



Resolution 2022-06
APPROVING LOCAL WATER SUPPLY PLAN

WHEREAS, North Carolina General Statute 143-355 (l) requires that each unit of local government that provides public water services or plans to provide such services shall, either individually or together with other such units of local government, prepare and submit a Local Water Supply Plan; and

WHEREAS, as required by the statute and in the interests of sound local planning, a Local Water Supply Plan for the Town of Oriental, has been developed and submitted to the Mayor and Board for approval; and

WHEREAS, the Mayor and Board finds that the Local Water Supply Plan is in accordance with the provisions of North Carolina General Statute 143-355 (l) and that it will provide appropriate guidance for the future management of water supplies for the Town of Oriental, as well as useful information to the Department of Environmental Quality for the development of a state water supply plan as required by statute;

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Board of Town of Oriental that the Local Water Supply Plan entitled, Oriental 2021 LWSP dated July 13, 2022, is hereby approved and shall be submitted to the Department of Environmental Quality, Division of Water Resources; and

BE IT FURTHER RESOLVED that the Mayor and Board intend that this plan shall be revised to reflect changes in relevant data and projections at least once every five years or as otherwise requested by the Department, in accordance with the statute and sound planning practice.

This the 2nd day of August, 2022.

Name: _____ Sally T. Belangia _____

Title: Mayor

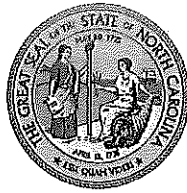
Signature: _____

ATTEST:

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



NORTH CAROLINA
Environmental Quality

July 13, 2022

Diane H. Miller
Town Manager
Town of Oriental
P.O. Box 472
Oriental, NC 28571

Subject: LWSP Meet Minimum Criteria
Town of Oriental Water System
PWSID#: 04-69-020
Pamlico County

Dear Ms. Miller,

This letter is to notify you that our staff has reviewed the information contained in the 2021 Local Water Supply Plan (LWSP) update submitted by your office. Since all the required information is complete, the LWSP for the Town of Oriental's Water System hereby meets the minimum criteria established in North Carolina General Statute 143-355(1).

Your water system's 2021 LWSP is now viewable online from the LWSP website found at: https://www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/search.php. The plan has been made available after our best efforts to screen any errors. As a final check, please review and report any mistakes or omissions to the review engineer. Unless notified otherwise, the Division of Water Resources considers your 2021 LWSP complete.

The 2021 LWSP must next be adopted by your water system's governing board; a model LWSP resolution is available online on the right side of the page in the Forms and Docs section at: https://www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/learn.php. A copy of the signed resolution must be submitted to Linwood Peele, Water Supply Planning Section Supervisor, at the address printed at the bottom of this letter. The LWSP cannot be considered compliant with the requirements of NCGS 143-355(1) until an adopted resolution is received.

Thank you very much for your efforts to provide your customers with a safe and reliable supply of drinking water. We look forward to continuing to work with you in these efforts. Please contact Louis Murray at louis.murray@ncdenr.gov or (919)707-9017, or Linwood Peele at linwood.peele@ncdenr.gov or (919) 707-9024, if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Linwood E. Peele".

Linwood E. Peele, Supervisor
Division of Water Resources, NCDEQ



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1611 Mail Service Center | Raleigh, North Carolina 27699-1611
919.707.9000

Oriental

2021 ▾

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: Oriental PWSID: 04-69-020
Mailing Address: PO Box 472
Oriental, NC 28571 Ownership: Municipality
Contact Person: Diane H. Miller Title: Town Manager
Phone: 252-249-0555 Cell/Mobile: --
Secondary Contact: Tammy Cox Phone: 252-249-0555
Mailing Address: PO Box 472
Oriental, NC 28571 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? 22 Miles

How many feet of distribution lines were replaced during 2021? 0 Feet

How many feet of new water mains were added during 2021? 0 Feet

How many meters were replaced in 2021? 10

How old are the oldest meters in this system? 29 Year(s)

How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 72

What is this system's finished water storage capacity? 0.2750 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, Quarterly

Does this system have a valve exercise program? Yes, Quarterly

Does this system have a cross-connection program? Yes

Does this system have a program to replace meters? Yes

Does this system have a plumbing retrofit program? Yes

Does this system have an active water conservation public education program? Yes

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? Yes

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Neuse River (10-1)	100 %	Pamlico	100 %

What was the year-round population served in 2021? 922

What was the seasonal population and months served in 2021? (if applicable) 1,800 (May Jun Jul Aug)

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	715	0.0589	0	0.0000
Commercial	74	0.0187	0	0.0000
Industrial	0	0.0000	0	0.0000
Institutional	0	0.0000	0	0.0000

How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0609 MGD

System process (accounted for) water was determined by adding all flushing, storage tank overflow, fire department use, distribution use, and estimated water line break totals together.

Water Sales

Purchaser	PWSID	Average Daily Sold (MGD)	Days Used	MGD	Contract Expiration	Recurring	Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
Pamlico County	04-69-025	0.0000	0	0.2000		Yes	Yes	6	Emergency

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	0.1364		May	0.2013		Sep	0.1627	
Feb	0.1407		Jun	0.2220		Oct	0.1564	
Mar	0.1347		Jul	0.1458		Nov	0.1467	
Apr	0.1778		Aug	0.1430		Dec	0.1422	



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					
well 1A	0.0981	365		0.2520	CUA0		Regular
well 2	0.0864	258		0.1872	CUA0		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			
well 1A	319	284	284	314	8	60	Yes
well 2	317	282	282	284	6	75	Yes

Are ground water levels monitored? Yes, Monthly

Does this system have a wellhead protection program? Yes

Water Purchases From Other Systems

Seller	PWSID	Average Daily Purchased (MGD)	Days Used	Contract			Required to comply with water use restrictions?	Pipe Size(s) (Inches)	Use Type
				MGD	Expiration	Recurring			
Pamlico County	04-69-025	0.0000	0	0.0000		Yes	Yes	6	Emergency

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Output Metered?	Source
Oriental Water Treatment Plant	0.3600	Yes	Yes	Ground Water - Castle Hayne Aquifer

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2021? No

If yes, was any water conservation implemented? No

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2021? No

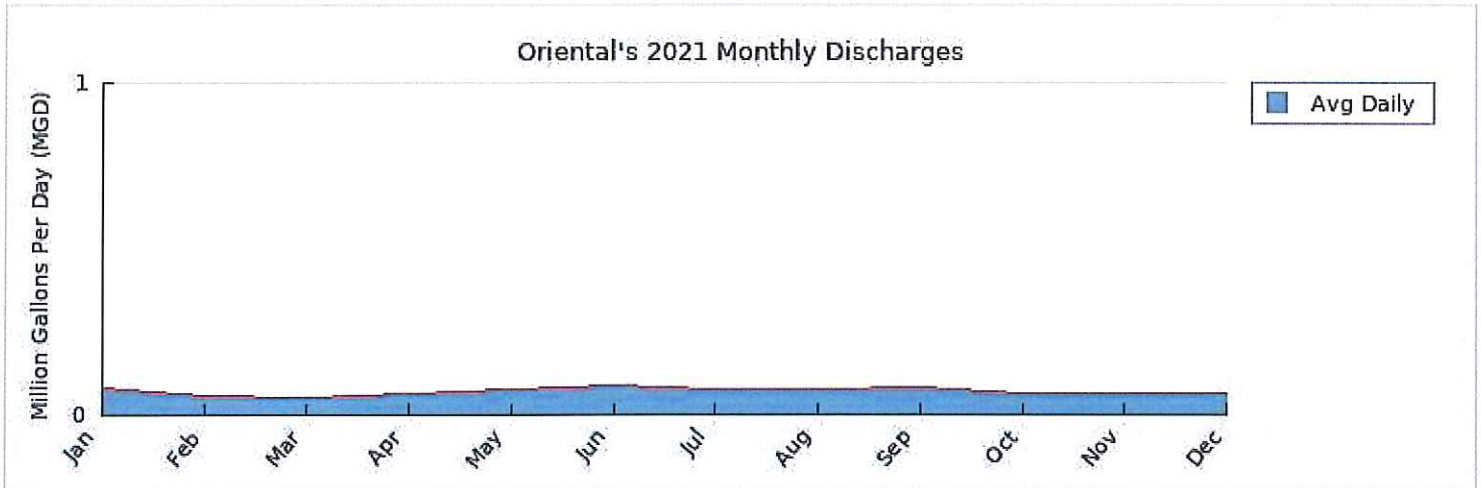
If yes, was any water conservation implemented? No

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

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.0819	May	0.0741	Sep	0.0819
Feb	0.0588	Jun	0.0903	Oct	0.0638
Mar	0.0538	Jul	0.0761	Nov	0.0657
Apr	0.0636	Aug	0.0759	Dec	0.0653



How many sewer connections does this system have? 683

How many water service connections with septic systems does this system have? 109

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

Wastewater Permits

Permit Number	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0088447	0.2000	0.0310	0.0710		Whitaker Creek	Neuse River (10-1)

5. Planning

Projections

	2021	2030	2040	2050	2060	2070
Year-Round Population	922	965	1,021	1,075	1,131	1,191
Seasonal Population	1,800	1,884	1,994	2,099	2,209	2,325
Residential	0.0589	0.0616	0.0652	0.0686	0.0722	0.0759
Commercial	0.0187	0.0196	0.0207	0.0218	0.0229	0.0241
Industrial	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Institutional	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
System Process	0.0609	0.0637	0.0674	0.0709	0.0745	0.0784
Unaccounted-for	0.0207	0.0217	0.0229	0.0241	0.0253	0.0267

Demand v/s Percent of Supply

	2021	2030	2040	2050	2060	2070
Surface Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Ground Water Supply	0.4392	0.4392	0.4392	0.4392	0.4392	0.4392
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)	0.4392	0.4392	0.4392	0.4392	0.4392	0.4392
Service Area Demand	0.1592	0.1666	0.1762	0.1854	0.1949	0.2051
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)	0.1592	0.1666	0.1762	0.1854	0.1949	0.2051
Demand as Percent of Supply	36%	38%	40%	42%	44%	47%



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 64 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.

Are there other demand management practices you will implement to reduce your future supply needs?

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs?

How does the water system intend to implement the demand management and supply planning components above?

Additional Information

Has this system participated in regional water supply or water use planning? Yes, CCPCUA

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

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: Replace old, outdated infrastructure such as aging waterlines.

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