

Stumpy Point WSD

2022 ▾

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Water System Name:	Stumpy Point WSD	PWSID:	60-28-002
Mailing Address:	P.O. Box 1000 Manteo, NC 27954	Ownership:	County
Contact Person:	Randy Grantham	Title:	Superintendent
Phone:	252-475-9140	Cell/Mobile:	--
Secondary Contact:	William Nash	Phone:	252-475-5606
Mailing Address:	600 Mustian Street Kill Devil Hills, NC 27948	Cell/Mobile:	--

Complete

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Polyvinyl Chloride	2-10	100.00 %

What are the estimated total miles of distribution system lines? **3 Miles**

How many feet of distribution lines were replaced during 2022? **0 Feet**

How many feet of new water mains were added during 2022? **0 Feet**

How many meters were replaced in 2022? **0**

How old are the oldest meters in this system? **4 Year(s)**

How many meters for outdoor water use, such as irrigation, are not billed for sewer services? **0**

What is this system's finished water storage capacity? **0.0850 Million Gallons**

Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* **No**

Programs

Does this system have a program to work or flush hydrants? **Yes, Annually**

Does this system have a valve exercise program? **Yes, Annually**

Does this system have a cross-connection program? **No**

Does this system have a program to replace meters? **Yes**

Does this system have a plumbing retrofit program? **No**

Does this system have an active water conservation public education program? **No**

Does this system have a leak detection program? **Yes**

Water Conservation

What type of rate structure is used? **Increasing Block**

How much reclaimed water does this system use? **0.0000 MGD** For how many connections? **0**

Does this system have an interconnection with another system capable of providing water in an emergency? **No**

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Albemarle Sound (12-1)	100 %	Dare	100 %

What was the year-round population served in 2022? 269

Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	140	0.0155	0	0.0000
Commercial	3	0.0005	0	0.0000
Industrial	1	0.0010	0	0.0000
Institutional	0	0.0000	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0060 MGD

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	0.0248	0.1124	May	0.0232	0.1149	Sep	0.0299	0.1076
Feb	0.0211	0.0832	Jun	0.0239	0.1095	Oct	0.0194	0.0874
Mar	0.0238	0.0116	Jul	0.0317	0.1524	Nov	0.0214	0.0852
Apr	0.0240	0.0952	Aug	0.0271	0.1107	Dec	0.0255	0.1492

Wells are not used on a daily basis but are used intermittently to fill elevated tank. Pumping records are stored electronically and have been verified. The system only operates one well at a time. At certain times based on use, leaks, etc., we must process longer than 12 hours per day. We choose to operate on a selected well for the entire process run. Starting and stopping wells tend to stir up sediment in the well and cause fouling issues in the pre-treatment process and the start/stop process causes shifting in the membranes in the RO equipment which increases the possibility of an O-ring or brine seal failure. Being each well usually rest 2-3 days between use it is more favorable to extend the run on the well than risk equipment failure in the plant



Ground Water Sources

Name or Number	Average Daily Withdrawal (MGD)		Max Day Withdrawal (MGD)	12-Hour Supply (MGD)	CUA Reduction	Year Offline	Use Type
	MGD	Days Used					
Stumpy 1	0.0900	50	0.162	0.0500			Regular
Stumpy 2	0.0900	50	0.158	0.0490			Regular

Ground Water Sources (continued)

Name or Number	Well Depth (Feet)	Casing Depth (Feet)	Screen Depth (Feet)		Well Diameter (Inches)	Pump Intake Depth (Feet)	Metered?
			Top	Bottom			
Stumpy 1	200	170	170	190	6	80	Yes
Stumpy 2	230	170	170	190	4	80	Yes

Are ground water levels monitored? Yes, Monthly

Does this system have a wellhead protection program? Yes

Wells are not used on a daily basis but are used intermittently to fill elevated tank. Pumping records are stored electronically and have been verified. The system only operates one well at a time. At certain times based on use, leaks, etc., we must process longer than 12 hours per day. We choose to operate on a selected well for the entire process run. Starting and stopping wells tend to stir up sediment in the well and cause fouling issues in the

pre-treatment process and the start/stop process causes shifting in the membranes in the RO equipment which increases the possibility of an O-ring or brine seal failure. Being each well usually rest 2-3 days between use it is more favorable to extend the run on the well than risk equipment failure in the plant

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Output Metered?	Source
Stumpy Point Water Plant	0.0600	Yes	Yes	Ground Water Wells

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2022? **No**

If yes, was any water conservation implemented?

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2022? **No**

If yes, was any water conservation implemented?

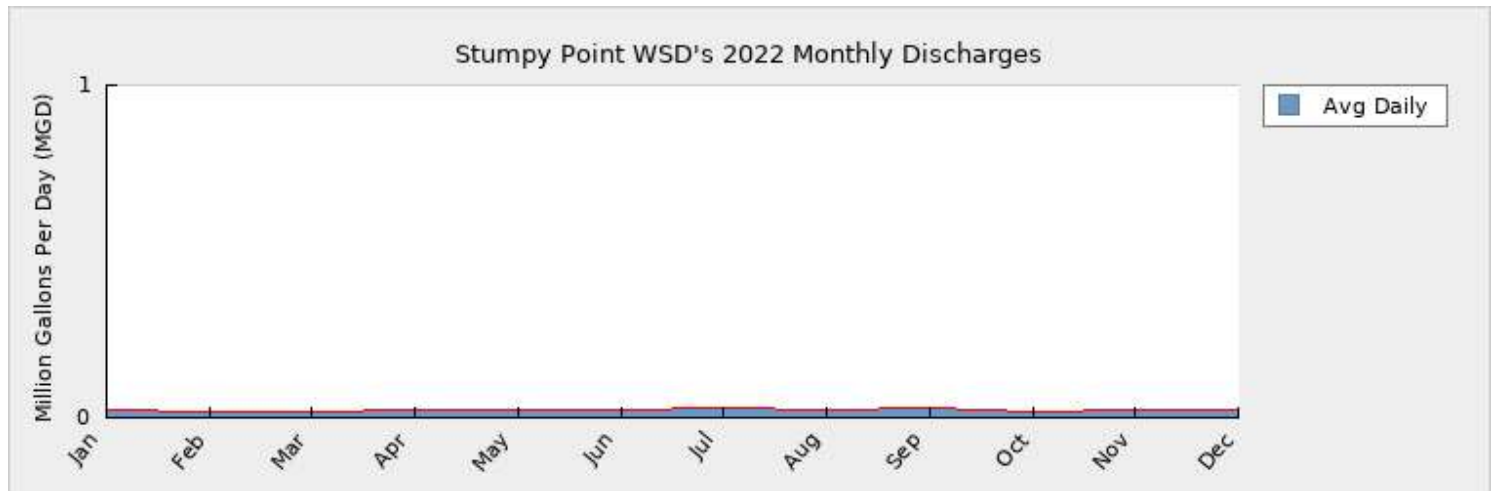
Are peak day demands expected to exceed the water treatment plant capacity in the next 10 years? **No**

Wells are not used on a daily basis but are used intermittently to fill elevated tank. Pumping records are stored electronically and have been verified. The system only operates one well at a time. At certain times based on use, leaks, etc., we must process longer than 12 hours per day. We choose to operate on a selected well for the entire process run. Starting and stopping wells tend to stir up sediment in the well and cause fouling issues in the pre-treatment process and the start/stop process causes shifting in the membranes in the RO equipment which increases the possibility of an O-ring or brine seal failure. Being each well usually rest 2-3 days between use it is more favorable to extend the run on the well than risk equipment failure in the plant

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.0207	May	0.0210	Sep	0.0282
Feb	0.0180	Jun	0.0225	Oct	0.0186
Mar	0.0204	Jul	0.0300	Nov	0.0210
Apr	0.0216	Aug	0.0261	Dec	0.0240



How many sewer connections does this system have? **127**

How many water service connections with septic systems does this system have? **0**

Are there plans to build or expand wastewater treatment facilities in the next 10 years? **No**

Wastewater Permits

Permit Number	Type	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0086932	WTP	0.0430	0.0360	0.0226	0.1000	Stumpy Point Bay	Albemarle Sound (12-1)

5. Planning

Projections

	2022	2030	2040	2050	2060	2070
Year-Round Population	269	270	275	285	290	300
Seasonal Population	0	0	0	0	0	0
Residential	0.0155	0.0102	0.0103	0.0104	0.0105	0.0106
Commercial	0.0005	0.0073	0.0076	0.0080	0.0084	0.0088
Industrial	0.0010	0.0018	0.0018	0.0018	0.0018	0.0018
Institutional	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
System Process	0.0060	0.0060	0.0061	0.0062	0.0063	0.0064
Unaccounted-for	0.0017	0.0019	0.0019	0.0019	0.0020	0.0020

Demand v/s Percent of Supply

	2022	2030	2040	2050	2060	2070
Surface Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ground Water Supply	0.0990	0.0990	0.0990	0.0990	0.0990	0.0990
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.0000	0.0000	0.0000	0.0000	0.0000
Total Available Supply (MGD)	0.0990	0.0990	0.0990	0.0990	0.0990	0.0990
Service Area Demand	0.0247	0.0272	0.0277	0.0283	0.0290	0.0296
Sales	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	0.0247	0.0272	0.0277	0.0283	0.0290	0.0296
Demand as Percent of Supply	25%	27%	28%	29%	29%	30%



The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is **58** gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here. **No Changes**

Are there other demand management practices you will implement to reduce your future supply needs? **None at this time.**

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? **None at this time.**

How does the water system intend to implement the demand management and supply planning components above? **No plans at this time.**

Additional Information

Has this system participated in regional water supply or water use planning? **No**

What major water supply reports or studies were used for planning?

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues:

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.