

Drought Management and Contingency Planning in Delaware

Presented to an advisory committee of the DRBC on June 3, 2026. Contents should not be published or re-posted in whole or in part without the permission of the presenter and DRBC.



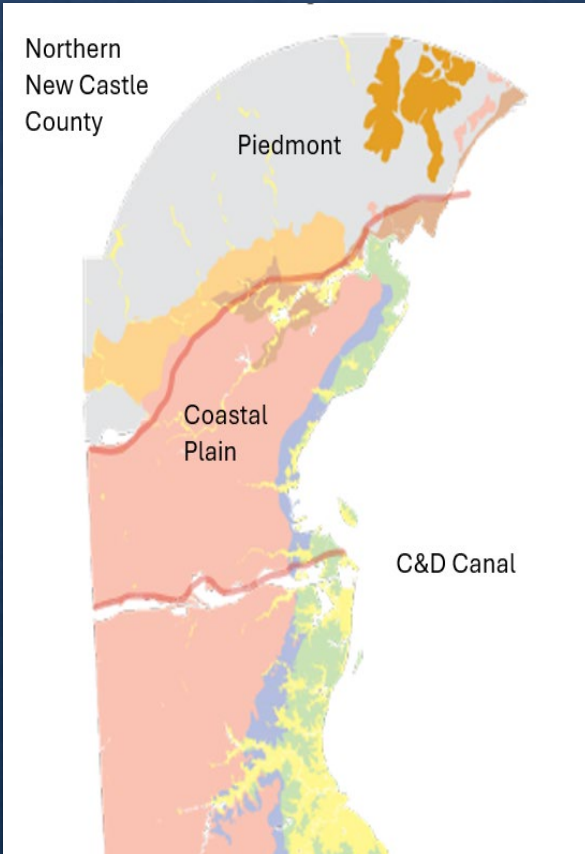
DELAWARE DEPARTMENT OF
NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL

DE Water Supply Coordinating Council (WSCC)

- ◆ Charged with planning and managing Delaware water supplies to ensure they can meet peak demand during times of water shortage.
- ◆ Established in December 1999 by Executive Order No. 74 due to the Drought of 1999 upon recommendation from the Governor's Water Supply Task Force
- ◆ Codified by HB 549 in April 2000
- ◆ Goal #1: Implement additional water supplies in Northern New Castle County within 1 to 3 years to meet peak demands during drought.
- ◆ Goal #2: Work cooperatively in a public-private effort between government and the water purveyors to manage water supplies more efficiently in Delaware.



Droughts of 1999 and 2002



- ❖ Water Supplies in northern New Castle County were most affected
- ❖ Geology consists of fractured bedrock aquifers of the Piedmont and the shallow Coastal Plain aquifers north of the Chesapeake and Delaware Canal
- ❖ Because stream flows reached record low flows during the drought of 2002, the WSCC reevaluated supply and demand projections and concluded that 262 to 450 mg of additional storage could be needed by 2020 to meet peak demands during a drought of record



Contingency Planning

- ◆ A large part of the contingency planning (from the Droughts of 1999 & 2002) has been implemented already - resulting in over 2 Billion Gallons of additional supply for New Castle County.

Water supply developed since the drought of 1999 in northern Delaware.

Sponsor	Project	Capacity (mg)
Artesian Water Co.	New Wells North of C&D Canal	405
Artesian Water Co.	Aquifer Storage and Recovery	130
City of Newark	Newark Reservoir	317
City of Newark	South Wellfield Iron Treatment Plant	75
SUEZ Delaware	Modify Tidal Capture Structure Plan	400
SUEZ Delaware	Aquifer Storage and Recovery	75
City of Wilmington	Hoopes Reservoir Deep Storage Plan	500
City of Wilmington	Raise Hoopes Reservoir Water Level by 2 ft	150
		2,052



Newark Reservoir
Photo courtesy of City of Newark



Three Phase Drought Operation Plan (DOP)

- ◆ Three Phase Drought Operating Plan (DOP) for Northern Delaware outline recommendations during Drought Watch and Warning then Restrictions go into effect during Drought Emergency.
- ◆ The DOP applies to the use of Public, Lawn and Turf, Landscape Irrigation*, Golf Courses, and Athletic Fields.
(*includes residential, commercial, institutional, and government uses)
- ◆ The DOP provides plans – submitted by the purveyors – to use surface supplies, ground-water supplies, and interconnections in the event of drought.
- ◆ The WSCC makes Drought Status Recommendations to the DNREC Secretary to be conveyed to the Governor's Drought Advisory Committee –then Declaration set by the Governor.



Drought Water Indicators – New Castle

**DELAWARE
GEOLOGICAL
SURVEY**

Delaware Geological Survey Building
 257 Academy Street
 Newark, DE 19716-7501

NORTHERN DELAWARE DROUGHT ADVISORY GUIDELINES

Reported by the Drought Advisory Guidelines Subcommittee, which is composed of the Delaware Department of Natural Resources and Environmental Control, Delaware Geological Survey, and the University of Delaware Water Resources Agency with input from the water purveyors and representatives from the landscaping industry. These drought operating guidelines are designed to provide guidance to the Delaware Water Supply Coordinating Council (WSCC) and the Governor's Drought Advisory Committee (GDAC). Responsibility for providing technical guidance for a move up or down from Drought Watch is with the WSCC. Responsibility for providing technical guidance for a move up to or down from Drought Warning or Emergency is with the GDAC. Final declaration of drought advisories rests with the Governor.

Climatic Indicators

Indicator	Drought Watch Voluntary Conservation	Drought Warning Voluntary Conservation	Drought Emergency Mandatory Restrictions	Status May 25, 2026
Precipitation Wilmington Arpt/Porter Rsvr 12 month	-6.00" to -8.99"	-9.00" to -11.99"	>12.00"	-8.86"
Precipitation Wilmington Arpt/Porter Rsvr 6 month	-3.00" to -4.50"	-4.51" to -6.00"	>6.00"	-5.49"
Brandywine Creek (30-day moving average)	85 mgd	70 mgd	48 mgd	205.5 mgd
White Clay Creek - Newark (30-day moving average)	19 mgd	16 mgd	13 mgd	48.2 mgd
White Clay Creek - Stanton (30-day moving average)	42 mgd	37 mgd	31 mgd	74.4 mgd
Well Db24-18	14 - 14.99 (fbfs)	15 - 15.99 (fbfs)	16 (fbfs)	14.4 (fbfs) (normal 8.9-12.3)
Water Conditions Index	5.0 - 4.0	3.99 - 3.00	< 3.00	4.33
Chlorides Christina River at Newport	WCC ≤ 37 mgd for 5 consecutive days at UWD Stanton Intake	CI > 250 ppm for 3 days at Christina River at Newport	CI > 250 ppm for 3 days at UWD Stanton Intake	-12.04
Chlorides Delaware River (5/25/26)	Monitor	Monitor	Monitor	Median RM: 68.0 Current RM: 687
US Drought Monitor (5/19/26)	Monitor	Monitor	Monitor	D1: 26% D2: 74%

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Storage Indicators

Indicator	Drought Watch Voluntary Conservation	Drought Warning Voluntary Conservation	Drought Emergency Mandatory Restrictions	Status May 25, 2026
Hoopes Reservoir (City of Wilmington)	-10 ft (68% capacity)	-12 ft (64% capacity)	-15 ft (57% capacity)	-1.79 (5/24/26)
Newark Reservoir City of Newark	-10 ft (70% capacity)	-17 ft (52% capacity)	-27 ft (28% capacity)	full (5/4/26)
Artesian Aquifer Storage and Recovery	Monitor	Monitor	Monitor	98.7 mg (5/4/26)
Veolia Aquifer Storage and Recovery	Monitor	Monitor	Monitor	(offline)
NYC Delaware River Basin Reservoirs (DRBC 5/25/26)	Monitor	Monitor	Monitor	Storage 266.7 76.7 bg above drought watch

fbfs – feet below land surface

mg – million gallons

mgd – million gallons per day

bg – billion gallons

RM – River Mile

US Drought Monitor

D0: Abnormally Dry

D1: Moderate Drought

D2: Severe Drought

D3: Extreme Drought

D4: Exceptional Drought

Delaware Geological Survey
<http://dgs.udel.edu>

Delaware Environmental Observing System (DEOS)
<http://deos.udel.edu>

Delaware River Basin Commission
<https://www.state.nj.us/drbc/>

U.S. Geological Survey
<https://waterdata.usgs.gov/>



Drought Water Indicators – Kent & Sussex

Kent County Hydrologic Conditions – May 25, 2026

PRECIPITATION

Dover – running surplus/deficit

12-month	6-month	5-month
-9.03	-6.35	-5.38

STREAMFLOW

St. Jones at Dover – 30-day moving average

10.8 mgd (Below Normal)

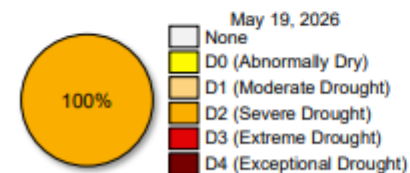
GROUNDWATER

Well Mc51-01a

15.4 fbls (Below Normal)

(Normal for May is between 10.3 and 12.7 fbls)

Kent County (DE) Percent Area in U.S. Drought Monitor Categories



Modified from the U.S. Drought Monitor

National Drought Mitigation Center

Sussex County Hydrologic Conditions – May 25, 2026

PRECIPITATION

Georgetown – running surplus/deficit

12-month	6-month	5-month
-10.35	-6.83	-5.19

STREAMFLOW

Nanticoke River at Bridgeville – 30-day moving average

24.9 mgd (Below Normal)

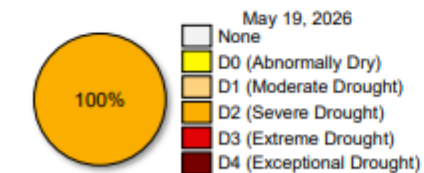
GROUNDWATER

Well Pe54-51

7.7 fbls (Normal)

(Normal for May is between 6.0 and 8.0 fbls)

Sussex County (DE) Percent Area in U.S. Drought Monitor Categories



Modified from the U.S. Drought Monitor

National Drought Mitigation Center



Drought Emergency Water Restrictions

- ◆ Public, Municipal, and Private Water Suppliers have the authority to impose more restrictive limits for demand management purposes.
- ◆ The WSCC has put strict requirements on the use of potable water for:
 - ◆ Lawn & Turf Watering
 - ◆ Landscape Plant Watering
 - ◆ Golf Courses and Athletic Fields
 - ◆ Vehicle washing & cleaning of paved surfaces



Conservation Plans

- ◆ The Water Allocation Regulations require that permittees of Water Allocation Permits supply the Department a plan that demonstrates the existence of and obligation to a water conservation program, for their particular use, as a condition of their application.

- 4.3.1 Establishment of a program of periodic monitoring and evaluation of water usage.
- 4.3.2 Establishment of a systematic leak detection and control program which, through routine maintenance and discovery of leaks, is responsive to high unaccounted for water usage rates.
- 4.3.3 Use of the best practical methods and devices to conserve water.
- 4.3.4 A plan to alert employees and customers of the need to conserve water and reduce wasteful usage.
- 4.3.5 Evaluation of the potential to use water of less than potable quality including the use of treated wastewater, where possible.
- 4.3.6 The establishment of pricing schedules which reflect the actual cost of water service is required of utilities regulated by the Public Service Commission and is encouraged for non-regulated utilities.



Delaware Drought Resources

- ❖ State Drought Status Web Page
- ❖ <https://climate.udel.edu/drought>

- ❖ Delaware Water Tracker
- ❖ <https://apps.cema.udel.edu/watertracker>



Delaware Climate Office

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Drought in Delaware

Latest Discussion 30-day Precipitation Map Weekly Precipitation Outlook

Seasonal Drought Outlook

Week of May 20th, 2026

Posted on May 21, 2026

Note: The next drought report will be on June 17th, 2026

Highlights:

- Precipitation continues to lag statewide. Our last above normal month was July 2026.
- Spring temperatures have been above normal, which is increasing the demand for water from vegetation and the environment in general.
- Streamflows at numerous stream gauges across the state are considerably below normal, with some locations experiencing their lowest levels ever for this time of year.
- Well levels continue to decline as result of the long-term, below normal precipitation conditions
- The outlook for June doesn't look favorable for much recovery from the current drought, as temperatures are likely to remain seasonably warm and precipitation not likely to be above normal.

Statewide Drought Discussion

Delaware Drought Status
Normal

Drought News

- Week of April 24th, 2026** Apr. 23.26
- Week of March 11th, 2026** Mar. 13.26
- Week of February 11th, 2026** Feb. 12.26
- Week of January 7th, 2026** Jan. 08.26

Resources

- Delaware Water Tracker**
- DGS Water Conditions Report**
- US Drought Monitor**
- NOAA Climate at a Glance
 - **PDSI**
 - **PHDI**
 - **PMDI**
 - **Palmer Z-index**
- Drought.gov DE site**
- DE Water Supply Coordinating Council**
- DRBC Drought Dashboard**
- Surrounding State Pages:
 - **MD**



Delaware Water Tracker
Water conditions for Delaware watersheds

ABOUT RESOURCES

Water Level ▾ Precipitation ▾ Evapotranspiration ▾

Groundwater Level 05/30/2026

Watershed ^	Status	Percentile
Andover Branch	Very Dry	6%
Army Creek-Delaware River	Very Dry	6%
Ash Gut-Murderkill River	Very Dry	6%
Assawoman Bay	Very Dry	1%
Augustine Creek	Very Dry	6%
Barren Creek-Nanticoke River	Very Dry	6%
Beaverdam Creek-Broadkill River	Very Dry	1%
Big Elk Creek	Very Dry	6%
Blackbird Creek	Very Dry	6%
Bohemia River	Very Dry	6%
Breakwater Harbor-Delaware Bay	Very Dry	1%

Water Level ①

- Very Wet
- Wet
- Normal
- Dry
- Very Dry
- N/A

Download Map



Questions

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