

CITY OF HIGH POINT

AGENDA ITEM

**Title: Local Water Supply Plan**

From: Robby Stone – Public Services Director
Derrick Boone – Asst. Director Public Services
Rodney Darr – Water Plant Superintendent

Meeting Date: August 1, 2022

Public Hearing: N/A

Advertising Date: N/A

Advertised By: N/A

Attachments: Attachment A – Letter- LWSP Meets Minimum Criteria
Attachment B – Resolution
Attachment C – City of High Point 2021 Local Water Supply Plan

PURPOSE:

A Local Water Supply Plan (LWSP) is an assessment of a water system's current and future water needs and its ability to meet those needs. By understanding the current and future needs, local governments will be better able to manage water supplies and better prepared to plan for water supply system improvements.

BACKGROUND:

North Carolina General Statute G.S. 143-355(l) requires all units of local government that provide public water service to prepare an LWSP. The Public Services Department has submitted High Point's 2021 LWSP and it has been reviewed by the North Carolina Department of Environmental Quality, Division of Water Resources. The 2021 LWSP must next be adopted by the High Point City Council in order to be compliant with the requirements of North Carolina General Statute G.S. 143-355(l).

BUDGET IMPACT: N/A

RECOMMENDATION / ACTION REQUESTED:

The Public Services Department is recommending that Council adopt the 2021 Local Water Supply Plan and the appropriate official execute the resolution.

RESOLUTION FOR 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 City of High Point, has been developed and submitted to the City Council for approval; and

WHEREAS, the City Council 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 City of High Point, as well as useful information to the Department of Environment and Natural Resources for the development of a state water supply plan as required by statute;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of High Point, that the Local Water Supply Plan entitled, LWSP-PWSID: 02-41-020 dated Calendar Year 2021 is hereby approved and shall be submitted to the Department of Environment and Natural Resources, Division of Water Resources; and

BE IT FURTHER RESOLVED that the City Council intends 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 1st day of August 2022.

Name: _____

Title: _____

Signature: _____

Attest:

Mary Brooks, Interim City Clerk

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

RICHARD E. ROGERS, JR.
Director



NORTH CAROLINA
Environmental Quality

June 16, 2022

Rodney Darr, WTP Superintendent
City of High Point
P.O. Box 230
High Point, NC 27261

Subject: LWSP Meets Minimum Criteria

City of High Point
PWSID#: 02-41-020
Guilford County

Dear Mr. Darr,

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 City of High Point hereby meets the minimum criteria established in North Carolina General Statute 143-355 (I).

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.

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 Vardry E. Austin at vardry.austin@ncdenr.gov or (919)707-9002, or Linwood Peele at linwood.peele@ncdenr.gov or (919) 707-9024 if we can be of further assistance.

Sincerely,

A handwritten signature in blue 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

High Point

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:

High Point

PWSID:

02-41-020

Mailing Address:

P.O. Box 230
High Point, NC 27261

Ownership:

Municipality

Contact Person:

Rodney Darr

Title:

WTP Superintendent

Phone:

336-822-7991

Cell/Mobile:

336-972-0682

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Cast Iron	6-36	45.00 %
Ductile Iron	6-36	54.00 %
Galvanized Iron	1/2-2	0.27 %
Other	30-48	0.73 %

What are the estimated total miles of distribution system lines?

629 Miles

How many feet of distribution lines were replaced during 2021?

1,376 Feet

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

22,341 Feet

How many meters were replaced in 2021?

1,444

How old are the oldest meters in this system?

44 Year(s)

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

2,005

What is this system's finished water storage capacity?

19.0000 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, Weekly

Does this system have a valve exercise program?

Yes, Daily

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?

No

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

Yes

Does this system have a leak detection program?

No

Water Conservation

What type of rate structure is used?

Decreasing Block, Uniform, Other

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
Deep River (02-2)	80 %	Guilford	100 %
Yadkin River (18-1)	20 %	Davidson	0 %
		Randolph	0 %

What was the year-round population served in 2021?

116,065

What was the seasonal population and months served in 2021? (if applicable)

166,065 (Jun Oct)

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	39,355	5.5690	22	0.0000
Commercial	3,753	2.7300	137	0.0040
Industrial	326	0.8620	36	0.0000
Institutional	0	0.0000	0	0.0000

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

1.3880 MGD

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
City of Archdale	02-76-030	0.0001	179	0.5000		Yes	Yes	12	Regular
City of Greensboro	02-41-010	0.0000	0	0.0000		Yes	Yes	12-16	Emergency
City of Jamestown	02-41-030	0.3904	365	1.5000		Yes	Yes	6-10	Regular
City of Thomasville	02-29-020	0.0000	0	0.0000		Yes	No	12	Emergency
Davidson Water, Inc.	02-29-025	0.0000	0	0.0000			Yes	6	Emergency

The following information is from the Jamestown plan:

Jamestown purchases most of their water from PTRWA, and that water is routed through the distribution system lines of Greensboro and High Point. Any additional water need is purchased from High Point via a separate 1.0 MGD contract.

Jamestown has an allocation of 0.775 MGD from PTRWA. They route 0.500 MGD through High Point and 0.125 MGD through Greensboro, the remainder (0.150 MGD) is shown as the contract from PTRWA.

https://www.ncwater.org/wudc/app/LWSP/report.php?pwsid=02-41-020&year=2021

1/3

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	10.9182		May	13.1082		Sep	14.4082	
Feb	10.7482		Jun	14.3582		Oct	13.7582	
Mar	10.7682		Jul	14.0182		Nov	12.4982	
Apr	11.8082		Aug	13.7082		Dec	12.0892	



Surface Water Sources							
Stream	Reservoir	Average Daily Withdrawal		Maximum Day Withdrawal (MGD)	Available Raw Water Supply		Usable On-Stream Raw Water Supply Storage (MG)
		MGD	Days Used		MGD	* Qualifier	
Deep River (City Lake)	City Lake	9.6700	324	0.0000	21.4000	SY50	1,120.0000
Deep River (Oak Hollow)	Oak Hollow	11.5900	41	0.0000	12.8400	SY50	3,270.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)							
Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Deep River (City Lake)	City Lake	61	Yes	Deep River (02-2)	Guilford		Regular
Deep River (Oak Hollow)	Oak Hollow	32	Yes	Deep River (02-2)	Guilford		Regular

What is this system's off-stream raw water supply storage capacity? 0 Million gallons

Are surface water sources monitored? Yes, Daily

Are you required to maintain minimum flows downstream of its intake or dam? No

Does this system anticipate transferring surface water between river basins? No

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				
City of Greensboro	02-41-010	0.0000	0		Yes	Yes	12-16	Emergency	
City of Thomasville	02-29-020	0.0000	0		Yes	No	12	Emergency	
Davidson Water Inc.	02-29-025	0.0453	365		Yes	Yes	16	Regular	
PTRWA	30-76-010	2.7729	365	2.7800	2057	Yes	16-24	Regular	

Water Treatment Plants				
Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Ouput Metered?	Source
Frank L. Ward Water Filtration	24.0000	Yes	Yes	City Lake & Oak Hollow Lake

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?

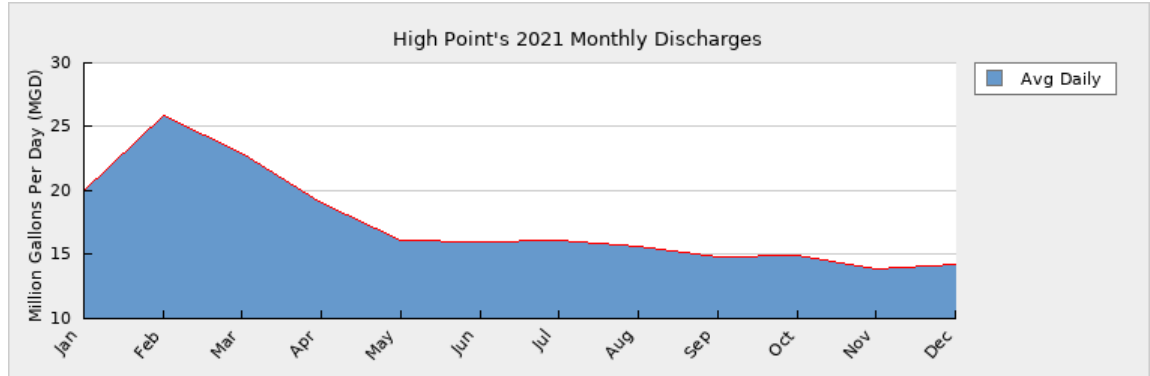
Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2021? No

If yes, was any water conservation implemented?

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	20.0100	May	16.1500	Sep	14.8700
Feb	25.9200	Jun	16.0400	Oct	14.9000
Mar	22.9300	Jul	16.0800	Nov	13.9400
Apr	19.0300	Aug	15.6800	Dec	14.2800



How many sewer connections does this system have? 52,500

How many water service connections with septic systems does this system have? 341

Are there plans to build or expand wastewater treatment facilities in the next 10 years? Yes

Eastside WWTP scheduled for expansion upgrade in 2027.

Wastewater Permits						
Permit Number	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0024210	26.0000	26.0000	13.8700		Deep River	Deep River (02-2)
NC0024228	10.0000	10.0000	3.0500		Rich Fork Creek	Yadkin River (18-1)
NC0081256	0.0000	0.0000	0.5690		Richland Creek	Deep River (02-2)

Wastewater Interconnections						
Water System	PWSID	Type	Average Daily Amount		Contract Maximum (MGD)	
			MGD	Days Used		
City of Archdale	02-76-030	Receiving	1.0050	365	2.5000	
City of Greensboro	02-41-010	Receiving	0.1229	365	0.0000	

City of Jamestown	02-41-030	Receiving	1.2240	365	2.0000
Davidson Water Inc.	02-29-025	Receiving	0.0810	365	0.0000
Sedgefield	00-00-000	Receiving	0.1820	365	0.2250
Winston-Salem	02-34-020	Receiving	0.0210	365	0.0000

5. Planning

Projections						
	2021	2030	2040	2050	2060	2070
Year-Round Population	116,065	119,413	124,189	129,156	134,322	137,008
Seasonal Population	166,065	167,466	167,218	170,562	173,973	177,452
Residential	5.5690	5.8100	6.0500	6.2940	6.5460	6.6770
Commercial	2.7340	3.1610	3.2550	3.3530	3.4530	4.1430
Industrial	0.8620	0.8490	0.8830	0.9180	0.9550	0.9740
Institutional	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
System Process	1.3880	0.8350	0.8520	0.8690	0.8860	0.9040
Unaccounted-for	1.7605	1.4056	1.4486	1.4795	1.5278	1.6192
Projected unaccounted-for water was adjusted to 10% of total demand which is the median for the period 2017-2021.						

Demand v/s Percent of Supply						
	2021	2030	2040	2050	2060	2070
Surface Water Supply	34.2400	34.2400	34.2400	34.2400	34.2400	34.2400
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	2.8253	2.8253	2.8253	2.8253	2.8253	2.8253
Future Supplies		0.0000	0.0000	0.0000	0.0000	0.0000
Total Available Supply (MGD)	37.0653	37.0653	37.0653	37.0653	37.0653	37.0653
Service Area Demand	12.3135	12.0606	12.4886	12.9135	13.3678	14.3172
Sales	0.3904	2.0000	2.0000	2.0000	2.0000	2.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	12.7039	14.0606	14.4886	14.9135	15.3678	16.3172
Demand as Percent of Supply	34%	38%	39%	40%	41%	44%



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 **48** 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, Member of Piedmont Regional Water Authority
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:	
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