

MEMORANDUM

TO: Delaware Water Supply Coordinating Council

FROM: Gerald Kauffman (University of Delaware Water Resources Center) *Gerald Kauffman*

DATE: March 17, 2024

SUBJECT: Water Supply Self-Sufficiency Projections for Northern New Castle County (2024 and 2027)

Enclosed are projected maximum monthly water demands for 2024 and 2027 for public water utilities in northern New Castle County. The Delaware Self-Sufficient Water Supply Act amendments of 2011 (Public Utilities, Title 26, Chapter 14) state that on or before March 1 of each reporting year (2024), the Water Supply Coordinating Council shall determine and publish for the projected year (2027), the projected demand for each water utility providing services in the drought sensitive area (New Castle County north of C & D Canal). Before July 1, 2024, each water utility in northern New Castle County shall submit to the WSCC: (1) consumer water conservation plan for the following 3-year period, (2) certification of adequate water supply for the projected year (2024), and (3) water conservation rate structure. After July 1, 2024, the WSCC shall review the water utility's certification of adequate supply and submit a recommendation to the Public Service Commission.

Table 1 summarizes maximum monthly water demands for northern New Castle County estimated for the reporting year (2024) and projected year (2027). Peak maximum monthly demands recorded by the water purveyors for the 5-year period (2019-2023) are used to estimate maximum demands for the base year 2024. Water demands are projected through 2027 based on a 0.5% per year increase in population forecast for northern New Castle County by the Delaware Population Consortium, Annual Population Projections (October 2020).

Table 1. Maximum monthly water demand projections for northern New Castle County (2024 and 2027)

Water Purveyor	2024 Demand (mgd)	2027 Demand (mgd)
Wilmington	18.3	18.6
Artesian Water Co.	21	21.3
Veolia DE	18.6	18.9
Newark	3.8	3.9
New Castle MSC	0.6	0.6
Total	62.3	63.2

Note: Water demands for 2024 are peak maximum monthly demand recorded by purveyors for 5-year period 2019-2023. Water demands for 2024 are projected based on a 0.5% per year increase in population forecast for northern New Castle County by the Delaware Population Consortium, October 2020.

Table 2. Maximum monthly water demands in northern New Castle County

Purveyor	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Wilmington	17.2	18.4	17.0	17.6	18.3	17.4	16.8	17.4	16.3	18.3	18.4	18.5	18.6
Artesian Water	19.2	19.3	18.6	20.0	21.0	20.8	19.8	19.6	19.2	21	21.1	21.2	21.3
SUEZ DE	20.4	18.9	18.1	21.2	18.2	18.6	16.9	17.1	16.1	18.6	18.7	18.8	18.9
Newark	3.5	3.8	3.3	3.5	3.5	3.5	3.4	3.8	3.3	3.8	3.8	3.8	3.9
New Castle MSC	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6
Total (mgd)	60.8	61.0	57.5	62.8	61.5	60.8	57.5	58.4	55.5	62.3	62.6	62.9	63.2

Base 2024 demand from peak maximum monthly demand recorded during 5-year period 2019-2023. Projected 2027 demands based on 0.5% annual population growth for New Castle County (Delaware Population Consortium Oct. 2020).

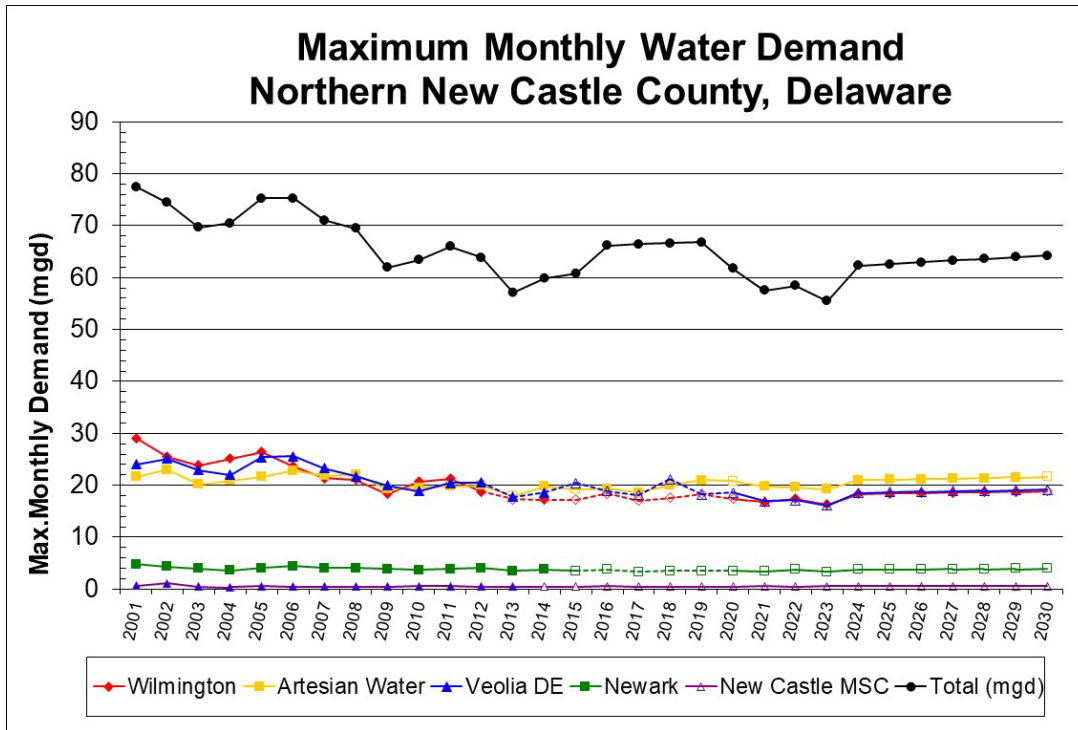


Figure 1. Maximum monthly water demands in northern New Castle County Projected demands through 2030 based on 0.5% annual population growth for New Castle County (Delaware Population Consortium, Oct 2020).

Table 3. Maximum monthly water demands in northern New Castle County (2010-2020)

Purveyor	2015	2016	2017	2018	2019	2020	2021	2022	2023
June (mgd)									
City of Wilmington	16.2	16.7	17.0	16.5	15.8	15.6	16.4	16.3	16.3
Artesian Water Co.	18.0	18.4	18.6	18.1	19.3	19.3	18.6	18.4	19.2
Veolia DE	18.8	17.9	17.4	18.7	15.9	17.7	16.6	15.8	16.1
City of Newark	3.3	3.1	3.1	3.2	3.0	2.9	2.9	2.8	2.5
New Castle MSC	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6
Total	56.8	56.5	56.6	57.0	54.5	56.0	54.9	53.7	54.6
July (mgd)									
City of Wilmington	16.6	17.4	16.9	17.6	16.9	17.4	15.0	17.1	16.2
Artesian Water Co.	19.2	18.7	18.6	20.0	20.2	20.8	19.8	19.4	18.9
Veolia DE	20.4	18.9	17.8	21.2	17.4	18.6	16.9	17.1	14.8
City of Newark	3.3	3.1	3.3	3.3	3.1	3.5	3.1	3.1	3.0
New Castle MSC	0.5	0.6	0.4	0.5	0.5	0.5	0.5	0.4	0.3
Total	60.0	58.7	57.0	62.6	58.1	60.8	55.4	57.1	53.3
August (mgd)									
City of Wilmington	17.2	18.4	16.3	16.4	18.3	16.0	16.8	17.4	16.1
Artesian Water Co.	18.6	19.3	18.3	18.9	21.0	18.5	19.6	19.6	18.9
Veolia DE	20.3	18.7	17.9	18.9	18.2	16.7	16.5	16.8	14.6
City of Newark	3.5	3.4	3.2	3.5	3.5	2.9	3.1	2.6	3.0
New Castle MSC	0.5	0.5	0.4	0.5	0.5	0.5	0.6	0.4	0.4
Total	60.1	60.3	56.1	58.2	61.5	54.6	56.3	56.6	53.0
September (mgd)									
City of Wilmington	16.1	17.5	15.9	17.6			16.1	16.3	15.8
Artesian Water Co.	19.1	18.7	17.9	18.1			17.7	19.2	18.3
Veolia DE	20.0	18.1	18.1	17.6			15.6	16.6	14.3
City of Newark	3.8	3.8	3.6	3.9			3.4	3.8	3.3
New Castle MSC	0.5	0.5	0.4	0.5			0.5	0.4	0.4
Total				57.6			54.0	56.0	52.0