

Source Water Assessment Program Report for ALEXANDER CO WTR DIST

Purchase Water System

This report is for a water supply system (ALEXANDER CO WTR DIST) that provides water to the public by purchasing water from other water systems. All of the sources listed in Table 1 below are owned by other water systems (i.e., the water supplier or seller system). This report provides information on how Source Water Assessments were completed in North Carolina.

Please refer to the Source Water Assessment Program Report for the seller systems to review the assessment results for the specific public water supply sources of the seller systems listed in Table 1.

Introduction — What is a Source Water Assessment?

The North Carolina Division of Environmental Health, Public Water Supply (PWS) Section is responsible for implementing the Source Water Assessment Program (SWAP) and completing assessments for all public drinking water supplies in the state. The 1996 amendments to the Safe Drinking Water Act provided federal support and required states to conduct assessments of all public water systems. A source water assessment is a qualitative evaluation of the potential of a drinking water source to become contaminated by the identified potential contaminant sources (PCS) within the delineated area. In North Carolina there are approximately 10,000 public water supply sources that were assessed by the state. The PWS Section has gathered information for each water supply and developed a process for completing the assessments.

What is the Source of Your Drinking Water?

Everyone wants clean, safe drinking water and we assume this natural resource will always be available to us. However, drinking water sources can be threatened by many potential contaminant sources including underground storage tanks for gasoline, permitted wastewater discharges and other waste disposal sites, improper handling of hazardous materials, urban storm water runoff or other types of non-point source contamination such as runoff produced by agricultural activities and land clearing for development. Protecting your drinking water from becoming contaminated is a wise investment in public health and your community's future.

Table 1. Public Water Supply System Information

System Name	ALEXANDER CO WTR DIST
City	HICKORY
PWS ID	01-02-020
Source Name	HICKORY CITY OF

Assessment Report Contents

This assessment report includes the following sections:

- Section 1: Assessment Area Delineation
- Section 2: Potential Contaminant Source Inventory
- Section 3: What is a Susceptibility Rating?

Section 1: Assessment Area Delineation

The area delineated for a surface water source(s) for this assessment is the water supply watershed. A watershed is a geographic area of land draining to either a stream or lake. Local ordinances dictate the type of development that can take place in some sections of the water supply watershed. In general, the watershed of a surface water source(s) is the area through which contaminants, if released to the environment, can be reasonably expected to move across the land surface following the path of overland flow or shallow subsurface flow and into the surface water body (stream or lake).

The area delineated for a well(s) for the purpose of this assessment is the contributing area for the well(s). When a well is pumped, it begins to influence groundwater that is flowing through the subsurface and towards the well. The pumping of the well creates a contributing area around the well that supplies water to the well. This is the area through which contaminants, if released to the environment, can be reasonably expected to move through the ground and reach the well.

Section 2: Potential Contaminant Source Inventory

An inventory of potential contaminant sources (PCSs) was completed for the delineated area of any public drinking water source. The delineated area for a drinking water source(s) is the area where potential contaminant sources, if released to the environment, could reasonably be expected to be a risk or a potential for contamination of a drinking water supply. A PCS in any assessment report is a facility or site regulated under a state or federal regulatory program. These facilities are identified in electronic databases that contain location information for each facility. Only databases that include statewide information were used for source water assessments.

It is important to note that the PCSs identified in any delineated area are only potential sources of contamination to a drinking water source. Environmental contamination is not likely to occur if harmful contaminants are managed properly.

Section 3: What is a Susceptibility Rating?

In North Carolina the susceptibility of any drinking water source is based on two components, a contaminant rating and an inherent vulnerability rating. A drinking water source(s) was assigned a qualitative susceptibility rating of higher, moderate or lower based on the results of the contaminant rating and inherent vulnerability rating process as described in the following paragraphs.

It is important to understand that a susceptibility rating of higher does not imply poor water quality. Susceptibility is an indication of a water supply's potential to become contaminated by the identified PCSs within the assessment area.

Susceptibility Rating

The final susceptibility rating for a drinking water source(s) is determined by combining the contaminant rating and the inherent vulnerability rating.

Contaminant Rating

The Contaminant Rating for a drinking water source(s) was determined based on the number and location of PCSs within the delineated area. Each PCS identified within the delineated area was assigned a risk rating of higher, moderate or lower. If a PCS is a facility regulated in an existing environmental program, it will receive a risk rating of higher. The number of PCSs that occur within the delineated area was determined and a contaminant rating of higher, moderate or lower was assigned to a drinking water source(s).

Inherent Vulnerability Rating

The Inherent Vulnerability Rating of a surface water source(s) refers to the geologic characteristics or existing conditions of the surface water source(s) and the delineated assessment area (watershed). These characteristics include water supply watershed classification, surface water source location, and the watershed characteristics rating. The watershed classification is based on the size of the watershed, development activities, and allowable waste treatment and disposal practices. The surface water sources are located in streams, large multi-purpose impoundments or small water supply impoundments. The raw water quality rating assessed turbidity and total coliform values over twelve months. The watershed characteristics rating is an assessment of the likelihood that contaminants will follow the path of overland flow or shallow

subsurface flow to a surface water source. An inherent vulnerability rating of higher, moderate or lower was assigned to a surface water source(s).

The inherent vulnerability rating of a well(s) refers to the geologic characteristics or existing conditions of the well and its delineated assessment area. These characteristics include aquifer rating, unsaturated zone rating and well integrity/well construction rating. The aquifer rating is an assessment of the water transmitting characteristics of the aquifer. The unsaturated zone rating is an assessment of the likelihood that contaminants from surface and shallow sources will follow the path of aquifer recharge and reach the water table. The well integrity/construction rating is an assessment of the quality of the construction of the well. An inherent vulnerability rating of higher, moderate or lower was assigned to a well(s).

If you are interested in obtaining information on the public water supply sources of the water provider systems listed in this report, please contact the Public Water Supply Section by e-mail at the following address: SWAP@ncmail.net. Or you may request information by mail using the address:

SWAP
Public Water Supply Section
1634 Mail Service Center
Raleigh, NC 27699-1634

Or you may contact the Source Water Assessment staff by phone at 919-715-2633.