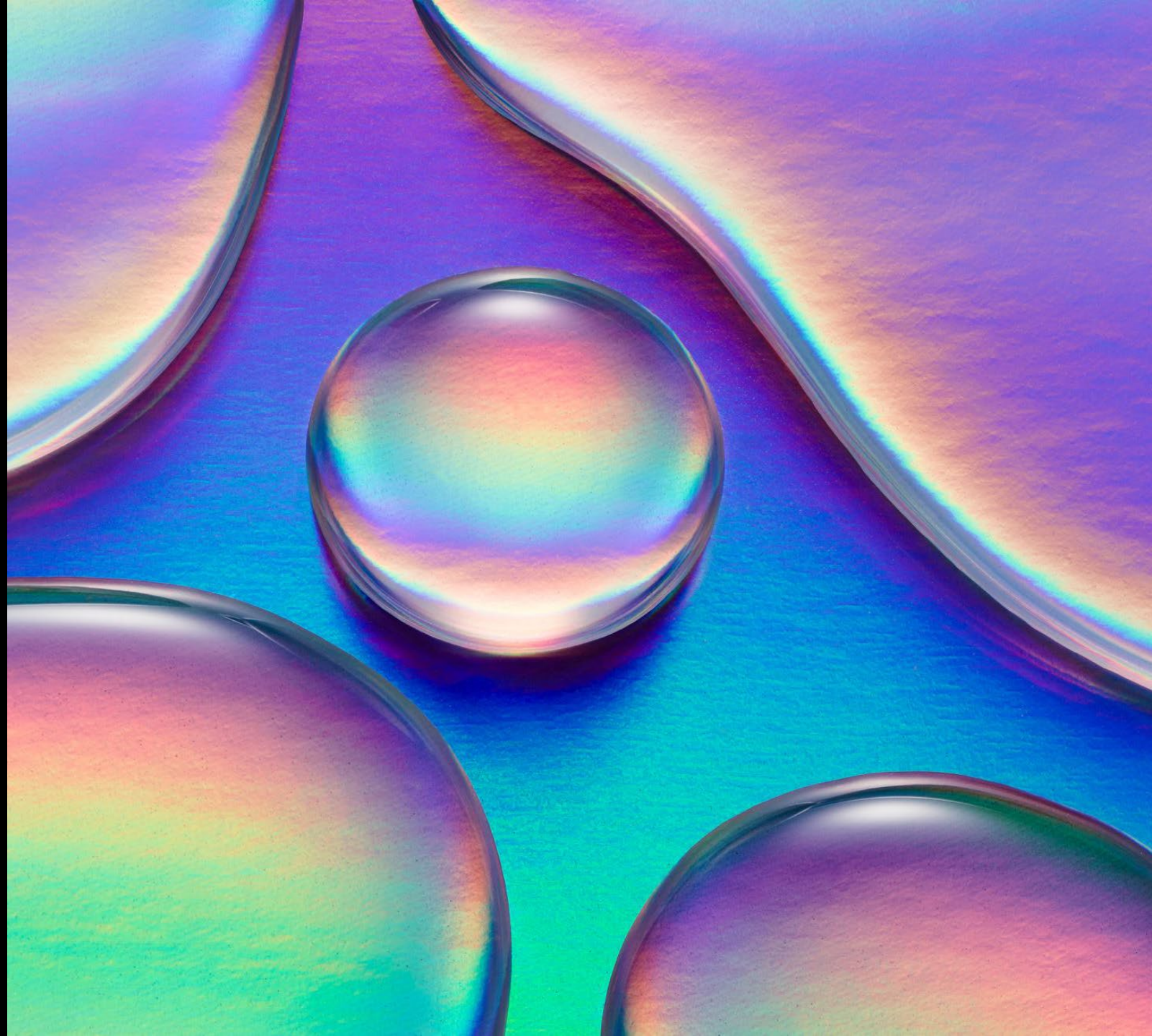


---

# WELLHEAD PROTECTION ZONING OVERLAY DISTRICT

UPDATE

Summary and Current Status



---

# HISTORY

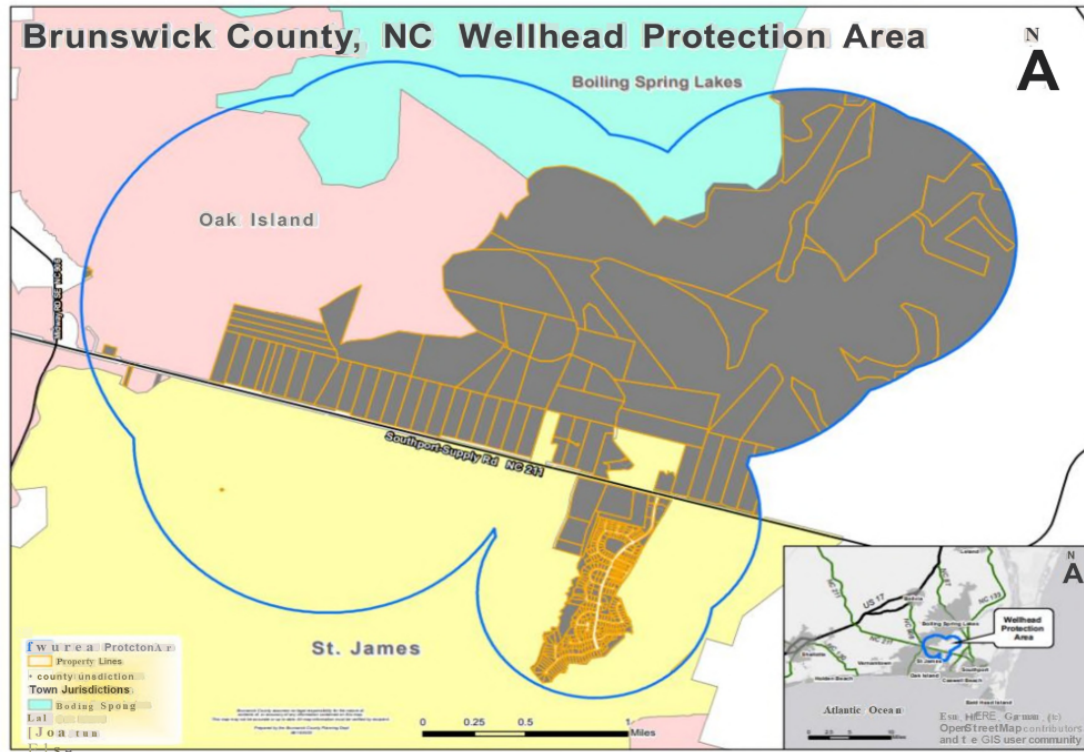
- Brunswick County Utilities have 14 public community wells in the NC 211 Corridor that get water from the Castle Hayne Aquifer.
- These wells provide raw water to the NC 211 Water Treatment Plant for public water throughout their service area. There are 12,574 customers that get water from these wells.
- The Castle Hayne Aquifer lacks a confining layer of soil making it more susceptible to contamination than other aquifers in the region.
- Contamination can occur from many sources including wastewater discharges, underground storage tanks, urban storm water runoff, or other types of non-point source contamination such as runoff produced by agricultural activities, junk yards, vehicles, and land clearing for development. Certain practices and businesses are at a bigger risk of contamination.
- In January 2013, Brunswick County adopted the Wellhead Protection Plan with specific policies for the protection of the public well area within the 211 corridor.

---

# SINCE ADOPTION OF THE WELLHEAD PROTECTION PLAN:

- Brunswick County has experienced rapid growth and development
- Explored ways to protect this vital community water source within the NC 211 Corridor
- Found trace amounts of contamination from water in the NC211 Corridor public community wells
- Public Utilities Department approached the County Planning Department about implementing zoning regulations to help protect the vital community water source in the NC 211 Corridor
- Explored ways to protect this vital community water source within the NC 211 Corridor
- Proposing a zoning overlay district within the NC 211 Corridor

# PROPOSED BRUNSWICK COUNTY WELLHEAD PROTECTION OVERLAY DISTRICT



- Will require a text amendment to the Brunswick County Unified Development Ordinance.
- Will add requirements for new development.
- Encourages uses, practices, and industries that will help maintain and improve the water quality within the area.
- Prohibits specific uses, practices, industries that negatively impact water from the Castle Hayne Aquifer.
- Already approved development & existing businesses, uses, & practices that are prohibited in the overlay will be grandfathered and can continue but expansions & changes will be affected.
- Staff reviewed other communities with wellhead protection ordinances & a model ordinance produced by the U.S. Environmental Protection Agency (EPA).

---

# WHAT COULD BE DEVELOPED WITHIN THE OVERLAY?



---

# WHAT RESTRICTIONS COULD BE IMPOSED BY THE OVERLAY?

Uses & Practices  
that contaminate the  
ground water & affect  
water quality

Limitations on the  
depths of digging and  
dirt removal

Additional buffers on  
wetlands and bodies  
of water

Limitations on  
impervious surface  
coverage

Limitations on  
underground material  
types

Prohibition of the  
use of certain  
chemicals

Prohibition of mining  
activity and  
underground storage  
facilities

Limit multi-story  
buildings and  
higher density  
developments

---

# WHERE ARE WE NOW?

- On May 15, 2023, the Wellhead Protection Zoning Overlay District was APPROVED by the Brunswick County Commissioners.
- The approved version creates the Wellhead Protection Overlay Zoning District in Section 4.8.8. of the Unified Development Ordinance (UDO) and focuses on prohibiting uses that produce, use, or store chemicals in Section 5.2.3. of the UDO. **It does not include any performance standards**, which provide the “teeth” in the ordinance by detailing the consequences of violation of the ordinance.
- One of the biggest concerns of St. James residents is the Burrow Pit on NC 211 that is being used by Barnhill Construction for the material being mined and used on the NC 211 expansion project.
- Brunswick County Public Utilities imposed a depth restriction of 23’ for the mining of the soil/sand from the Burrow Pit.
- Your TOSJ Council has been following this measurement process closely and have obtained visual proof that the depth restrictions are being followed by Barnhill. (see next slide)

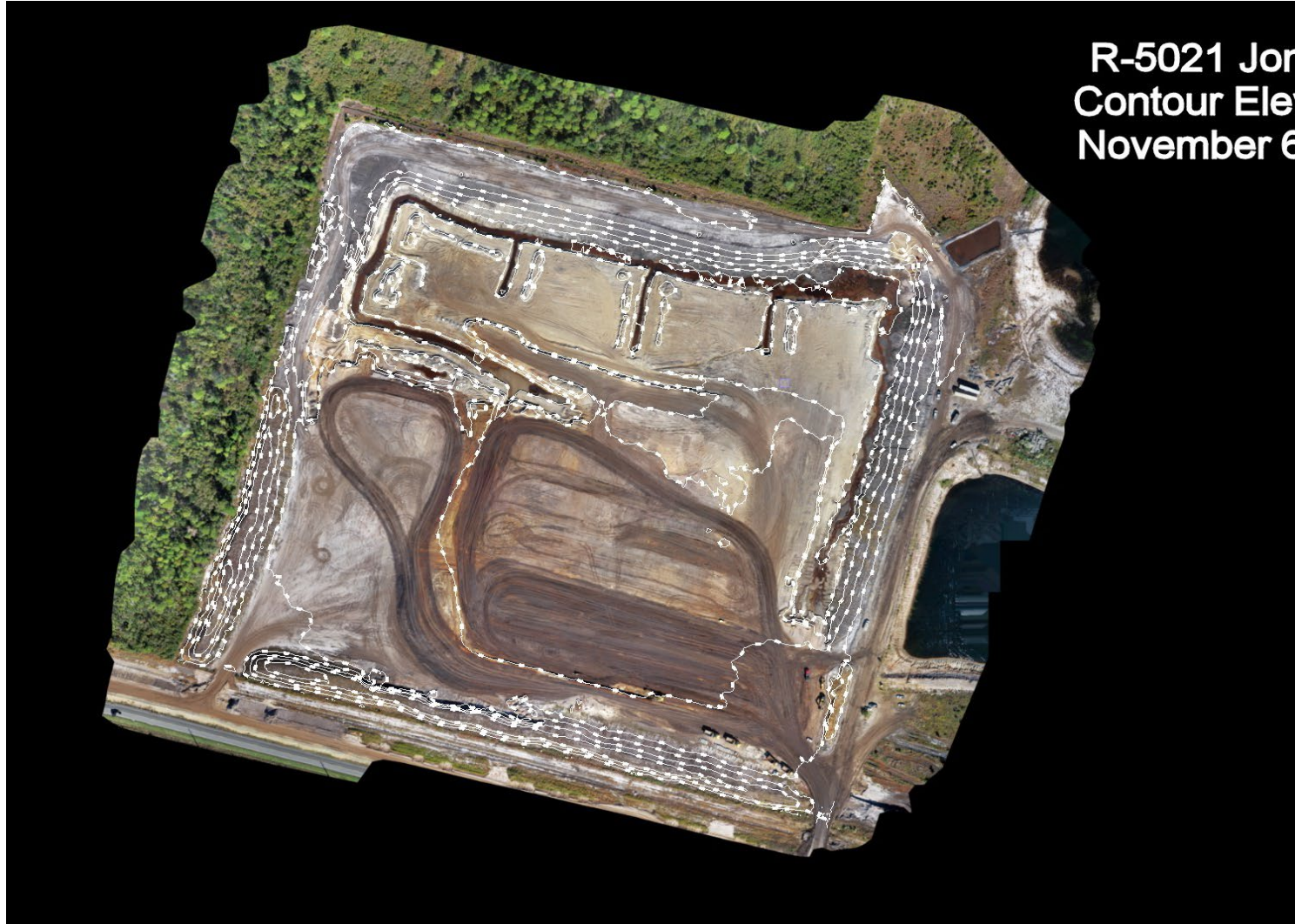
---

# ARIAL VIEW OF NORTHEAST CORNER

- Closest point to an active wellhead.
- The NE corner at 20' is currently the lowest elevation and is being used as a drainage location.
- The original elevation of that corner was 40' and the confining layer of the aquifer was found to be 23-25' deep.
- The floor of the borrow pit will be ~21'.







R-5021 Jon  
Contour Elev  
November 6

---

## NEXT STEPS:

- Your TOSJ Council has requested additional, more recent, photographs of the borrow pit, along with the depth measurements. We have been advised that there was a drone flight scheduled for last week and that we should receive the updated photos and depth readings by the end of February 2024.
- Additionally, we have found out that the County Planning Board has received a draft of the proposed Performance Standards from their consultant. This is currently being reviewed by the Deputy Director of the Board, as well as county legal counsel. The Planning Board will reconvene to review the documents in a few weeks and will then propose a text modification of the Wellhead Protection Zoning Overlay District to include these Performance Standards.
- To date, we have not had the opportunity to review these Performance Standards but believe that these will be presented by the County Planning Board in a Public Meeting prior to being proposed to the Board of Commissioners.

---

FOR MORE INFORMATION OF  
THE WELLHEAD PROTECTION  
ZONING OVERLAY DISTRICT:

<https://www.brunswickcountync.gov/423/Wellhead-Protection-Zoning-Overlay-Distr>