

MEMORANDUM

TO: Delaware Water Supply Coordinating Council

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

DATE: March 1, 2021 (rev. Jun 23, 2021)

SUBJECT: Water Supply Self-Sufficiency Projections for Northern New Castle County (2021 and 2024)

Enclosed are projected maximum monthly water demands for 2021 and 2024 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 (2021), the Water Supply Coordinating Council shall determine and publish for the projected year (2024), 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, 2021, 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, 2021, 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 (2021) and projected year (2024). Peak maximum monthly demands recorded by the water purveyors for the 5-year period (2016-2020) are used to estimate maximum demands for the base year 2021. Water demands are projected to 2024 based on a 0.5% per year increase in population forecast for 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 (2021 and 2024)

Water Purveyor	2021 Demand (mgd)	2024 Demand (mgd)
Wilmington	18.4	18.7
Artesian Water Co.	21.0	21.3
SUEZ DE	21.2	21.5
Newark	3.8	3.9
New Castle MSC	0.6	0.6
Total	65.0	66.0

Note: Water demands for 2021 are peak maximum monthly demand recorded by purveyors for 5-year period 2016-2020. Water demands for 2024 are projected based on 0.5% per year increase in population forecast for New Castle County by Delaware Population Consortium, October 2020.

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

Purveyor	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Wilmington	20.7	21.3	18.8	17.3	17.2	17.2	18.4	17.0	17.6	18.3	17.4	18.4	18.5	18.6	18.7
Artesian Water	19.5	19.8	20.0	18.0	19.8	19.2	19.3	18.6	20.0	21.0	20.8	21.0	21.1	21.2	21.3
SUEZ DE	18.9	20.4	20.5	17.8	18.6	20.4	18.9	18.1	21.2	18.2	18.6	21.2	21.3	21.4	21.5
Newark	3.7	3.9	4.1	3.5	3.8	3.5	3.8	3.3	3.5	3.5	3.5	3.8	3.8	3.9	3.9
New Castle MSC	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6
Total (mgd)	63.4	66	63.9	57.1	59.9	60.8	61.0	57.5	62.8	61.5	60.8	65.0	65.3	65.7	66.0

Base 2021 demand from peak maximum monthly demand during 5-year period 2016-2020. Projected 2024 demands based on 0.5% annual population growth for New Castle County (Delaware Population Consortium Oct. 2020).

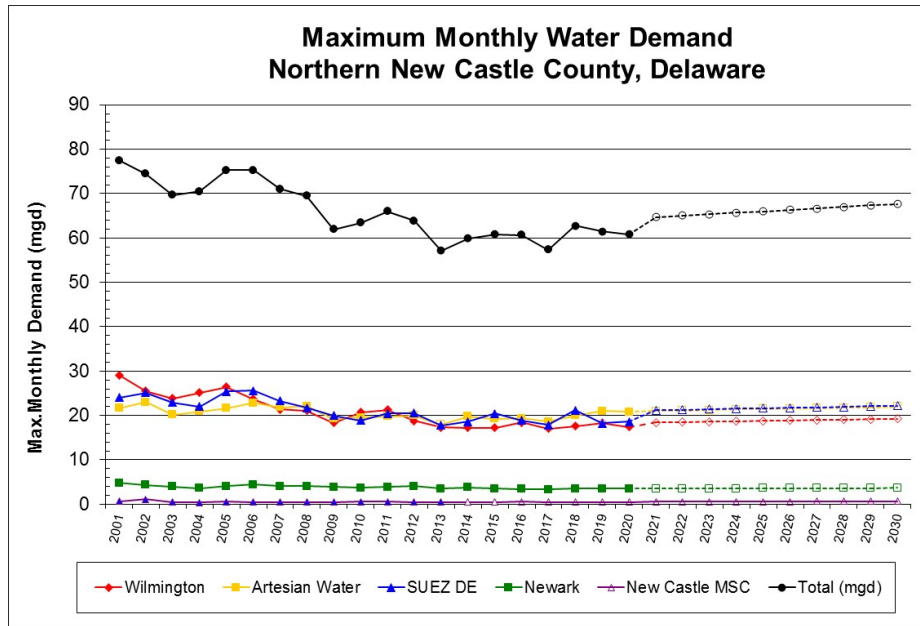


Figure 1. Maximum monthly water demands in northern New Castle County
 Projected demands through 2030 based on 0.5% annual population growth for New Castle County
 (Delaware Population Consortium, Oct 2020).

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

Purveyor	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
June (mgd)											
City of Wilmington	20.7	19.0	17.9	16.7	17.0	16.2	16.7	17.0	16.5	15.8	15.6
Artesian Water Co.	19.4	18.9	18.7	18.0	19.8	18.0	18.4	18.6	18.1	19.3	19.3
SUEZ DE	16.4	19.1	17.6	17.3	17.6	18.8	17.9	17.4	18.7	15.9	17.7
City of Newark	3.7	3.6	3.6	3.3	3.4	3.3	3.1	3.1	3.2	3.0	2.9
New Castle MSC	0.6	0.6	0.5	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.5
Total	60.8	61.2	58.3	55.7	58.3	56.8	56.5	56.6	57.0	54.5	56.0
July (mgd)											
City of Wilmington	19.9	21.3	18.8	17.3	17.2	16.6	17.4	16.9	17.6	16.9	17.4
Artesian Water Co.	19.5	19.8	20.0	18.0	19.1	19.2	18.7	18.6	20.0	20.2	20.8
SUEZ DE	17.7	20.4	20.5	17.8	18.6	20.4	18.9	17.8	21.2	17.4	18.6
City of Newark	3.7	3.9	4.1	3.5	3.2	3.3	3.1	3.3	3.3	3.1	3.5
New Castle MSC	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.5
Total	61.3	65.9	63.9	57.1	58.6	60.0	58.7	57.0	62.6	58.1	60.8
August (mgd)											
City of Wilmington	19.8	20.0	17.4	16.6	16.6	17.2	18.4	16.3	16.4	18.3	16.0
Artesian Water Co.	19.1	17.8	18.2	17.5	18.9	18.6	19.3	18.3	18.9	21.0	18.5
SUEZ DE	18.9	19.6	19.1	16.1	17.3	20.3	18.7	17.9	18.9	18.2	16.7
City of Newark	3.7	3.5	3.9	3.3	3.8	3.5	3.4	3.2	3.5	3.5	2.9
New Castle MSC	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5
Total	62.0	61.4	59.1	54.0	57.1	60.1	60.3	56.1	58.2	61.5	54.6
September (mgd)											
City of Wilmington	20.3	18.7	16.0	16.1	15.9	16.1	17.5	15.9	17.6		
Artesian Water Co.	19.1	16.8	17.6	17.5	18.3	19.1	18.7	17.9	18.1		
SUEZ DE	18.3	18.7	16.9	16.1	17.5	20.0	18.1	18.1	17.6		
City of Newark	4.2	3.8	4.1	3.3	4.2	3.8	3.8	3.6			
New Castle MSC	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.5		
Total											