CHATHAM COUNTY WELL WATER

PLANNING BOARD SUBCOMMITTEE

JANUARY 6, 2021

ANNE LOWRY, REHS
ENVIRONMENTAL HEALTH DIRECTOR

Discussion Topics

- Is there information about community vs. individual wells, is one better than another?
- How many community wells are in use in the county and how many people are served?
- Information about dewatered wells (i.e. wells that have failed)?
  - If anecdotally it appears most failing wells are shallow, should/could we infer that the water table is getting lower?
- South Atlantic water survey data (was mentioned during the past meeting)?

Public Water Supply Categories

Public Water Supply	systems which provide piped drinking water to at least 15 connections or 25 or more people 60 or more days per year.
• Community	a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. **Ex. Municipal Water Supplies- Town of Pittsboro, Siler City, Chatham County (Could be wells or surface water)**
• Non Community	public water system that is not a community water system
○ Non Transient Non Community	System that serves 25 or more of the same people for 60 or more days per year. **Ex. Churches, day cares, schools, large businesses (Primarily wells)**
○ Transient Non Community	System that provides water in a place such as a gas station or campground where people do not remain for long periods of time. **Ex. Gas stations/campgrounds (Primarily Wells)**

IS THERE INFORMATION ABOUT COMMUNITY VS. INDIVIDUAL WELLS, IS ONE BETTER THAN ANOTHER?

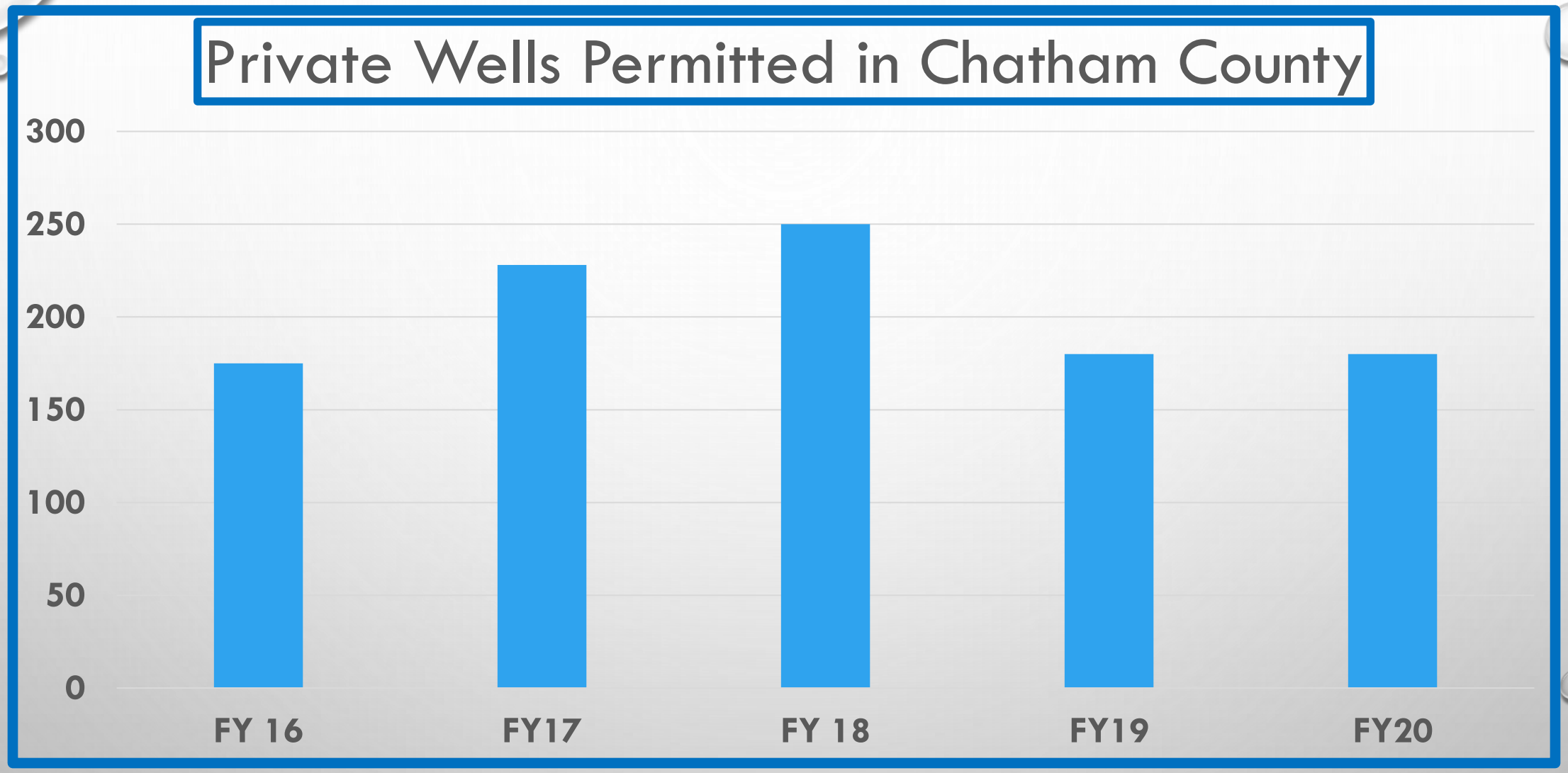
Public Water Supply Wells (Community/Non Community)	Private Wells
Permitted by NCDEQ Public Water Supply Section	Permitted by local health department
Annual sampling requirements*	One time sampling requirement
Water system oversight by NCDEQ	Water system oversight by well owner

*Sampling requirements (frequency/types) change based on number of people served by water system

How many community wells are in use in the county and how many people are served?

Type of Water System	Number in Chatham	Number of People Served
Community	23 (15 wells)	40,000+ (1,900 by wells) estimate
Non Transient-Non Community	1(well)	Church
Transient Non Community	28 (all wells)	Gas stations/campgrounds and some churches
Private Wells	Estimated 15,000	Unknown

Private Wells Permitted in Chatham County



- Information about dewatered wells (i.e. wells that have failed)?
  - If anecdotally it appears most failing wells are shallow, should/could we infer that the water table is getting lower?

South Atlantic water survey data (was mentioned during the past meeting)?

The U.S. Geological Survey (USGS) South Atlantic Water Science Center is conducting a study of groundwater availability in the Triangle area of North Carolina. This study will assess the depth and distribution of fresh groundwater. Landowners, who currently have a well on their property, are encouraged to participate. There will be no charge to well owners for the collection of water-level measurements, and no well owner names or addresses will be presented with study results.

Emailed Jason form from USGS

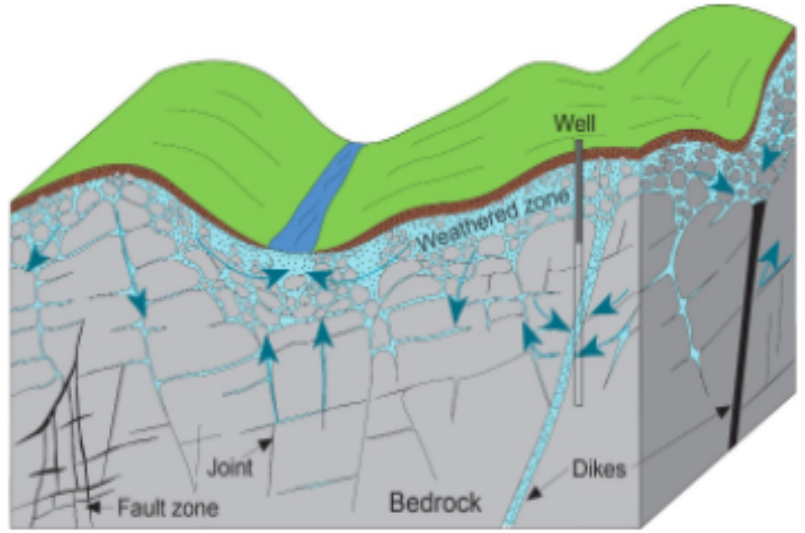
USGS
science for a changing world

Study Overview | Monitoring Network | Data Collection | Hydrologic Modeling

Wake County Groundwater Assessment: Home

Study Overview

The objective of this study is to develop a county-wide assessment of groundwater availability within the fractured-rock aquifer system in Wake County that will prepare the County for planning into the future. The goal is to develop a comprehensive groundwater budget for the county, including sources and distribution of water into the system and out of the system. Since fractured rock aquifers dominate the landscape, key tasks include characterization of the fractured rock aquifers. The study will assist Wake County in the management of their groundwater resources by providing information on sustainable quantity of groundwater, which will be based on water-budget components including potential recharge, distribution of well yields, and locating possible instances of well interference and competing uses.



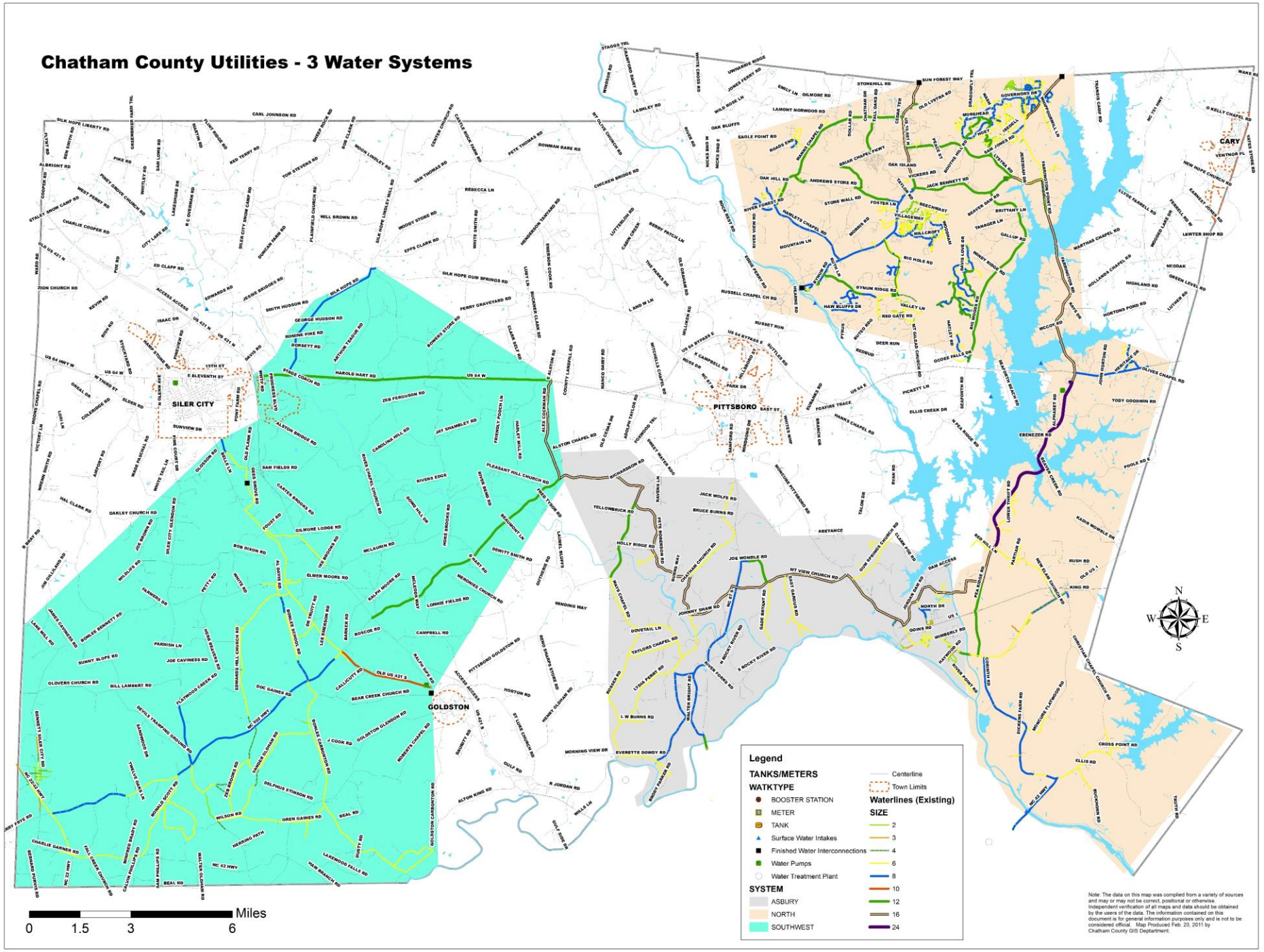
Generalized groundwater flow in a fractured-rock aquifer (modified from Freeze and Cherry, 1979)

Project Tasks

- Implement a groundwater-level monitoring network for Wake County.
- Collect borehole geophysical logs within the monitoring network wells.
- Map the distribution of maximum well-yields and primary fracture orientations.
- Display the spatial distribution of natural recharge to the groundwater system using a Soil and Water Balance model.
- Estimate the groundwater contribution to streamflow at gaged-streams using hydrograph-separation analyses.
- Future Land-use and water demand forecast modeling.
- Simulate regional groundwater flow using MODFLOW model.
- Summarize all data collected and assess the County's groundwater resources in two USGS Scientific Investigations Reports.

For more information contact NCgroundwater@usgs.gov or (919) 571-4094

QUESTIONS?


Chatham County Utilities - 3 Water Systems
SILER CITY
PITTSBORO
GOLDSTON
CARY
Legend
TANKS/METERS
WATKTYPE
BOOSTER STATION
METER
TANK
Surface Water Intakes
Finished Water Interconnections
Water Pumps
Water Treatment Plant
SYSTEM
ASBURY
NORTH
SOUTHWEST
Centerline
Town Limits
Waterlines (Existing)
SIZE
2
3
4
6
8
10
12
16
24
Miles
0
1.5
3
6
N
W
E
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