Downloading Water Level (Quantity) and Water Quality Data Using the Division of Water Resources (DWR)/Groundwater Management Branch (GWMB) Database

This document describes how to download water quantity and water quality data from the DWR/GWMB database. For the purposes of this document, we are using the Merchants Millpond Station, C16S1, Gates County well as the example.

Navigating the website

1. Open https://www.ncwater.org/gwmb

2. Click on Groundwater Levels and Quality link (Figure 1, upper left) to open the map interface (Figure 2). The map displays all active DWR Network wells, and you can use the Zoom tools to enlarge the map and view individual station names. If you click on an individual station, a list of station wells will display (Figure 3).
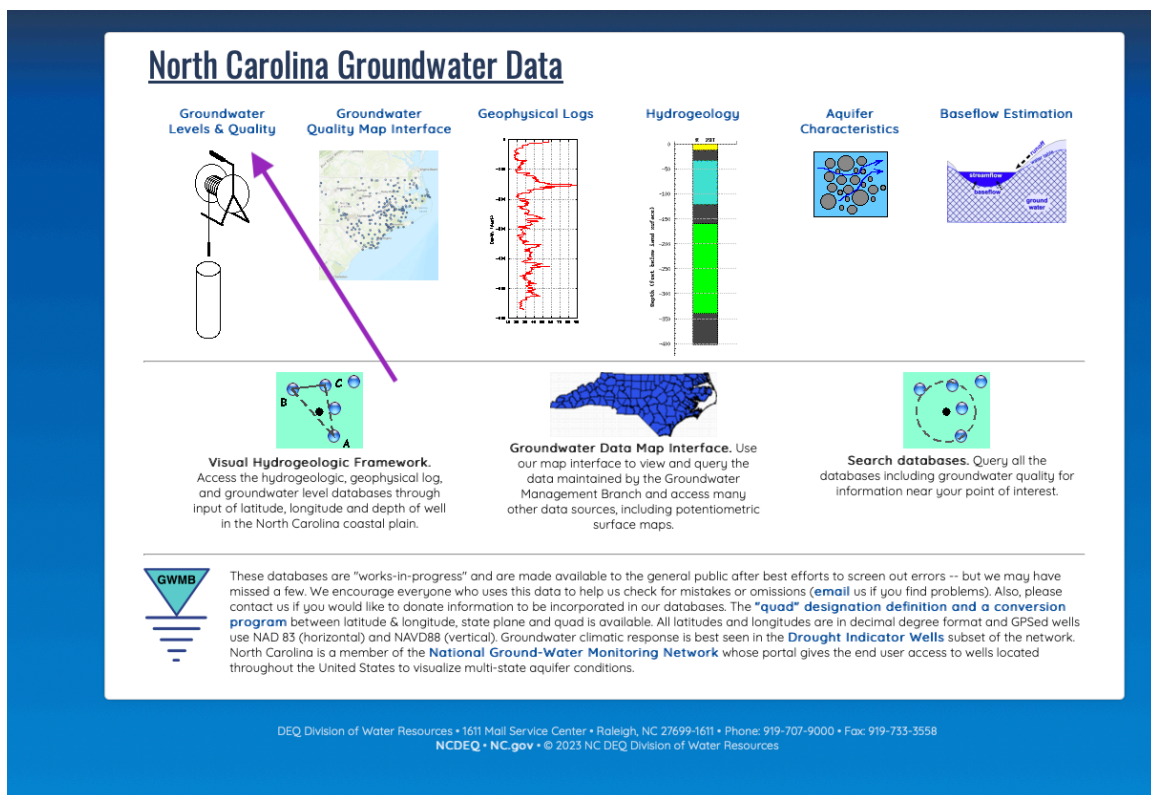

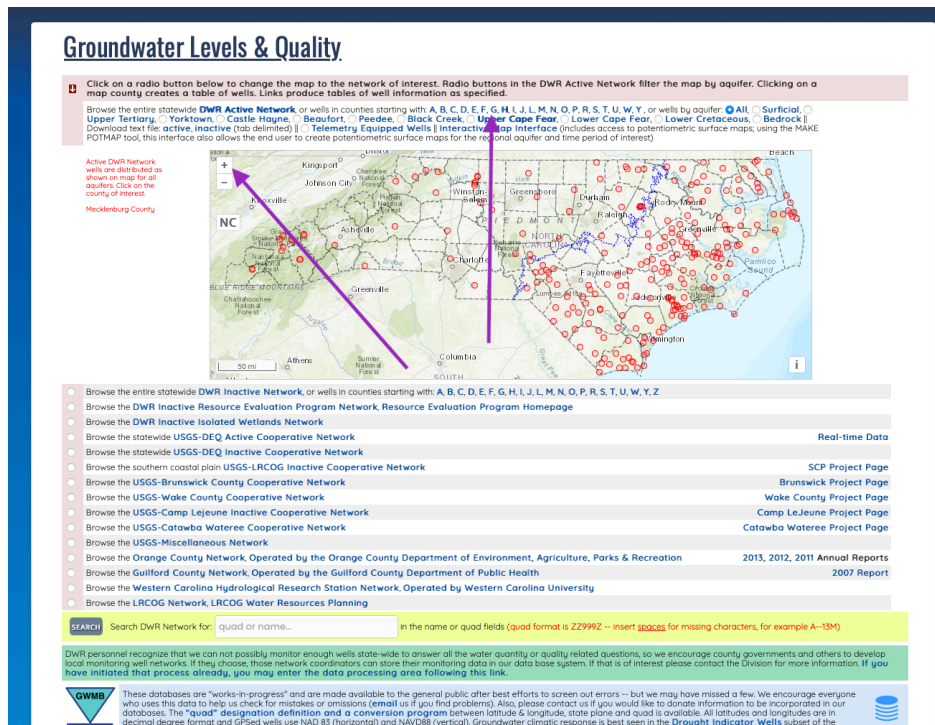*Figure 1. Screen capture of the North Carolina Groundwater Data web interface.*

Figure 2. Screen capture of the North Carolina Dept. of Environmental Quality's Groundwater levels and quality map interface.
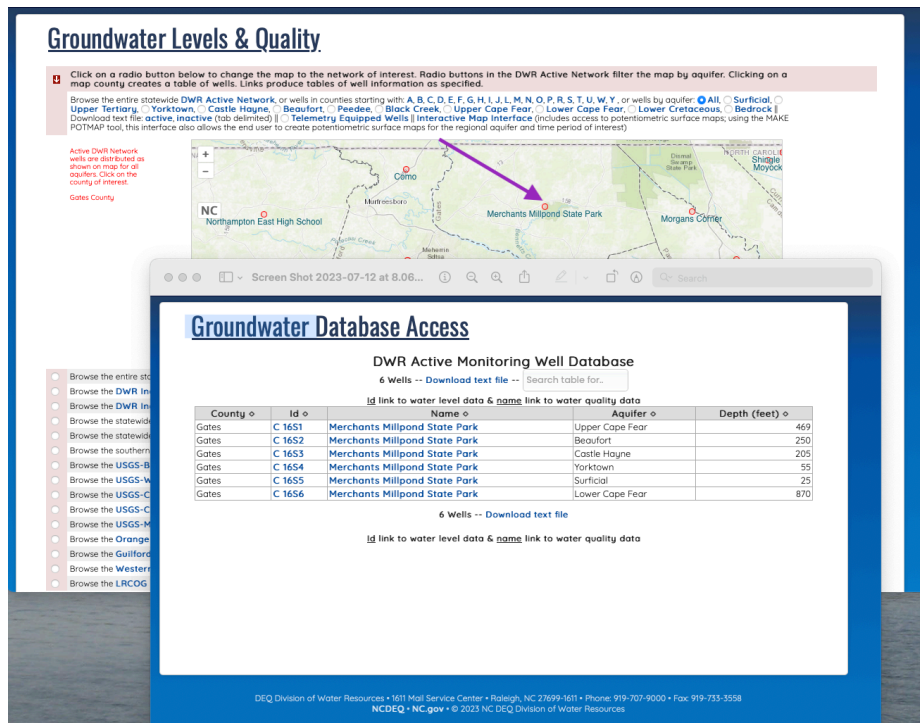

Figure 3. List of wells located at the Merchants Millpond State Park monitoring station when accessed through the map interface.

3. Use the "Browse by counties" tool at the top of the map interface to view wells in counties that start with "G" (click on the 'G' indicated by the purple arrow in Figure 2). A list of wells, sorted by counties will display as a new tab (Figure 4).

For each item in the list, the well ID is a link to water level data and the well name is a link to water quality data (Figure 5).
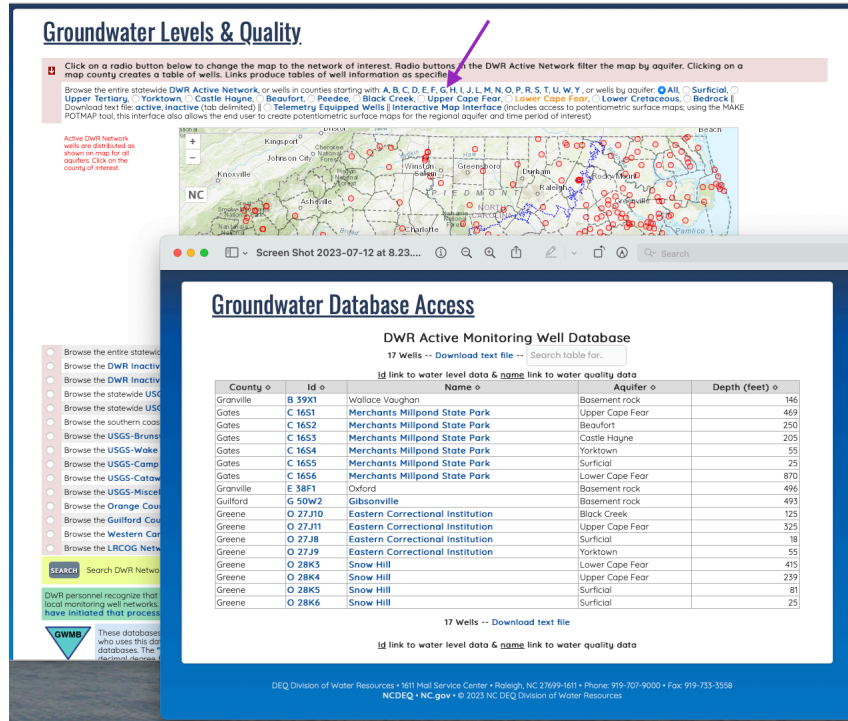
Figure 4. Screen capture of the list of wells in counties whose names start with 'G'.

Groundwater Database Access

DWR Active Monitoring Well Database

17 Wells -- Download text file -- Search table for..

Id link to water level data & name link to water quality data

County ⬦	Id ⬦	Name ⬦	Aquifer ⬦	Depth (feet) ⬦
Granville	B 39X1	Wallace Vaughan	Basement rock	146
Gates	C 16S1	Merchants Millpond State Park	Upper Cape Fear	469
Gates	C 16S2	Merchants Millpond State Park	Beaufort	250
Gates	C 16S3	Merchants Millpond State Park	Castle Hayne	205
Gates	C 16S4	Merchants Millpond State Park	Yorktown	55
Gates	C 16S5	Merchants Millpond State Park	Surficial	25
Gates	C 16S6	Merchants Millpond State Park	Lower Cape Fear	870
Granville	E 38F1	Oxford	Basement rock	496
Guilford	G 50W2	Gibsonville	Basement rock	493
Greene	O 27J10	Eastern Correctional Institution	Black Creek	125
Greene	O 27J11	Eastern Correctional Institution	Upper Cape Fear	325
Greene	O 27J8	Eastern Correctional Institution	Surficial	18
Greene	O 27J9	Eastern Correctional Institution	Yorktown	55
Greene	O 28K3	Snow Hill	Lower Cape Fear	415
Greene	O 28K4	Snow Hill	Upper Cape Fear	239
Greene	O 28K5	Snow Hill	Surficial	81
Greene	O 28K6	Snow Hill	Surficial	25

17 Wells -- Download text file

Id link to water level data & name link to water quality data

Figure 5. Screen capture of list of wells in counties whose names start with 'G'. Well IDS, which link to water level data, are highlighted in red. Well names, which link to water quality data, are highlighted in blue.

Downloading and viewing water level data

1. Click on well ID "C16S1" from the previous list (Figure 5) to open the water level data interface (Figure 6).
2. Locate the number of water levels at the bottom of the table, and click on this number (1,531 as of January 24, 2024, see Figure 6) to initiate the download of a CSV file. The data will be saved in a comma separated value format which can be imported into Excel or viewed in a text editor application (Figure 7).
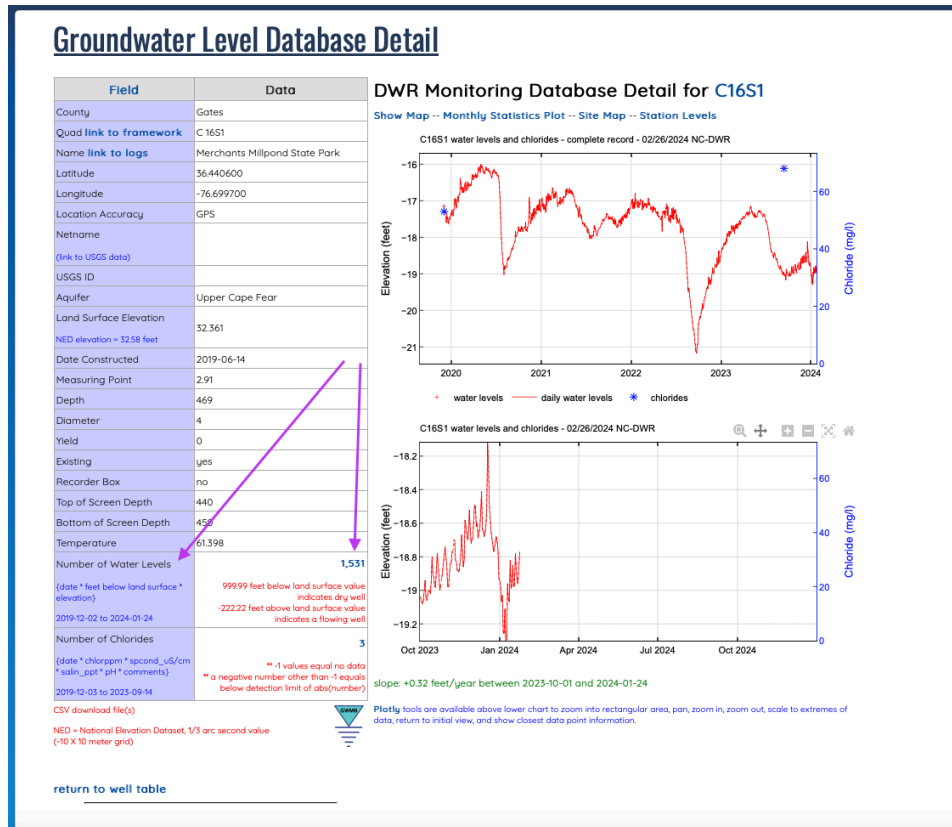

Figure 6. Screen capture of the water level data interface. Data shown corresponds to well C16S1.
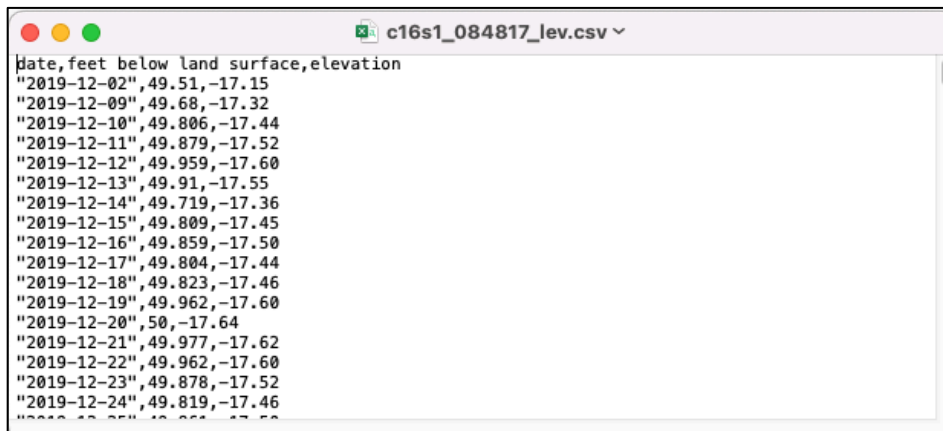
Figure 7. Screen capture of the first several water level records for C16S1 from the downloaded file.

3. You may open the file directly into Excel by either double-clicking the file which will normally be associated with Excel or from Excel: File: Open… command open the file.
4. Or you may open Microsoft Excel, navigate to the cell of interest, and use the File: Import command and select CSV and then choose the file of interest and then check delimited with comma and finally, use the Finish button (Figure 8).

A1				
	A	B	C	D
1	date	feet below land surface	elevation	
2	12/2/19	49.51	-17.15	
3	12/9/19	49.68	-17.32	
4	12/10/19	49.806	-17.44	
5	12/11/19	49.879	-17.52	
6	12/12/19	49.959	-17.6	
7	12/13/19	49.91	-17.55	
8	12/14/19	49.719	-17.36	
9	12/15/19	49.809	-17.45	
10	12/16/19	49.859	-17.5	
11	12/17/19	49.804	-17.44	
12	12/18/19	49.823	-17.46	
13	12/19/19	49.962	-17.6	
14	12/20/19	50	-17.64	
15	12/21/19	49.977	-17.62	
16	12/22/19	49.962	-17.6	
17	12/23/19	49.878	-17.52	
18	12/24/19	49.819	-17.46	
19	12/25/19	49.861	-17.5	
20	12/26/19	49.869	-17.51	
21	12/27/19	49.87	-17.51	
22	12/28/19	49.84	-17.48	
23	12/29/19	49.804	-17.44	
24	12/30/19	49.713	-17.35	
25	12/31/19	49.687	-17.33	
26	1/1/20	49.695	-17.33	
27	1/2/20	49.764	-17.4	
28	1/3/20	49.701	-17.34	
29	1/4/20	49.641	-17.28	
30	1/5/20	49.609	-17.25	
31	1/6/20	49.649	-17.29	
32	1/7/20	49.673	-17.31	

Figure 8. Screen capture of water level data in Excel.

Downloading and viewing water quality data

1. Return to the list of wells in counties whose names start with "G" (refer to Figure 5).
2. Open the water quality data interface for well C16S1 (Figure 9) by clicking on the monitoring station name (Merchants Millpond State Park) that appears in the column to the right of well ID C16S1.

Figure 8. Screen capture of the groundwater quality data interface for monitoring well C16S1. A separate window displays the data as comma separated value file in a text editor application..

3. Click on the Download WQ data link to retrieve the data. The window will show that C16S1 has 283 records and a link to download the text file. Click on the link in blue and the text file will download to your computer as shown in Figure 9.

4. Either double-click the file (which is normally associated with Excel) or use the Open… command from within Excel or open Excel and use the File: Import command (as described previously). Your worksheet should look like Figure 10. As before, the file can also be viewed in a text editor application.

Figure 10. Screen capture of Microsoft Excel worksheet with water quality data for well C16S1.