



WCUA Annual Stakeholder Workgroup Update

November 15, 2021

South Carolina Department of Health and Environmental Control
Healthy People. Healthy Communities.

Option to Call In

If you are experiencing audio problems, join the virtual meeting by phone:

Or call in (audio only)

Conference phone number: [+1 864-558-7311](tel:+18645587311), United States, Greenville

AUDIO CONFERENCEING PIN: 147 336 483#



Exits the meeting. (If you accidentally exit the meeting, you can rejoin.)

Using MS Teams

Close all other applications running on your computer and turn off other streaming services or devices at your location.



Mute your mic to minimize background noise



Turn off your camera until your turn to speak



Opportunity for comments following presentation

Meeting Agenda

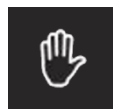
- Gathering Time
- Welcome & Overview of Virtual Meeting
- Permitting Update
- 2020 Reported Water Use Update
- Groundwater Conditions Update
- Statewide Water Update
- Q&A
- Adjourn

How to Participate

Unmute to indicate you would like to speak

Unmuted lines will be called on to speak

Click the Hand Raise icon to be called on to speak



Hand Raise
(click this icon to
indicate you would
like to speak)



Muted
(no one in the meeting
can hear you)



Unmuted
(everyone in the
meeting can hear you)





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Permitting Update

Courtney Kemmer

Current WCUA Permitting Numbers

- Designation November 2019
- 350 Permitted Facilities;
- 1,185 permitted wells
- 52 wells under construction
- 12 Registered Facilities; did not meet permitting threshold



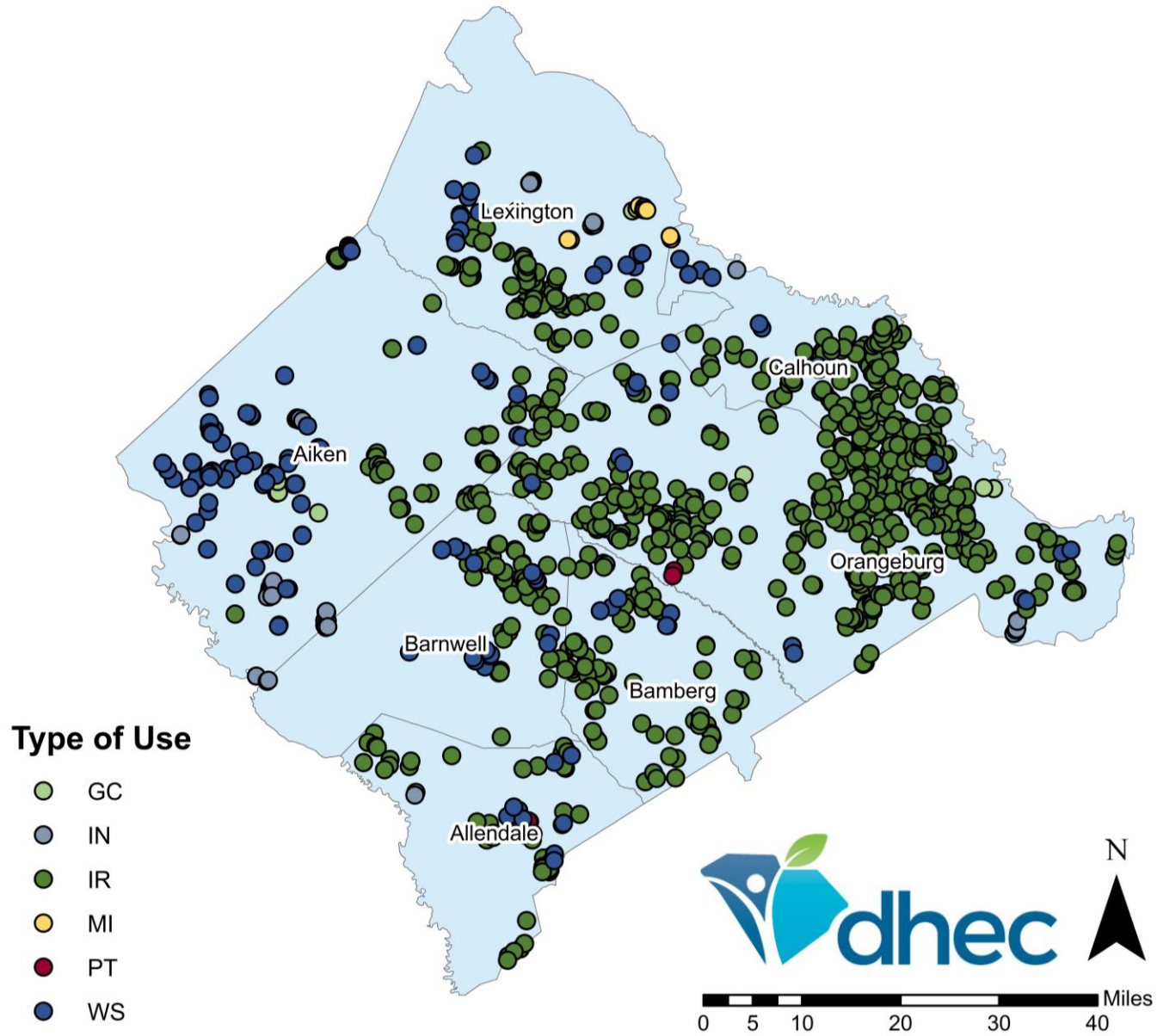
County Breakdown Permits and Wells

<u>County</u>	<u># of Permits</u>	<u># of Wells</u>
Aiken	47	204
Allendale	21	70
Bamberg	37	92
Barnwell	36	93
Calhoun	60	196
Lexington	31	124
<u>Orangeburg</u>	<u>118</u>	<u>406</u>
Total	350	1,185

Type Use Breakdown Wells

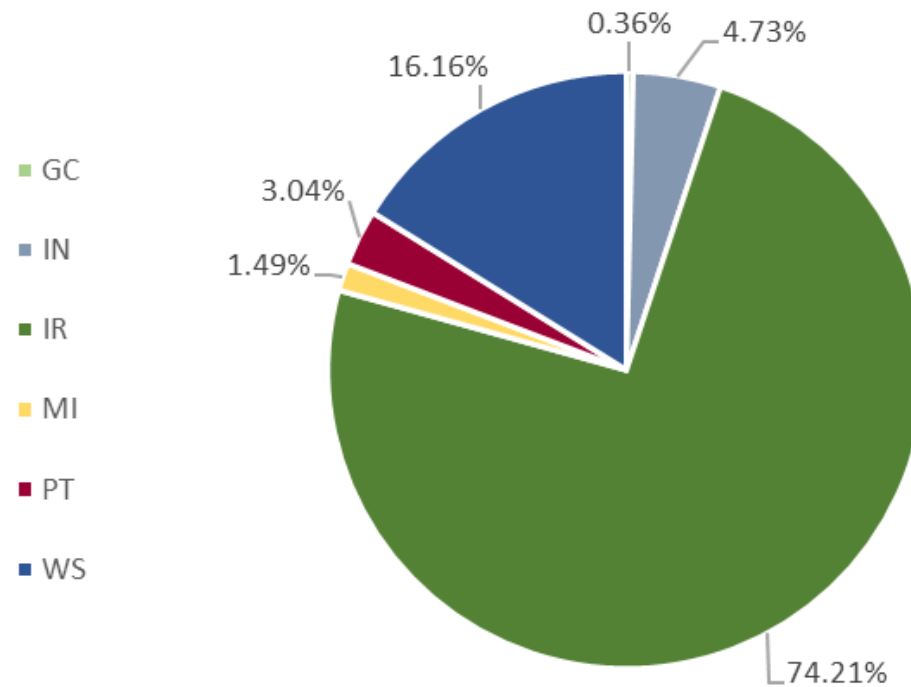
Type Use	# of Wells	% of Total
Golf Course	10	0.84%
Industrial	67	5.65%
Irrigation	928	78.31%
Mining	11	0.93%
Power Thermal	7	0.59%
Water Supply	162	13.67%

Western Capacity Use Wells by Use Type



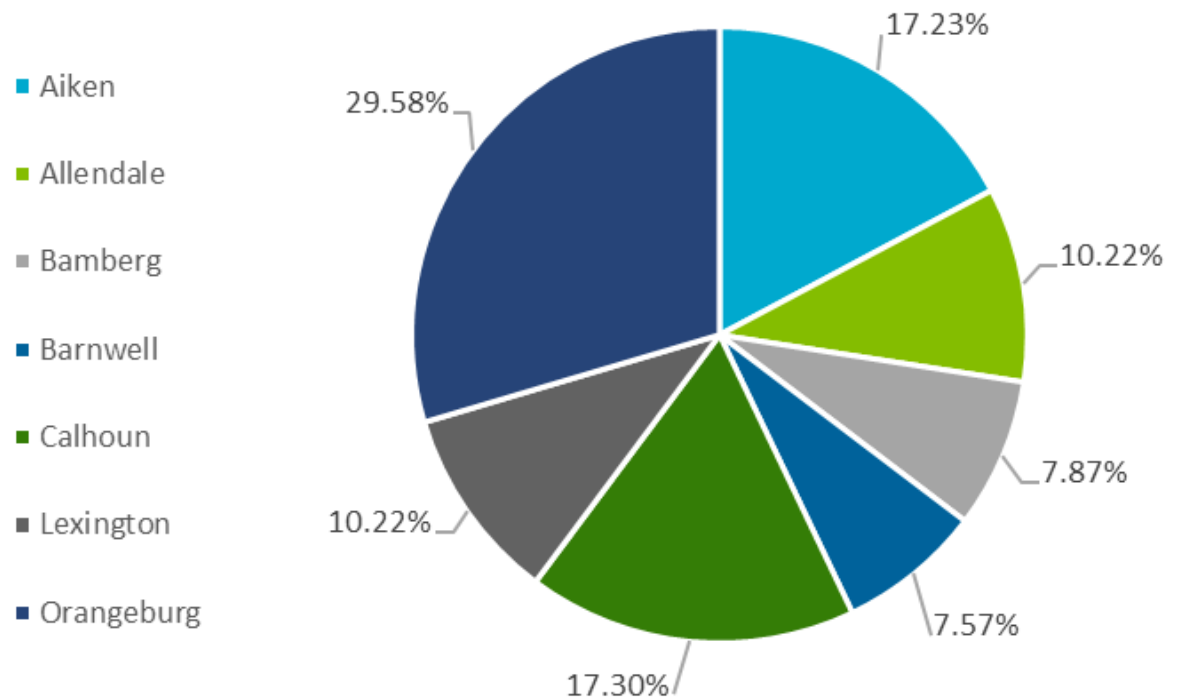
Total Permitted Use Per Year by Type

Type Use	MGY
GC	258.30
IN	3,358.52
IR	52,653.49
MI	1,058.49
PT	2,158.73
WS	11,463.91
TOTAL	70,951.44

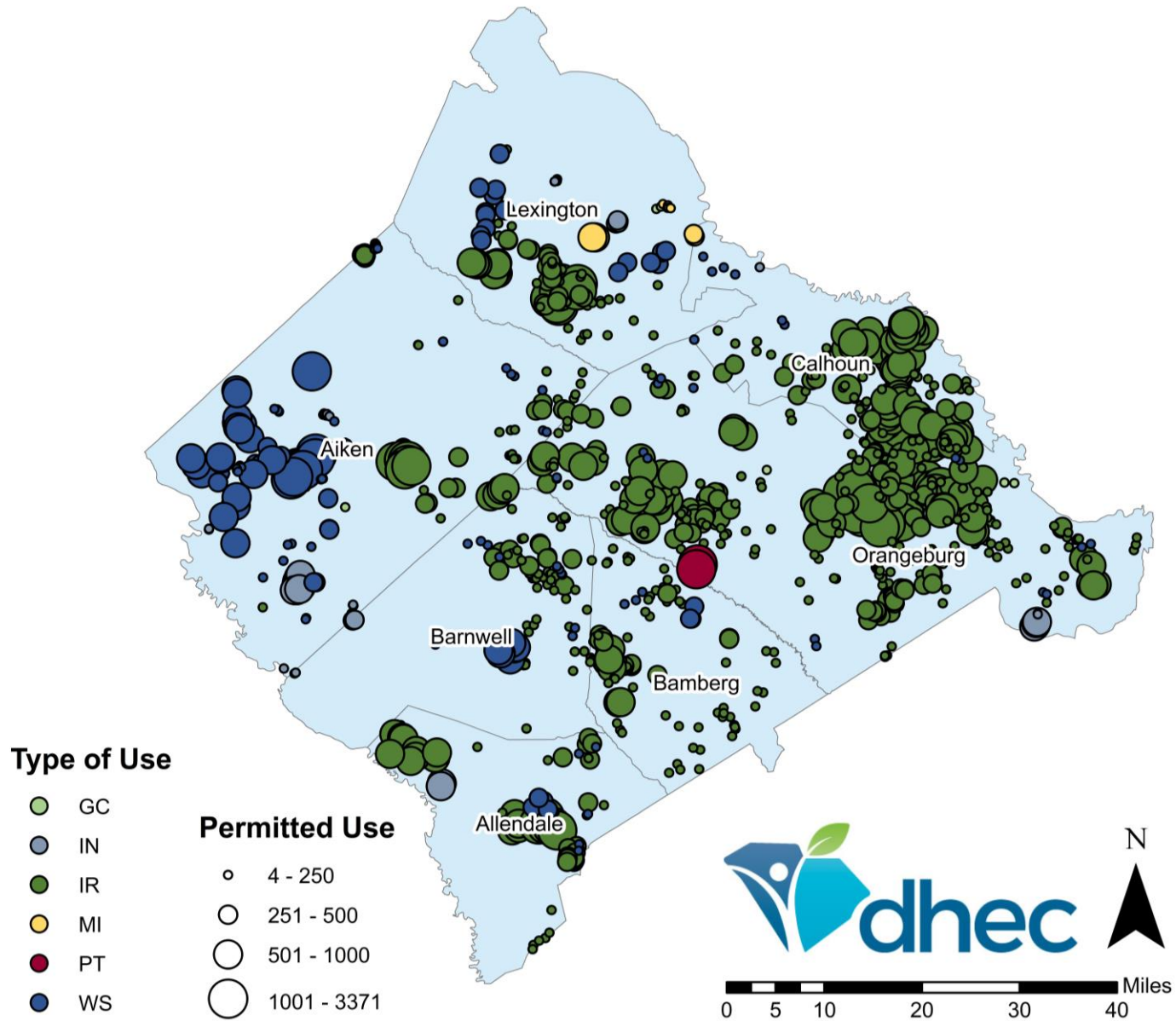


Total Permitted Use Per Year by County

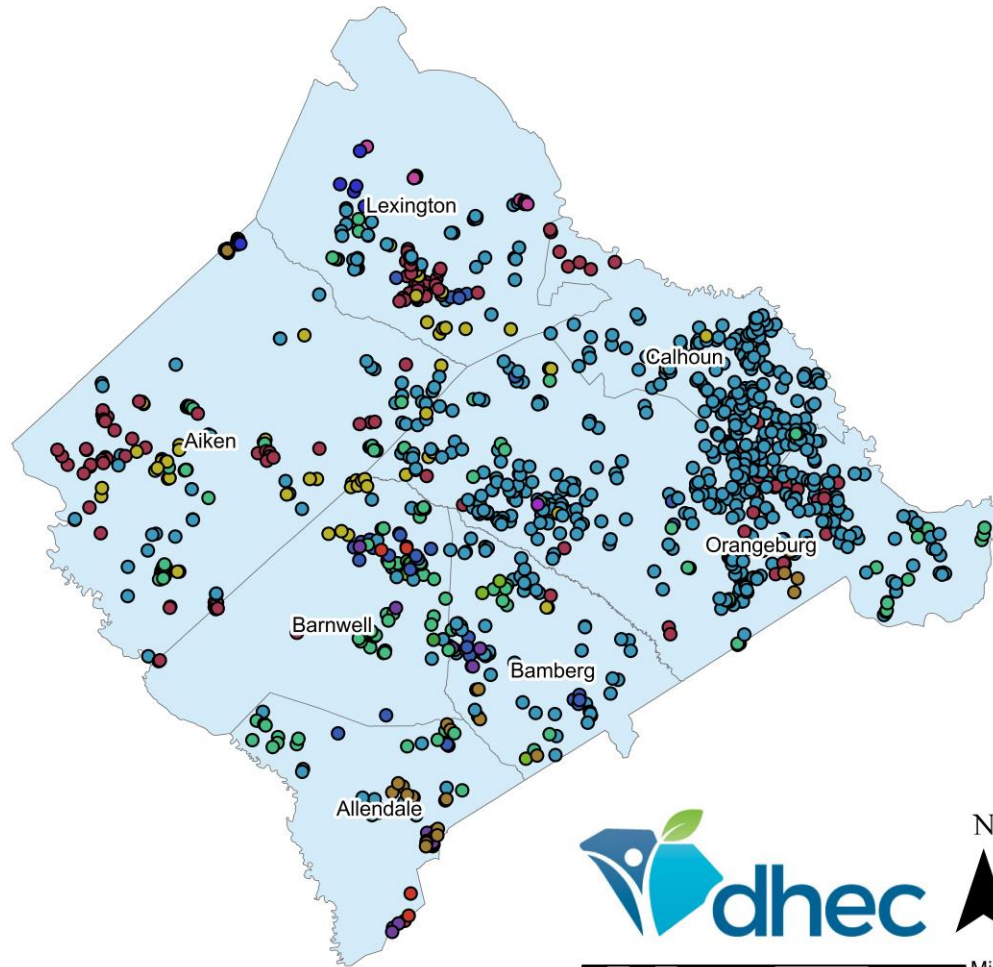
County	MGY
Aiken	12,223.77
Allendale	7,253.98
Bamberg	5,585.34
Barnwell	5,374.16
Calhoun	12,277.85
Lexington	7,249.10
Orangeburg	20,987.24
TOTAL	70,951.44



Western Capacity Use Wells by Use Type and Total Permitted Limit



Western Capacity Use Wells by Aquifer



Aquifer

- | | | |
|----------------------------------|--------------------------------|--------------------------|
| ● Surficial | ● Middle Floridan-Gordon | ● Crouch Branch-Bed Rock |
| ● Upper Three Runs | ● Gordon | ● McQueen Branch |
| ● Upper Floridan | ● Gordon-Crouch Branch | ● Charleston |
| ● Upper Floridan-Middle Floridan | ● Crouch Branch | ● Bedrock |
| ● Middle Floridan | ● Crouch Branch-McQueen Branch | |



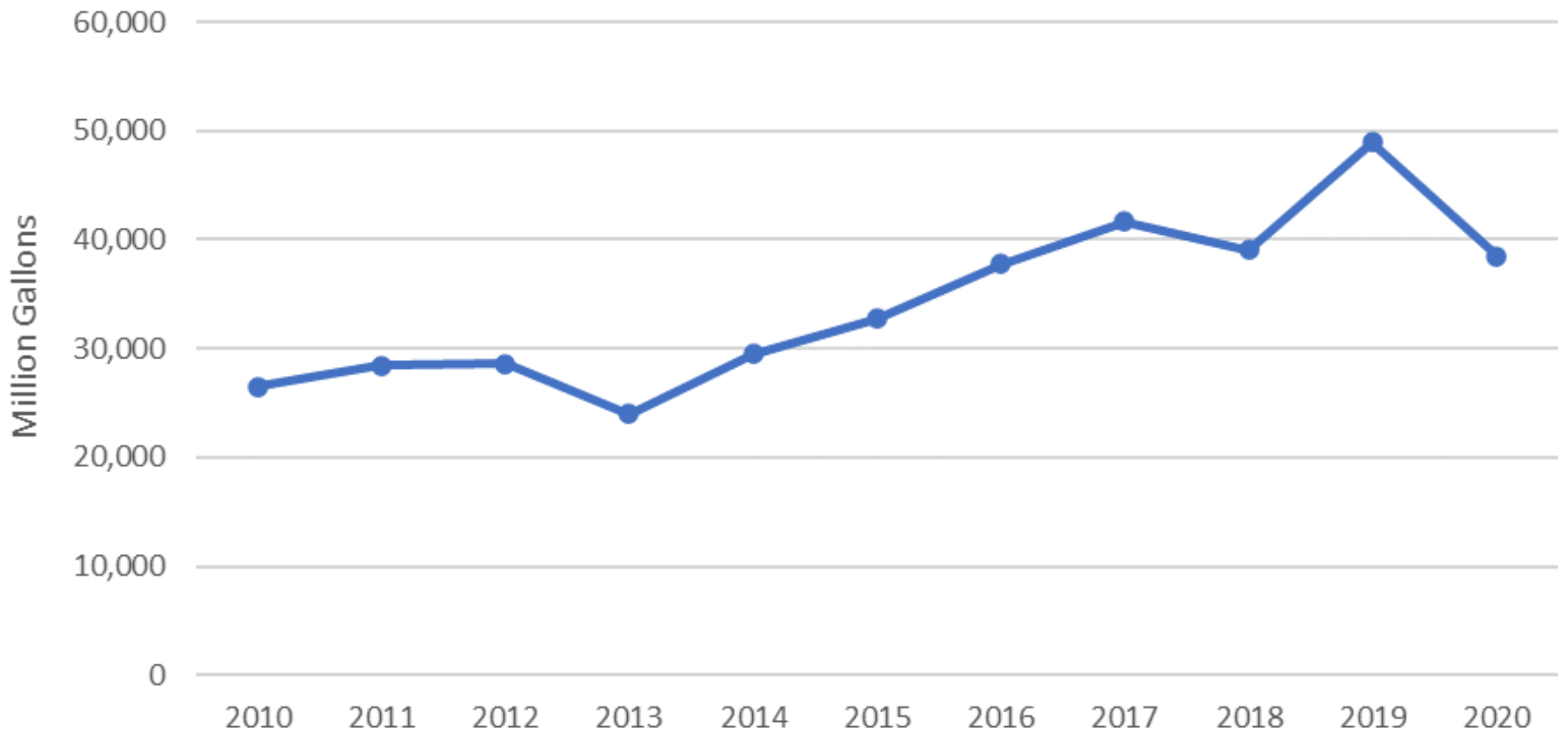
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2020 Groundwater Use Update

Courtney Kemmer

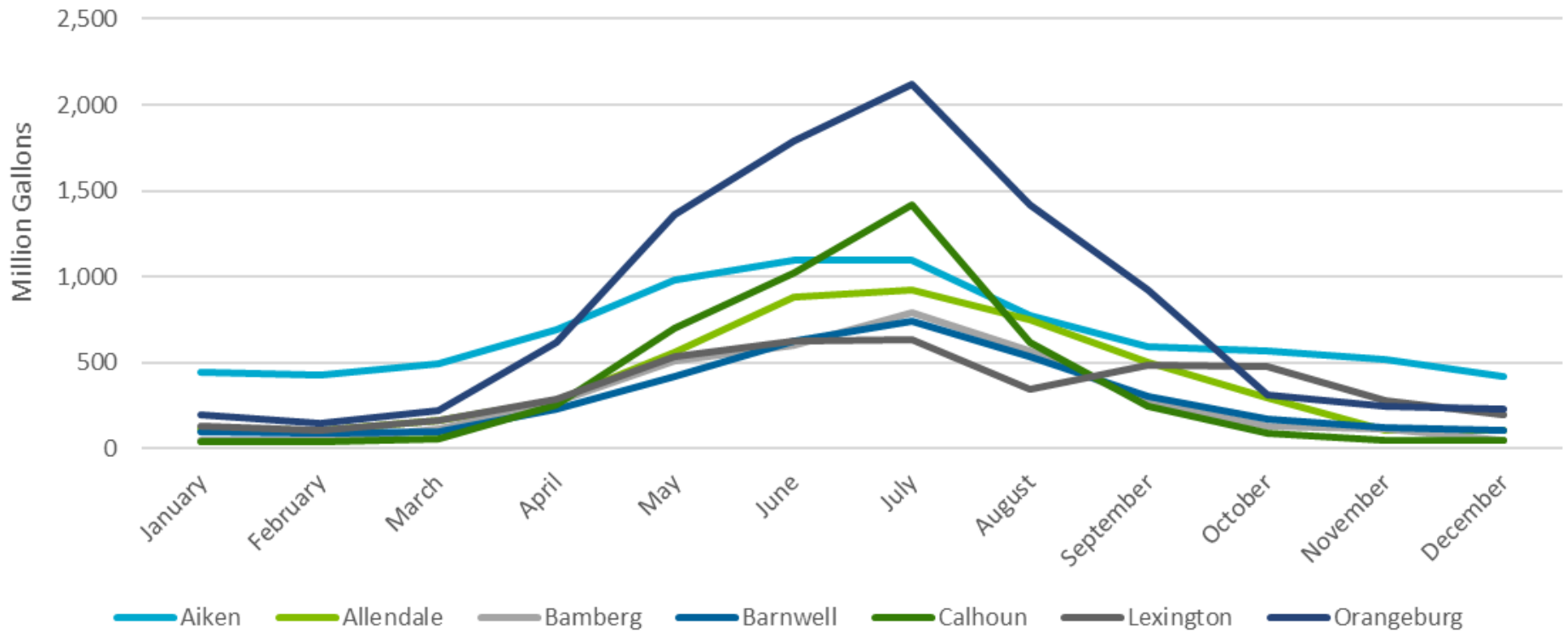


Western Total Reported Groundwater Use, 2010-2020





Reported Groundwater Use by Month, 2020

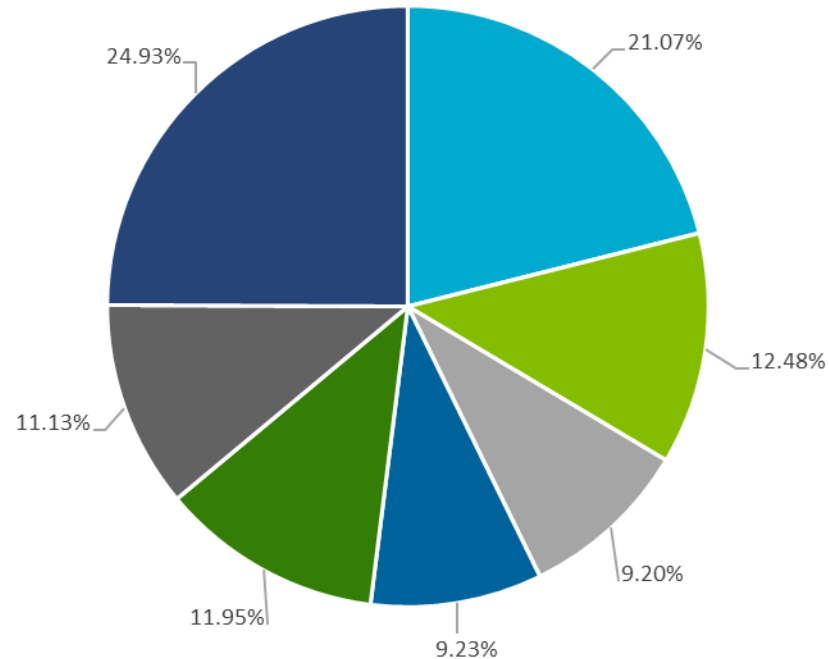


Reported Groundwater Use by County, 2020

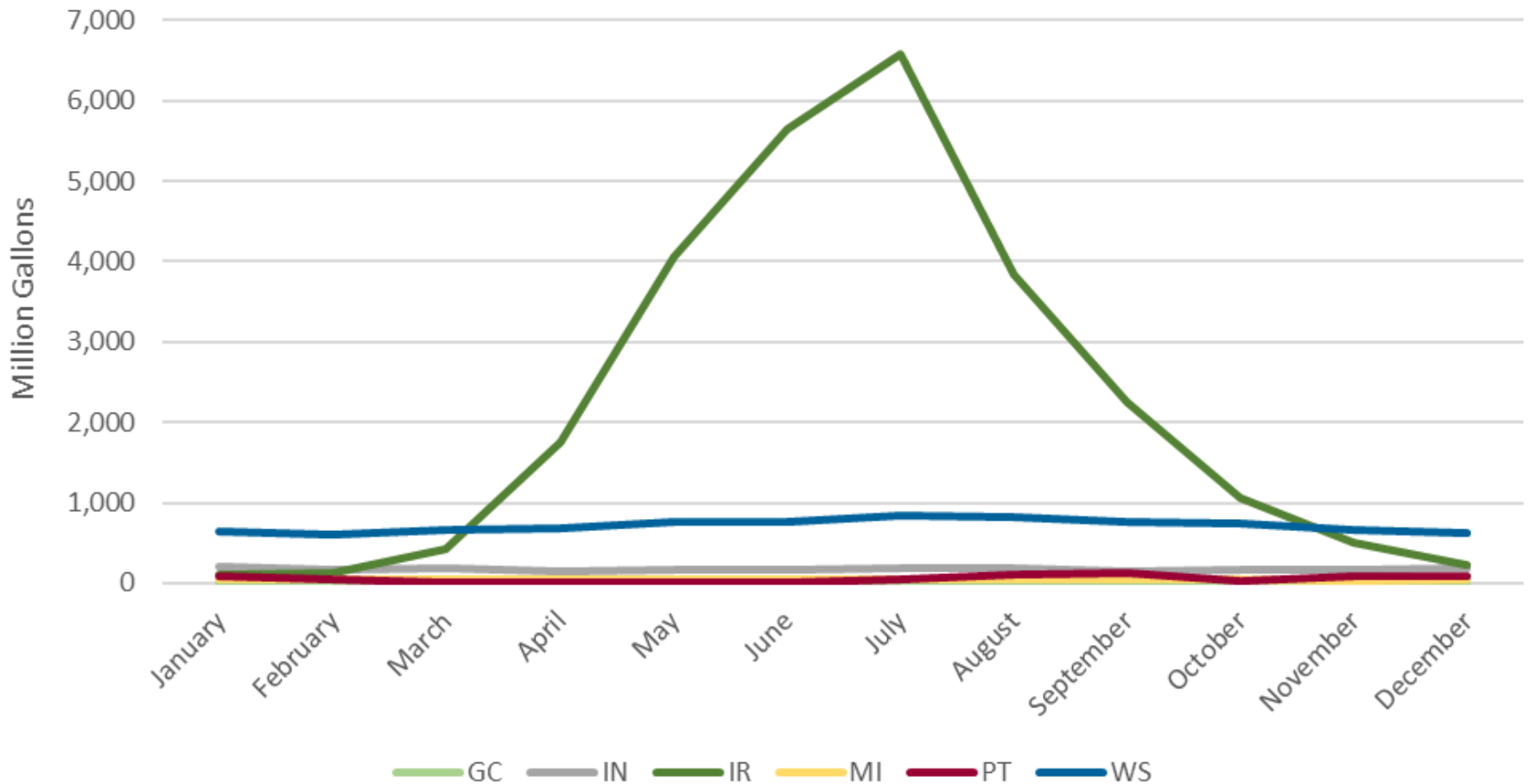
County	MGY
Aiken	8,103.40
Allendale	4,799.16
Bamberg	3,538.21
Barnwell	3,550.24
Calhoun	4,596.90
Lexington	4,280.44
Orangeburg	9,584.67
TOTAL	38,452.98

Reported Groundwater Use by County, 2020

- Aiken
- Allendale
- Bamberg
- Barnwell
- Calhoun
- Lexington
- Orangeburg

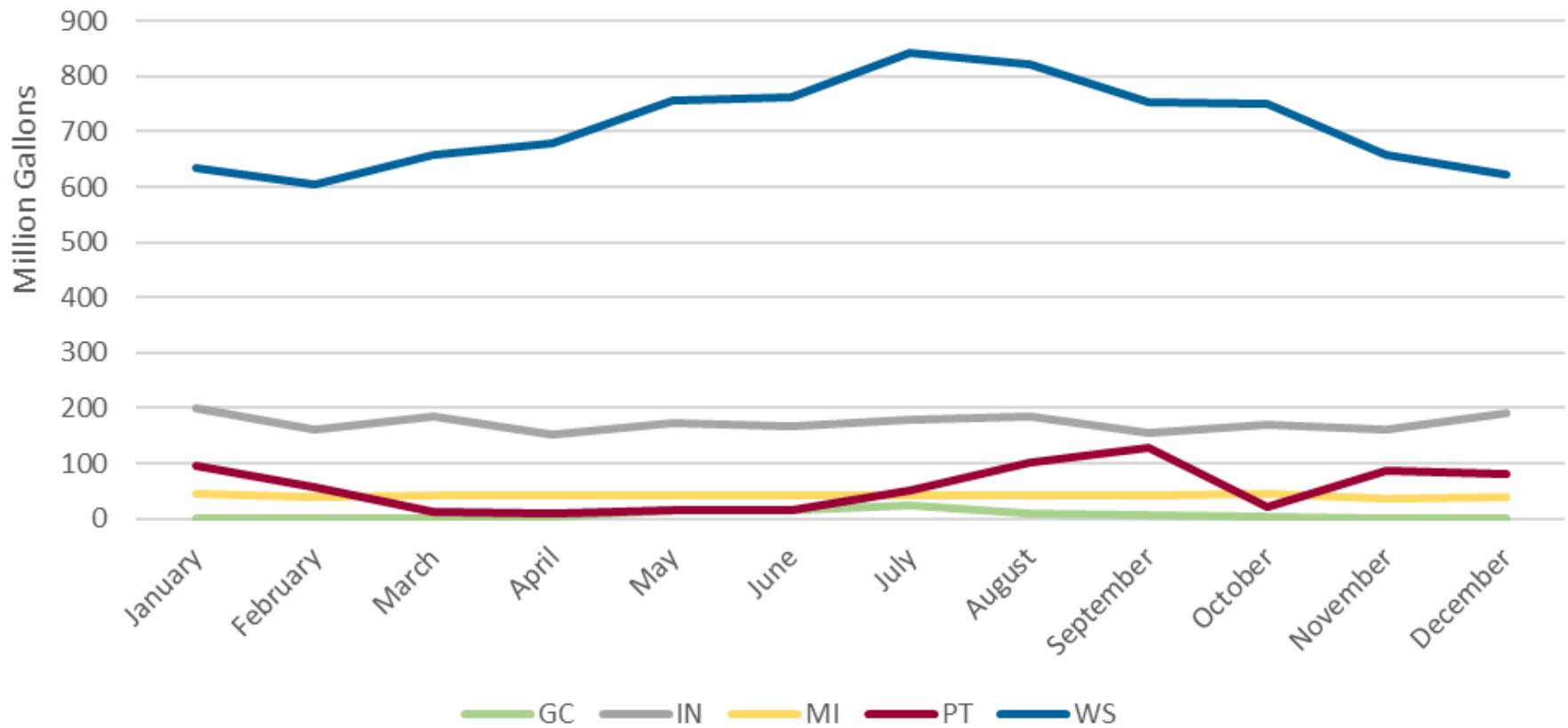


Reported Groundwater Use by Type, 2020





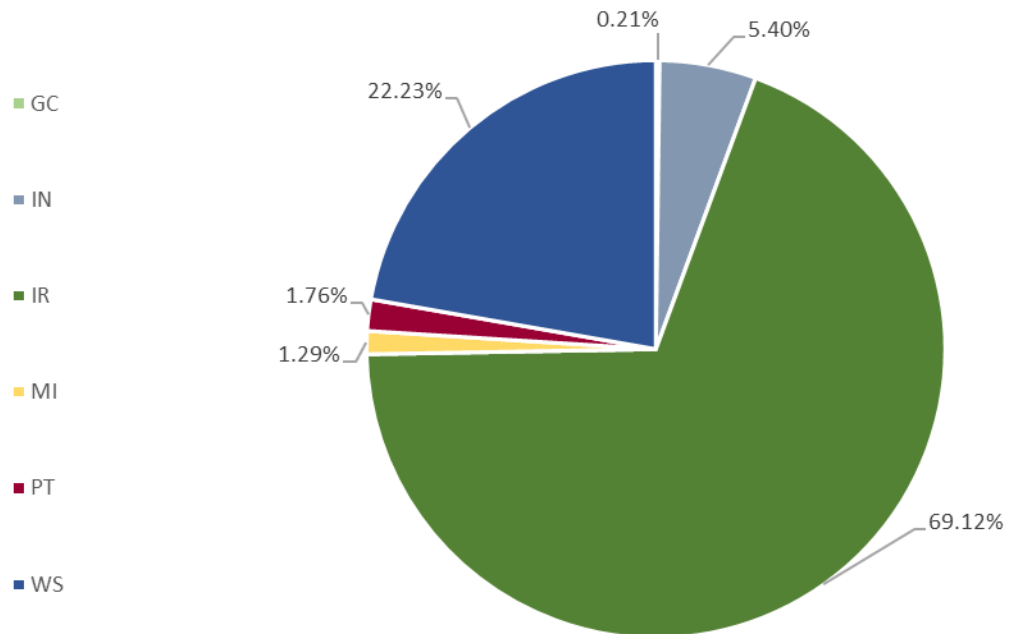
Reported Groundwater Use by Type, 2020 (Agricultural Use Removed)



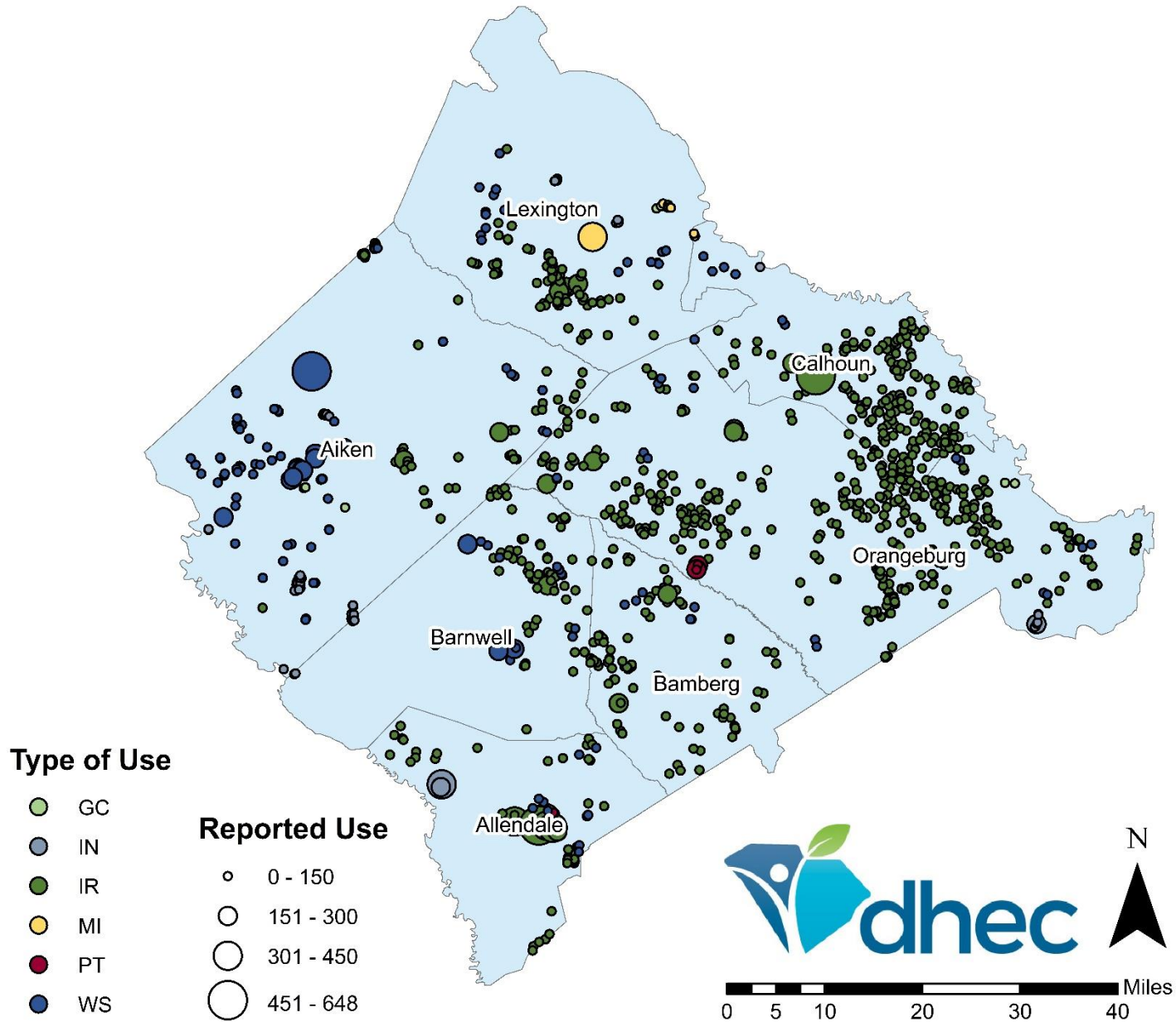
Reported Groundwater Use by Type, 2020

Type Use	MGY
GC	79.27
IN	2,075.34
IR	26,576.88
MI	495.72
PT	676.72
WS	8,548.67
TOTAL	38,452.98

Reported Groundwater Use by Type, 2020



Active Western Wells with 2020 Reported Use





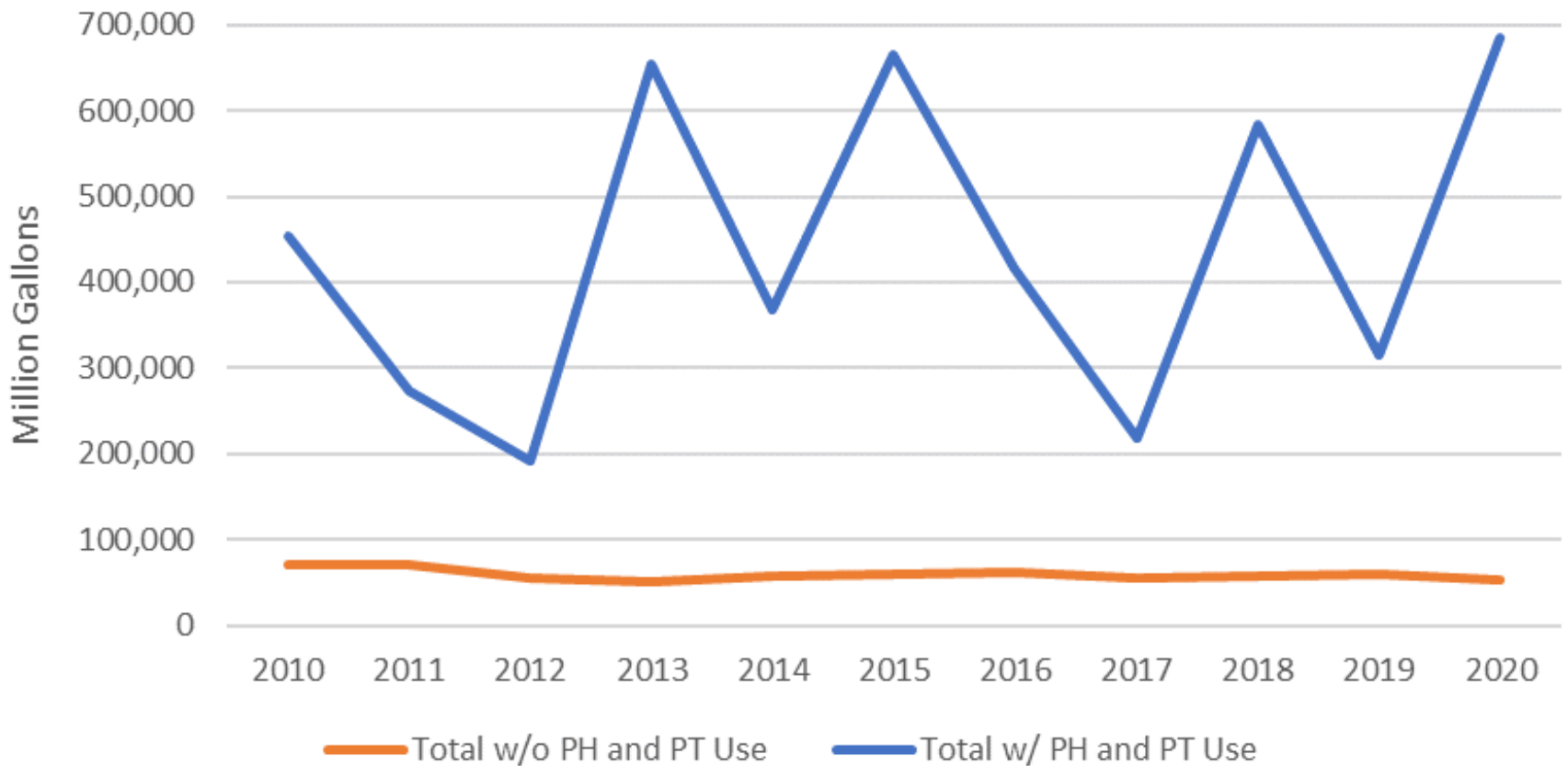
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2020 Surface Water Use Update

Courtney Kemmer

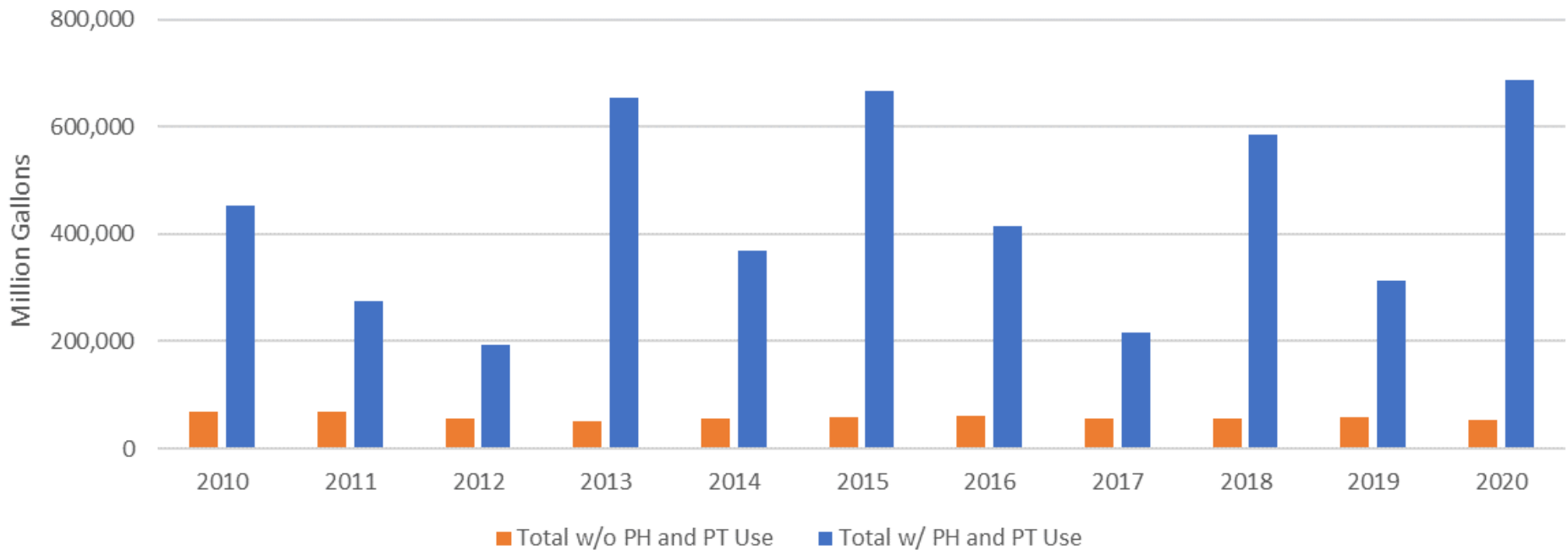


Western Total Reported Surface Water Use, 2010-2020, With and Without Power

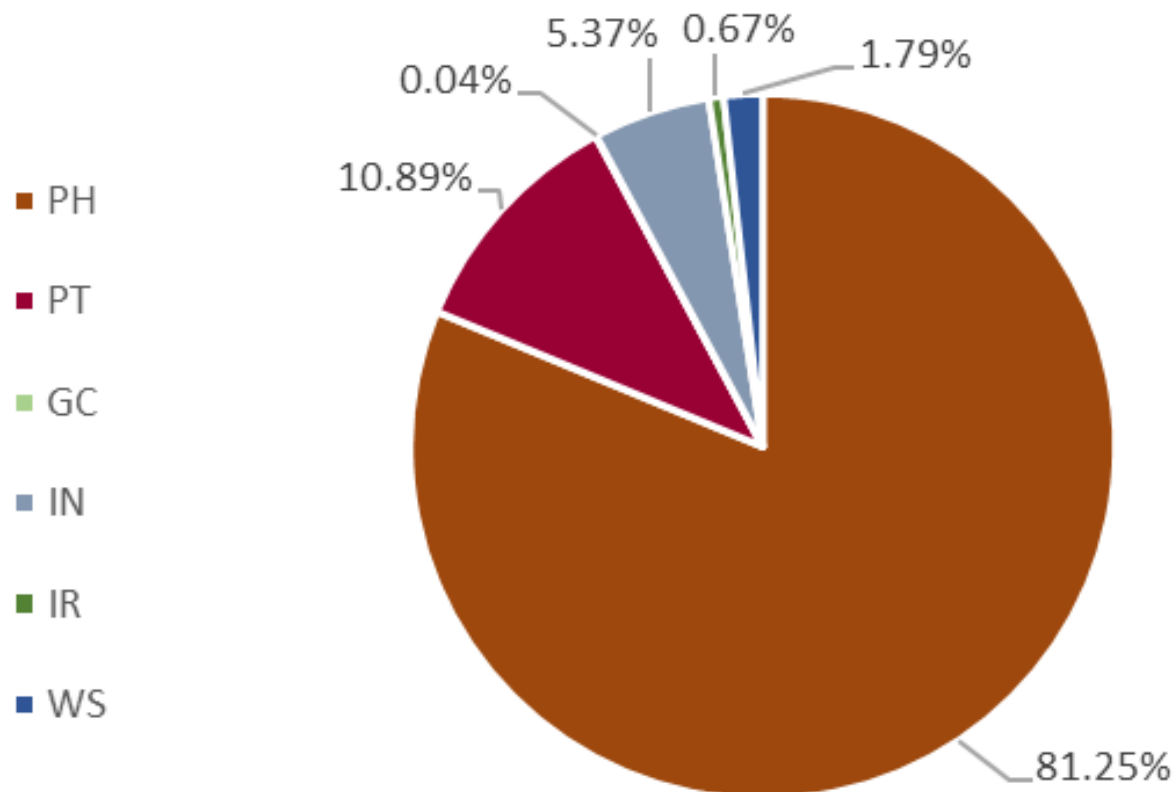




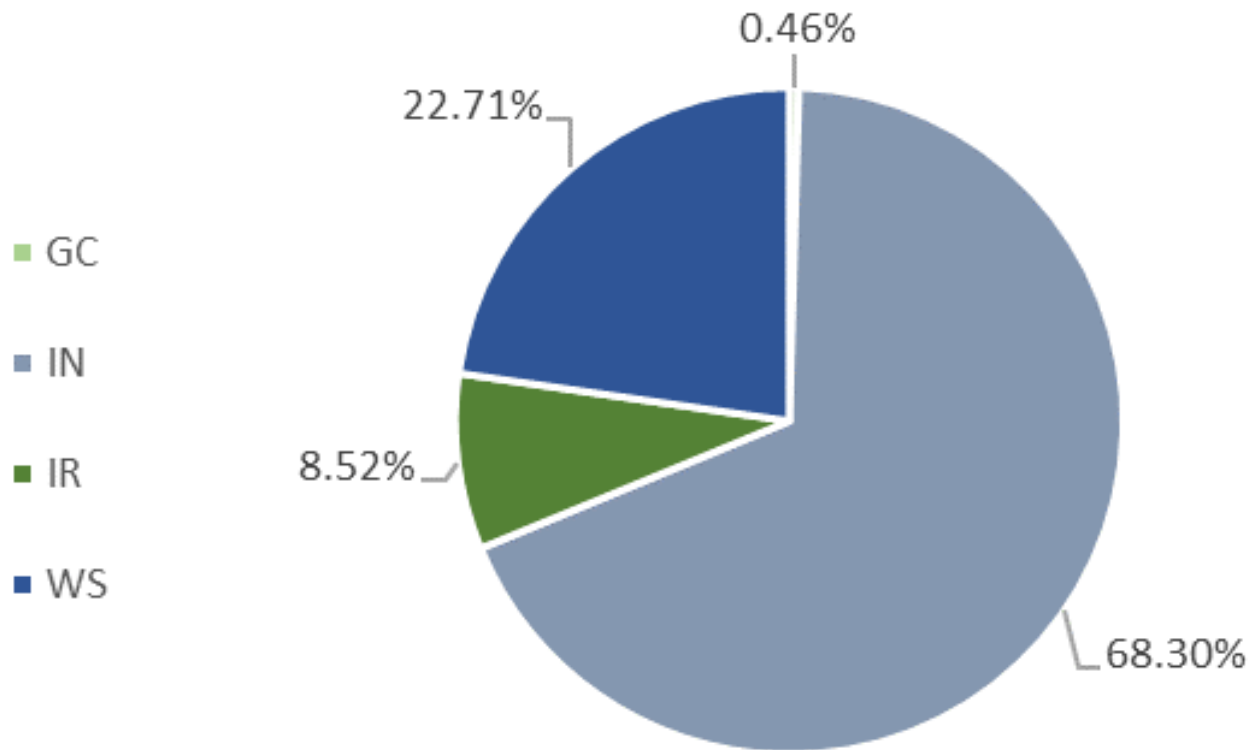
Western Total Reported Surface Water Use, 2010-2020, With and Without Power



Reported Surface Water Use by Type, 2020

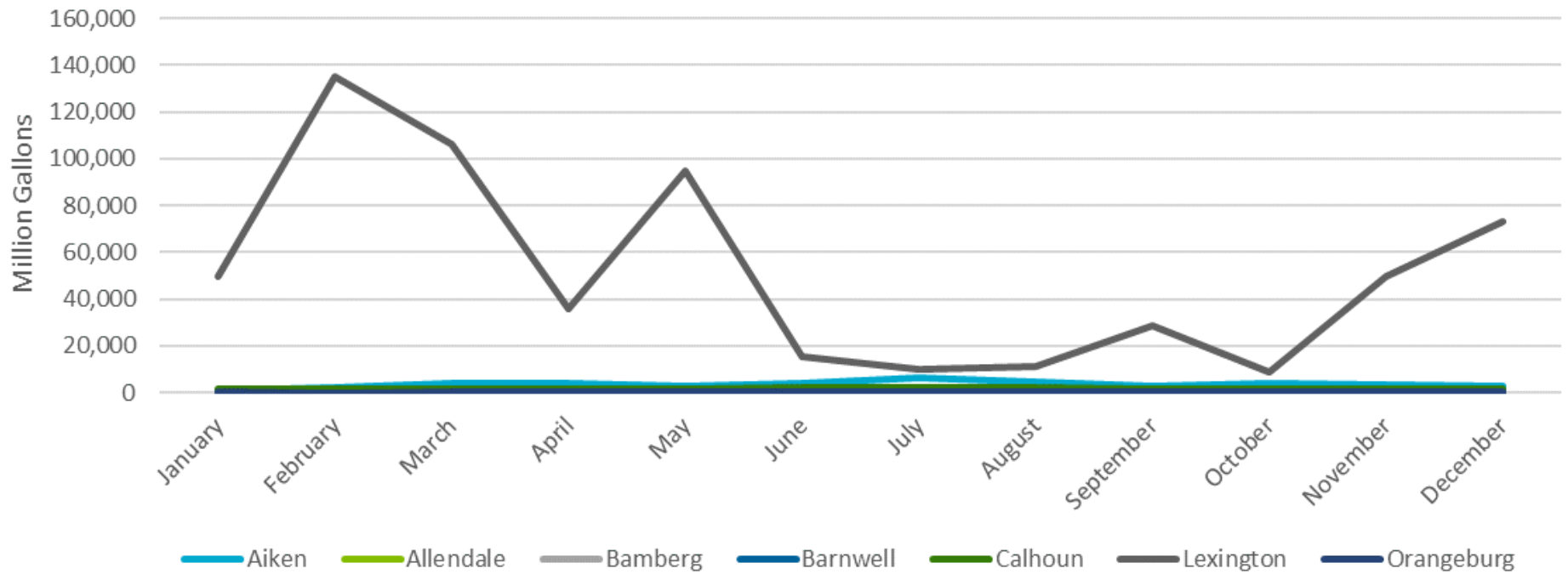


Reported Surface Water Use by Type, 2020, Without Power Use



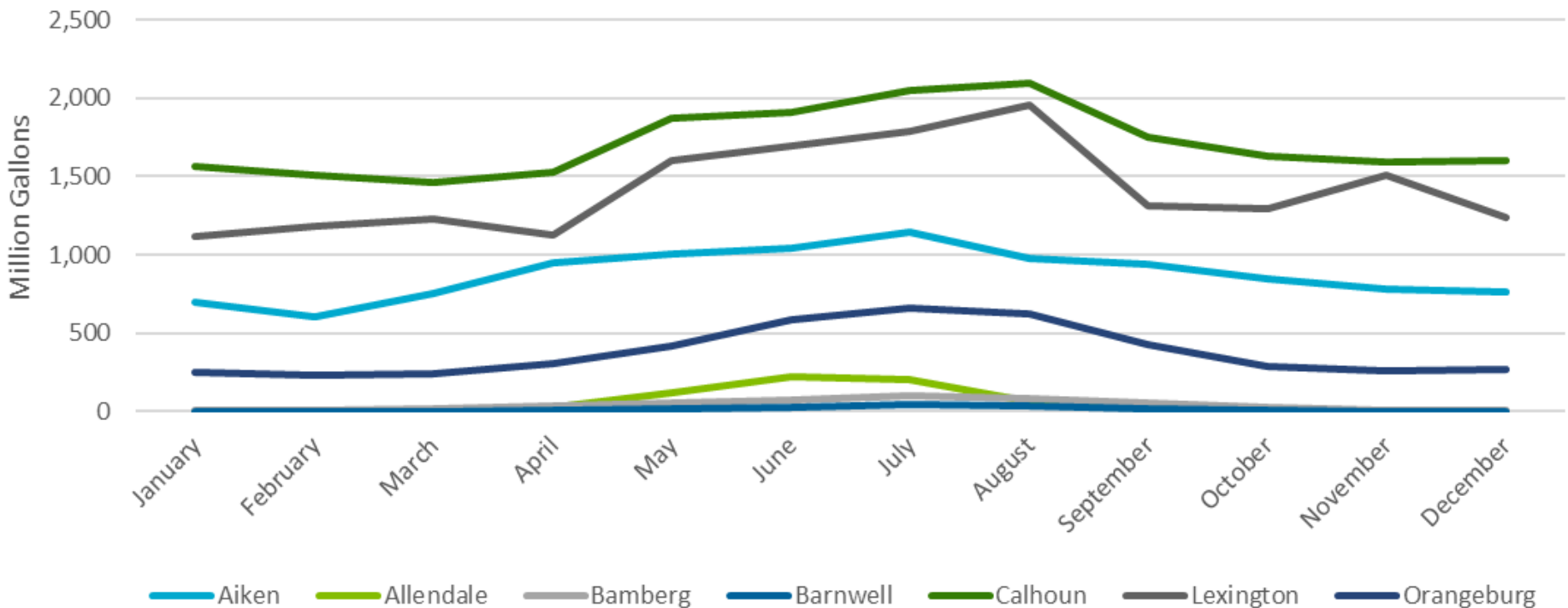


Reported Surface Water Use by Month, 2020

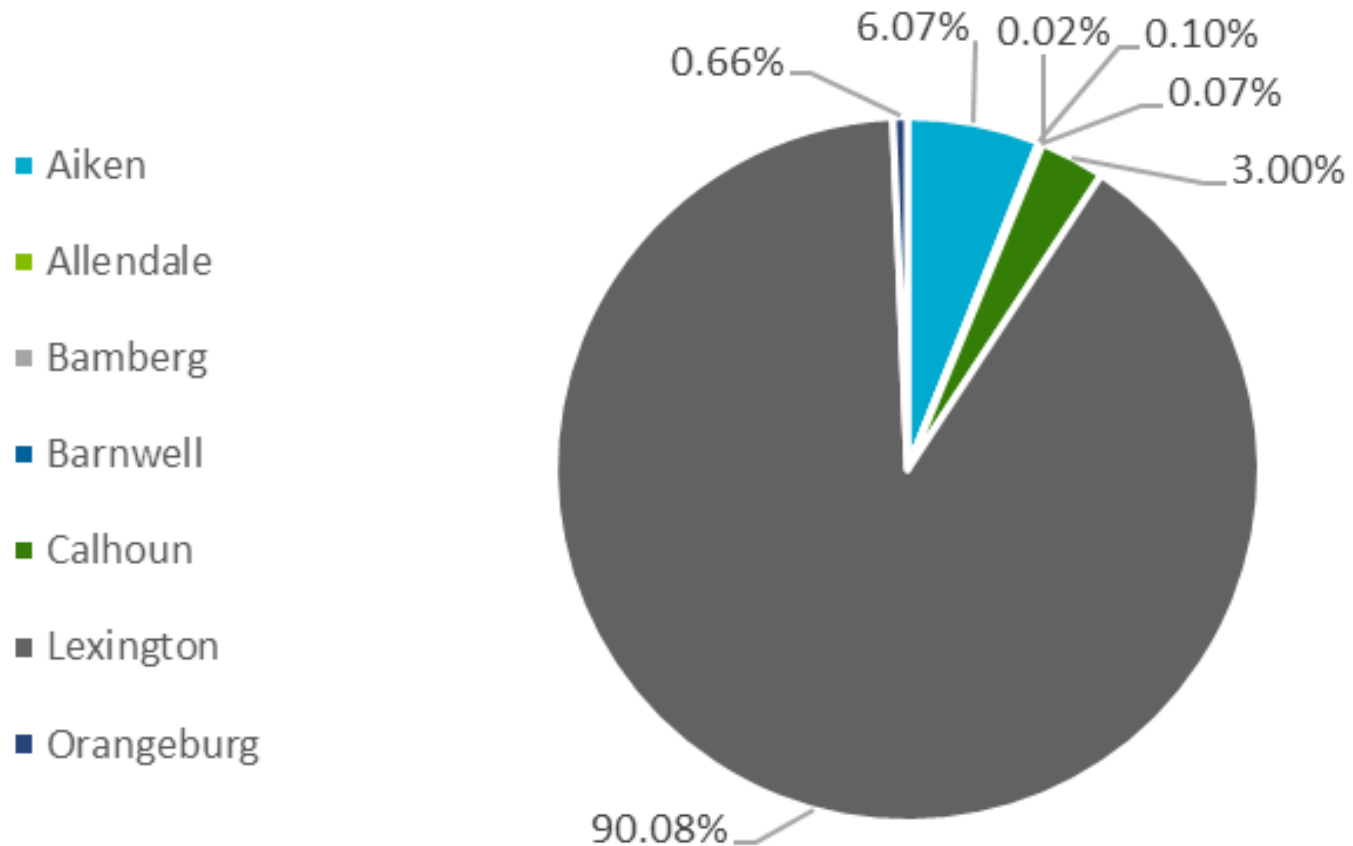




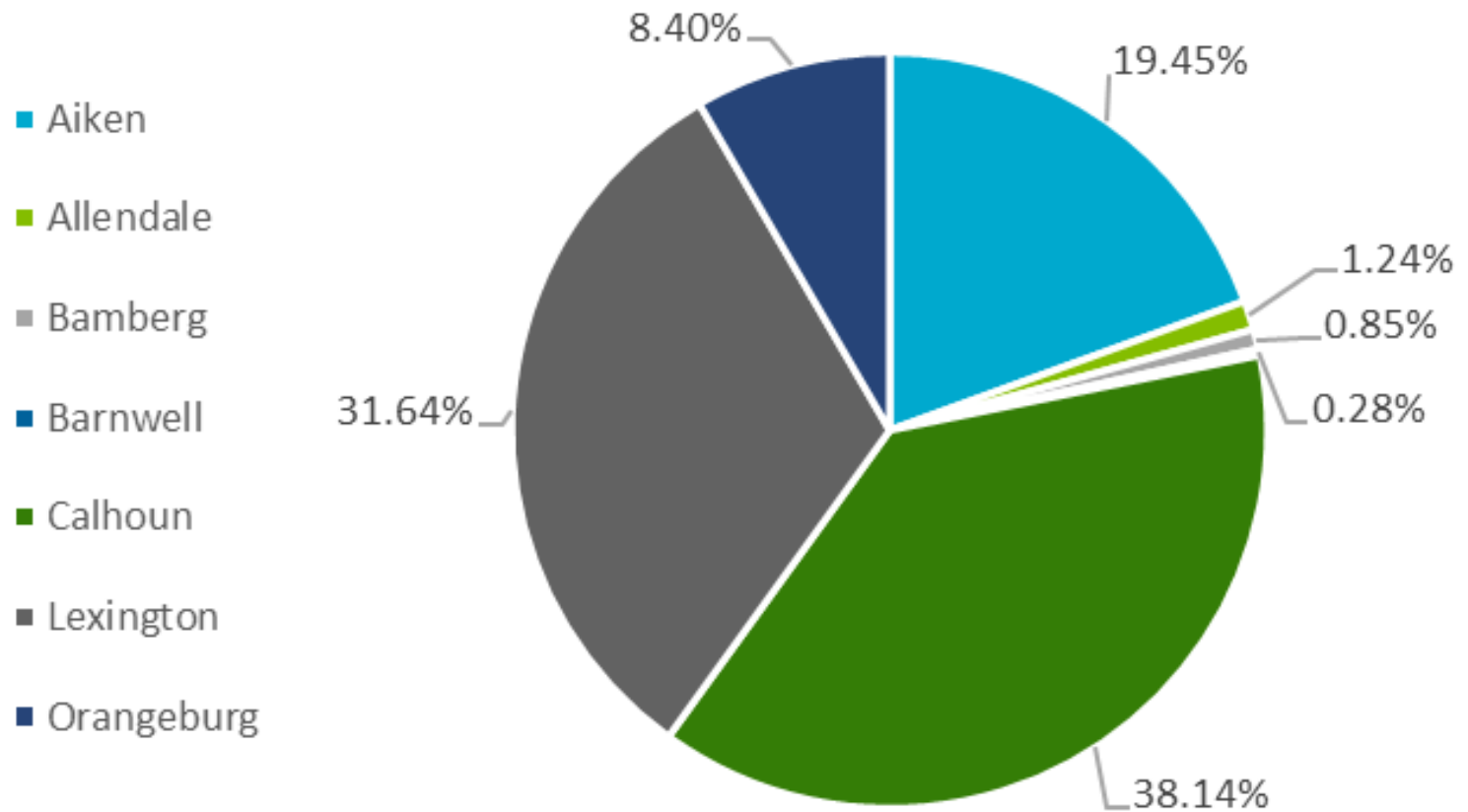
Reported Surface Water by Month, 2020 (Without Power)



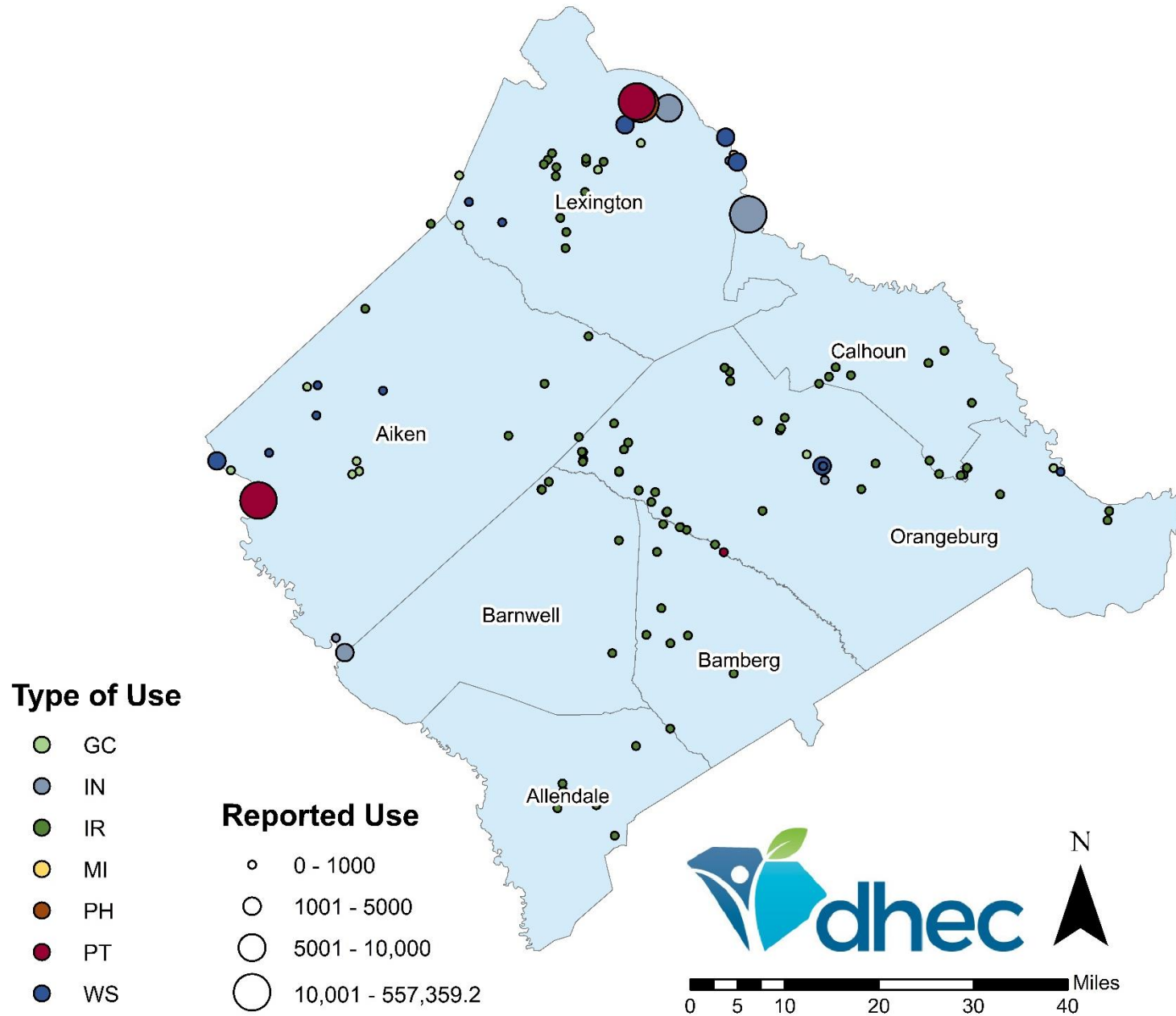
Reported Surface Water Use by County, 2020



Reported Surface Water Use by County, 2020, Without Power Use



Active Western Intakes with 2020 Reported Use



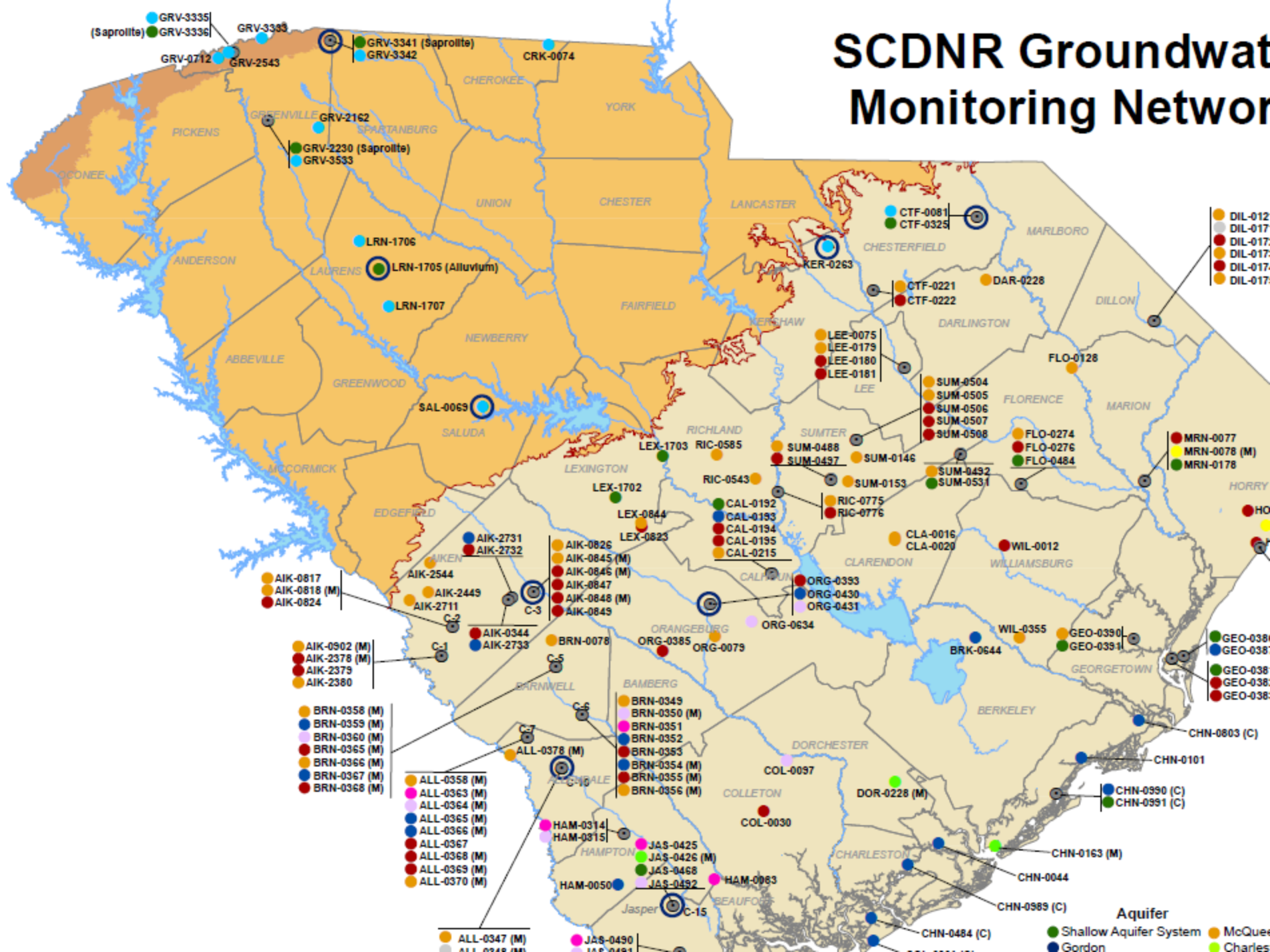


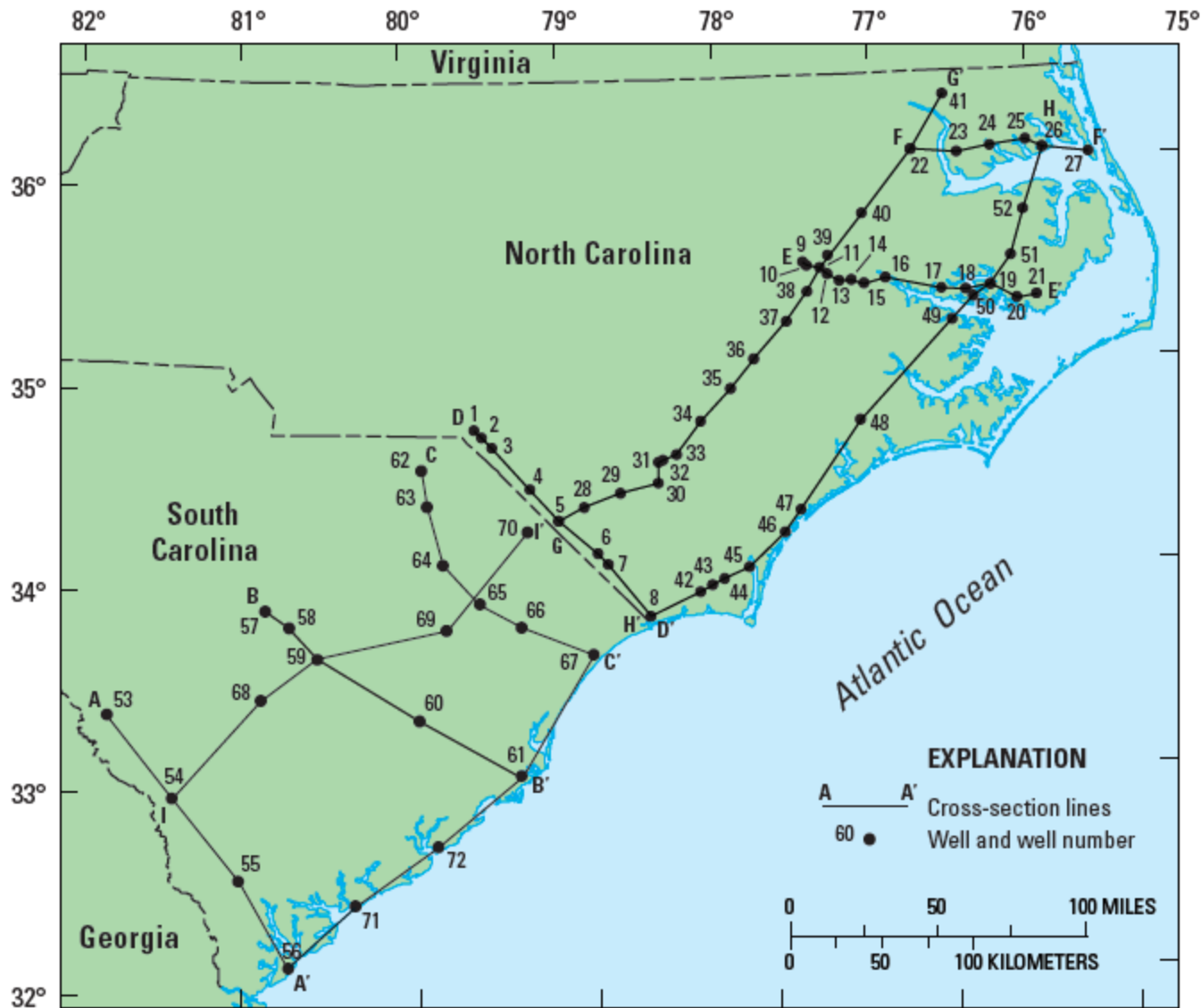
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Groundwater Conditions Update

Andrea Hughes, PhD

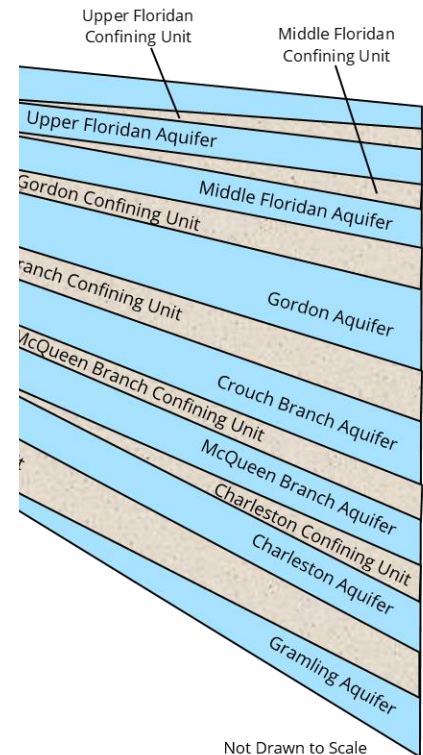
SCDNR Groundwater Monitoring Network





Environmental Control

A'
 (Southeast)
 Coastline
 Beaufort Co.

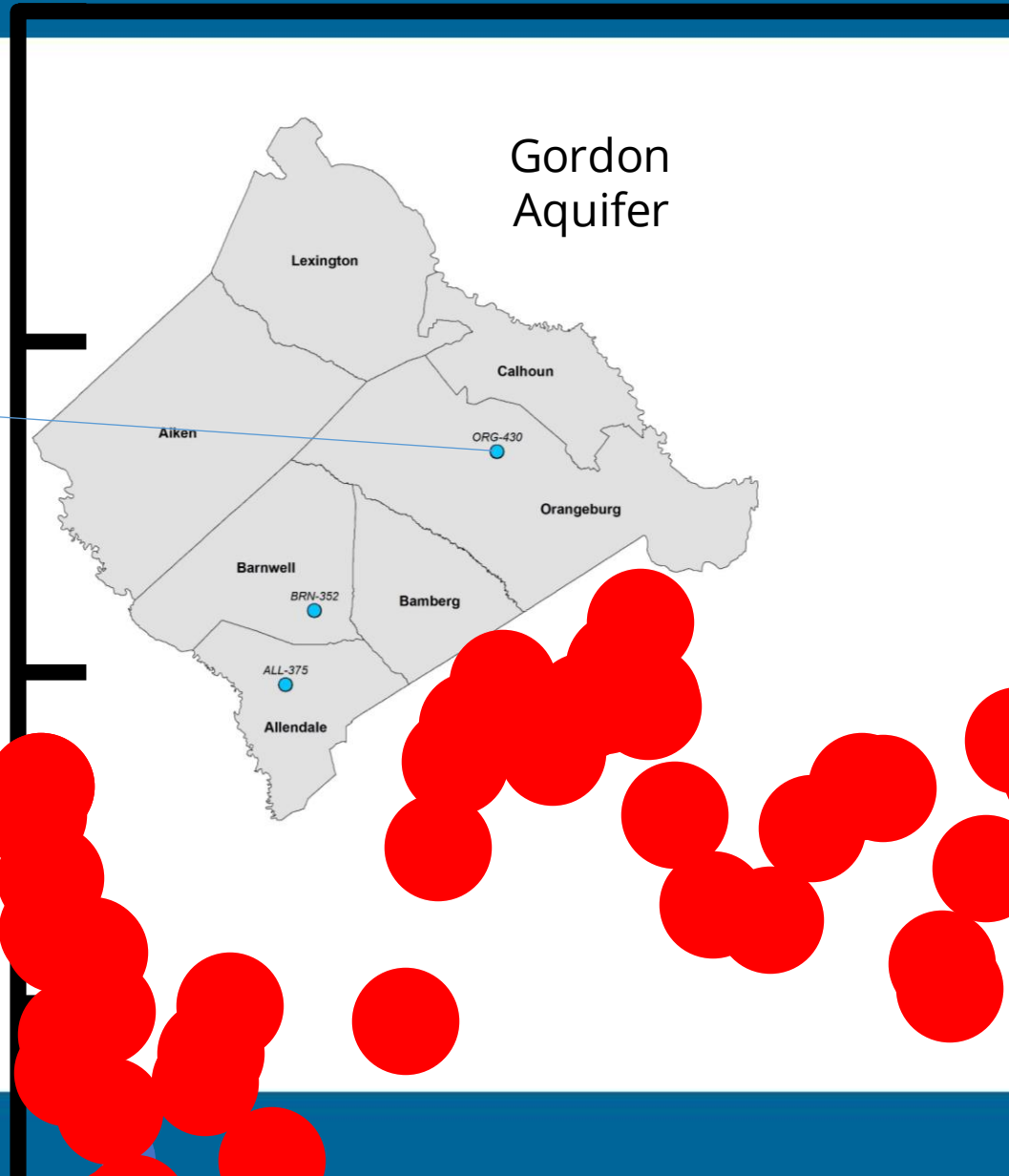


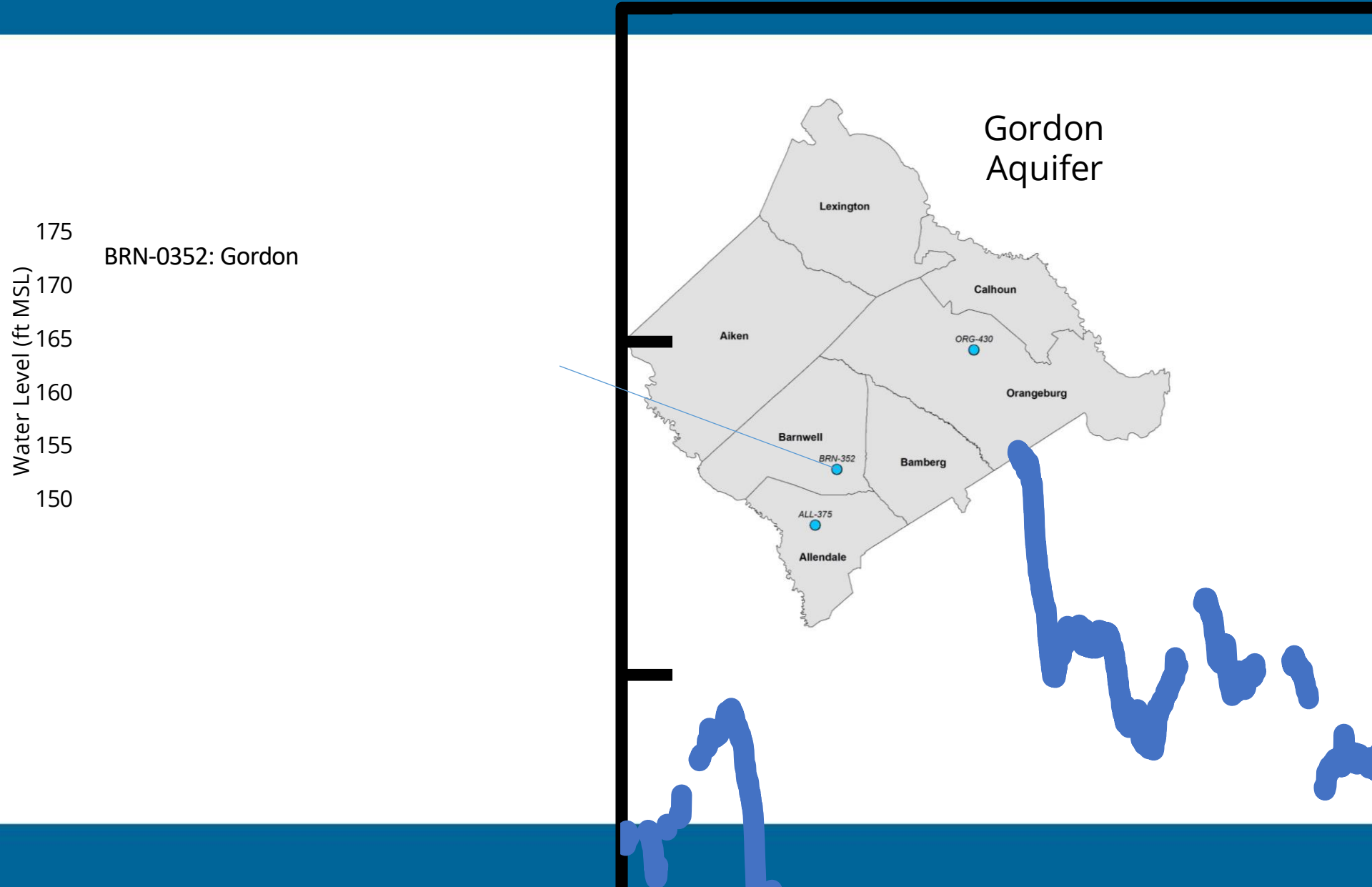
Modified from Gellici and
 Lautier, 2010

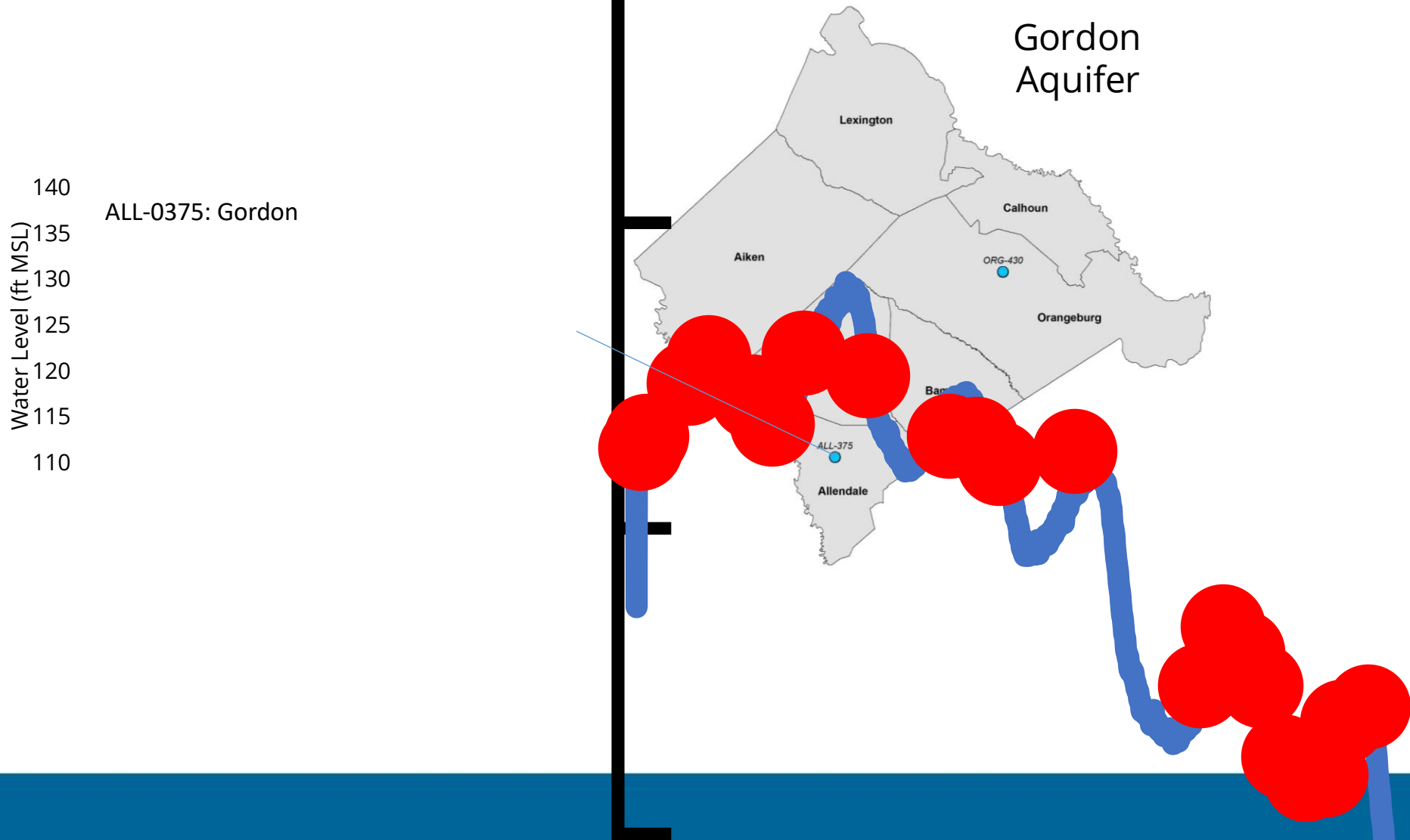


Water Level (ft MSL)
185
180
175
170
165
160
155
150

ORG-0430: Gordon

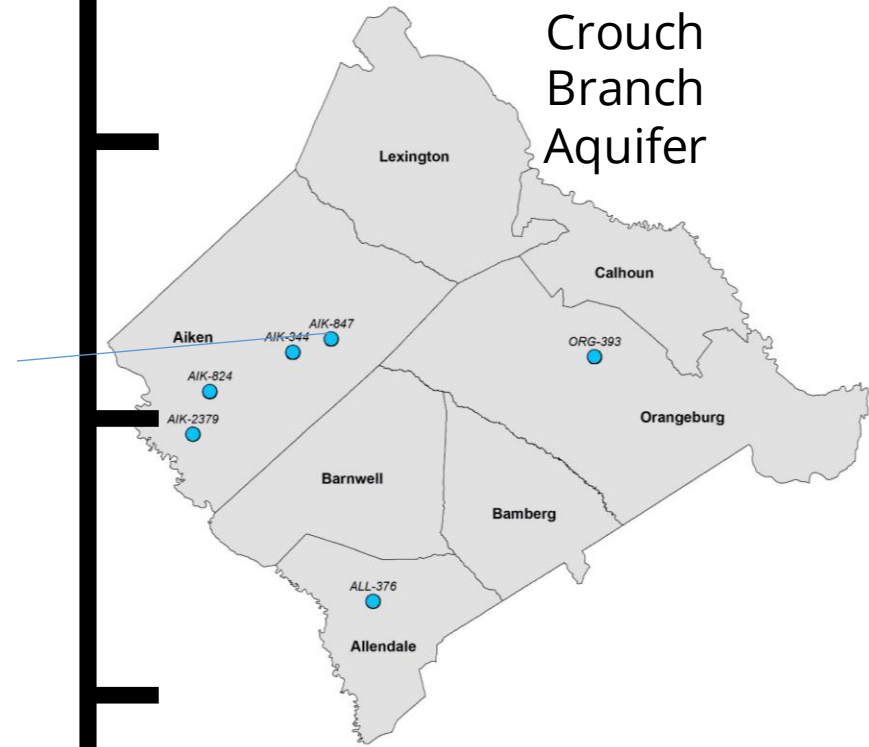






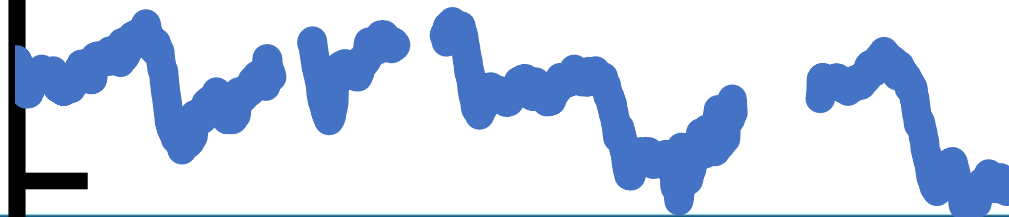


Crouch Branch Aquifer



AIK-0847: Crouch Branch

Water Level (ft MSL)
290
285
280
275
270
265
260
255
250



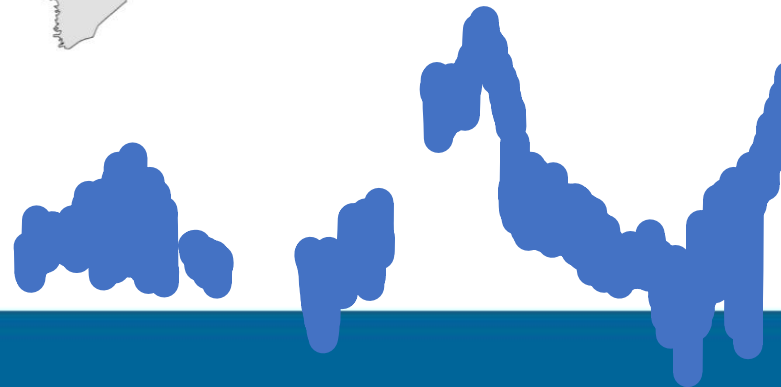
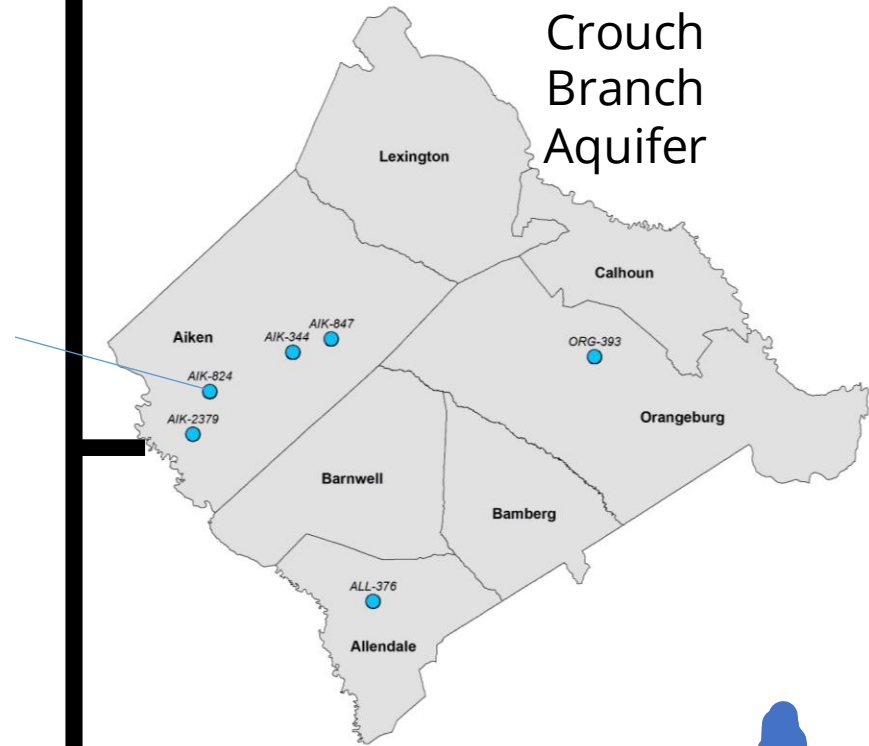


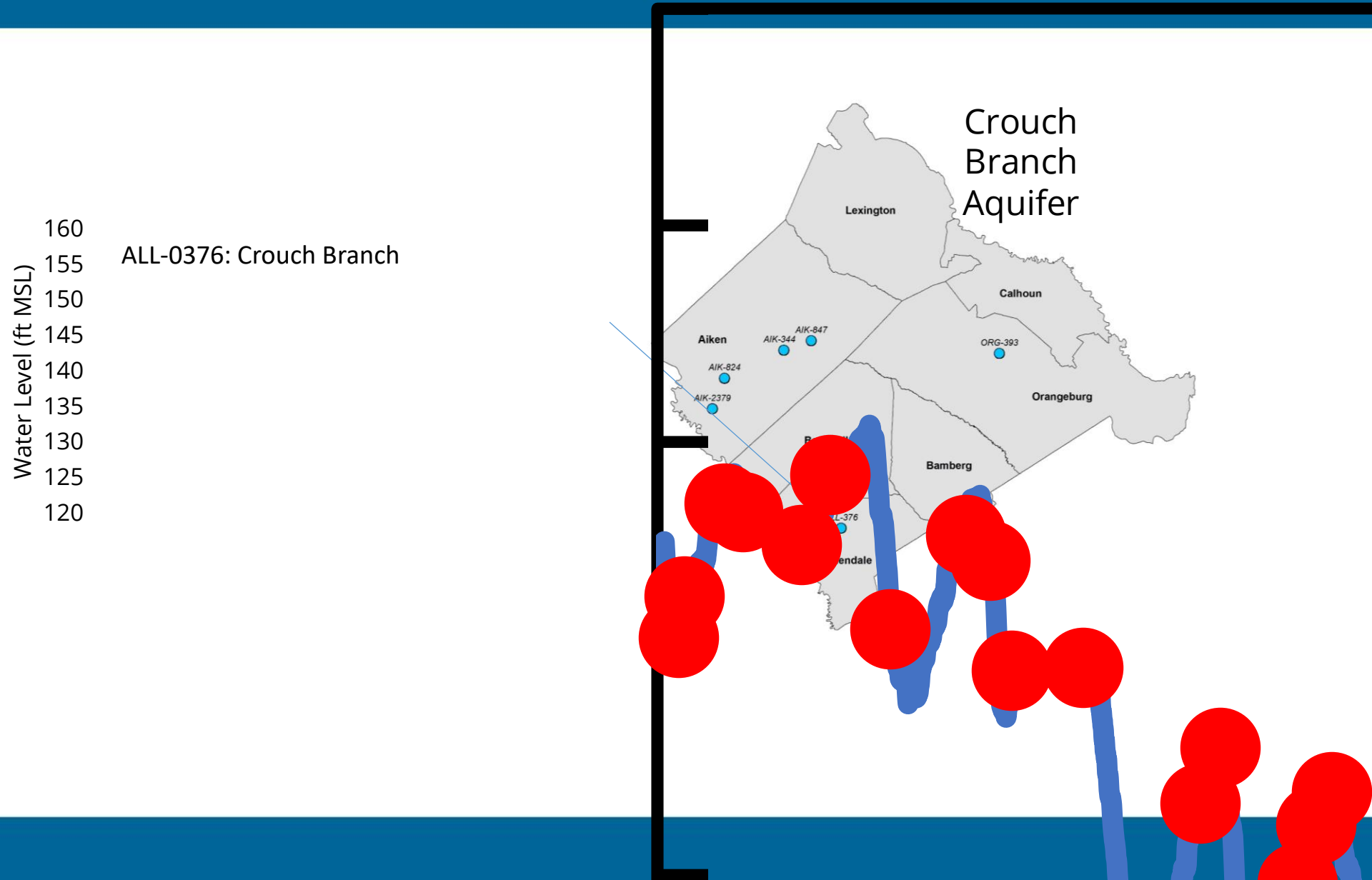
Water Level (ft MSL)

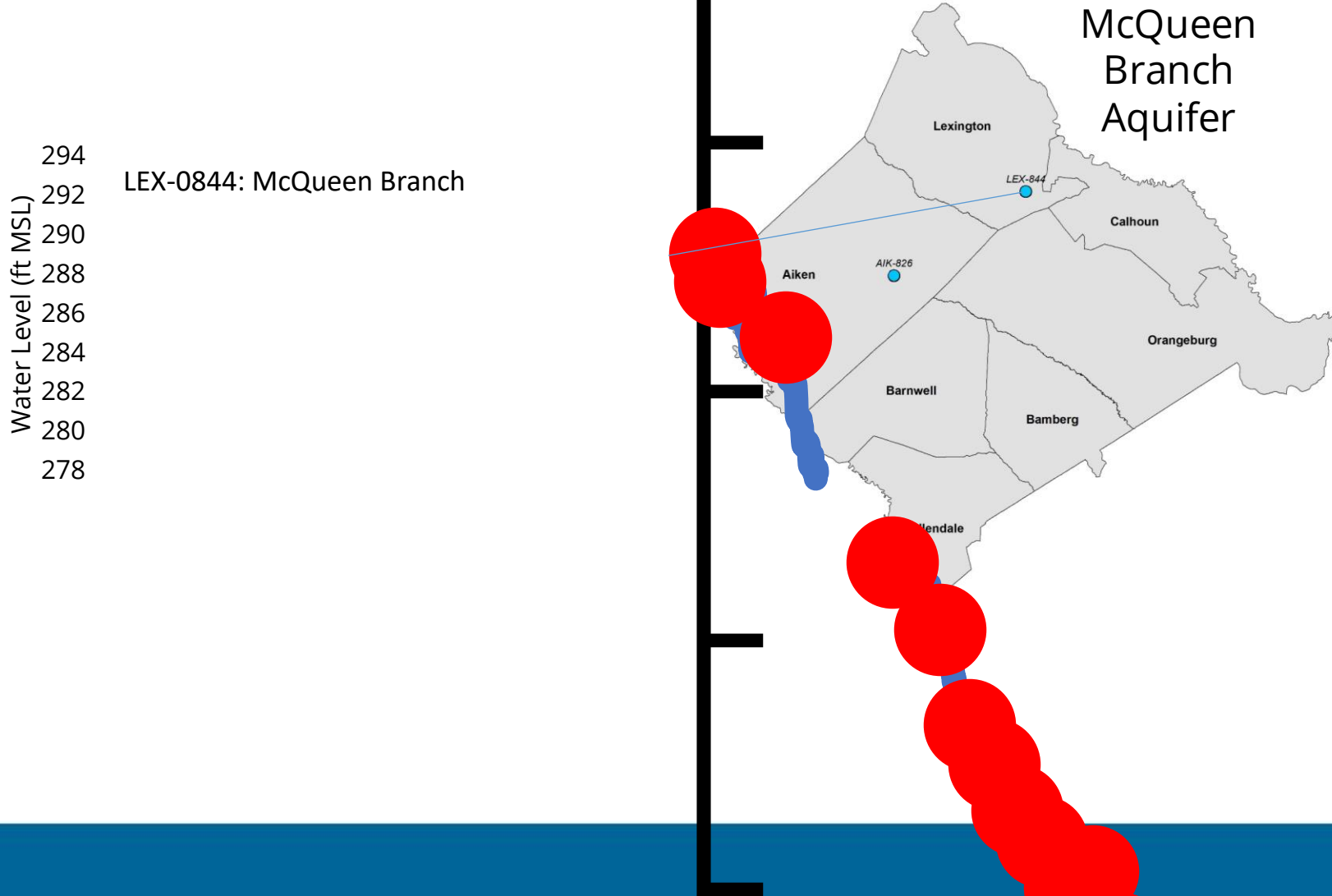
AIK-0824: Crouch Branch

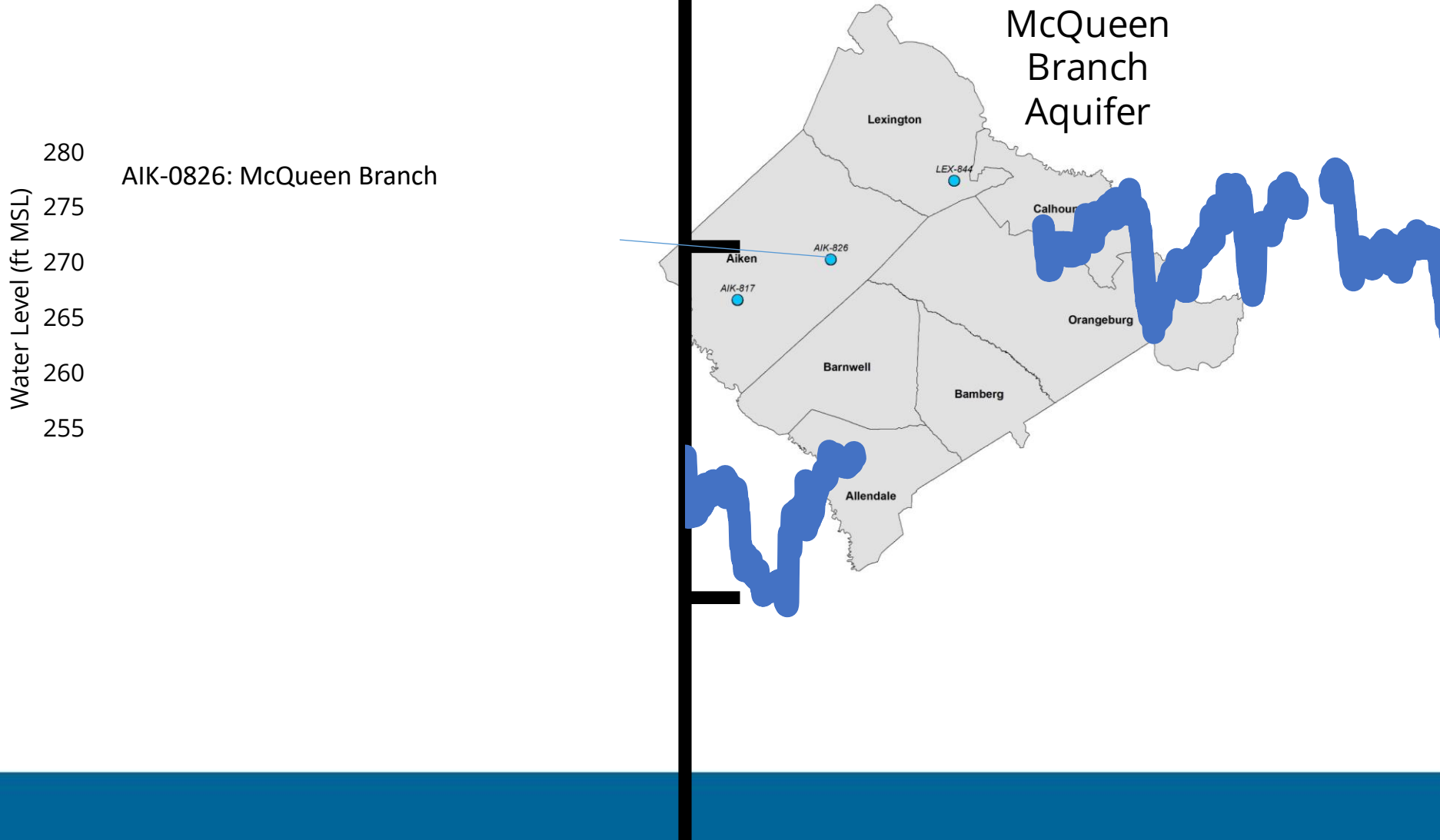
250
245
240
235
230

Crouch Branch Aquifer





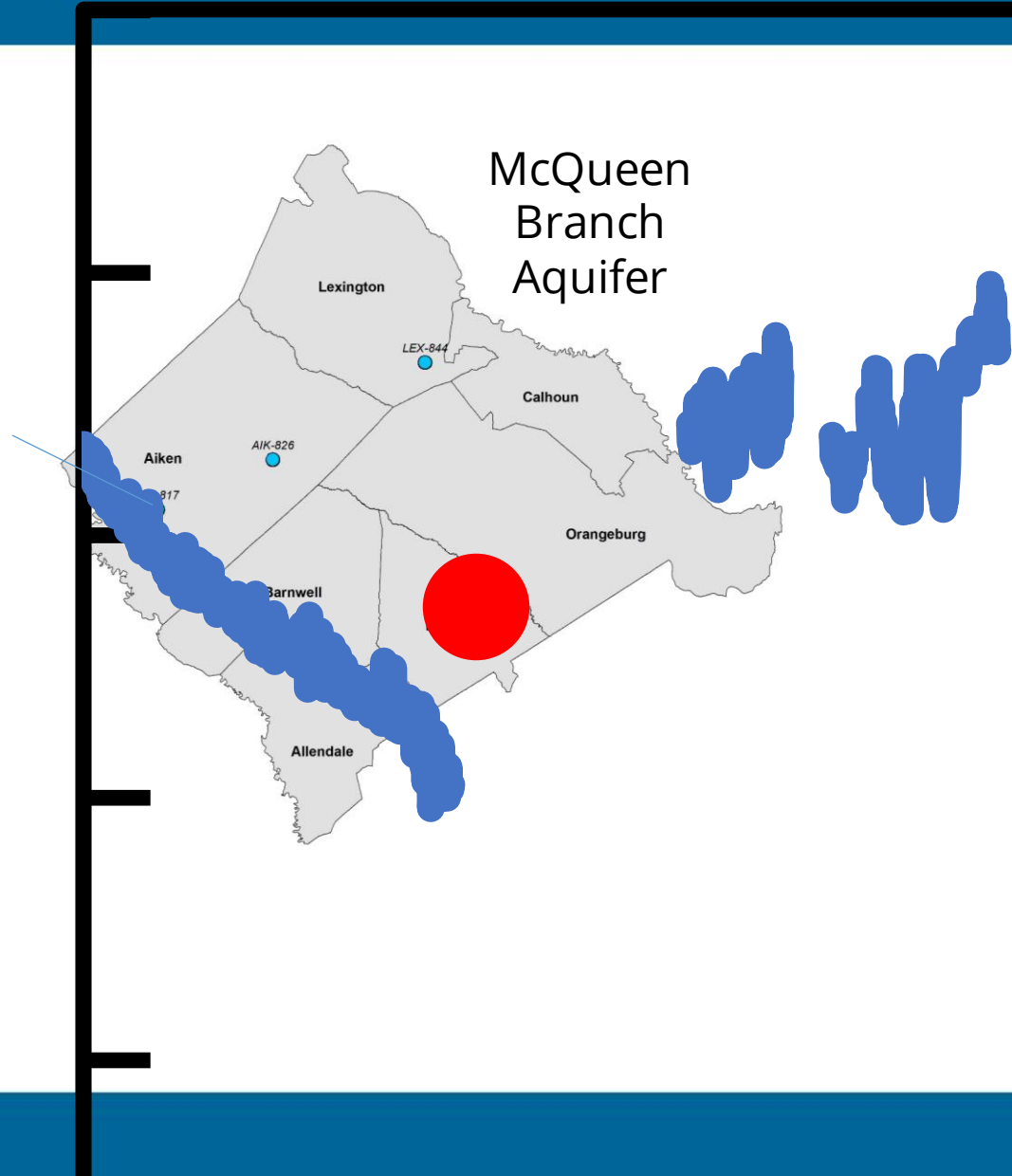






Water Level (ft MSL)
240
238
236
234
232
230
228
226
224

AIK-0817: McQueen Branch

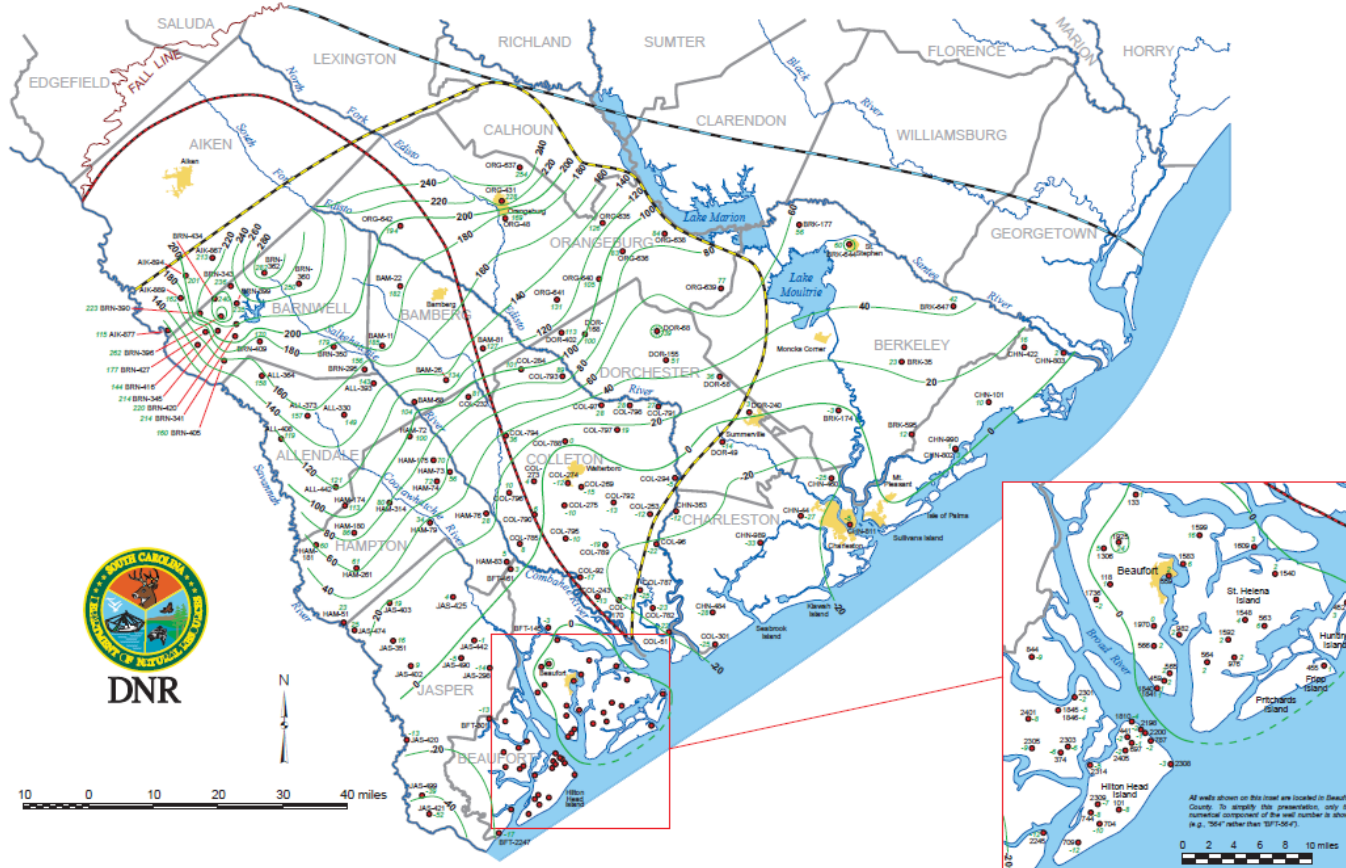




EXPLANATION

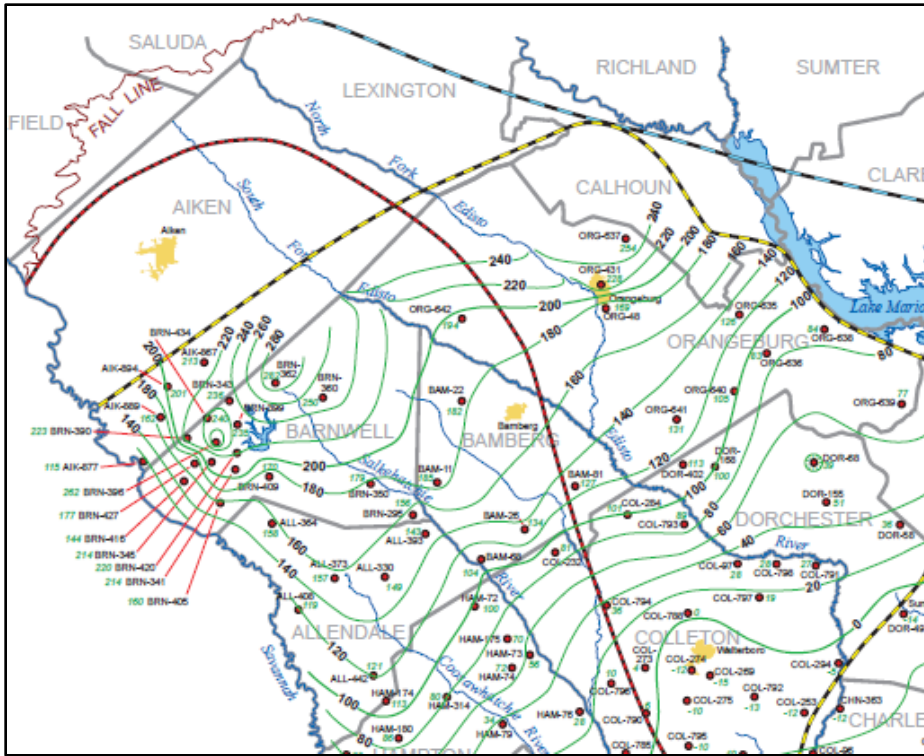
- Potentiometric contour for the Tertiary aquifers, in feet relative to sea level; dashed where inferred
- HAM-175 ● 10 Measured well, with county well number and potentiometric elevation
- Approximate updip limit of Gordon aquifer
- Approximate updip limit of Middle Floridan aquifer
- Approximate updip limit of Upper Floridan aquifer

Potentiometric Surface of the Upper Floridan, Middle Floridan, and Gordon Aquifers in South Carolina, November–December 2016

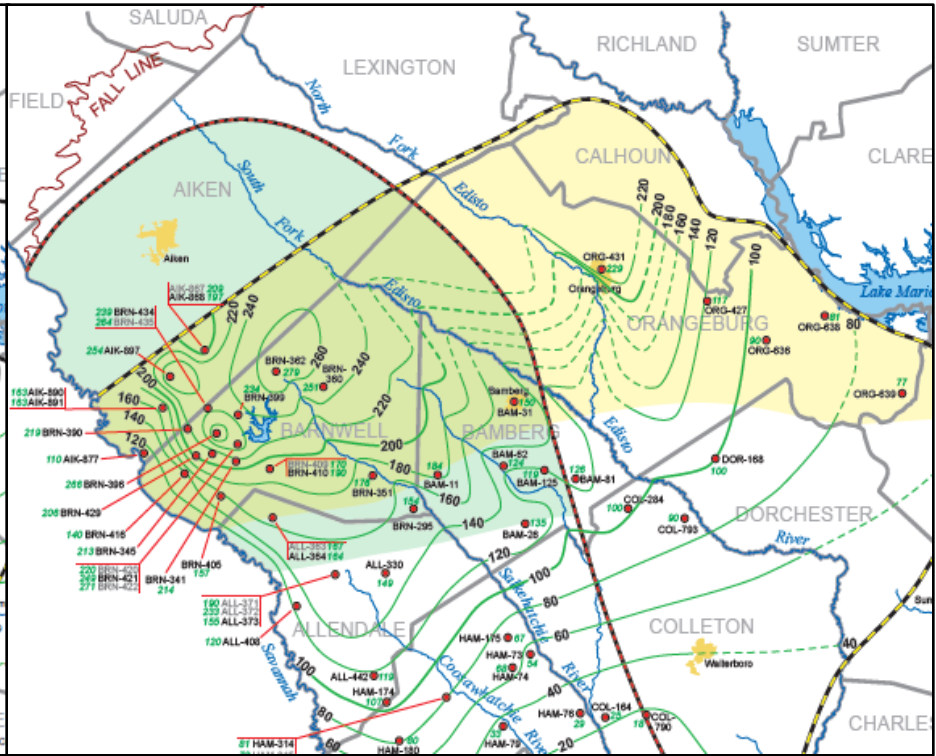




2016 Floridan/Gordon Potentiometric Surface

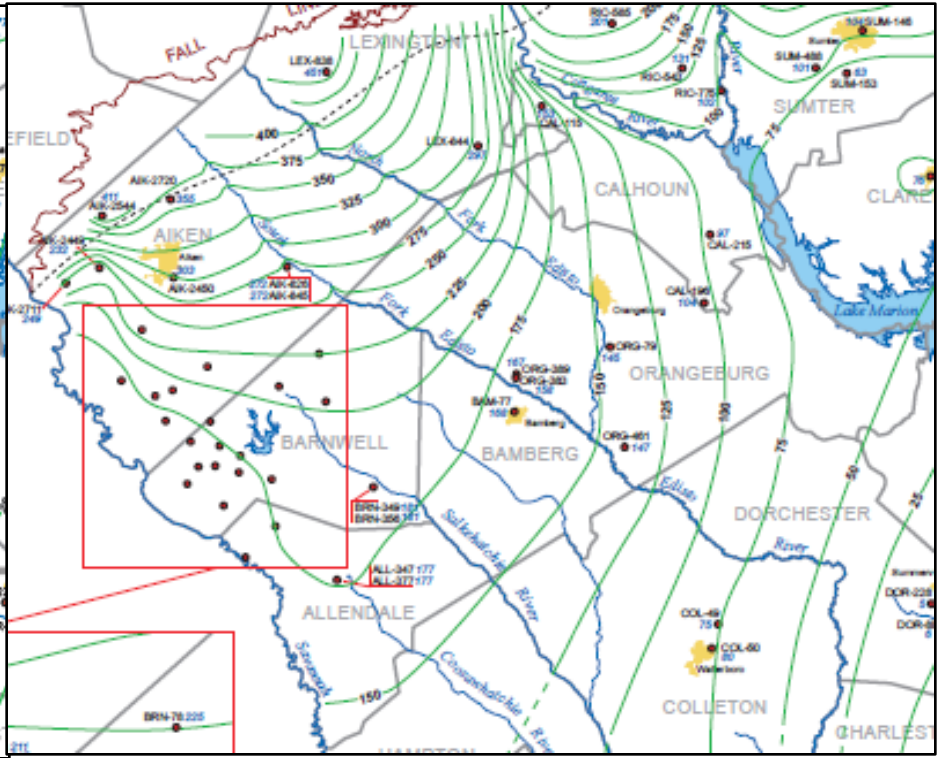
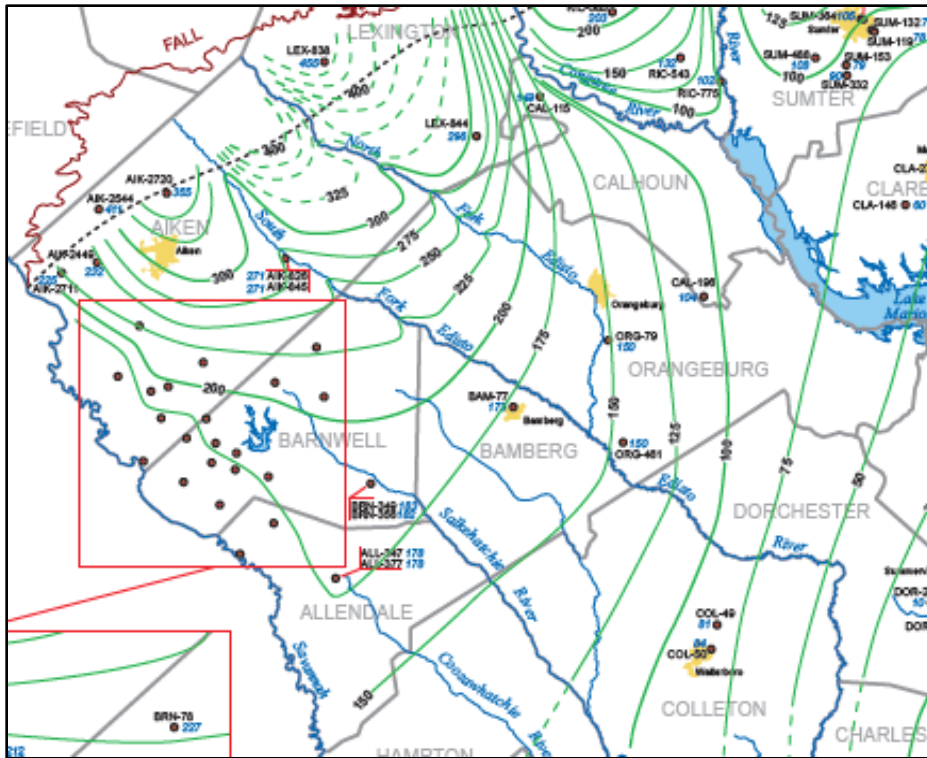


2018 Floridan Potentiometric Surface





2016 McQueen Branch Potentiometric Surface 2019 McQueen Branch Potentiometric Surface



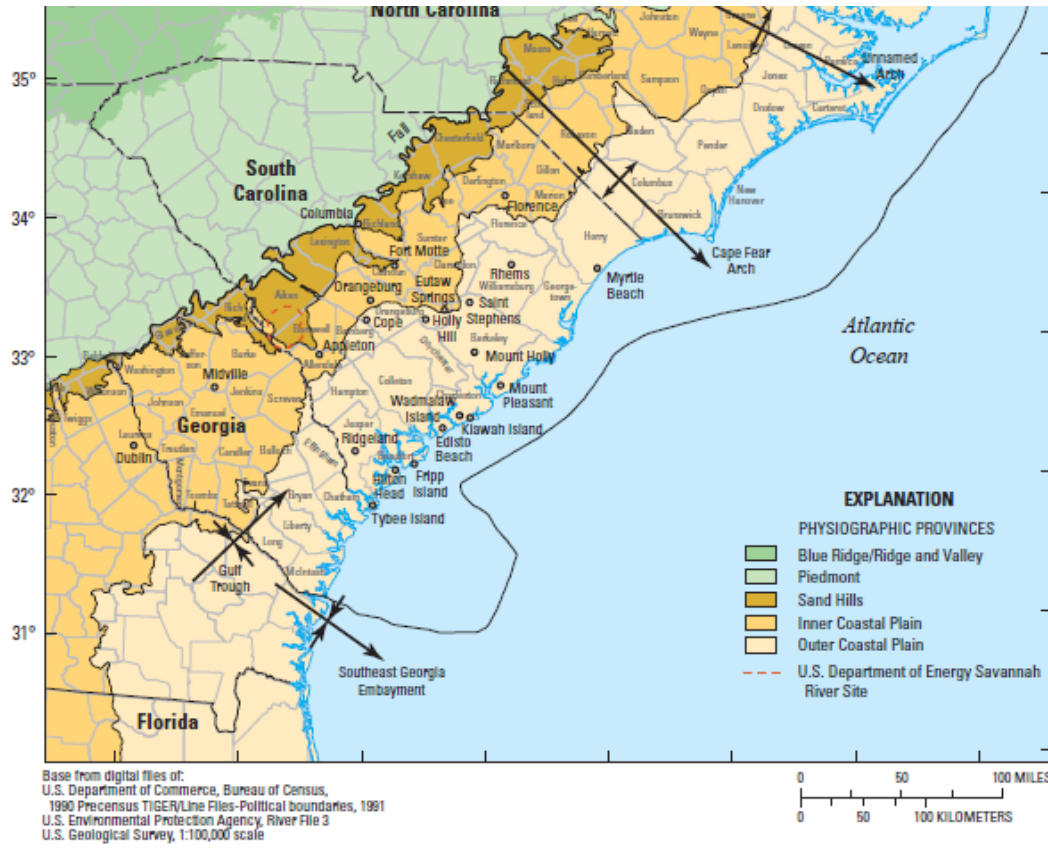


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Statewide Water Update

Leigh Anne Monroe

USGS Model Update (In Development)



LOCATION OF THE ATLANTIC AND GULF COASTAL PLAIN

Figure B1. Location of the study area, major geological features, and the Atlantic Coastal Plain of North and South Carolina.



Surface Water Regulations

- Notice of Drafting in State Register August 27, 2021
- Workgroup Meetings In-Process
 - Meeting 1: September 23, 2021
 - Meeting 2: October 21, 2021
 - Meeting 3: December 9th, 2021
- Updates can be found at:
 - <https://scdhec.gov/surface-water-stakeholder-workgroup>



State Water Planning

Edisto River Basin Council Meetings:

<http://hydrology.dnr.sc.gov/edisto-basin-planning.html>

Next meeting: November 17th, 2021 9am-2pm

Broad River Basin Council Meetings:

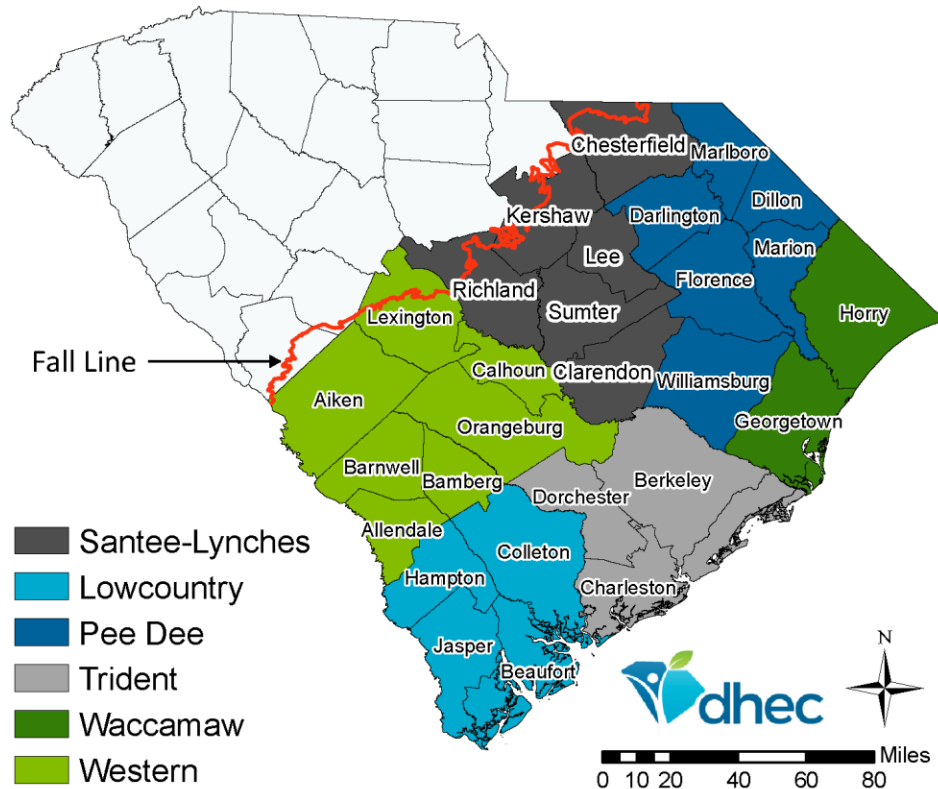
<http://hydrology.dnr.sc.gov/broad-basin-planning.html>

First two public meetings for Broad River Basin Council:
November 8th and November 9th

Scott Harder: harders@dnr.sc.gov

Santee Lynches Capacity Use Area

South Carolina Capacity Use Counties



- Approved by the DHEC Board July 15, 2021
- Groundwater Management Plan in development
 - Meeting #1 – Oct. 6, 2021
 - Meeting #2 – Nov. 3, 2021
 - Meeting #3 – Dec. 1, 2021

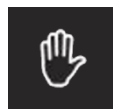
<https://scdhec.gov/BOW/groundwater-use-reporting/groundwater-management-planning/santee-lynches-area-preliminary>

How to Participate

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Hand Raise
(click this icon to
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(no one in the meeting
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Unmuted
(everyone in the
meeting can hear you)





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Dr. Andrea Hughes

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Questions, Comments and Discussion

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