Recommended Template

Engineer's Report for Water Main Extensions

Date:_____

Project Name:_____

Water System Name:_____Union County_____

Water System ID: _____01-09-413_____

County of Project:_____Union County_____

Prepared by:

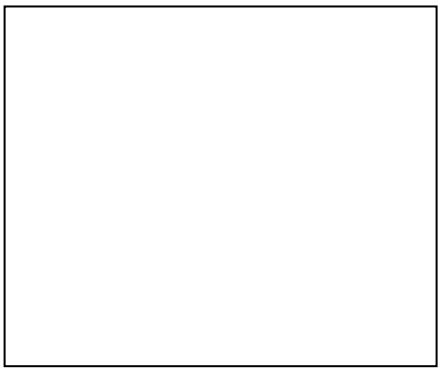
_____

_____

_____

This form includes the minimum information needed for the N.C. Public Water Supply Section to review water main extension projects. Complex or unique design conditions must be addressed in a supplemental document as deemed appropriate by the design engineer.

Signature and seal of professional engineer that prepared this report



I attest that this engineer's report has been prepared by me, or under my responsible charge, and is accurate, complete and consistent with the information supplied in the engineering calculations. I further attest that the proposed design has been prepared in accordance with 15A NCAC 18C. Although page 4 of this report incorporates data provided by others, inclusion of these materials under my seal signifies that I have reviewed this material and have judged it to be consistent with the proposed design.

Water Main Extension Engineer's Report Mandatory Information
To present data required by 15A NCAC 18C .0307(b)
Specific citations from 15A NCAC 18C are provided when data is required to confirm compliance with another regulation.

Applicant Information

Applicant name (must be a person): Crystal O. Panico – New Development Program Manager

Applicant mailing address: 500 N. Main Street, Suite 400

Monroe, NC 28112

Applicant phone numbers: Business 704-296-4239 Cell _____

Applicant e-mail address:
Crystal.Panico@unioncountync.gov

Description of Proposed Project

Name of proposed project: _____

Provide a summary of the diameter, length and material of all piping proposed in the project.

Diameter of piping	Length of piping	Material
_____-inch	_____ linear feet	
_____-inch	_____ linear feet	
_____-inch	_____ linear feet	
_____-inch	_____ linear feet	
_____-inch	_____ linear feet	

Location of project: (use existing road and intersections, address if available; and identify municipality).

_____

_____

The proposed project is an expansion of the existing public water system. □ Yes □ No

The source of water for the proposed project will be provided by a separately owned public water system. □ Yes □ No

Is the project phased? □ Yes □ No

If yes, delineate all phases in plan sheets. Partial final approvals may be granted to completed phases specified in this submittal.

_____

_____

If yes, depending on whether the water system does or does not provide fire flow; provide calculations to demonstrate that the project can provide adequate peak demand (domestic peak demand) at the minimum required residual pressure of 30 pounds per square inch gauge (psig) or can provide peak demand with fire flow (domestic plus fire flow) at the minimum pressure of 20 psig through ***each*** phase of construction.

Check here if project is a water main replacement with no additional demands. **(Water main replacement consists of like size, no additional service connections, and no additional hydrants and no added fire demand.)**	□ If box checked, proceed to page 4

Provide anticipated project flows for any project that will increase demands

Does the proposed project include any in-ground irrigation?	□ Yes □ No
If yes, attach appropriate analysis to address how the system is designed to accommodate the impact of irrigation use on treated water supply, storage needs and system pressure.	
Peak demand of the proposed project Maximum daily demand of the proposed project	_____gpm _____gpd
Per Rule .0901, are the water mains and water system designed to carry fire protection flows for this project?	□ Yes □ No
If the water mains and water system **<u>are not</u>** designed to provide fire protection flow, indicate the minimum ***calculated*** pressure at domestic peak demand (non-fire flow). The pressure must be at least 30 psig per Rule .0901.	_____psig
If the water mains and water system **<u>are</u>** designed to provide fire protection flow, indicate the minimum **calculated** pressure at peak demand (domestic plus fire flow). Pressure must be at least 20 psig per Rule .0901.	_____psig

gpm: gallons per minute

gpd: gallons per day

psig: pounds per square inch gauge

Water System-Supplied Information

Information on this page must be updated on an annual basis

Data provided by: _____(name) Date provided:_____

Position: _____

Number of current connections in water system	_____connections
Approved number of connections in water system	_____connections □ N/A – local government system
Current average and maximum daily demand of existing system. Average day demand is the one day average demand for the latest calendar year.	_____average gpd _____maximum gpd
Current maximum daily treated water supply of existing system Maximum daily treated water supply is the maximum quantity of treated water that can be produced and/or purchased by the system.	_____maximum gpd
Total elevated storage capacity of existing system Total ground storage capacity of existing system Total hydropneumatic storage capacity of existing system Contractual storage with other system(s) Attach a copy of the agreement with the providing system	_____gallons _____gallons _____gallons _____gallons
Systems > 300 connections: • Total storage volume is at least half the average annual daily demand (Rule .0805(c)) • For municipalities, at least 75,000 gallons elevated storage and at least half the average day demand combined elevated and ground finished water storage (Rule .0805(b)) Systems with hydropneumatic storage tanks up to 300 connections: • Volume of hydropneumatic storage tank is sufficient to meet peak demands based on Rule .0802 and calculations in Appendix B, Figure 6 • For residential community systems, volume of hydropneumatic storage tank is at least 40 times the number of connections or 500 gallons, whichever is greater (Rule .0803) • For mobile home park systems, volume of hydropneumatic storage tank is at least 25 times the number of connections or 500 gallons, whichever is greater (Rule .0803) • For campground systems, volume of hydropneumatic storage tank is at least 10 times the number of connections or 500 gallons, whichever is greater (Rule .0803)	□ Yes □ No □ Yes □ No □ N/A □ Yes □ No □ Yes □ No □ N/A □ Yes □ No □ N/A □ Yes □ No □ N/A