NC DEPARTMENT OF INSURANCE
OFFICE OF STATE FIRE MARSHAL

# Pre-Survey Information Request for Water Supply

The North Carolina Department of Insurance is responsible for the certification and rating of the fire departments in North Carolina. An important part of the information North Carolina Department of Insurance provides to insurers is a community's Public Protection Classification or a rating number.

The following questionnaire will assist the Office of State Fire Marshal rating inspector in calculating the grade for the fire department.

The water departments that serve the district being graded should complete this questionnaire. **A questionnaire must go to each water department serving the district.**

Your cooperation in completing this questionnaire prior to the Office of State Fire Marshal rating inspector arriving will greatly assist in expediting the survey as well as helping to ensure that your community receives full benefits of all credit to which it is entitled.

Water Department Name _____

Address _____

City_____ State_____ Zip_____

Contact Name_____

Title _____

Work Phone _____ Cell Phone_____

Fax Number _____E-Mail _____

## WATER SUPPLY

**This survey is for the entire water system and not just the district being surveyed.**

**If there are credible hydrants (250gpm or more while maintaining 20psi residual) on multiple systems, this information will need to be duplicated for each system or pressure zone. We consider a pressure zone or service zone as any area separated by a booster pump, pressure reducing valve, or any other restricting or boosting device.**

**Maps:** Please provide GIS data that depicts the hydrants and pressure zones.

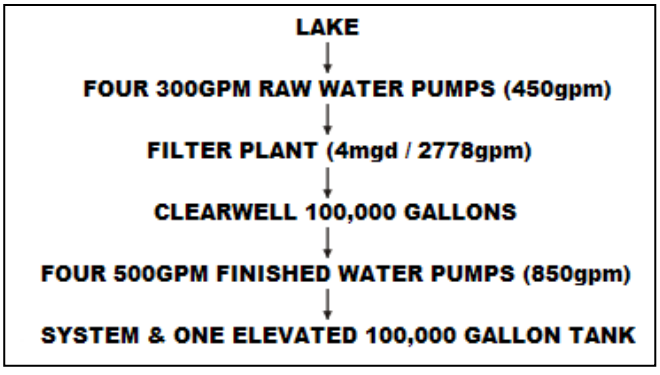
GIS Data Provided: _____

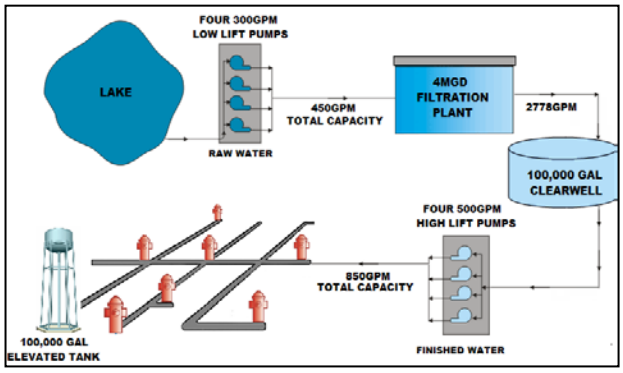
**Consumption Records:** What was the total consumption on this system or pressure zone for the past year recorded? If possible please indicate the maximum consumption day recorded in the past 3 years and the average daily consumption in any given year.

**This System or Pressure Zone's Consumption:**
Average Daily Consumption (ADC): _____
Maximum Daily Consumption (MDC): _____ Date of MDC: _____ (last 3 years)

1. **Filter Plants:**
   a. Filter Plant A Maximum Capacity**:** _____ (mgd) or _____ (gpm)
   b. Filter Plant B Maximum Capacity**:** _____ (mgd) or _____ (gpm)
   c. Filter Plant C Maximum Capacity**:** _____ (mgd) or _____ (gpm)

2. Please include a description or an illustration of your distribution system. (See Examples Below)
   a. **System Overview Description**: Please describe your system.
   b. **System Overview Illustration:** Please include an illustration of your pressure zones




**Complete this sheet for each pressure zone**

*Click here for additional pressure zones*

**Pressure Zone** _____

5. **Storage**: Please list all storage tanks on the system and indicate on the map their location. We will need capacity, low water level (i.e. the percent of water maintained in the tank before it begins to refill), and the size of the pipes connecting each storage tank to the distribution system.

| Site Description | Capacity | Storage Tank Type | Normal Daily Minimum in % | Connection Pipe Size |
|---|---|---|---|---|
| EXAMPLE: Plant Clearwell | 1 Mg | Clearwell | 80% | 16” |
| EXAMPLE: Elm St Tank | 500,000 | Elevated Tank | 75% | 10” |
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**Complete this sheet for each pressure zone if their storage tanks in that zone**

**Pressure Zone** _____

6. **Pumps:** Please list all pumps on the system such as well pumps, raw water pumps, finished water pumps, booster pumps. Please list each pump on a separate row, unless all of the pumps at a given location have the same capacity.

| Site Description | RATED GPM | Pump # (s) | Alternate or Tandem | Pulls Water From | Pumps Water To | Actual GPM Output |
|---|---|---|---|---|---|---|
| EXAMPLE: Raw Water | 300 | 1,2,3,4 | Two pumps can run in tandem | Lake | Filter Plant | 450 |
| EXAMPLE: Finished Water | 500 | 1,2,3,4 | Two pumps can run in tandem | Clearwell | System & Storage | 850 |
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**Complete this sheet for each pressure zone if their pumps in that zone**

**Pressure Zone** _____

**Maintenance & Inspection of Fire Hydrants**

A. Do you have an inspection, maintenance, & flushing testing schedule for the hydrants? Yes__ No__

B. Does the fire or water department conduct and record main capacity flow testing? Yes __No__
(See Below for specifics)

When conducting a main capacity test, one hydrant, designated the test hydrant, is chosen to be the hydrant where the normal static pressure will be observed with the other hydrant(s) in the group closed, and where the residual pressure will be observed with the other hydrant(s) flowing. The test hydrant is chosen so it will be located between the flow hydrant and the large main or water supply source in the area (i.e. tank, booster pump). Three pressures are collected and recorded during this test and including; the static, pitot, and residual pressures.

C. Please describe any hydrant maintenance procedures that are currently in place.

| |
|---|
| |

Also, please provide the last three years or cycles you have conducted hydrant testing.

1st Cycle Date: _____ Percentage of Hydrants Tested _____ by: Fire Dept Water Dept
2nd Cycle Date: _____ Percentage of Hydrants Tested _____ by: Fire Dept Water Dept
3rd Cycle Date: _____ Percentage of Hydrants Tested _____ by: Fire Dept Water Dept

**NOTE: PLEASE HAVE THE HYDRANT TESTING RECORDS ON HAND FOR THE LAST 3 DATES TESTED**

7. **Breakdown of Hydrants:** Please list the Number of Hydrants in the corresponding blanks below that indicated the type and size of the hydrants in the Pressure Zone and Fire Protection Area being evaluated:

## Hydrant Count

**Creditable hydrants must be able to supply 250 GPM for 2 hours**

Number of hydrants with 2 – 2 ½" and 1 – 4 ½" outlet with 5 ¼" or larger barrel _____

Number of hydrants with 2 – 2 ½" and 1 – 4 ½" outlet with 4 ½" barrel _____

Number of hydrants on 4-inch branch line or smaller OR any single 2 ½" outlet hydrant _____

**Total Hydrant count** _____

**Complete this sheet for each pressure zone with hydrant count for that zone**

**Notes or other pertinent information:**