municipal owned wells are eligible

- Non-Drinking Water/Agricultural Well Mitigation Track:

- Non-drinking water wells for agricultural or other non-potable irrigation (i.e. golf course irrigation), must be permitted by GA EPD
- **Not** eligible for emergency/interim drinking water supplies



# Well Mitigation Area





# Drinking Water Well Mitigation Track Claims Process

## WHO CAN SUBMIT A CLAIM?



## CRITERIA FOR A CLAIM TO QUALIFY

1

The well is an existing privately owned Floridan aquifer well located within the Mitigation Area and was constructed prior to April 2025, and has undergone the on-site assessment via the GSP claims process.

2

The well has experienced a significant lowering of water level due to new Floridan aquifer groundwater withdrawals from the Bulloch and Bryan municipal supply wells (see full mitigation plan for additional details).

3

Non-Floridan Aquifer wells, such as surficial, Miocene, or other shallow wells are **not** eligible for mitigation under the GSP. Issues with well water quality, casing damage, or other well issues unrelated to reductions in water levels due to the Bulloch and Bryan municipal well withdrawals are **not** eligible under the GSP.

## CLAIMS PROCESS

- Well user (owner or tenant) contacts GSP upon loss of drinking water supplies to receive emergency bottled water within 24 hours and interim supplies system within 72 hours.
- The well owner then fills out an online claim form or calls GSP for assistance.
- GSP on-call licensed well driller and staff will perform an on-site assessment and gather information from well owner.
- GSP on-call licensed well driller and Well Mitigation Manager (or his assign) will evaluate the likely causation of well failure to determine if the claim qualifies for mitigation through GSP funding.
- If the claim qualifies for mitigation, GSP staff will direct the on-call licensed well driller to perform immediate repairs/mitigation to the impact well.





# Non-Drinking Water / Agricultural Well Mitigation Track Claims Process

## WHO CAN SUBMIT A CLAIM?



## CRITERIA FOR A CLAIM TO QUALIFY

1

The well is an existing privately owned Floridan aquifer or other non-drinking water well permitted through Georgia EPD, located within the Mitigation Area and constructed prior to April 2025, and has undergone the on-site assessment via the GSP claims process.

2

The well has experienced a significant lowering of water due to new Floridan aquifer groundwater withdraws from the Bulloch and Bryan municipal supply wells (see full mitigation plan for additional details).

3

Non-Floridan Aquifer wells, such as: surficial, Miocene, or other shallow wells are **not** eligible for mitigation under the GSP. Existing agricultural or other non-drinking water wells are not permitted by Georgia EPD are also not eligible for mitigation under the GSP. Issues with well water quality, casing damage, or other well issues **not** related to the Bulloch and Bryan municipal well withdraws are not eligible under the GSP.

## CLAIMS PROCESS

- Well owner fills out an online claim form or calls GSP upon loss of water supply to set up an on-site assessment.
- GSP on-call licensed well driller and staff will evaluate the likely causation of well failure to determine if the claim qualifies for mitigation through GSP funding.
- If the claim qualifies for mitigation, GSP staff will direct the on-call licensed well driller to perform immediate repairs/mitigation to the impact well.



# On-Call Well Drillers

- Currently preparing for public solicitation of proposals and contract with at least 3 well drilling companies
- Licensed well drillers in the State of Georgia
- Response and responsible drillers, located within 100-mile radius of Mitigation Area
- Experience with Floridan aquifer wells and remediation of the same
- Sufficient personnel and equipment to handle all Mitigation Program service request
- Contract for at least 3-year periods
- Provide unit cost schedules for mitigation measures



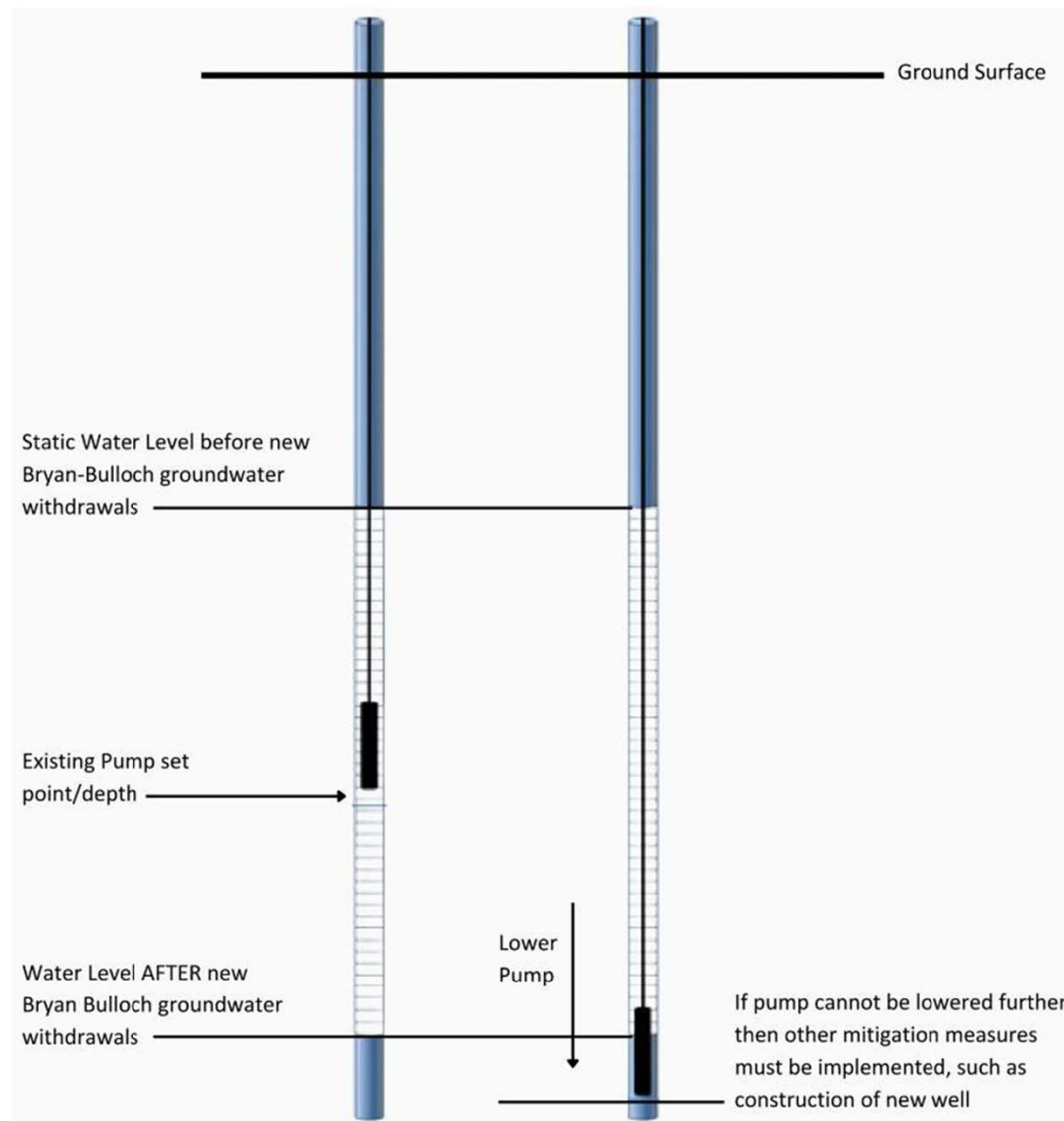
# Mitigation Measures

Include, but are not limited, to the following:

- Lowering Well Pump below the anticipated long-term reduced water well caused by pumpage from proposed Bryan and Bulloch wells
- Modify existing pump equipment, as necessary, based on lowered setpoint/depth in well
- Deepen the well, and install existing, modified, or new pump equipment
- Construct a new well and abandon existing well in accordance with Georgia EPD standards
- Connect the impacted party with an existing public water system in the vicinity
- With the consent of the affected user, provide other acceptable means of mitigation as approved by GSP
- Assist the well owner in the application for a new or modified non-drinking water/agricultural groundwater use permit and/or permit to drill through Georgia EPD, as necessary



# Typical Mitigation Measure: Lowering Pump in Existing Well





# Mitigation Fund

- Initial Operating Funds –
  - \$250,000 each from Bulloch County Development Authority, the Bryan County Development Authority, HMGA, and the Savannah Harbor-Interstate 16 Corridor Joint Development Authority (JDA)
  - Total of \$1 million to start the Mitigation Fund
- Develop policies and strategies for increasing the Fund balance based a portion of proceeds from water service charges to be deposited into the Fund
  - Initially \$0.10 per 1,000 gallons from Bryan County charges for at least 5-years
  - The Well Mitigation Managers shall make appropriate requests for additional funding from the respective Boards of Commission to approve any modifications to these amounts to maintain a sufficient Fund balance.
- The GSP shall also implement an investment policy which is in compliance with various provisions of Georgia law relating to the investment and security of municipally managed funds.

