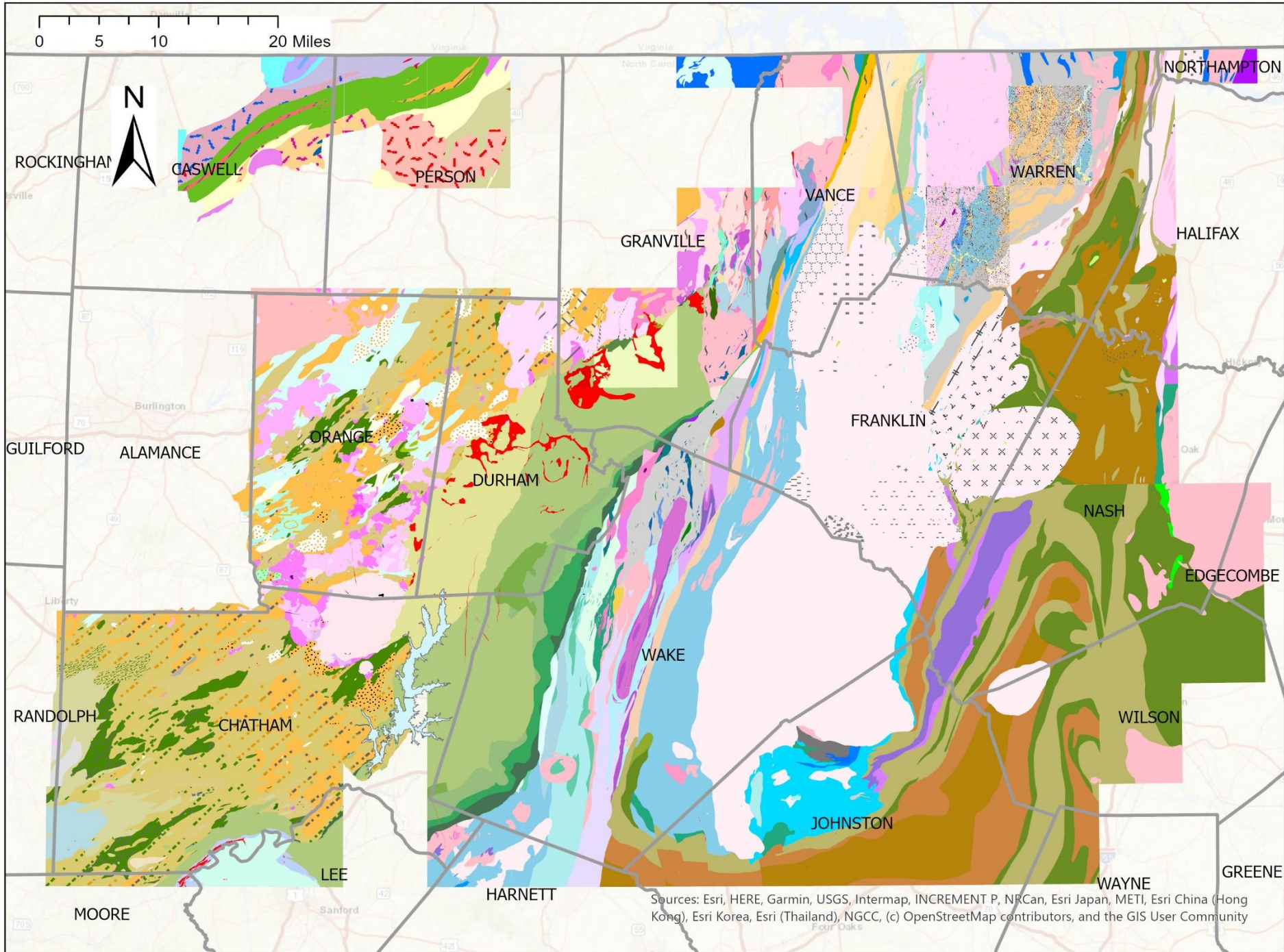


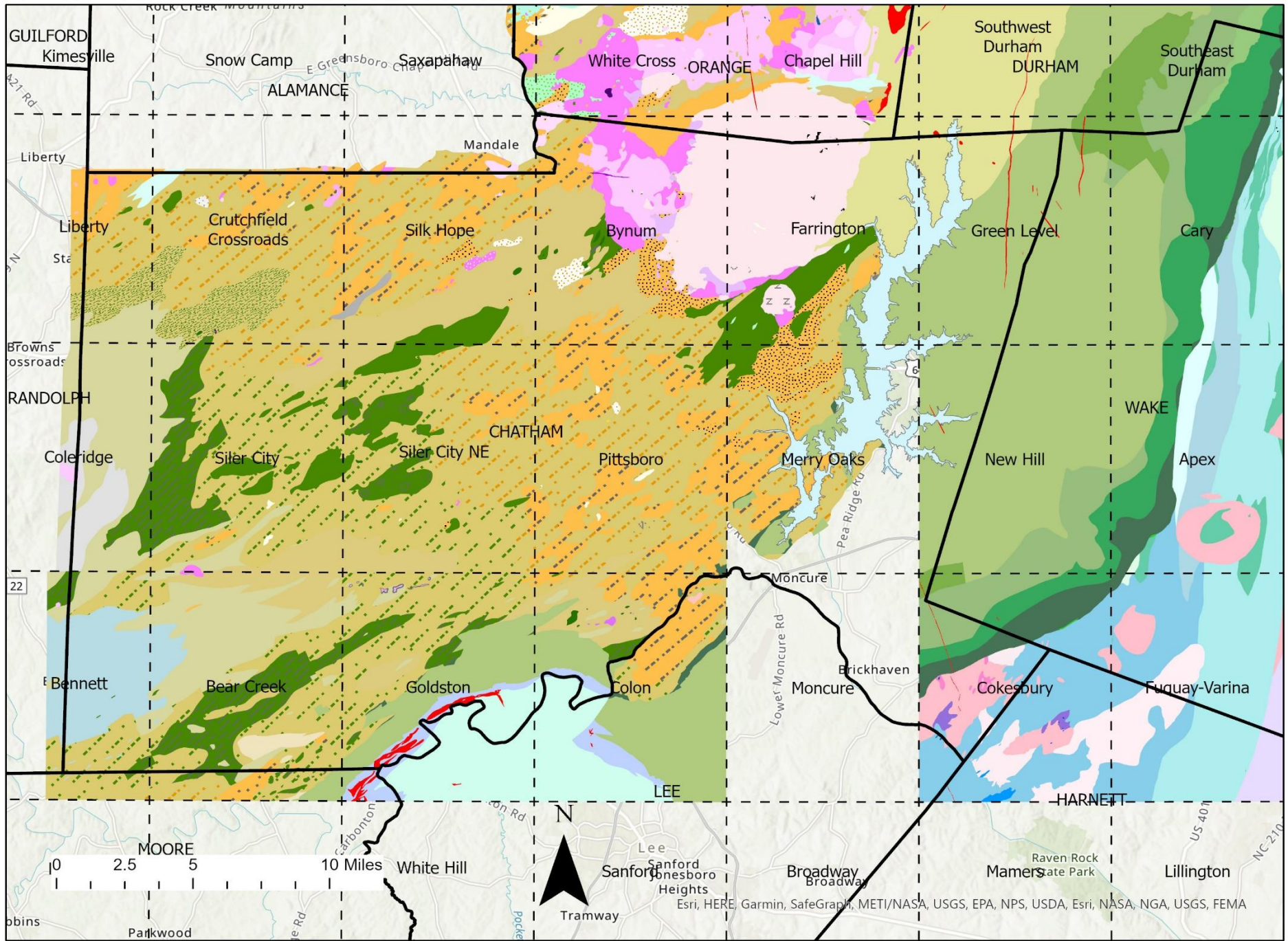
Basic Hydrogeology of Chatham County, NC

Rick Bolich

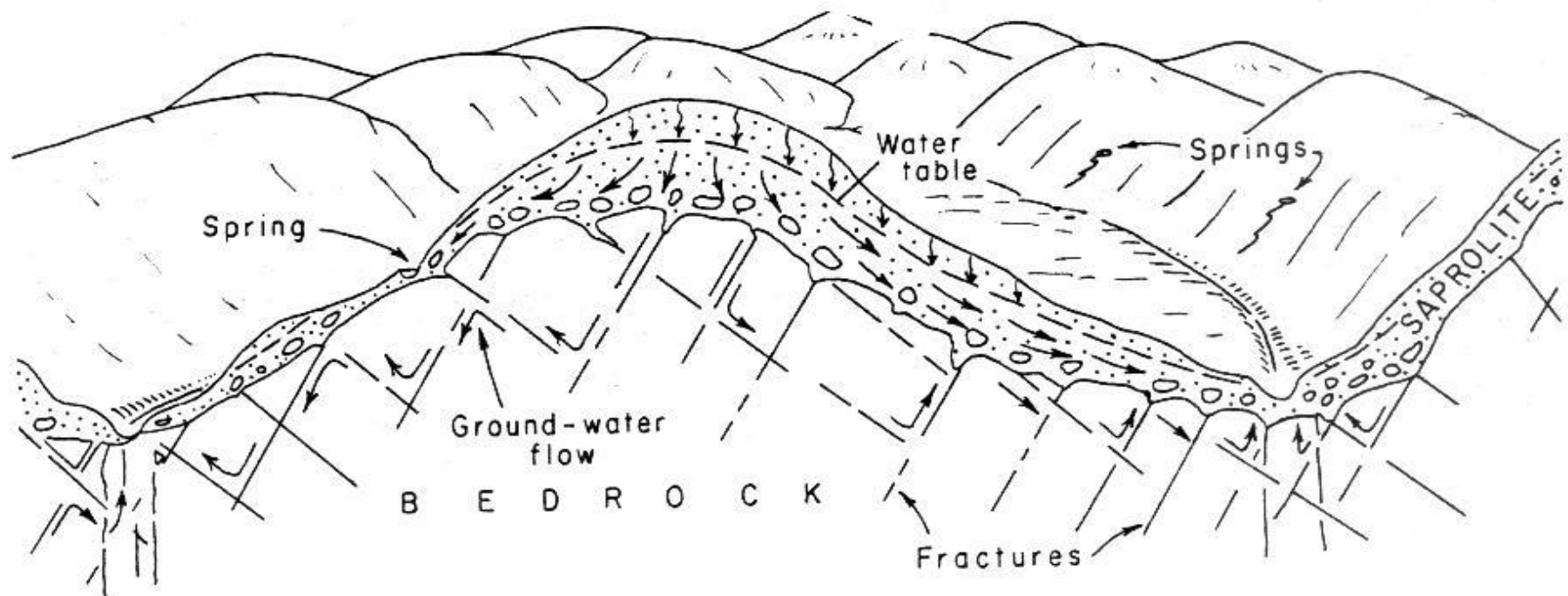
NCDEQ – Division of Water Resources



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

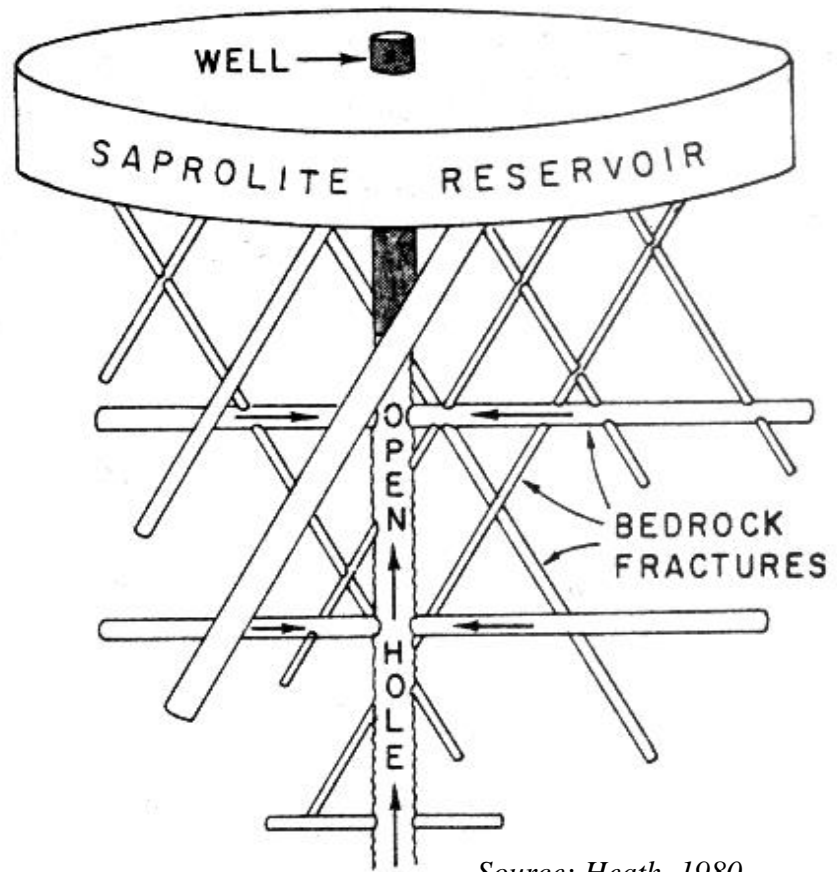
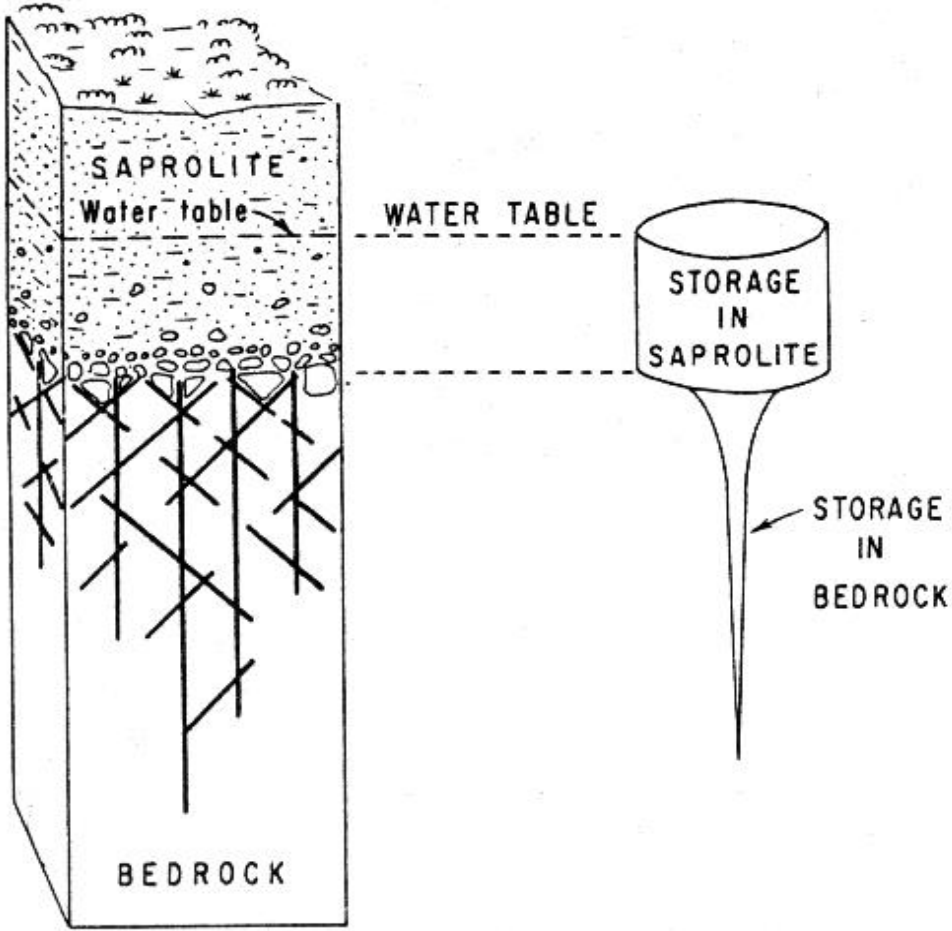


Groundwater in the Piedmont

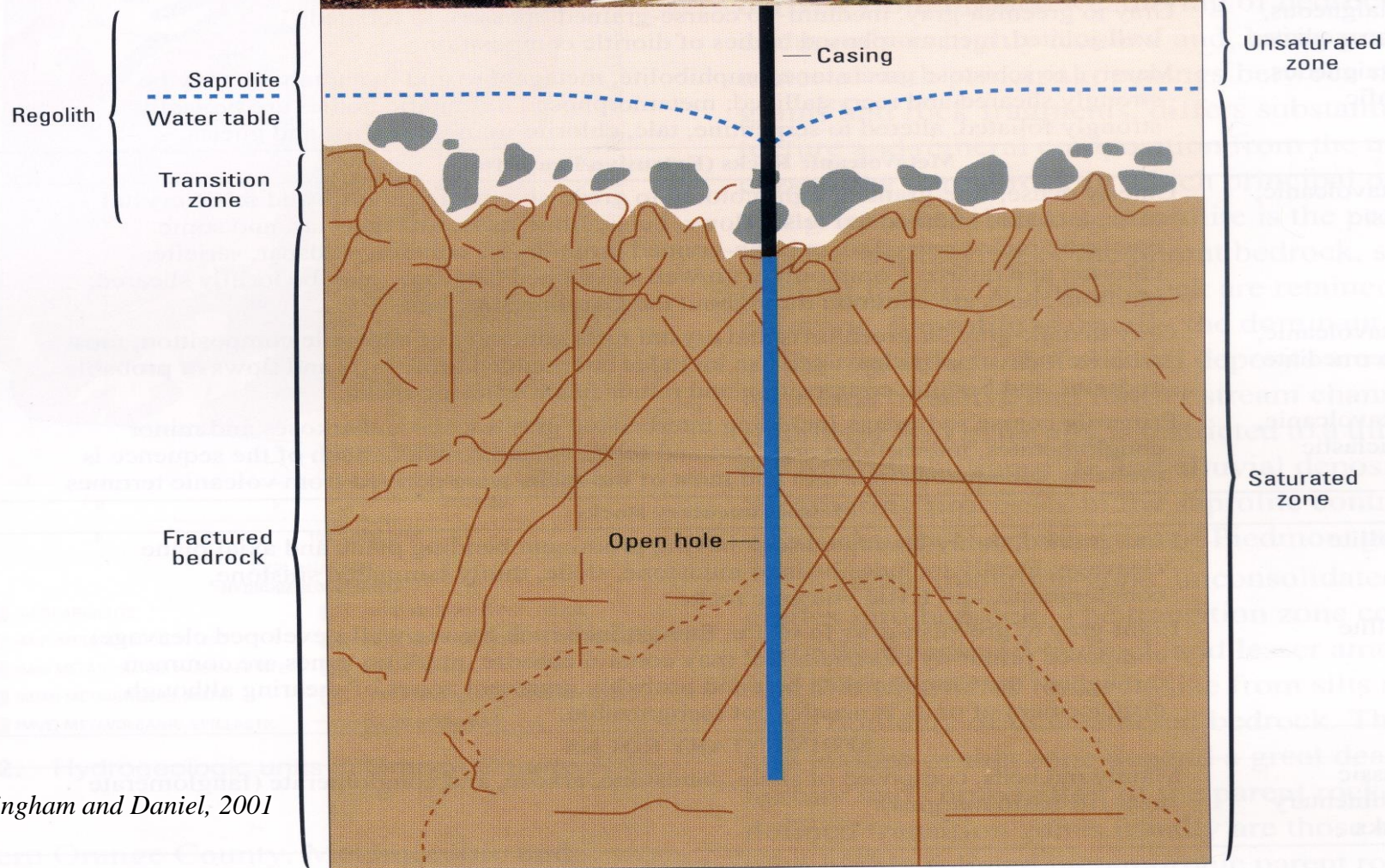


Source: Heath, 1980

Hydraulic Characteristics of the Piedmont and Mountain Ground-Water System



Source: Heath, 1980



Source: Cunningham and Daniel, 2001

Deeper →



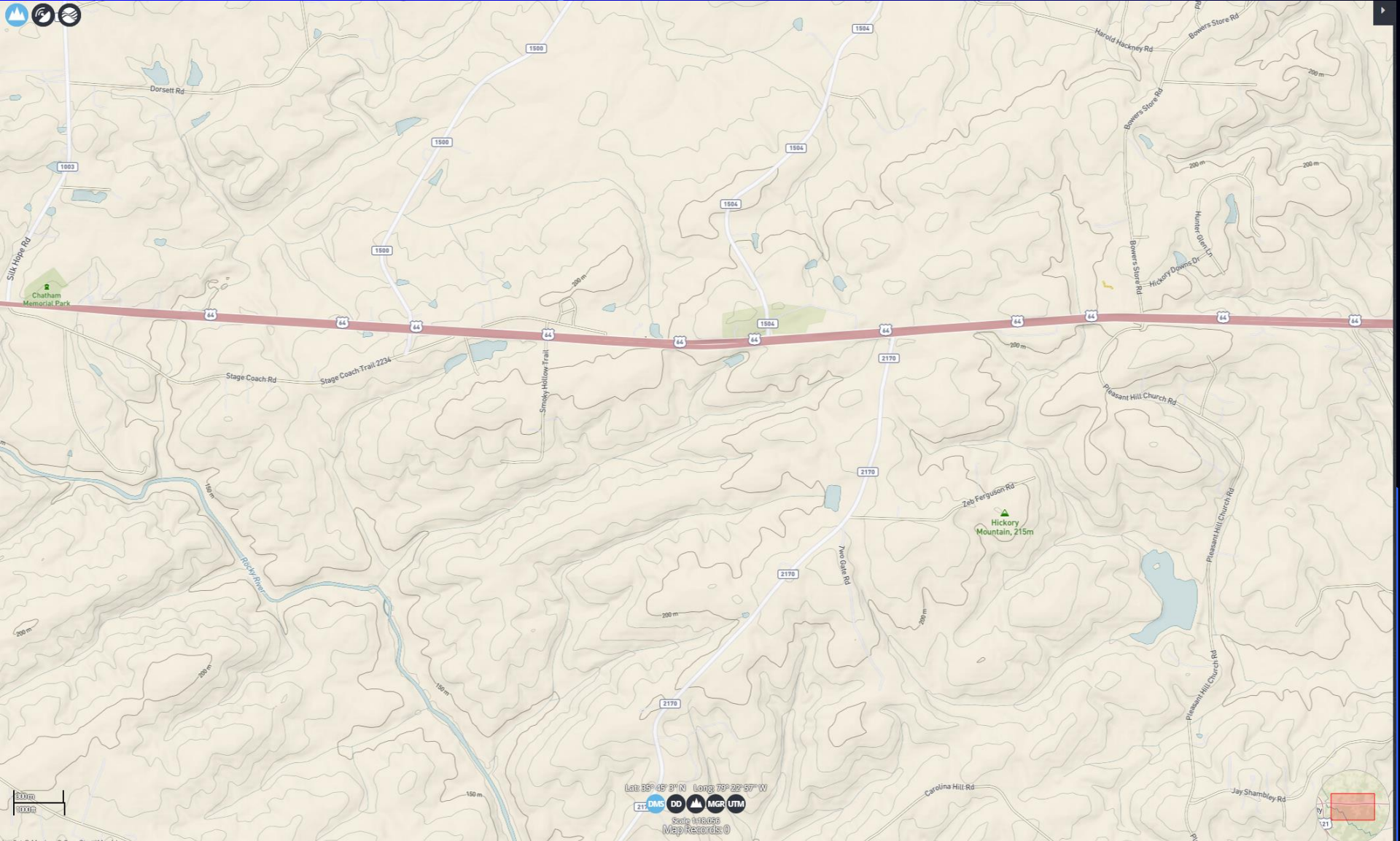
Transition Zone



NCSU Lake Wheeler Rd. Raleigh

~67 feet





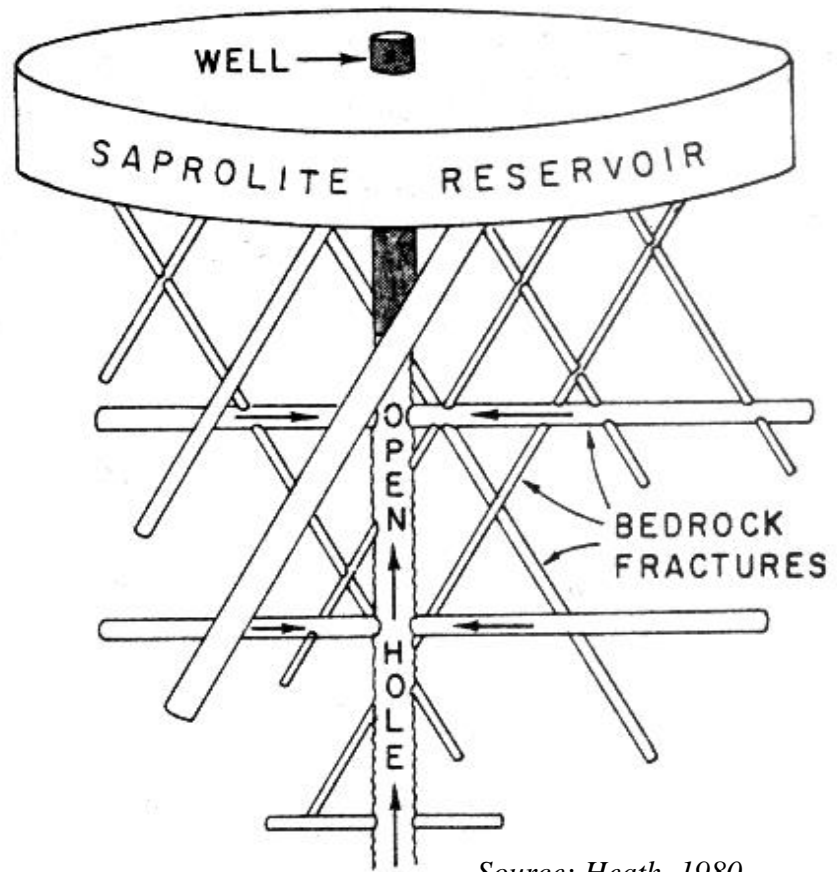
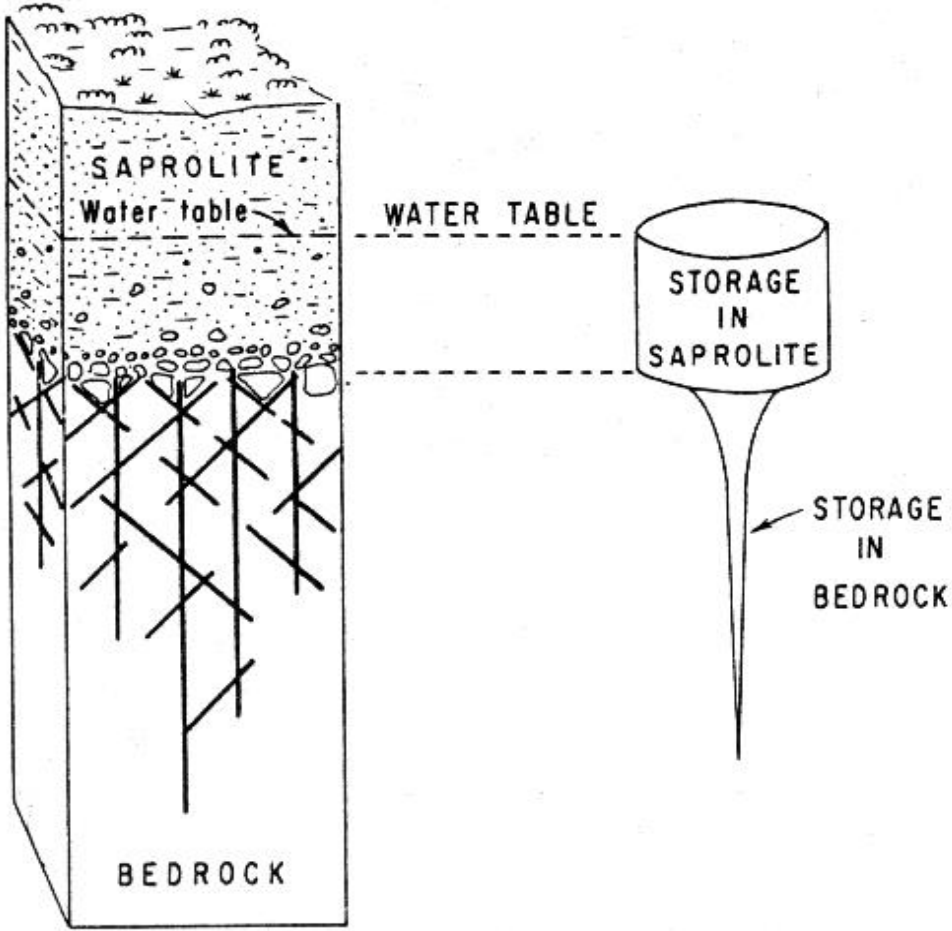
Lat: 35° 45' 31" N Long: 75° 22' 57" W



Scale 1:18,035
Map Records: 0

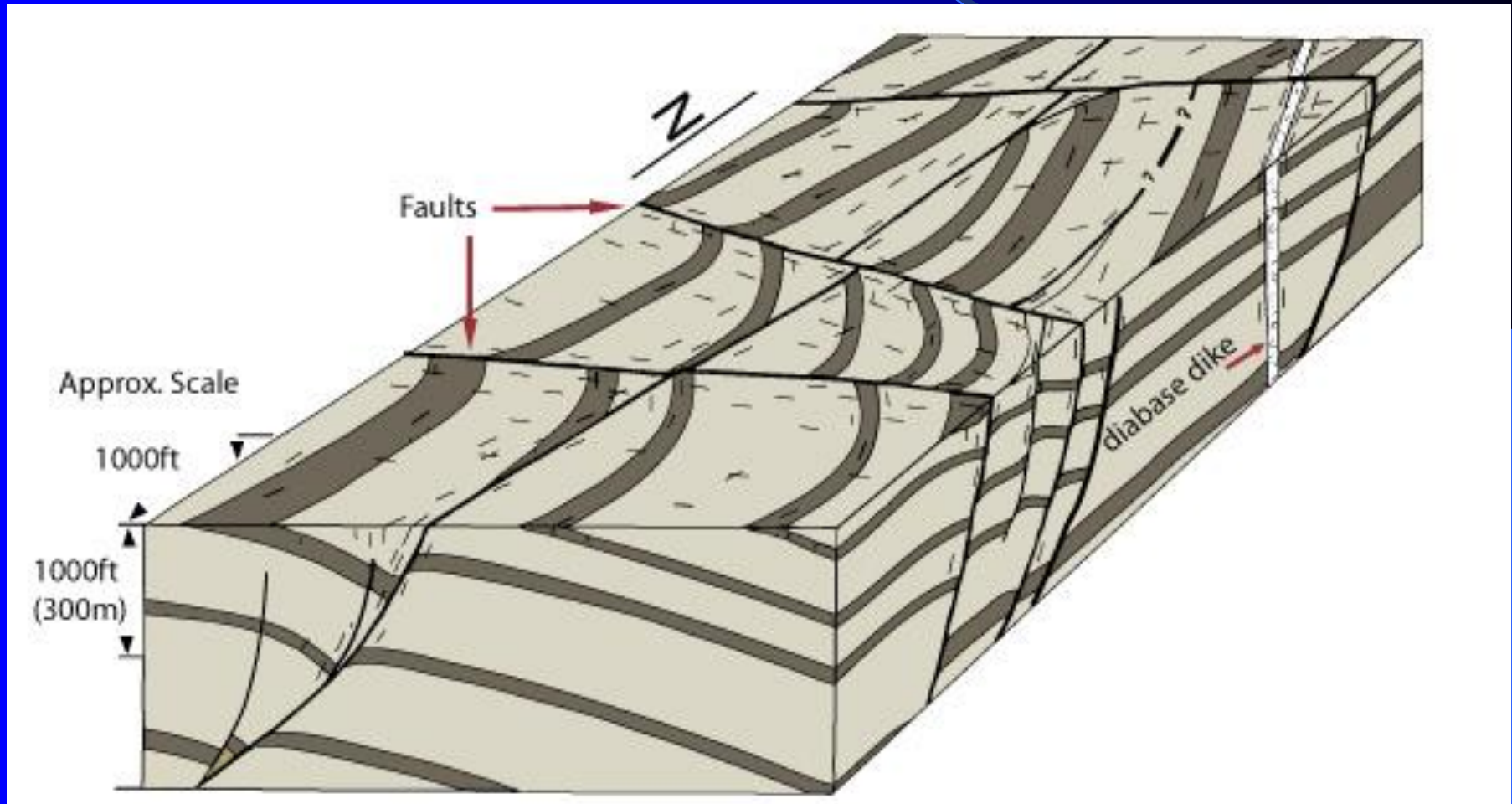


Hydraulic Characteristics of the Piedmont and Mountain Ground-Water System



Source: Heath, 1980

Geologic X-Section from the Sanford Basin Near New Hill



Diabase Dike in Quarry



NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY – DIVISION OF WATER RESOURCES
APPLICATION FOR PERMIT TO CONSTRUCT A WATER SUPPLY WELL OR WELL SYSTEM
(Wells or Well Systems with a Design Capacity of 100,000 Gallons Per Day or Greater)

PLEASE TYPE OR PRINT CLEARLY

In accordance with the provisions of Article 7, Chapter 87, General Statutes of North Carolina and regulations pursuant thereto,
application is hereby made for a permit to construct water supply wells.

1. Date: _____ 2. County: _____ 3. Applicant: _____ Applicant's Mailing Address: _____ Applicant's Email Address (if available): _____ 4. Contact Person (if different than Applicant): _____ Contact Person's Mailing Address: _____ Contact Person's Email Address (if available): _____ 5. Property Owner (if different than Applicant): _____ Owner's Mailing Address: _____ Owner's Email Address (if available): _____ 6. Property Physical Address (including PIN Number): _____ City: _____ County: _____ Zip Code: _____ 7. Intended use of Well or Well System: _____ (examples: irrigation, consumption, etc.) 8. Will the proposed water supply well or well system replace or be added to an existing well or well system? _____ (If yes, complete questions 7 and 8)...(If no, complete question 7 and then skip to question 9) 9. Total design capacity of proposed well or well system in gallons per day (gpd): _____ 10. If adding a well to an existing system, list the existing water supply wells in the existing system and their respective yields: _____ _____ 11. Is this a public well or well system? _____ If yes, give Public Water ID Number: _____ If yes, give Project Engineer and contact information: _____ 12. Well Contractor: _____ Well Contractor Certification No.: _____ Well Contractor Address: _____	FOR OFFICE USE ONLY PERMIT NO. _____ ISSUED DATE: _____
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PROPOSED WELL CONSTRUCTION INFORMATION

- | | |
|--|---|
| 1. As required by 15A NCAC 02C .0105(f)(7), attach a well construction diagram of each well showing the following:
a. Borehole and well diameter
b. Estimated well depth
c. Screen intervals
d. Sand/gravel pack intervals
e. Type of casing material and thickness
f. Grout horizons
g. Well Head completion details | 2. No. of wells to be constructed in unconsolidated material: _____
3. No. of wells to be constructed in bedrock: _____
4. Total No. of wells to be constructed: _____
(add answers from 2 and 3)
5. Estimated beginning construction date: _____
6. Estimated construction completion date: _____ |
|--|---|

