

Groundwater Report

Drought Management
Advisory Council

Raleigh, NC

September 11, 2024

<https://www.ncdrought.org/>

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Ground Water Resources Branch

NC DEQ DWR Water Planning Section



Groundwater Monitoring Network

DWR Well Network

- 240 multi-well monitoring stations
- 699 individual wells
- 69 of 100 counties have stations
- 84 drought wells (surficial aquifer)
- 13 telemetry drought wells



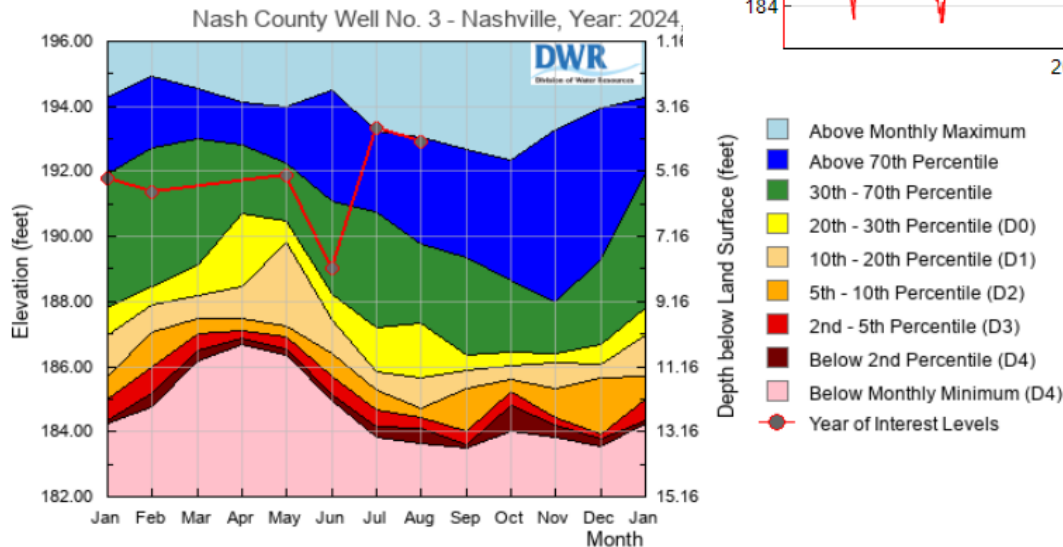
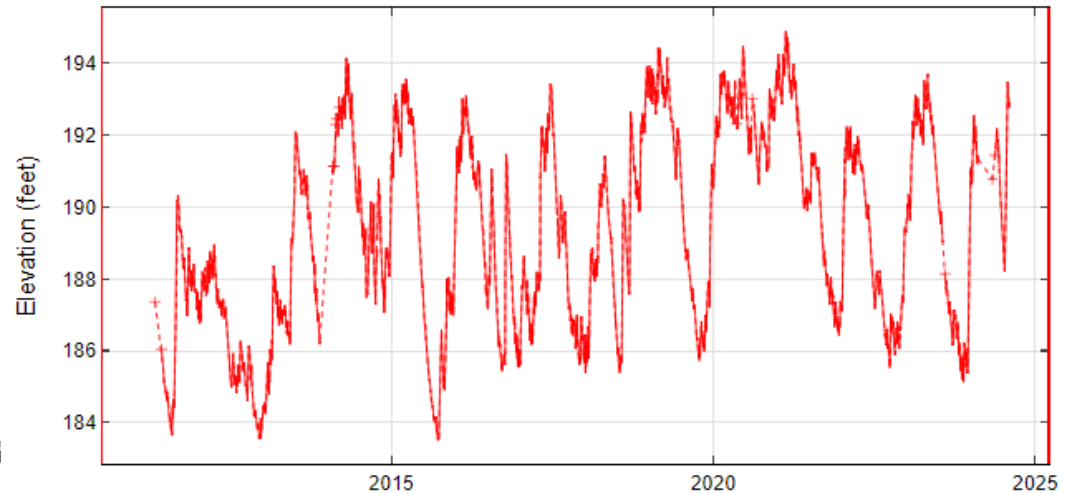
Groundwater Monitoring Station



Drought Wells

Well hydrograph of groundwater level fluctuations in 2024 at Nash County Well No. 3

I31M1 water levels - complete record - 09/09/2024 NC-DWR



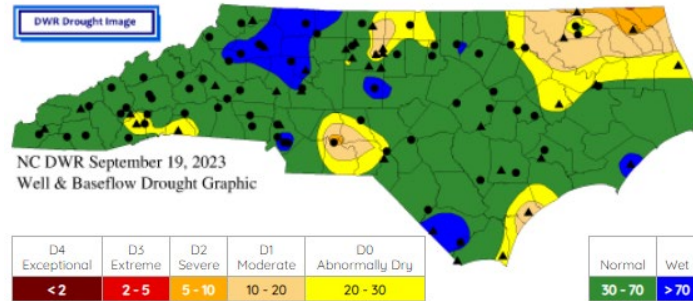
Well: I 31M1 -- Nash County Well No. 3 - Nashville
part of the Division of Water Resources Network

Statistical curves are monthly minimum, 2nd percentile, 5th, 10th, 20th, 30th, 70th & maximum of the record through 2023. Red points are 2024, latest date in month data. Statistics based on all DWR data for well.

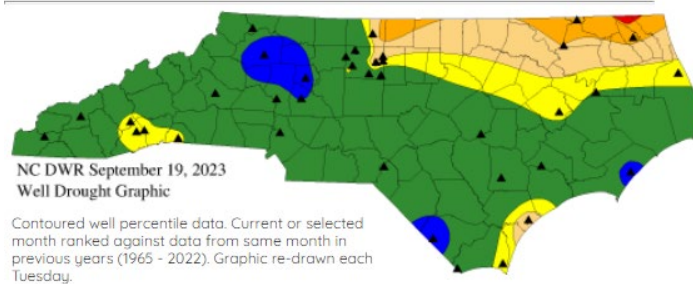
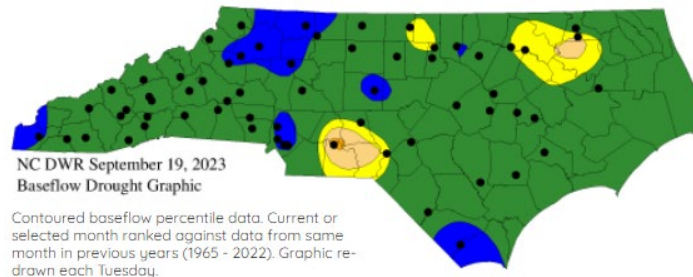
Well hydrograph overlaid on historical percentile data for all years of record.



DWR Drought Image



Contoured baseflow (circles) and well (triangles) percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2022). Graphic re-drawn each Tuesday.



Weekly Drought Image

=

Latest Baseflow Data

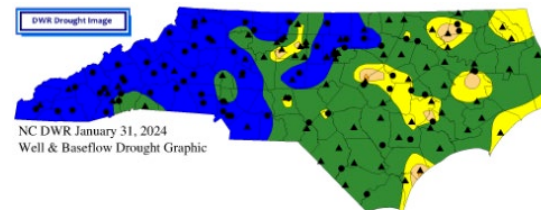
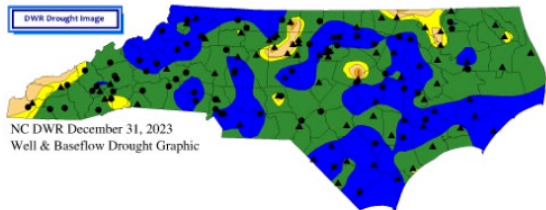
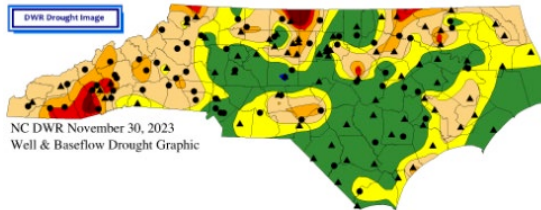
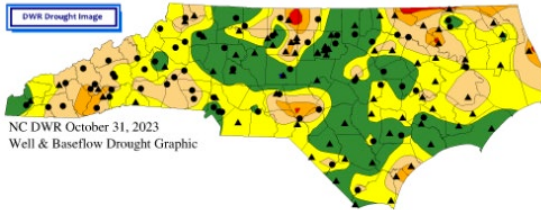
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Latest Groundwater Data



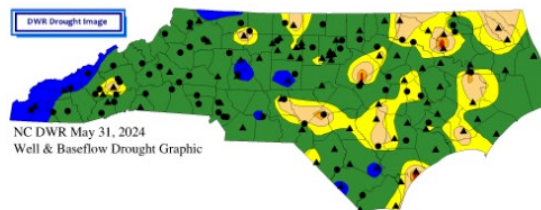
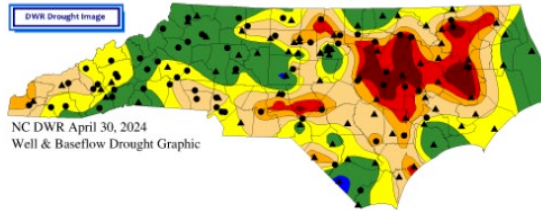
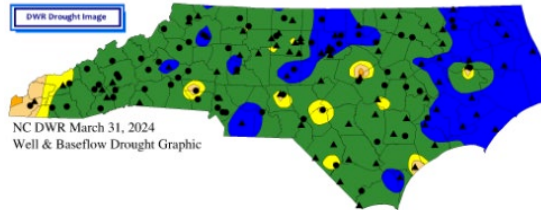
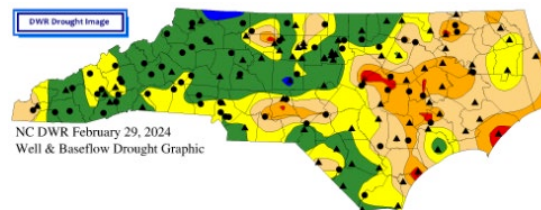
Year in Review

October 2023



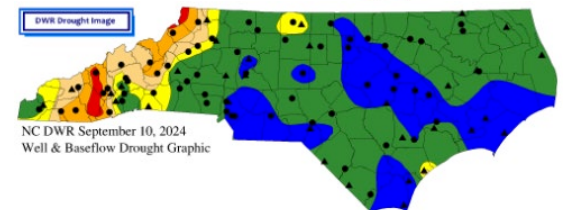
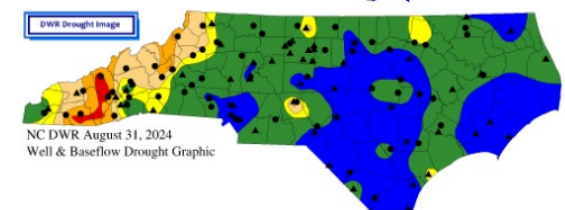
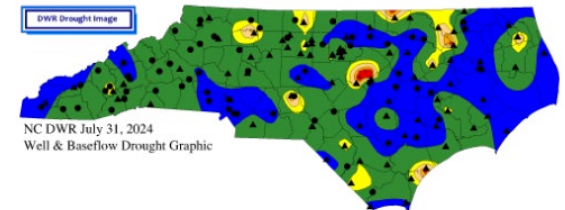
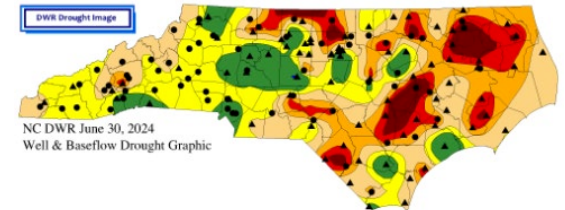
January 2024

February 2024



May 2024

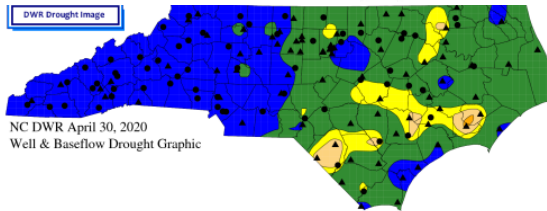
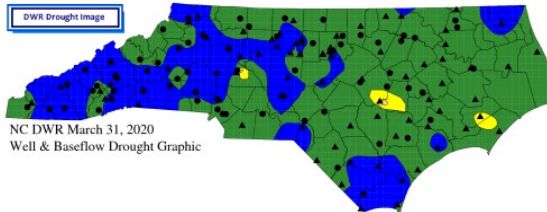
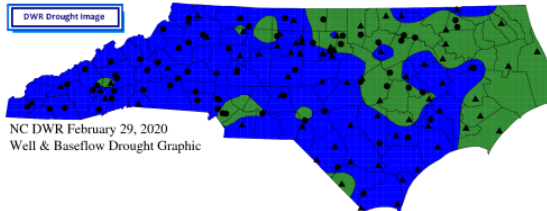
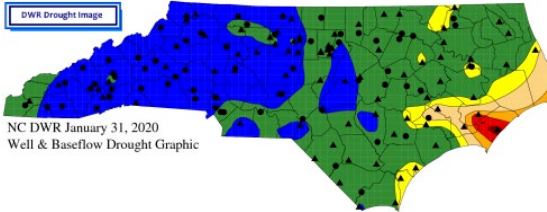
June 2024



September 2024

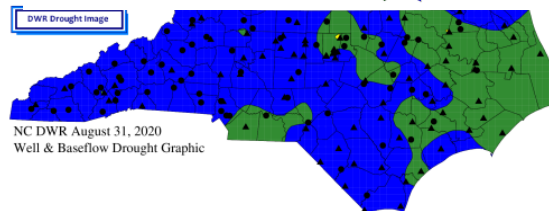
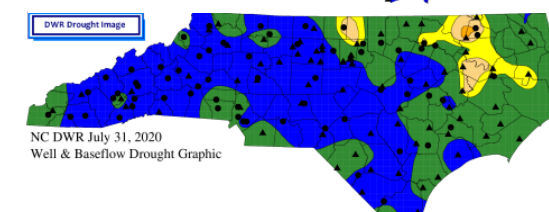
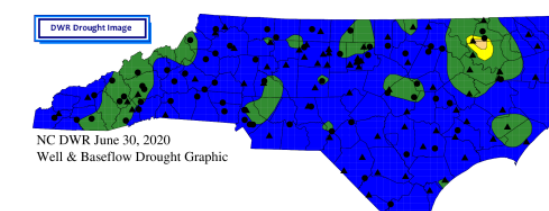
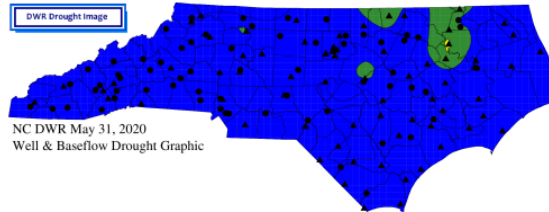
2020

January 2020



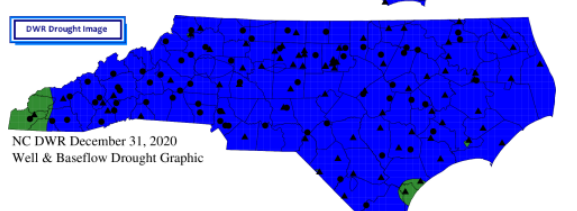
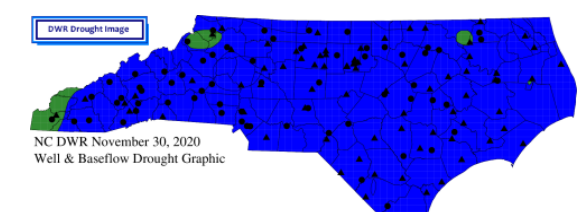
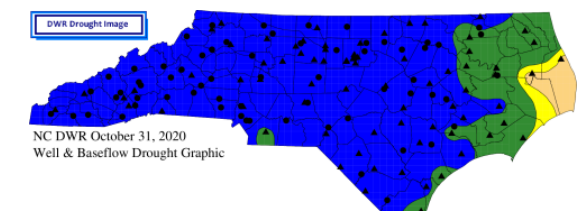
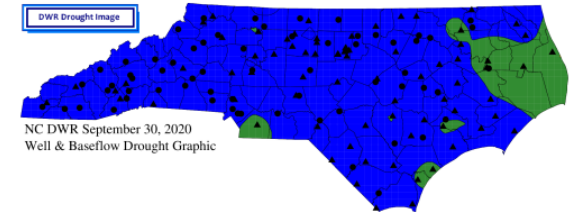
April 2020

May 2020



August 2020

September 2020

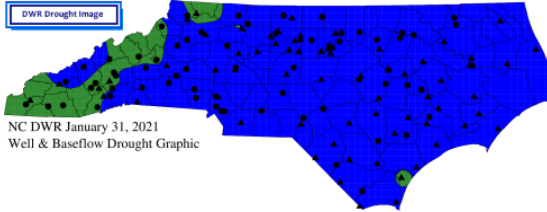


December 2020

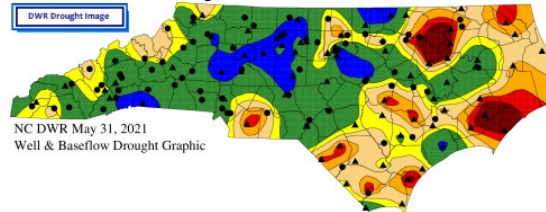


2021

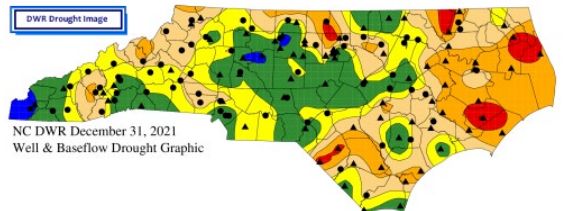
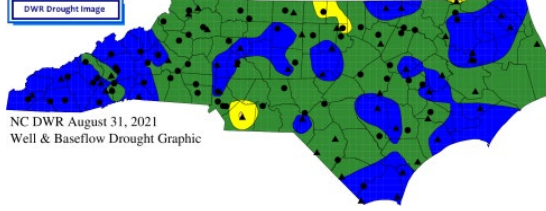
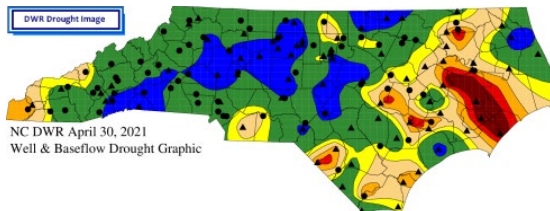
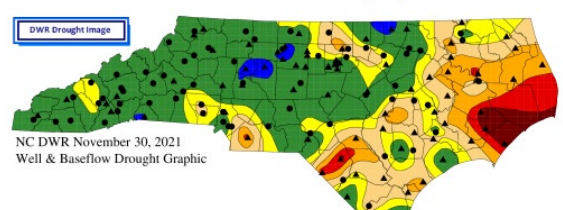
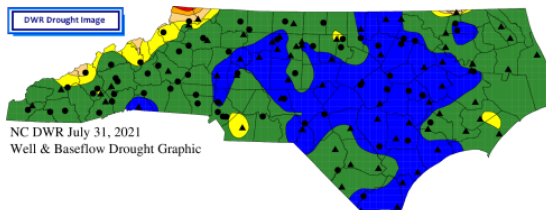
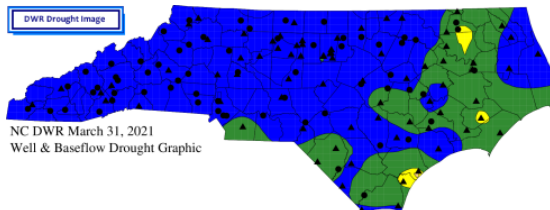
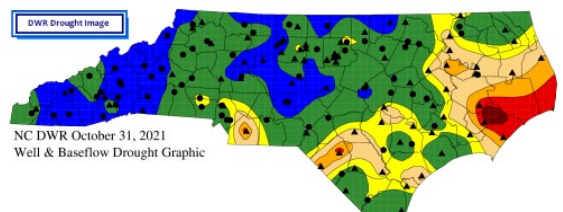
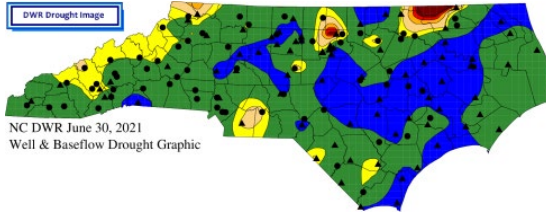
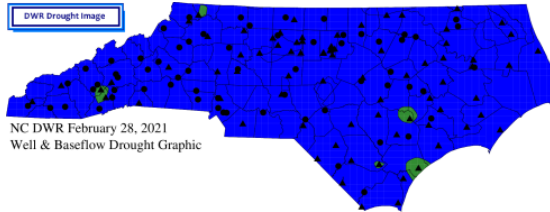
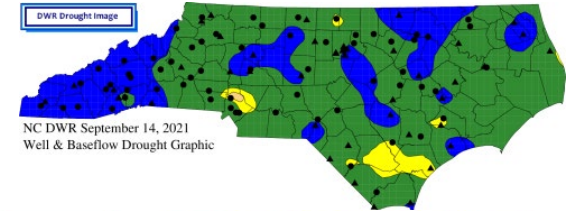
January 2021



May 2021



September 2021



April 2021

August 2021

December 2021



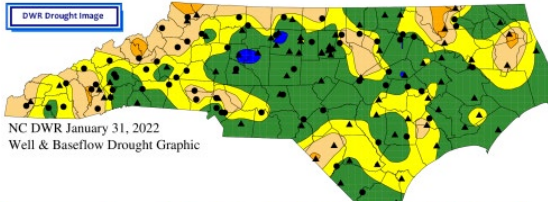
2022

January 2022

May 2022

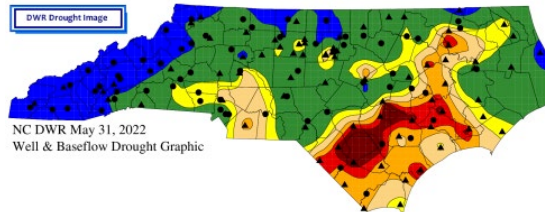
September 2022

DWR Drought Image



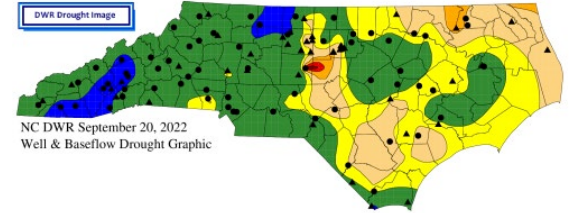
NC DWR January 31, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



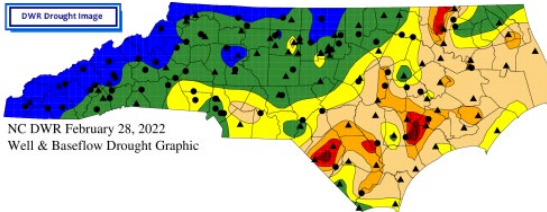
NC DWR May 31, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



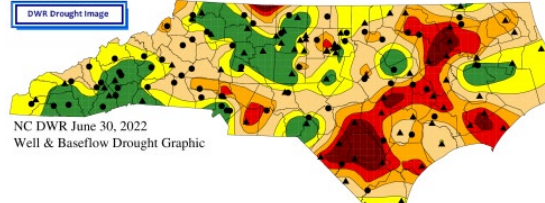
NC DWR September 20, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



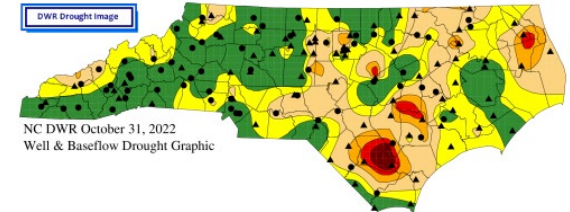
NC DWR February 28, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



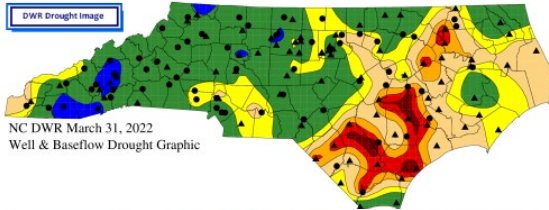
NC DWR June 30, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



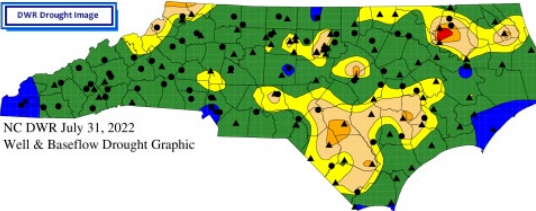
NC DWR October 31, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



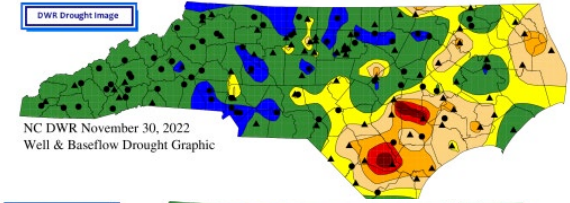
NC DWR March 31, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



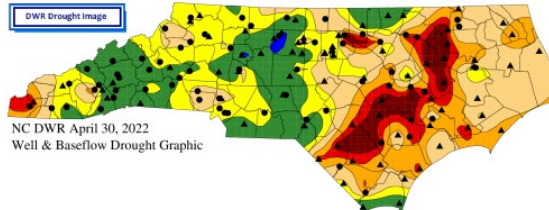
NC DWR July 31, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



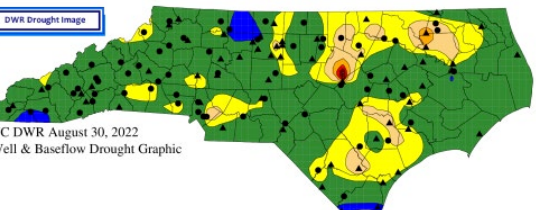
NC DWR November 30, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



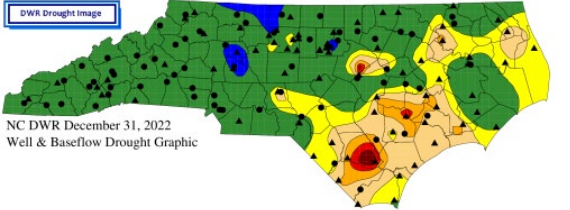
NC DWR April 30, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



NC DWR August 30, 2022
Well & Baseflow Drought Graphic

DWR Drought Image



NC DWR December 31, 2022
Well & Baseflow Drought Graphic

April 2022

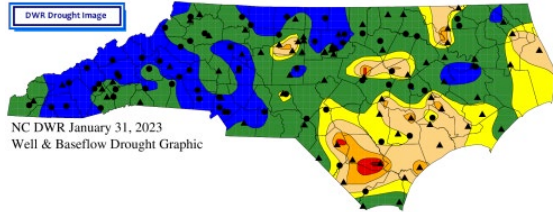
August 2022

December 2022

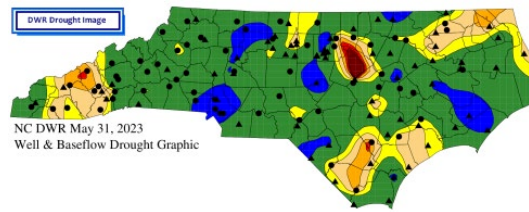


2023

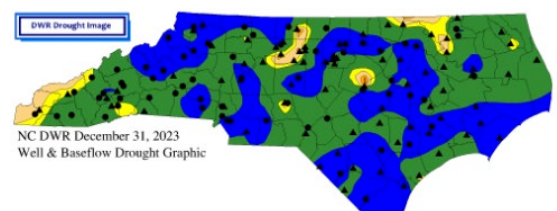
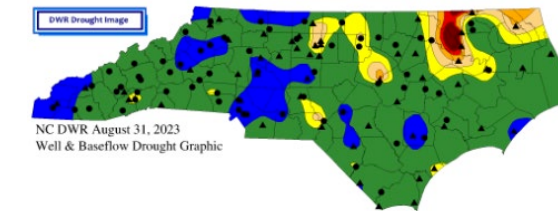
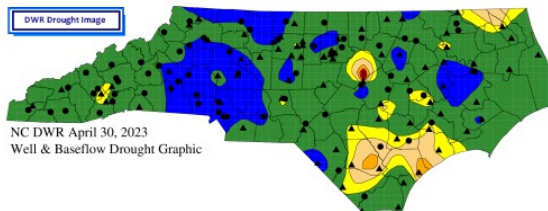
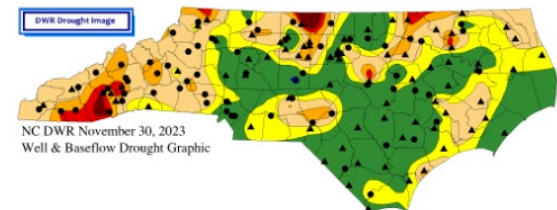
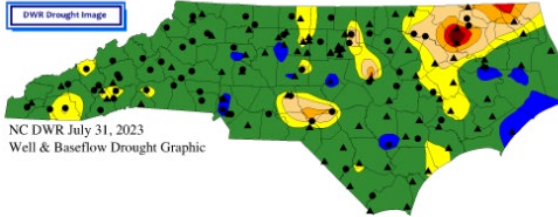
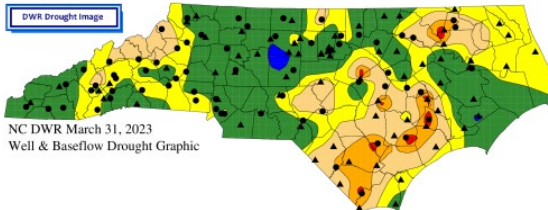
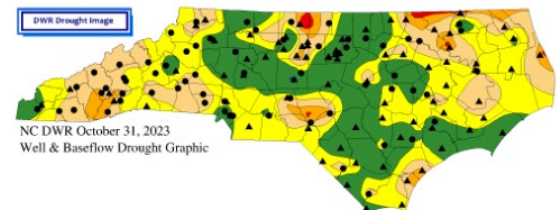
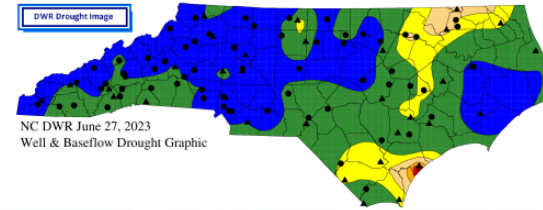
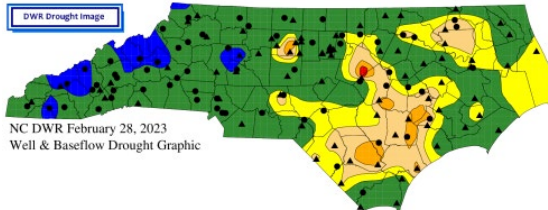
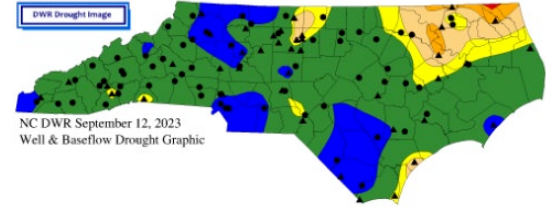
January 2023



May 2023



September 2023



April 2023

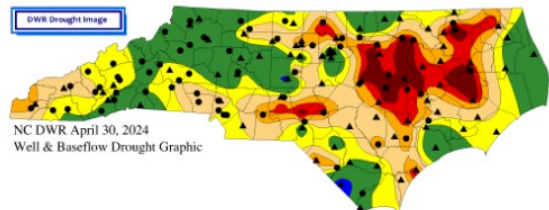
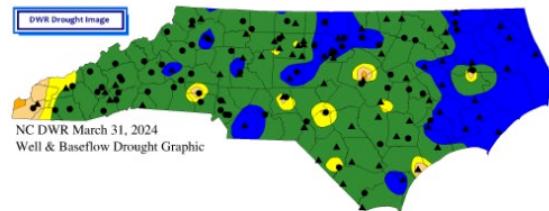
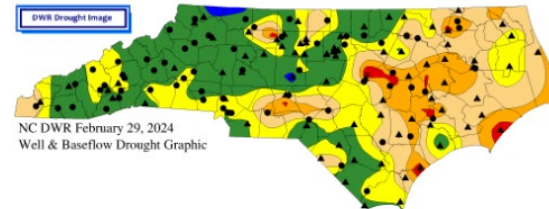
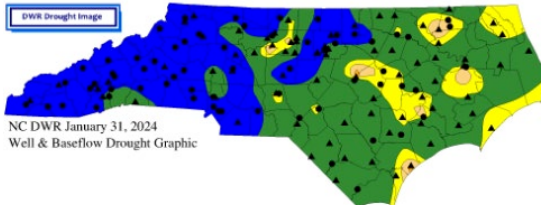
August 2023

December 2023



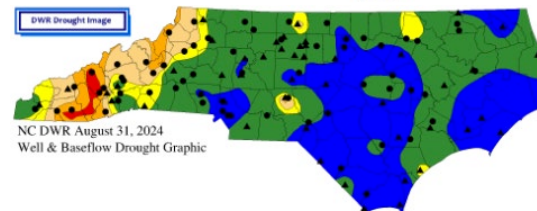
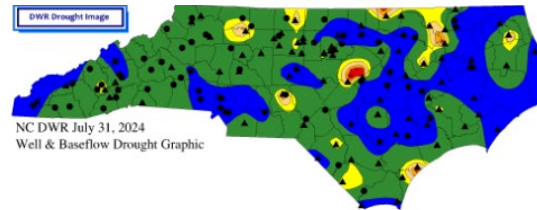
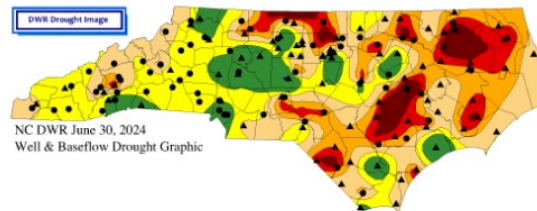
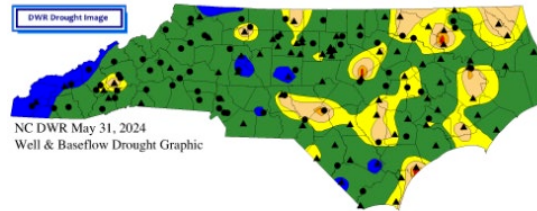
2024

January 2024



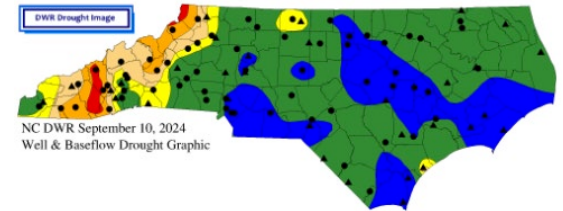
April 2024

May 2024



August 2024

September 2024



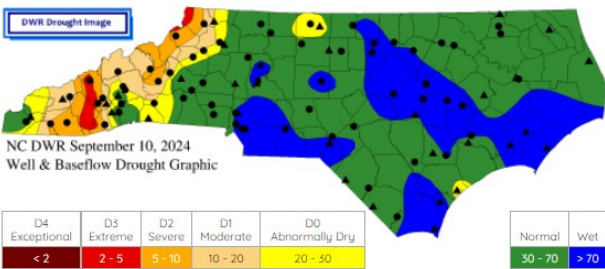
Drought Image Comparison

This Week, 9/11/24

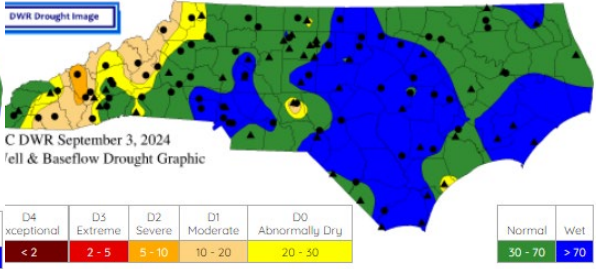
Last Week

Two Weeks Ago

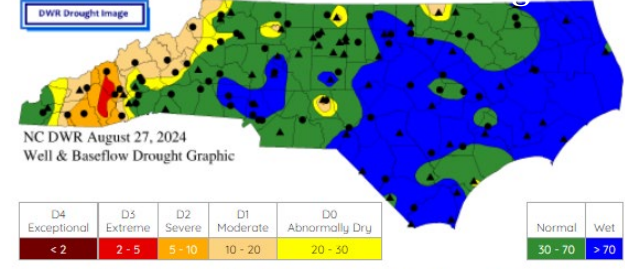
Combined



Contoured baseflow (circles) and well (triangles) percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

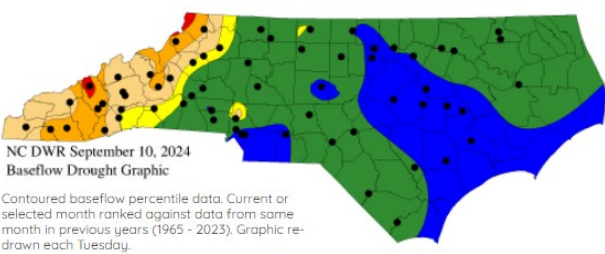


Contoured baseflow (circles) and well (triangles) percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

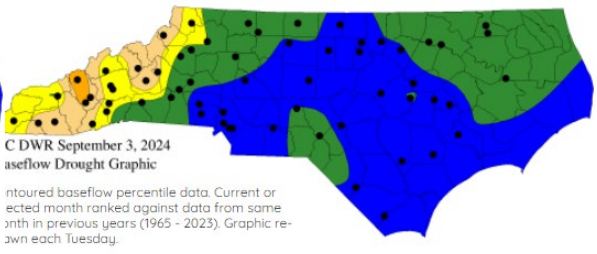


Contoured baseflow (circles) and well (triangles) percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

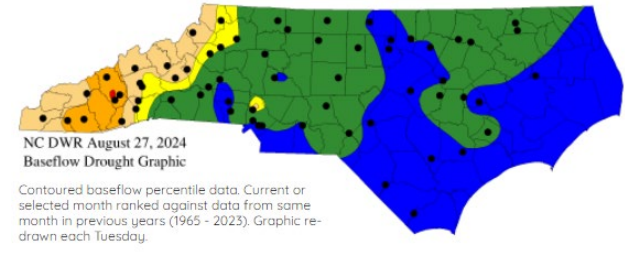
Baseflow



Contoured baseflow percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

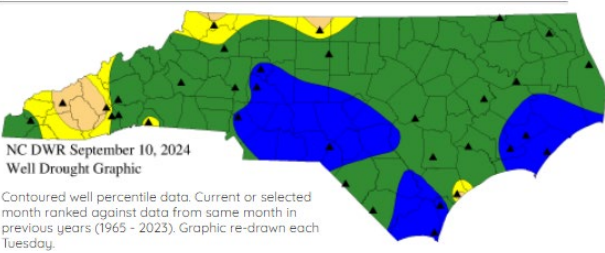


Contoured baseflow percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

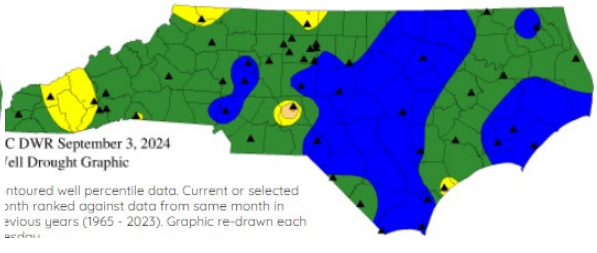


Contoured baseflow percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

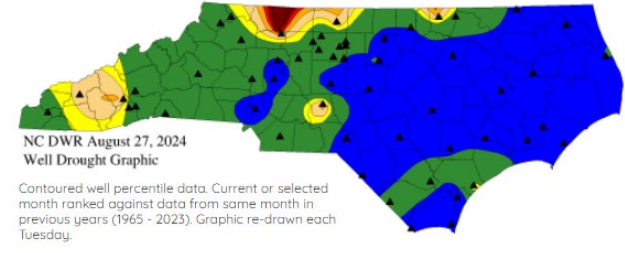
Groundwater



Contoured well percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.



Contoured well percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.



Contoured well percentile data. Current or selected month ranked against data from same month in previous years (1965 - 2023). Graphic re-drawn each Tuesday.

Similar to the previous two weeks, current moisture conditions are normal to above in the Coastal Plain and Piedmont, but dry throughout most the Mountains.

Wells Used for This Week’s Drought Image

Today: September 10, 2024

Well Name ◊	Cur%ile ◊	Status ◊	County ◊	River Basin ◊	Years ◊	%-Daily
Bryson City	15	2024-09-10	Swain	Little Tennessee	60	45
Laurel Springs	20	2024-09-10	Alleghany	New	53	45
Topsail Beach **	7	2024-09-10	Pender	White Oak	41	48
Columbus	24	2024-09-10	Polk	Broad	50	46
Gibsonville	54	2024-09-10	Guilford	Cape Fear	57	42
Clarendon	54	2024-09-10	Columbus	Lumber	49	32
Wilkesboro	32	2024-09-10	Wilkes	Yadkin-PeeDee	52	52
Rowland	53	2024-09-10	Robeson	Lumber	54	23
Troutman	43	2024-09-10	Iredell	Catawba	56	58
Hornets Nest Park	75	2024-09-10	Mecklenburg	Catawba	25	100
Como	67	2024-09-10	Hertford	Chowan	43	48
Manteo Airport	50	2024-09-10	Dare	Pasquotank	40	53
Mocksville (NC-142)	78	2024-09-09	Davie	Yadkin-PeeDee	43	97
American Thread (NC-192)	33	2024-09-09	Cherokee	Hiwassee	35	100
Van Swamp (NC-158)	64	2024-09-09	Washington	Roanoke	30	90
Elizabeth City (NC-195)	63	2024-09-09	Pasquotank	Pasquotank	33	90
Champion (HW-047)	14	2024-09-09	Haywood	French Broad	69	97
Blantyre (NC-144)	52	2024-09-09	Transylvania	French Broad	43	99
Simpson (NC-160)	43	2024-09-09	Pitt	Tar-Pamlico	30	90
Grantham (NC-148)	69	2024-09-09	Wayne	Neuse	45	60
Comfort (NC-173)	46	2024-09-09	Jones	Neuse	38	72
Pisgah Forest (NC-147)	28	2024-09-09	Transylvania	French Broad	39	98
Barber (NC-193)	81	2024-09-09	Rowan	Yadkin-PeeDee	35	96
Glen Alpine (BK-126)	57	2024-09-09	Burke	Catawba	54	44
Upper Piedmont RS (RK-239)	19	2024-09-09	Rockingham	Roanoke	22	48
Rose Hill (NC-222R)	64	2024-09-09	Duplin	Cape Fear	42	56
Jordan Creek (NC-194)	95	2024-09-09	Scotland	Lumber	31	89
Bent Creek	45	2024-08-19	Buncombe	French Broad	13	100
Whortonville	95	2024-08-14	Pamlico	Neuse	47	34
Cherry Point	83	2024-08-13	Craven	Neuse	35	57
Atlantic	98	2024-08-13	Carteret	White Oak	43	29
NH Correctional Institute **	96	2024-08-12	New Hanover	Cape Fear	12	94
Southport (BR-083)	93	2024-08-12	Brunswick	Cape Fear	55	50

Most Recent Water Level Compared to Historical Monthly Water Levels	
	Above maximum - 0
	70 - 99th percentile - 23
	30 - 70th percentile - 33
	20 - 30th percentile (D0) - 11
	10 - 20th percentile (D1) - 8
	5 - 10th percentile (D2) - 5
	2 - 5th percentile (D3) - 1
	1 - 2nd percentile (D4) - 1
	Below minimum (D4) - 2
84 Wells	
Average years of record: 35	
Average percent daily measurements: 69	

This week’s drought image is based on groundwater levels from 33 wells measured over the past 30 days. Groundwater levels are normal or above in 79% of wells, down from 85% last week. With the exception of Topsail Beach, sub-normal wells are all within the western half of the state, and primarily in the Mountains.

Drought Wells with Below-Normal Water Levels

Today: September 10, 2024

Well Name ◊	Cur%ile ◊	Status ◊	County ◊	River Basin ◊	Years ◊	%-Daily
Cleveland **	0	2024-07-20	Johnston	Neuse	20	93
East Bend VFD **	0	2024-07-30	Yadkin	Yadkin-PeeDee	10	98
Lewiston	1	2024-07-24	Bertie	Roanoke	41	52
Fuquay Varina	4	2024-07-20	Wake	Cape Fear	42	38
Densons Creek Park	5	2024-08-05	Montgomery	Yadkin-PeeDee	11	95
Topsail Beach **	7	2024-09-10	Pender	White Oak	41	48
Old Sparta	8	2024-07-22	Edgecombe	Tar-Pamlico	24	82
Big Flatty Creek	8	2024-07-23	Pasquotank	Pasquotank	48	26
Warren County High School	9	2024-07-29	Warren	Tar-Pamlico	14	87
Cove City	12	2024-07-22	Craven	Neuse	39	45
Magnolia School	13	2024-07-27	Robeson	Lumber	47	42
Champion (HW-047)	14	2024-09-09	Haywood	French Broad	69	97
Caledonia Prison Farm	15	2024-07-24	Halifax	Roanoke	13	98
Bryson City	15	2024-09-10	Swain	Little Tennessee	60	45
911 Center	17	2024-07-16	Orange	Neuse	12	100
Bunn	19	2024-07-22	Franklin	Tar-Pamlico	19	92
Upper Piedmont RS (RK-239)	19	2024-09-09	Rockingham	Roanoke	22	48
Laurel Springs	20	2024-09-10	Alleghany	New	53	45
COL-4	21	2024-07-16	Orange	Cape Fear	13	100
COL-3	22	2024-07-16	Orange	Cape Fear	13	100
Roxobel	22	2024-07-24	Bertie	Chowan	25	100
COL-1	24	2024-07-16	Orange	Cape Fear	13	98
Eubanks Road	24	2024-07-16	Orange	Cape Fear	14	100
Blackwood Farm Bedrock	24	2024-07-16	Orange	Cape Fear	14	100
Columbus	24	2024-09-10	Polk	Broad	50	46
Bladenboro	26	2024-07-27	Bladen	Lumber	49	42
DF-4D	28	2024-07-16	Orange	Cape Fear	16	72
Pisgah Forest (NC-147)	28	2024-09-09	Transylvania	French Broad	39	98

Groundwater levels are currently below-normal in about one third of our 84 drought wells, based on data collected over the past 90 days. In most cases, these below-normal water levels are either in the western half of the state (where it's been drier) or because sample date precedes major July-August precipitation events (such as Tropical Storm Debbie).