



NC Groundwater Withdrawal Data

Groundwater Professionals of North Carolina

February 23, 2021

Harold Brady & Linwood Peele, DWR



Outline

- Available Data Sources
 - Water Withdrawal and Transfer Registration (WWATR)
 - Local Water Supply Plans (LWSP)
 - Central Coastal Plain Capacity Use Area (CCPCUA)
- Distribution Map(s)
- Data Analysis Tool



Water Supply Planning Branch

- Provide technical assistance to local governments by planning, identifying water supply needs, identifying and developing water supply sources to address their long-term water supply needs.
- This process of division staff working with local water systems was formalized with the passage of HB 609 (Session Law 2011-374) in 2011.
- Collect surface and groundwater withdrawal data.



Water Withdrawal and Transfer Registration Program

Statutory Requirements:

- G.S. 143-215.22H & 15A NCAC 02E .0301 (Estd.1991)
- Accounting of large withdrawals
 - Agricultural users > 1,000,000 gallons any single day
 - Non-agricultural users > 100,000 gallons any single day
- Same requirements for both surface and groundwater withdrawals
- April 1st deadline to report annual water withdrawals for the previous year



WWATR Components

- Facility Information
 - Registrant
 - Facility Name & ID
 - Contact Information
- Withdrawal Information
 - Average Daily Withdrawal
 - Maximum Day Withdrawal
 - Source Information
 - Source Name & Type
 - Pumping Capacity
- Discharge Information
 - Average Daily Discharge
 - Maximum Day Discharge
 - Discharge Type
 - Discharge Capacity
- Interbasin Transfer Information
 - Description of Transfer
 - Source and Receiving Basins
 - Average Daily Transfer
 - Maximum Day Transfer
 - Transfer Capacity

NC DEQ Division of Water Resources

Water Withdrawal and Transfer Registration

Overview

Reports

FAQ

NCID

Login

The easy way to report your water withdrawals.

In an effort to make reporting of water withdrawals easier, we would like to welcome you to our new online reporting system. It's the fast and simple way to meet your reporting requirements!

GET STARTED NOW

Need a paper form?

[View our FAQ](#)

About Our Program

North Carolina [General Statute § 143-215.22H \(15A NCAC 02E .0301\)](#), originally passed in 1991, requires surface water and ground water withdrawers who meet conditions established by the General Assembly to register their water withdrawals and surface water transfers with the State and update those registrations at least every five years. Agricultural water users that withdraw one million gallons of water a day or more and non-agricultural water users that withdraw one hundred thousand gallons of water a day are required to register. Administrative rules that became effective in March 2007 (15A NCAC 02E.0600) stipulate that registrants must also report their water usage annually to the Department of Environment and Natural Resources. In its 2008 session, the General Assembly established civil penalties for failure to comply with these requirements. The links above will provide you with the information and forms you need to comply with these requirements.

The screenshot shows a web browser window displaying the 'Water Withdrawal Registration' portal. The page title is 'Annual Water Use Report 2009'. It features the NCDENR logo and a navigation bar with 'Report', 'Submit', 'Help', and 'Logout' buttons. A yellow banner at the top provides instructions on how to submit the report. Below this, there is a table for 'Section 1: Facility Information' with the following data:

Registrant	Owner Name	Facility ID	0000-0001
Facility Name:	Facility Name:	Facility Type:	Industrial
County:	Wake	Sub-Basin:	Neuse River (10-1)
Mailing Address:	123 One Way St City, NC 99999	Email:	test@email.com
Contact Person:	Contact Person	Title:	Contact Title
Phone:	999-999-9999	Fax:	999-999-9999

Below the table is a link to 'Edit Facility Information'. At the bottom, 'Section 2: Withdrawal Information' is partially visible, with a note: '2-A. Average daily withdrawal and maximum day withdrawal by month in million gallons per day (MGD)'.

<https://www.ncwater.org/WUDC/app/WWATR/page>

Local Water Supply Planning

Statutory Requirements:

- G.S. 143-355(I) & 15A NCAC 02E .0604 (Estd.1989)
- Requires all units of local governments and large community water systems to prepare a Local Water Supply Plan (LWSP)
 - Applies to systems with >1000 connections or >3000 people
- Annual assessment of a water system's current and future water needs and its ability to meet those needs
- Each LWSP also includes, water shortage response plan, water efficiency plan and surface water transfer worksheets (if needed)
- April 1st deadline to report for the previous year



LWSP Components

- Water System Information
 - Contact Information
 - Distribution Data
 - Maintenance
 - Conservation Programs
- Water Use
 - Service area
 - Water Use by Type
 - Water Sales & Purchases
 - Ground Water Sources
 - Surface Water Sources
 - Surface Water Transfers
 - Water Treatment Facilities
 - Wastewater Information
- System Planning
 - 50-Year Projections
 - Future Sale and Purchase Contracts
 - Future Supply Sources
 - Plan for Meeting Future Water Supply Needs

NC DEQ Division of Water Resources

Local Water Supply Planning

Overview

FAQ

Plans

<https://www.ncwater.org/WUDC/app/LWSP/index.php>

A Local Water Supply Plan is an assessment of a water system's current and future water needs and its ability to meet those needs. By understanding current and future needs, local governments will be better able to manage water supplies and better prepared to plan for water supply system improvements.

North Carolina General Statute [General Statute § 143-355\(f\)](#) requires all units of local government that provide or plan to provide public water service to prepare a Local Water Supply Plan. All community water systems that regularly serve 1,000 or more service connections or serve more than 3,000 people are also required to prepare a Local Water Supply Plan.

North Carolina Administrative Code [15A NCAC 02E .0604](#) requires all systems subject to General Statute § 143-355(f) to electronically submit an annual water use update based on their water use and system conditions by April 1st of every year for the period of January 1st to December 31st of the prior year.

Helpful Tools

- [AWWA Free Water Audit](#)
- [LWSP Completion Assistance Tool](#)
- [LWSP Completion Assistance Tool Checklist](#)
- [Workbook to determine Max Day Well Withdrawal](#)
- [LWSP Projections Evaluation Tool](#)
- [Small System Water Audit](#)
- [Small System Water Audit Presentation](#)

Quick Search

Choose a County...

Choose a Sub-Basin...

Choose a Reporting Year...

Central Coastal Plain Capacity Use Area



Statutory Requirements:

- G.S. 143-215.13-19 & 15A NCAC 02E .0500 (Estd.1989)
- Groundwater Management Branch
- Covers 15 eastern Counties in NC
- Intended to prevent “de-watering” & salt water encroachment in aquifer
- Registration required for withdrawals > 10,000 gpd
- Permit required for withdrawals > 100,000 gpd
- 320+ active permits at this time
- Phased reduction of withdrawals also mandated
- Phase 3 reductions began in 2018 of 30-75% from initial base rate

CCPCUA Components

- Applicant Information
 - Contact Information
 - Facility Information
- Water Use Purpose
 - Type of Water Use
 - Description of Water Use
 - Type of Water Source
 - Well & Pump Information
 - Source Capacity
 - Source Location
 - Number of Days Used
 - Average Daily Withdrawal
 - Maximum Day Withdrawal

<https://www.ncwater.org/?page=49>

Central Coastal Plain Capacity Use Area

Home
Background
Forms
Law and Rules
Public Notices
Miscellaneous
Query the Data

CCPCUA Reporting On-line
*Updated and improved!
Paperless Processing.*
www.ncwater.org/CCPCUAreportonline

State Certified Labs

Email us at ccpcua@ncdenr.gov

GWMB Map Interface

Onslow County Map Interface

Legend

- Dewatering Zone
- Declining WL Zone
- Salt Water Zone

Introduction

The Environmental Management Commission has designated the 15 highlighted counties shown on the map to the left as the Central Coastal Plain Capacity Use Area and approved the CCPCUA rules which create a groundwater use permitting process. The CCPCUA rules became effective August 1, 2002.

Permits are required for groundwater users of more than 100,000 gallons per day.

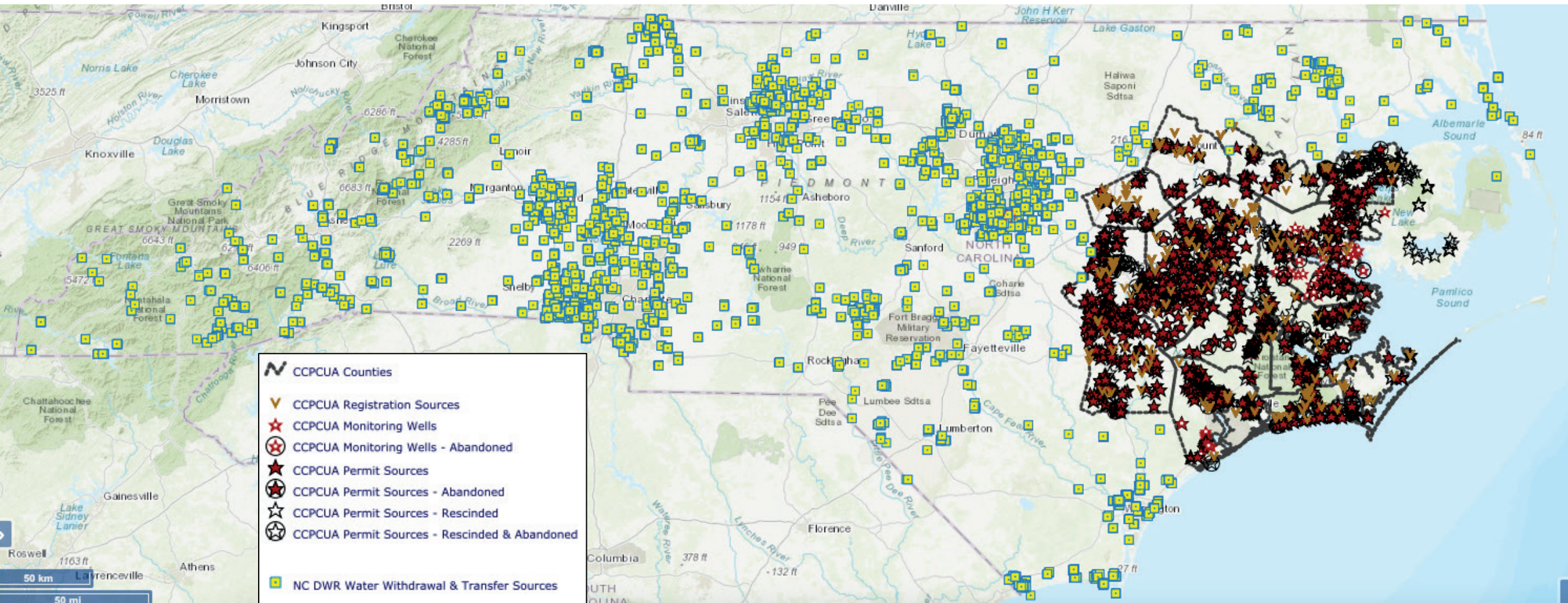
Annual registration and reporting of withdrawals is required for surface and groundwater users of more than 10,000 gallons per day.

Frequently Asked Questions
Flow chart of CUA permitting process

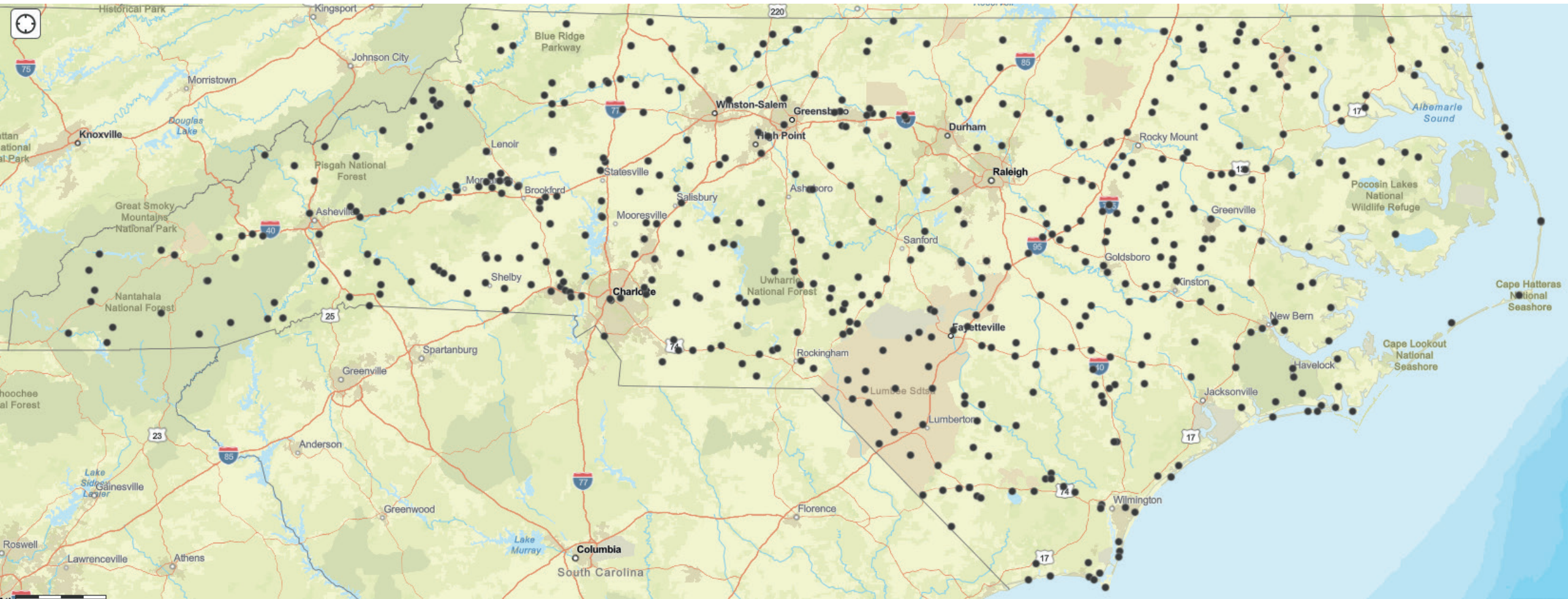
2019 CCPCUA Status Report

The 2019 CCPCUA Status Report, as required by 15A NCAC 02E .0506 of the CCPCUA rules, was presented to the North Carolina Environmental Management Commission (EMC), Water Allocation Committee on September 11, 2019. The **status report** (4.8 mb pdf) is now available with this link or from the Miscellaneous menu option.

WWATR and CCPCUA Data Distribution

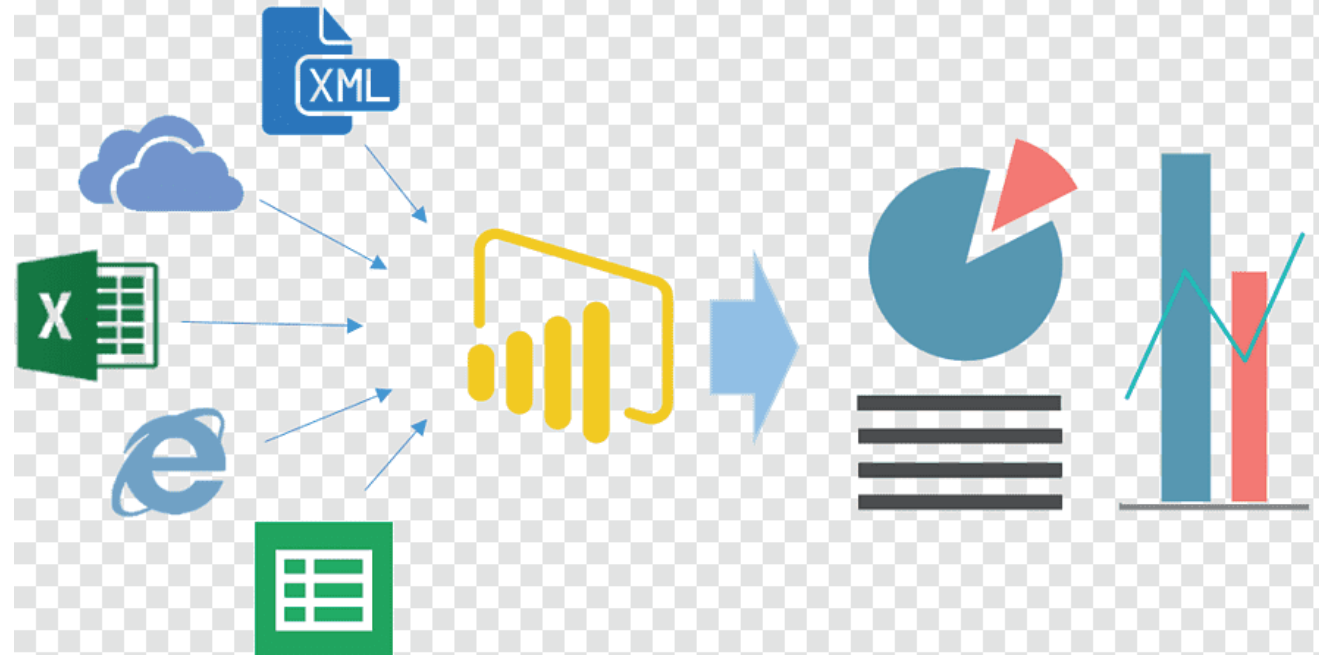


LWSP Data Distribution

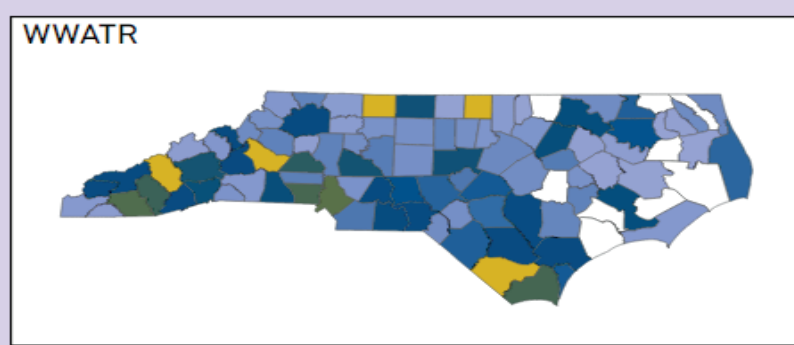
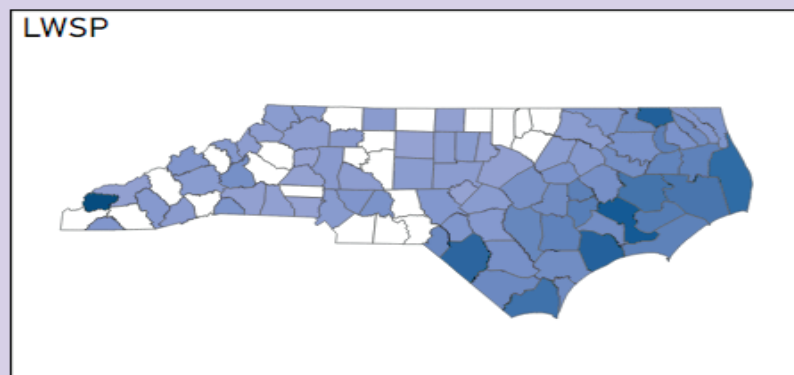
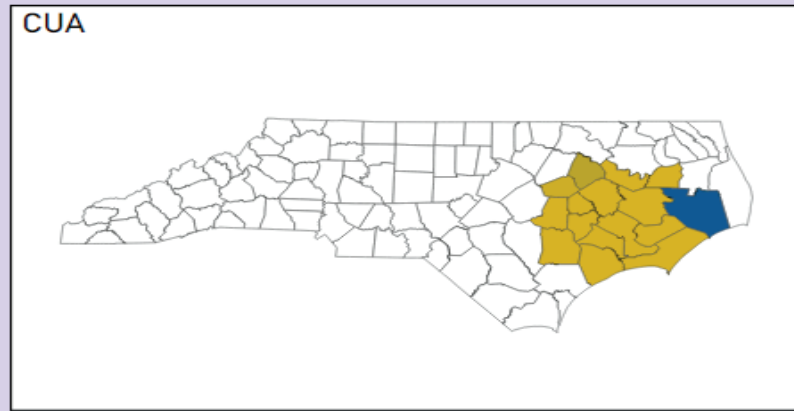
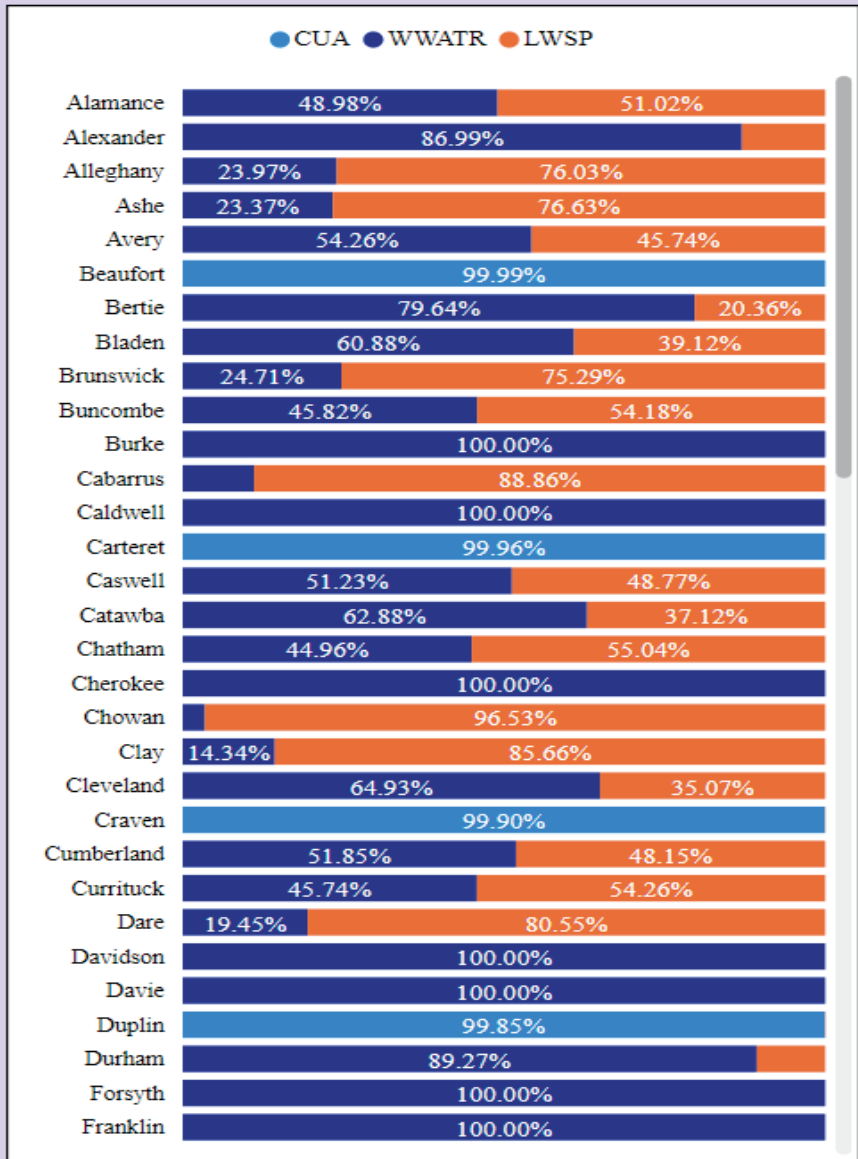
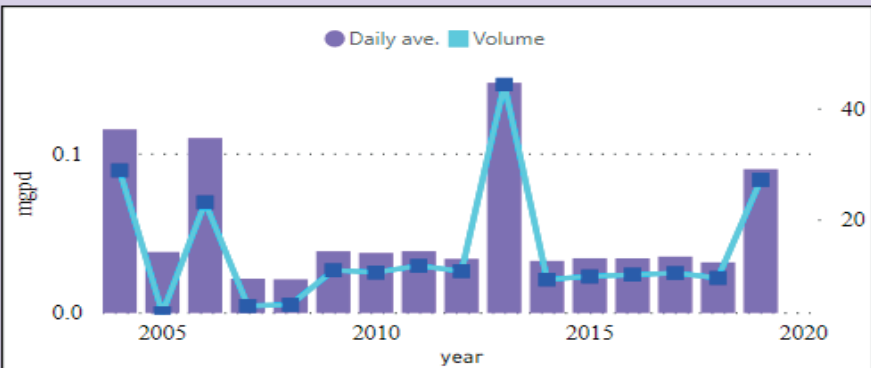
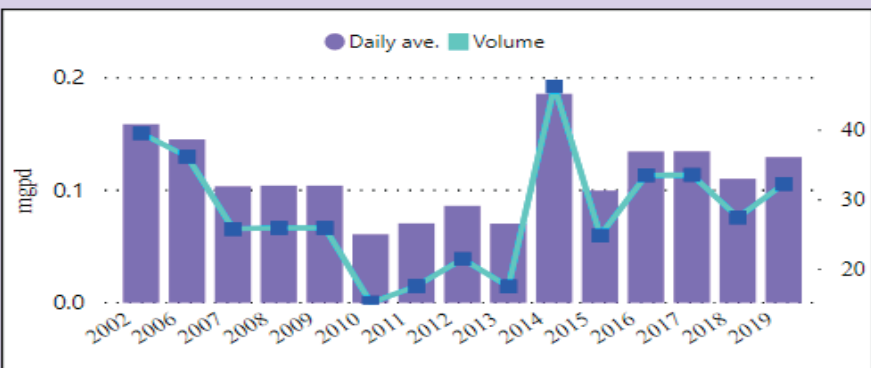
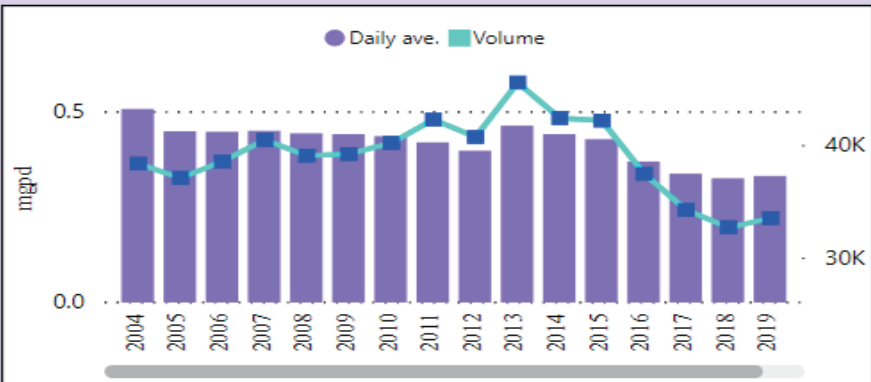


Analyzing Withdrawal Data

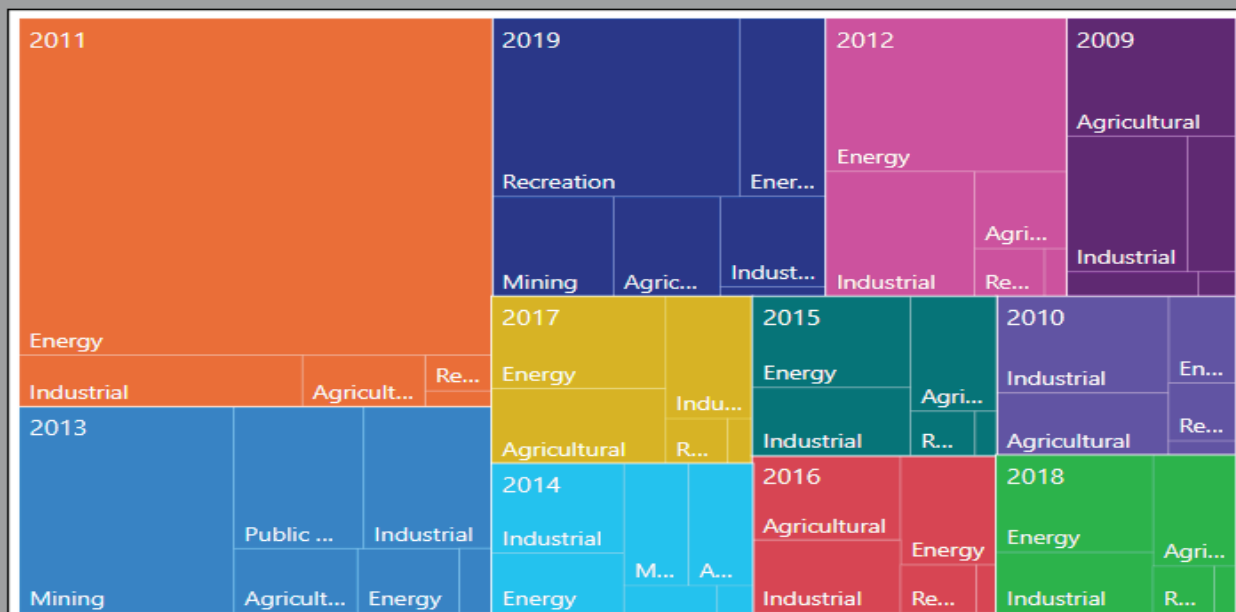
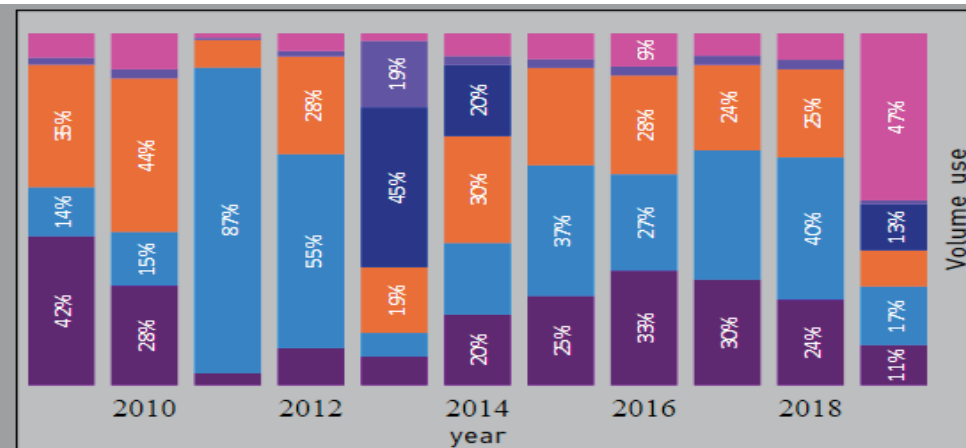
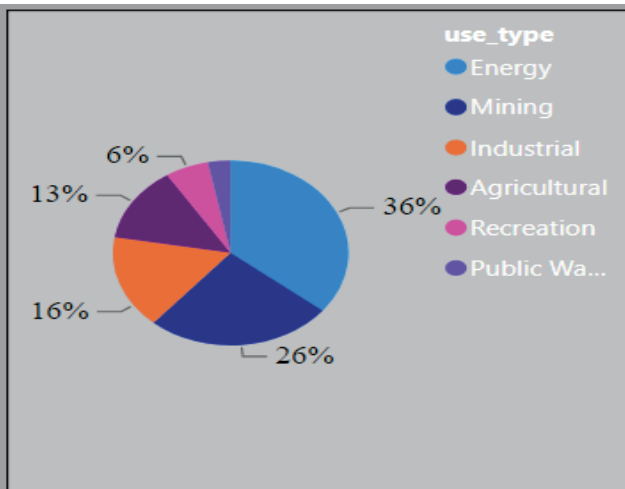
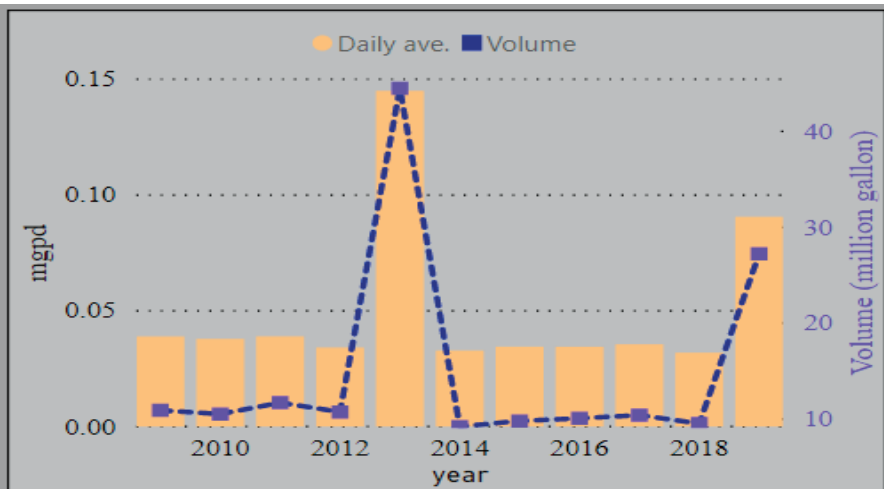
- Power BI: Data Visualization Tool to better internally analyze the data and ultimately as a tool to present available data to the public
- Goals: Provide for greater and easier public access, filtering of data by the user, real-time data access, user determined graphical display of data



All data shown in the following slides has been filtered to only show groundwater data



Water Withdrawal and Transfer Registration

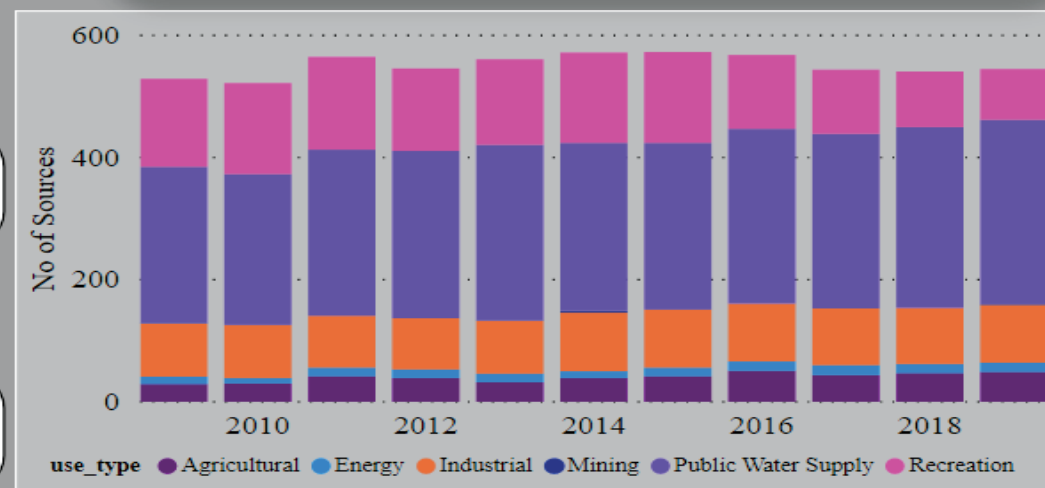


County
75

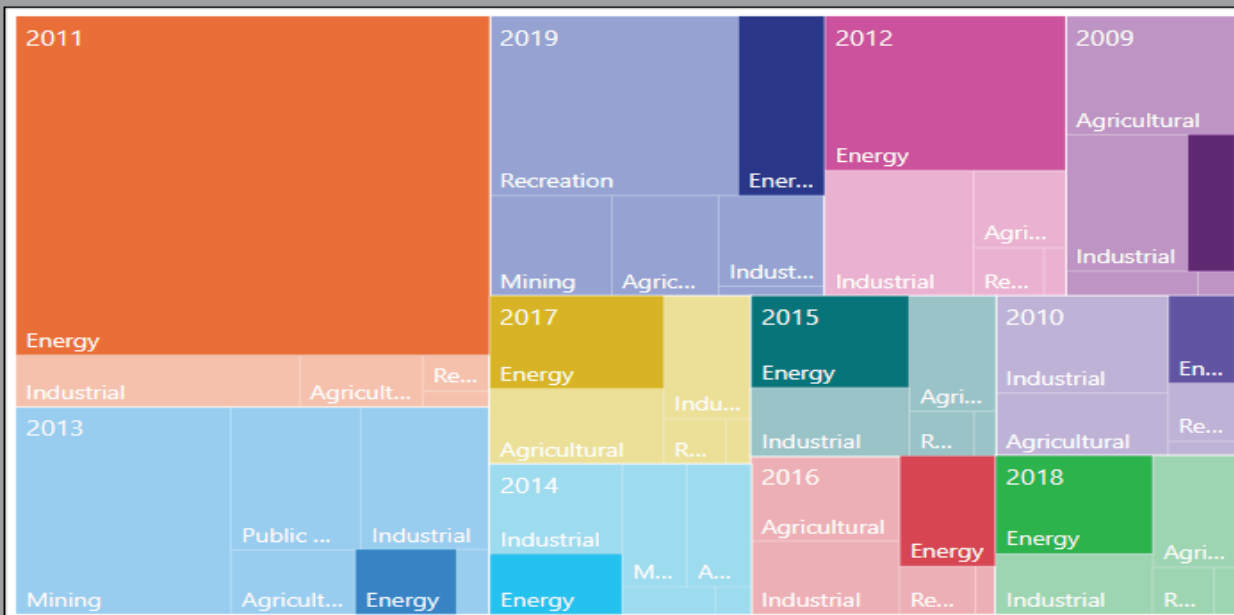
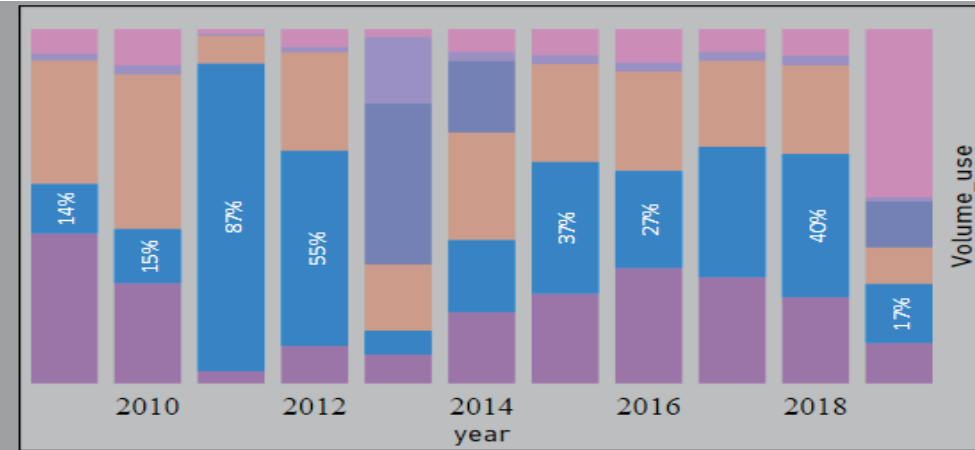
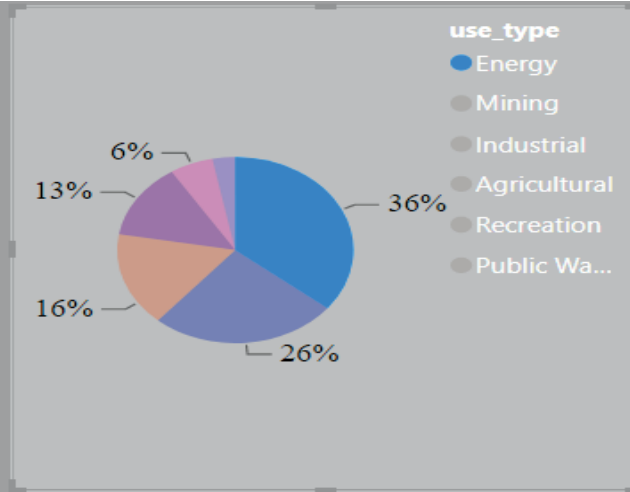
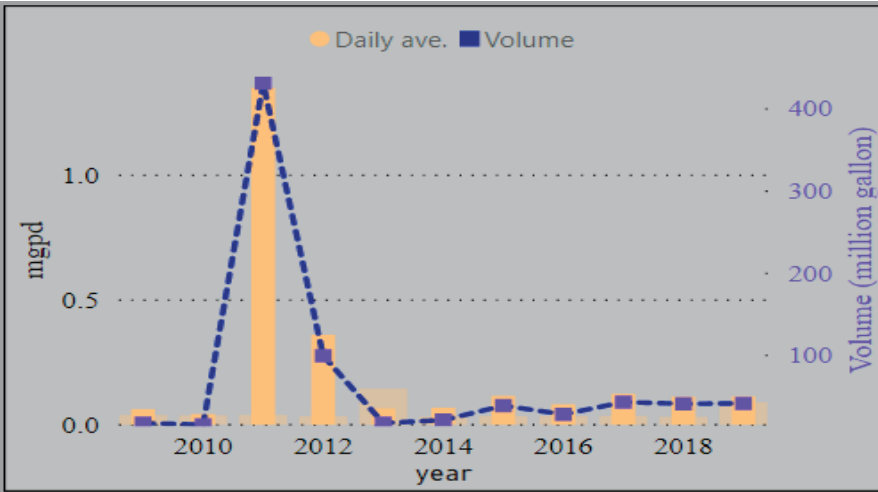
Facility
979

Source
678

Alamance Alexander Alleghany



WWATR - Energy Withdrawals

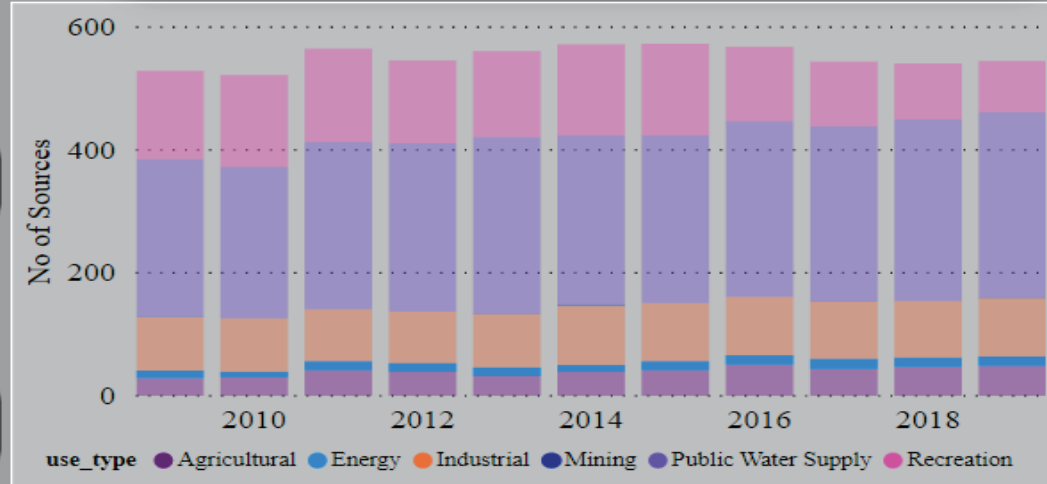


County **6**

Facility **7**

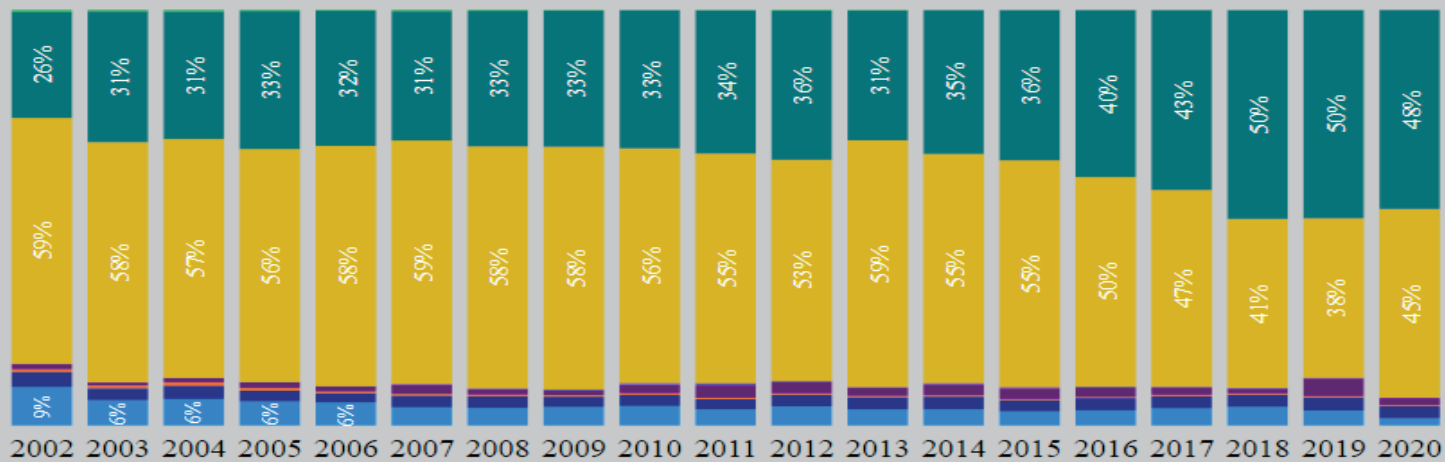
Source **21**

Alamance Alexander Alleghany



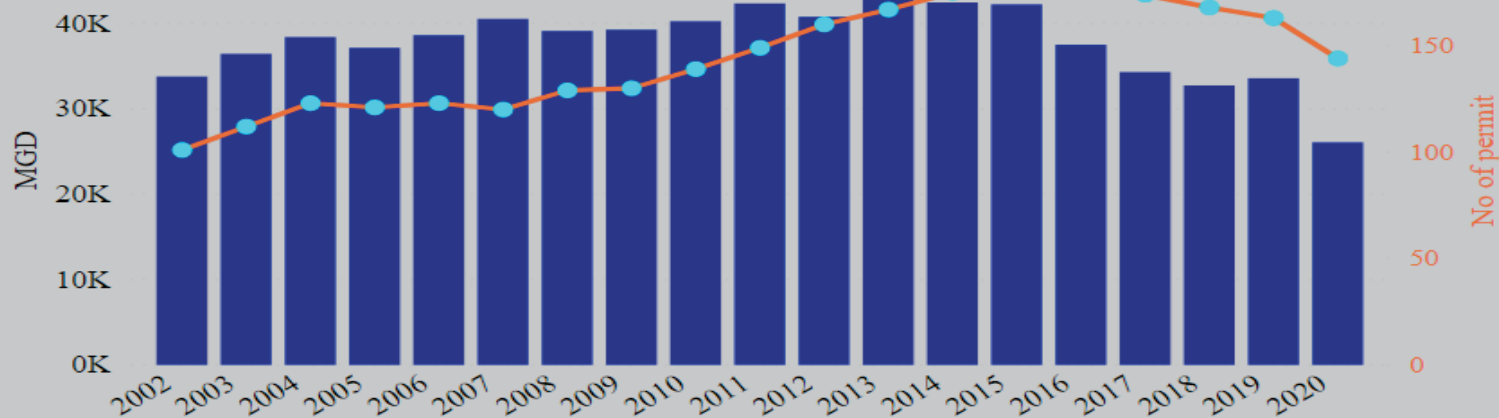
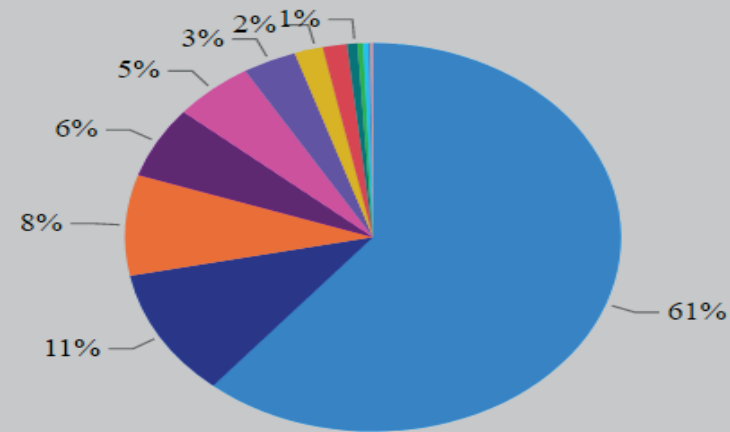
Central Coastal Plain Capacity Use Area

● Aquaculture
 ● Industrial
 ● Industrial, Pu...
 ● Irrigation, ...
 ● Irrigation, ...
 ● Irrigation, ...
 ● Mine Dewatering
 ● Other
 ● Public Supply
 ● Waterfowl I...



county

- Beaufort
- Onslow
- Craven
- Carteret
- Duplin
- Wayne
- Washington
- Pamlico
- Wilson
- Martin
- Jones
- Pitt
- Lenoir
- Tyrrell
- Greene
- Hyde



Permits

249

Sources

716

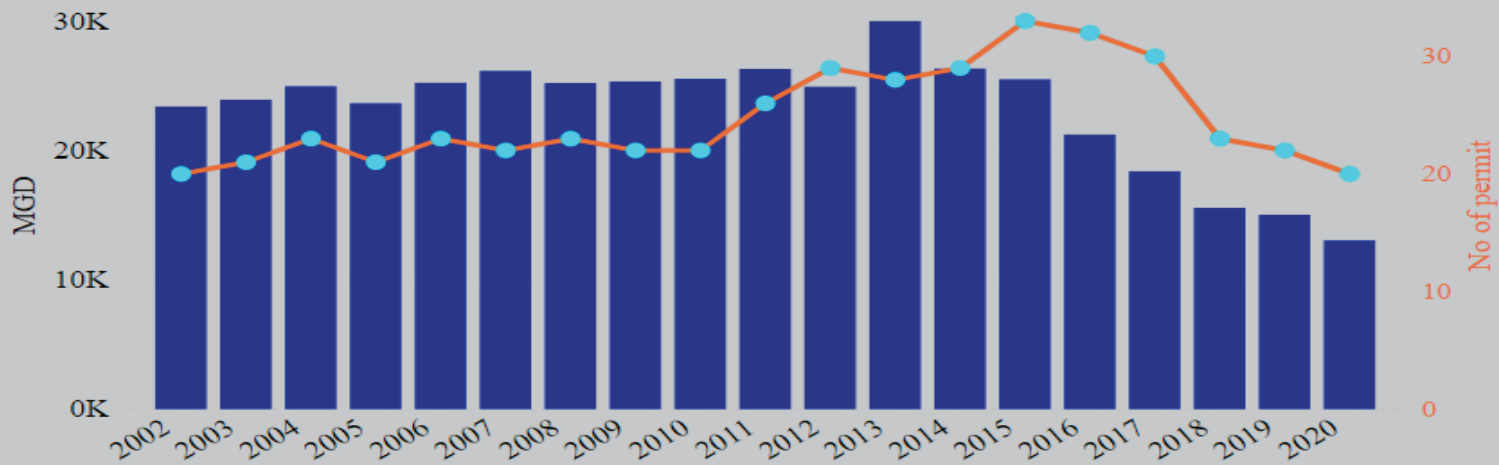
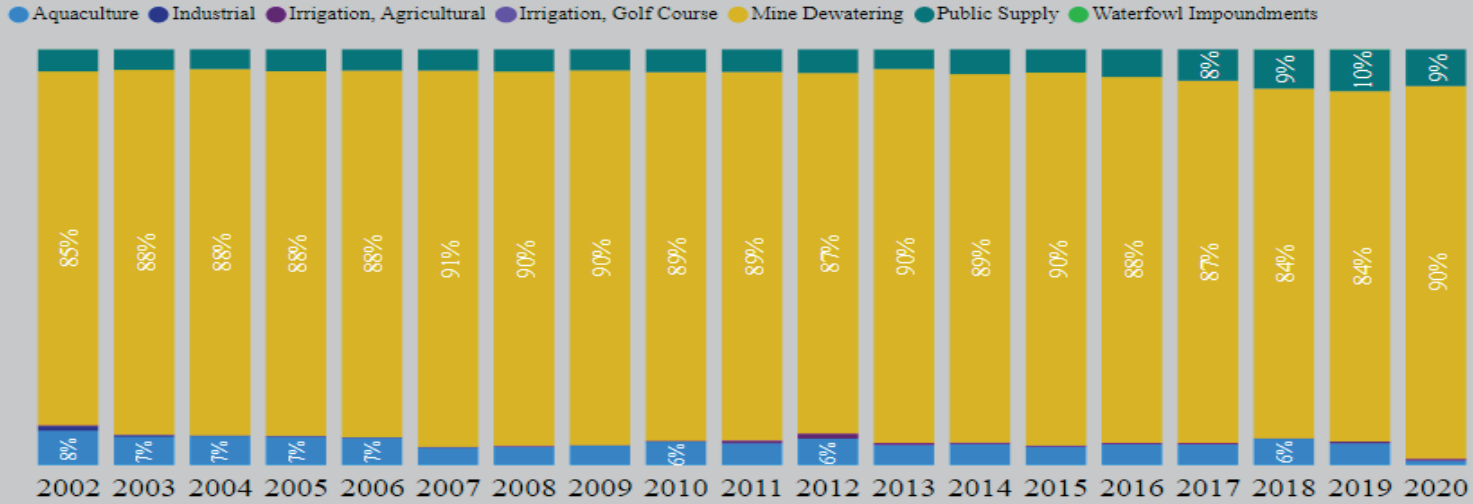
Well depth

277

Gallons/day



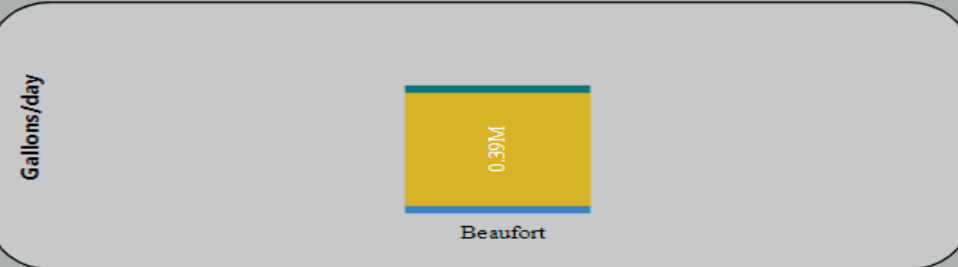
CCPCUA - Beaufort County



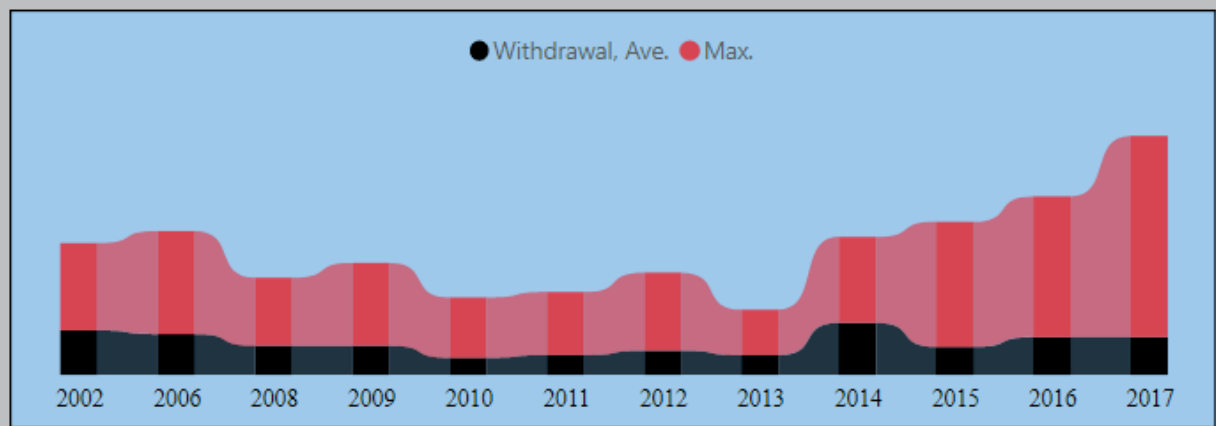
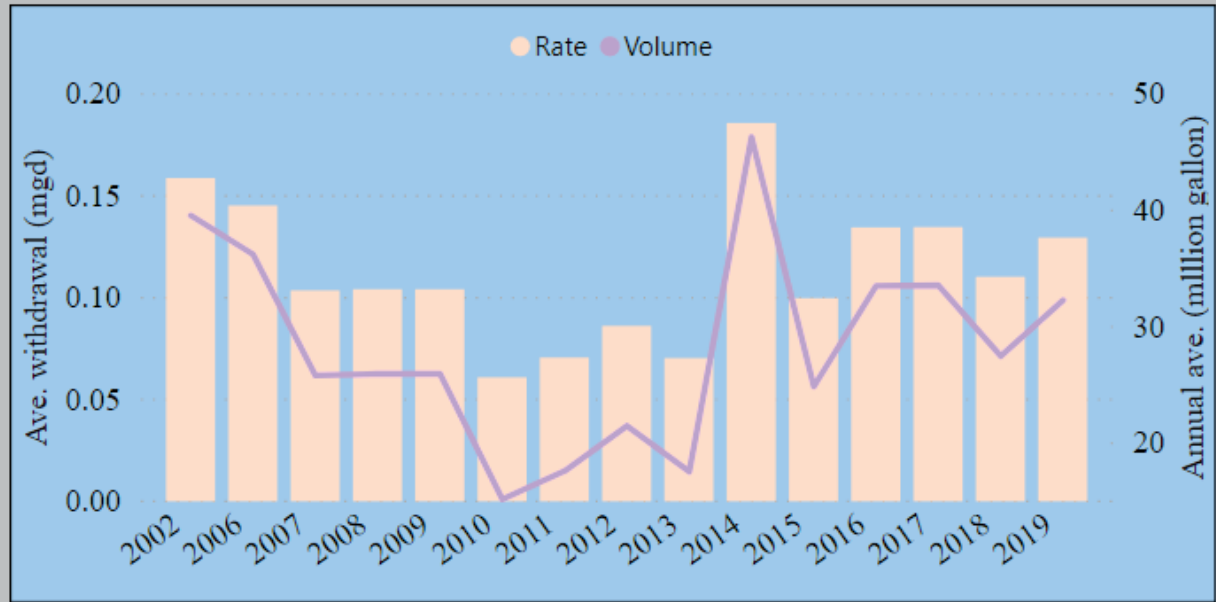
Permits
41

Sources
145

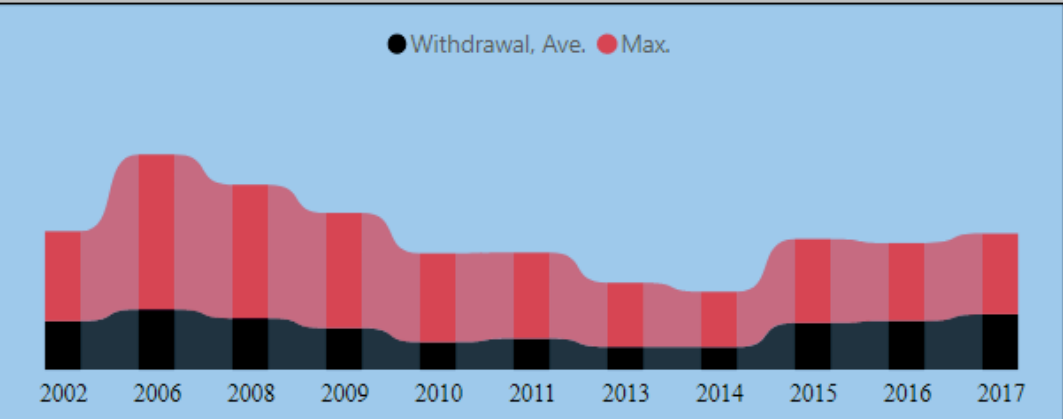
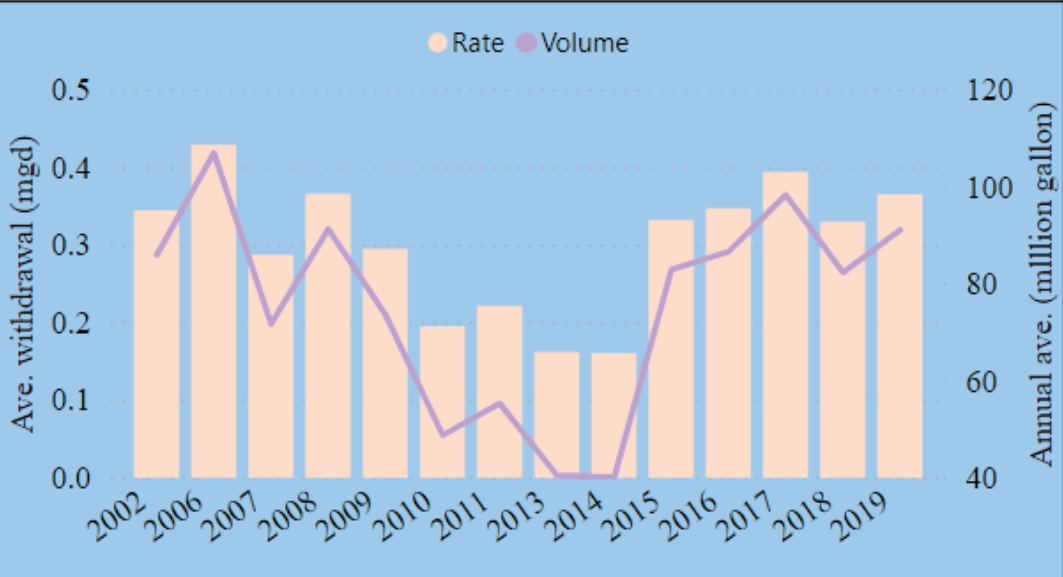
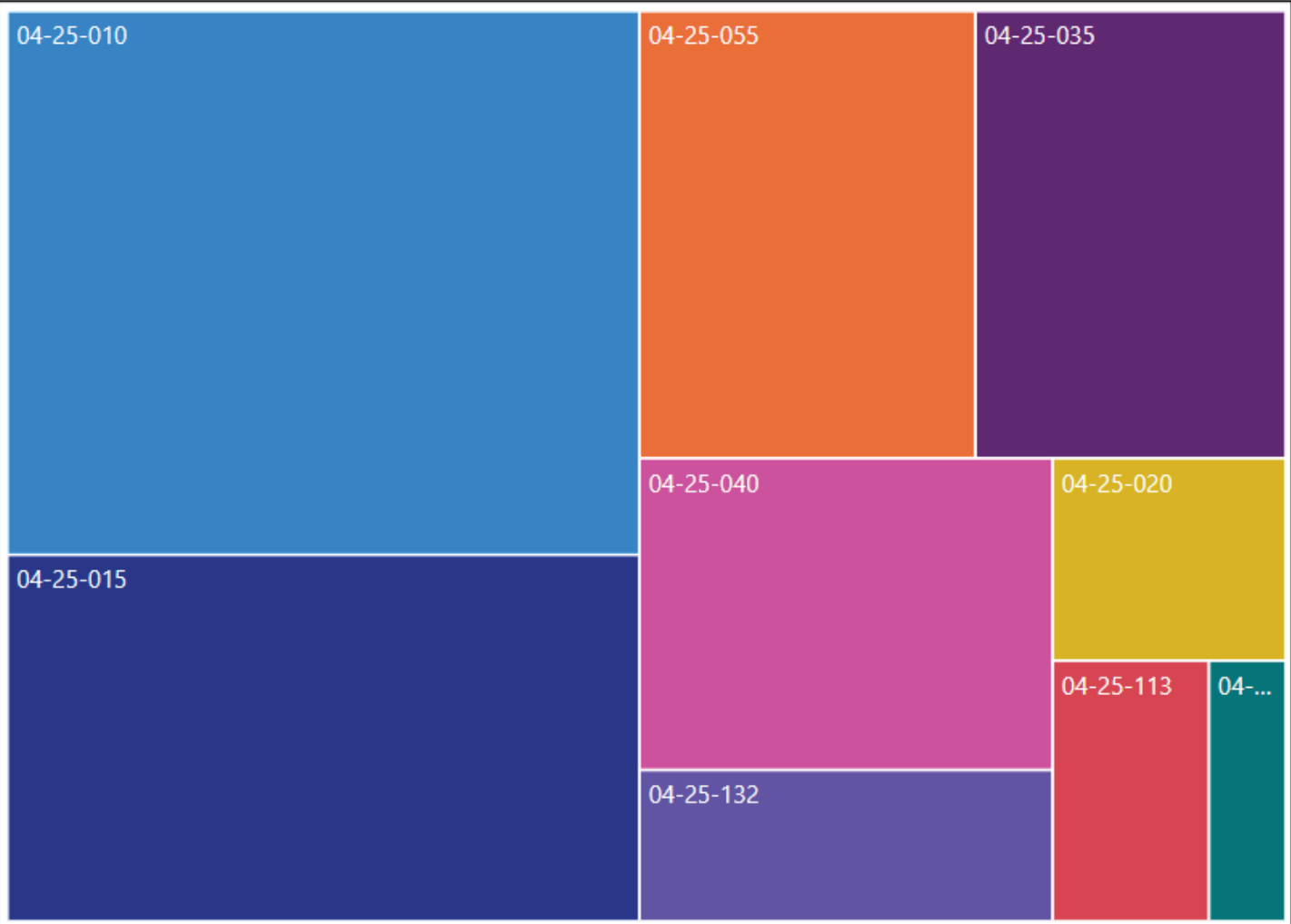
Well depth
235



Local Water Supply Plans



LWSP - Craven County



Harold Brady
harold.m.brady@ncdenr.gov
919-707-9005

HB 609 Program website:
<https://deq.nc.gov/about/divisions/water-resources/water-planning/water-supply-planning/water-supply-development>

Linwood Peele, Supervisor
Water Supply Planning Branch
Division of Water Resources
Phone: 919-707-9024
linwood.peele@ncdenr.gov

