

Source Water Protection Plan



Davidson County, NC

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We would also like to thank Jay Frick, the NC Source Water Protection Coordinator for his leadership in putting this plan together. Also, the Source Water Assessment and Protection Report (SWAP) prepared by the North Carolina Public Water Supply Section (PWSS) provided an excellent resource for beginning this planning process. Another invaluable resource contributing to this effort was The North Carolina Source Water Protection Guidebook, Developing a Local Surface Water Protection Plan, made available by the PWSS in 2006.

Executive Summary

The Yadkin River is one of Davidson County's most valuable assets, serving as the County's primary drinking water source. While robust economic development benefits the community and quality of life, rapid growth could threaten natural resources, including the Yadkin River. This Source Water Protection Plan is designed to help protect the Yadkin River for the community, both today and for future generations.

This plan was drafted by a committee of local citizens (the SWP committee). The plan includes recommendations to provide long term protection of one of Davidson County's drinking water sources and its immediate watershed. The recommendations are as follows:

1. Regulations and enforcement – Add Water Quality Policies to Davidson County's Land Development Plan that will encourage the protection of the Yadkin River and its tributaries.
2. Establish and maintain permanent partnerships with local groups or entities with the ability to impact Yadkin River's water quality, (Yadkin Riverkeepers, Stormwater Smart Program, Winston Salem Wastewater Treatment Plant, Davie County, local industry, etc).
3. Organize a public education, communication, and outreach program to target all age groups throughout Davidson County. (Schools K-12, Civic Organizations, Davidson County Board of Commissioners, etc.)
4. Support the transfer of enforcement of the state Erosion and Sedimentation Control Ordinance from the state to Davidson County.
5. Support the creation of a local Stormwater Control Ordinance, promote education and require developers to contain stormwater generated by development.

The Committee strongly recommends adoption and implementation of this plan to help ensure the purity and adequacy of the drinking water drawn from the Yadkin River. In addition to cleaner water, implementation of this Plan will raise awareness in the community of the importance of the river, sources of contamination and the river's vulnerability.

Adoption and state approval of this plan may also make Davidson County eligible for a low interest-long term (1%, 20 year) loan program through the NC DENR.

Introduction

Source water is untreated water from lakes, streams, reservoirs, or ground water that is used as a drinking water supply. Source water quality can be threatened by many everyday activities and land uses, ranging from industrial wastes to chemicals applied to lawns. Source Water Protection (SWP) is the process of identifying and managing potential sources of contamination that may impact a drinking water supply. The ultimate goal of SWP is to prevent contaminants from entering a source of public drinking water.

The North Carolina Source Water Protection Program (SWPP) is a voluntary program designed to support local efforts to protect public drinking water sources. The SWPP is administered by the Public Water Supply (PWS) Section of the North Carolina Department of Environment and Natural Resources (DENR). A key feature of the SWPP is that each PWS system develops its own local SWP plan based on local conditions and priorities. The SWPP affords PWS systems a broad range of options for protecting their water supplies. The SWPP also provides information about funding and other resources available to support such local protection efforts. The SWPP encompasses both surface water and ground water sources of drinking water. Communities are encouraged to establish source water protection plans which include the following:

Step 1. Obtaining a copy of the Source Water Assessment Program (SWAP) Report: 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. The PWS Section completed assessments for approximately 10,000 public water supply sources in the state of North Carolina. A copy of the Davidson Water, Inc. System SWAP may be found on the PWS website <http://www.deh.enr.state.nc.us/pws/>.

Step 2. Forming a local Source Water Protection Team: The SWP Team will develop and implement the local SWP plan.

Step 3. Conducting a Potential Contaminant Source Inventory: Identify potential contamination sources within the source water protection area.

Step 4. Developing Management Strategies: The goal of management is to minimize the potential for contamination to enter the drinking water supply. Management strategies may take the form of regulatory strategies (such as zoning or use permits) and/or non-regulatory strategies (such as education or household hazardous waste collection). The local SWP Team must decide what methods are appropriate for their PWS system.

Step 5. Developing a Contingency Plan: Develop an emergency contingency plan for alternative water supply sources in the event supply becomes contaminated and emergency response planning for incidents that may impact water quality.

Step 6. Developing a Schedule for Implementing and Updating the Local SWP Plan: Develop an implementation and maintenance schedule for the local SWP plan.

Step 7. Submitting the Local SWP Plan to the PWS Section: Submit the completed local SWP plan to the PWS Section for review and approval.

A copy of this plan should be forwarded to the Public Water Supply Section (PWSS) for their review and recommendations. The PWSS will provide the final approval for SWP Plans. Plans should be submitted to:

Source Water Protection Program Coordinator
Public Water Supply Section
1634 Mail Service Center
Raleigh, North Carolina 27699-1634
Phone 919-715-0827
Fax 919-715-4374

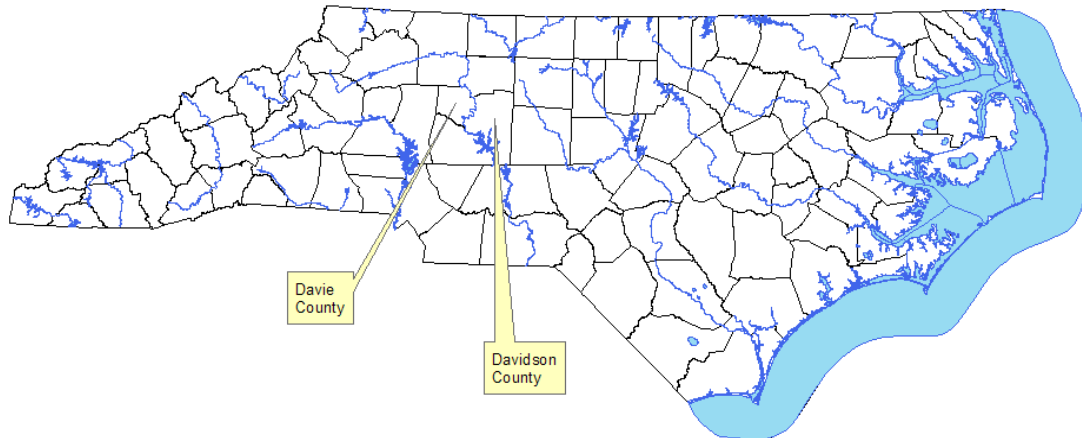
Step 1: The Source Water Assessment Program Report

A Source Water Assessment Program (SWAP) Report has been developed for Davidson Water, Inc. by the NC Public Water Supply Section. Surface water sources can be threatened by many potential contaminant sources, including permitted wastewater discharges, urban storm water runoff, or other types of non-point source contamination such as runoff produced by agricultural activities and land clearing for development. 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 (PCSs) within the delineated area. A SWAP Report consists of an assessment area delineation, a potential contaminant source inventory and map, a susceptibility rating, maps, tables, and figures for the surface water source, and a detailed description of North Carolina's SWAP approach. Davidson Water, Inc.' surface water source is the Yadkin River which has been assigned a qualitative susceptibility rating of Higher, based on a contaminant rating of Moderate and an inherent vulnerability rating of Higher. The rating process is described in detail in Sections 3 and 6 of the SWAP Report.

The Yadkin River at this surface water intake was assigned a WS-IV Watershed Classification by the state which means that its critical area is ½ mile draining to a river intake and its protected area is ten miles upstream of and draining into its river intake. At a minimum, the state mandated watershed protection ordinance requires one dwelling unit per half acre and no more than 24% built upon area, a 30 foot stream buffer, agricultural, forestry and transportation best management practices and does not allow new landfills in the protected area to protect the source water quality. Davidson County however, has chosen to increase protection of its surface water intake by requiring that single family residential development will not exceed one dwelling unit per acre and a minimum fifty foot vegetative buffer for any buildings along perennial streams.

Davidson Water, Inc. removes and treats water from the Yadkin River that flows along the border between Davidson County to the east and Davie County to the west. In addition Davidson Water, Inc. has interconnections to allow for the purchase of water from or supplying water to the following water systems:

- Winston Salem, City of
 - Lexington, City of
- Handy Sanitary District
 - High Point, City of
 - Thomasville, City of
 - Archdale, City of



The Davidson Water, Inc. WTP plant is located just south of Highway 64 on the Yadkin River approximately ten miles west of the City of Lexington and has the capacity to pump 32 million gallons a day to 120,000 people via 57,000 connections. The plant has three intake stations on the Yadkin River including screw pumps extending down into the river pulling the water up into troughs leading to three connected reservoirs that hold approximately 75 million gallons of water. If spills get into the river the intake pumps can be cut off and the reservoirs used until the contamination passes. The system has three raw water pump stations that can pump 32 million gallons per day out of the reservoirs to settling basins. The settling basins can handle up to 20 million gallons of water a day. Track-vacs have been installed in these settling basins to continually clean the basins of sediments instead of allowing it to build up. This helps provide better water quality. The plant has 20 dual media filters with each one capable of filtering 1 million gallons of water a day. The plant owns over 1,500 miles of 2 to 24 inch distribution lines.

For this Source Water Protection Plan, it was determined that the focus area would be the source water protection area as indicated by the Source Water Assessment Program Report that has been made available by the NC Public Water Supply Section. Maps showing the protected area are included in the Appendix.

Step 2: Davidson Water, Inc. Source Water Protection Plan Stakeholder Committee

Team Leader, Mr. Gregg Stabler, invited a number of local people who he thought might have an interest in or be influential in protecting the raw water quality at the Davidson Water, Inc. intake. As a result, the following people came together as the Source Water Protection Committee. Technical assistance was provided by the NC Public Water Supply Section and the North Carolina Rural Association.

NAME	REPRESENTING/TITLE	ADDRESS	PHONE	E-MAIL
Gregg Stabler	Davidson Water, Inc. Manager	PO Box 969 Welcome, NC 27374	336-731-5525	gstabler@davidsonwater.com
Ron Farnsworth	Davidson Water, Inc. Plant Superintendent	388 Koontz Road Lexington, NC 27255	336-787-5800	rfarnsworth@davidsonwater.com
Tim Gwaltney	Davidson Water, Inc. Lab Technician	388 Koontz Road Lexington, NC 27255	336-787-5800	waterplant@davidsonwater.com
Scott Leonard	Davidson County Planning	913 Greensboro Street Lexington, NC 27292	336-242-2229	scott.leonard@davidsoncountync.gov
Dr. Max Walser	Davidson County Commissioner	4695 Arnold Road Lexington, NC 27295	336-731-6242 336-596-5843C	mpwalser@lexcominc.net
Thom Hege	Robana Farm	2300 Enterprise Road Lexington, NC 27295	336-764-2824H 336-764-0856W 336-247-2824C	hshege@yahoo.com
Andy Miller	Davidson County Soil and Water Conservation District	301 E. Center Street Lexington, NC 27292	336-242-2075	andy.miller@davidsoncountync.gov
Lee Spencer	NC DENR/Public Water Supply Section	585 Waughtown Street Winston Salem, NC 27107	336-771-5070	lee.spencer@ncmail.net

THOSE WHO PROVIDED INFORMATIONAL PRESENTATIONS TO THE GROUP:				
Jenifer Carter	NC DENR Environmental Specialist Division of Water Quality	585 Waughtown Street Winston Salem, NC 27107	336-771-4957	jenifer.carter@ncmail.net
Beth M. Dirks	Davie County Assistant Manager	123 South Main Street Mocksville, NC 27028	336-753-6001	beth.dirks@co.davie.nc.us
Steve Googe	Davidson County Economic Development Commission Executive Director	297 DCCC Road Lexington, NC 27295	336-243-1900	slgooge@davidsoncountye dc.com
Lee Byerly	Utility Plant Superintendent Winston Salem/Forsythe County City County Utilities	Manson Meads Complex 2799 Griffith Road Winston-Salem, NC 27103	336-765-0130 x 1102 O 336-662-2947C 336-659-4300F	leeb@cityofws.org
Zoë Gamble Hanes	President, Yadkin Riverkeeper Association	10 South Stratford Road, Suite 27104 PO Drawer 25008 Winston-Salem, NC 27114	336-293-9078 336-293-9000 336-293-9030F	zgh@blancolaw.com

Step 3: Potential Contaminant Source Inventory

Using a United States Geological Survey (USGS) Topographic Map, with the Source Water Protection Area (SWPA) delineated and a list of potential contamination sources taken from the Source Water Assessment, a windshield survey was conducted. The potential contaminant source (PSC) inventory map shows the delineated area for the surface water source and the PCSs that, if released to the environment, could reasonably be expected to be a risk or a potential for contamination to the drinking water supply. PCS identification includes those facilities or sites regulated under a state or federal regulatory program and are identified in electronic databases in the source water assessment and facilities or sites that fall into the following list of example categories supplied by the US EPA.

Abandoned Wells	Laundromat/Dry Cleaners
Aboveground Storage Tank	Lift Stations
Airport	Machine Shops
Agricultural Facilities	Major Highways
Animal Feedlot/Waste Storage	Major Railroads
Asphalt Plant	Military Bases
Auto Repair	Mining
Body Shop/Salvage	Nurseries
Car Washes	Oil/Gas Pipeline
Cemetery	Oil Wells
Chemical Production	Photo Processor
Chemical Mixing/Storage	Printer
Drainage Canal	Power Lines
Dumps	Other Wells
Electroplaters/Metal Finishers	Refineries
Fertilizer/Pesticide Storage	Refinishing
Fertilizer/Pesticide Production	Road Salt
Fertilizer/Pesticide Mixing	Septic Systems
Funeral Homes	Substations
Gas Stations	Surface Water
Golf Courses	Sewage Plant
Grain Storage Bin	Underground Storage Tanks
Groundwater Remediation	Waste Piles
Holding Pond/Lagoon	Wood Preserving
Inactive/Abandoned Hazardous Waste Sites	
Injection Wells	
Laboratories	

Animal Operations Facilities (AWD) – There are four AWD permitted facilities within the Source Water Protection Area, two in Davie County and two in Davidson County, which according to a representative with the Division of Water Quality in the Winston Salem Regional Office (WSRO), are Animal Waste Deemed facilities, but are below the threshold for number of head for requiring permits by the state. The only one she was familiar with was Friendship Farms where she had been a number of times because of complaints. She stated that they had a discharge to the stream from a milk parlor, but that had been removed and they had tried a number of things. Now she said she thought they had dug a waste lagoon. She had done some testing and they didn't have any fecal or dissolved oxygen problems, but they did have sedimentation issues.

Septic Tanks – The entire SWPA uses private septic systems to dispose of waste. Municipal waste service is not available in that part of either Davidson or Davie County.

Reedy Creek Food Mart
3778 N. NC Highway 150
UST Section
WSRO
Pollution Incident # 30505

Three 4,000 gallon gasoline tanks were removed October 18, 2004. Soils were tested and there was 4,200 – 14,000 ppm gasoline. A Limited Site Assessment (LSA) was submitted in April of 2005 that completed DENR requirements.

Groundwater Sampling in MW-1

	<u>(ppb.)</u>	<u>2L Standards (ppb.)</u>	<u>GCLs (ppb.)</u>
Benzene	11,000	1	5,000
Toluene	25,000	1,000	257,000
Ethylbenzene	25,000	29	29,000
Xylene	9,400	530	87,500

Groundwater flow is to the northeast.

In May, 2005, Session Law 2004-124 letter, “where the Department shall establish the degree of risk to human health and the environment posed... At this time your release does not meet the requirements for further assessment or corrective action, and, therefore, you are not directed to proceed... payment or reimbursement of costs for the non-directed tasks will not be paid until after the Department has paid all claims for payment or reimbursement of costs for directed tasks.”

Former Piedmont Converting, Inc.
Kurz Transfer Products
4939 N. Highway 150
UST Section
WSRO
Pollution Incident # 5544

According to a Soil Assessment Report conducted in 1989, the facility is primarily engaged in coating polyester and aluminum for use in special occasion items and operated seven underground storage tanks (USTs) holding chemical products essential in producing the acetate coating material - 1,1,1-Trichloroethane, Ethanol, Ethyl Acetate, Butyl Acetate, Toluene, MEK and Acetone. One or more releases of volatile organic compounds (VOCs) occurred at the site prior to 1989, possibly due to overfilling of USTs. Groundwater samples collected at that time from four monitoring wells show total volatile organic compounds ranged in detectable quantities from 150 µg/L in MW-1 to 29,800 µg/L in MW-4. The primary constituents found in the groundwater are 1,1,1-Trichloroethane, 1,1-dichloroethane and methyl ethyl ketone.

An air sparging groundwater remediation system was in operation from April 1993 to January 2000 when the WSRO approved the permanent shutdown of the system. All air sparge wells were abandoned in 2007. An Annual Groundwater Monitoring Report indicated that the VOC

concentrations are stable or decreasing and have decreased significantly since 1989. However, in August of 2007, Kurz Transfer Products received a Notice of Two Violations of the 2N rules governing USTs. Violation 1 - Failure to provide corrosion protection for steel underground piping systems. Violation 2 – Failure to meet the requirements of secondary containment for hazardous substance USTs.

**Division of Water Quality
WSRO**

NPDES Permit Number NC 0070637 for Kurz Transfer Products is a permit to discharge wastewater under the National Pollutant Discharge Elimination System to Reedy Creek in the Yadkin-Pee Dee River Basin. The facility operates a 0.0015 MGD wastewater treatment plant that consists of a recirculating sand filter, a 1500-gallon septic tank, a dosing tank, a chlorine contact tank (outfall 001), and a discharge boiler blowdown (outfall 002). The facility was inspected on April 15, 2008 by the Division of Water Quality (DWQ) where a review of the submitted self-monitoring data for the period of March 2007 through March 2008 revealed two pH limit violations in September 2007 and March 2008 at outfall 002. Options to solve the problem are currently being discussed, including capturing the discharge (less than 1 ½ gallons per day) and allowing it to evaporate off, or pumping the discharge to the sand filter system. The DWQ should be contacted once a solution is in place.

NCG050288 Kurz Transfer Products - Three stormwater outfalls are monitored as required and records were complete. The Stormwater Pollution Prevention Plan is adequate, though the site map needs to be updated to show that stormwater outfall #2 no longer exists. Secondary containment is provided where required.

**Hazardous Waste Section
Raleigh Regional Office (RRO)
NCD116001280**

A Notice of Violation had been issued to Kurz Transfer Products in December of 2006 for not having training records available for 2006, having three satellite containers adjacent to printing machines open, for not having “Hazardous Waste” labels on the three containers, and for not having a system for tracking the starting accumulation dates of universal waste. The facility had been reinspected in January of 2007, and had corrected all of the noncompliance issues.

**150 Mart
4423 North NC Highway 150
UST Section WSRO
Pollution Incident # 21438**

The site has been transferred from the Winston Salem Regional Office to the State Trust Fund in Raleigh for cleanup, probably because the responsible party cannot be identified. The site is ranked Low 55R. Currently the State is cleaning up sites that are ranked higher than 150.

**Pallet Resource of North Carolina, Inc.
4572 North Highway 150**

Material Safety Data Sheets (MSDS) sheets were obtained from Pallet Resource, Inc. for dyes used in their mulch dying process, copies of which are included in the Appendix. It is believed

that the only concerns with the dyes entering the water are their potential to discolor the water and disrupt the photosynthesis process and that the dye constituents are not toxic.

Division of Water Quality WSRO

Certificate of Coverage #NCG210212, Pallet Resources of North Carolina, Inc. – A stormwater inspection of the facility was conducted on May 1, 2008. Although there were no deficiencies of the permit requirements noted during the inspection, other observations were made as follows:

- Absorbent materials had been poured onto small spills in a number of areas throughout the site.
- There was no secondary containment provided for the used oil drum, which sits next to a concrete containment area for an aboveground tank containing kerosene. There were at least two other aboveground storage tanks containing diesel fuel that did not have secondary containment.
- There is a diesel fuel dispenser without secondary containment near the office, which it was stated is a double-hulled tank.
- There were two old trailers adjacent to an unnamed tributary to Reedy Creek, each with less than 25 55-gallon drums of mulch colorant in them. If more than twenty-five (25) 55-gallon drums are stored in close proximity to one another, secondary containment is required.
- The latex paint spray area is exposed to rainwater.
- There were small amounts of debris from the site observed in the creek that could easily be removed.

Action Items

- Make sure, when absorbent materials are used to soak up spills, that the absorbent material is then picked up and properly disposed of.
- Provide Secondary Containment for the used oil drum, and the 55-gallon drums of mulch colorant.
- Do not perform latex paint spraying operations during storm events, and keep absorbent materials handy should it rain before paint is allowed to dry.
- Provide adequate measures to prevent debris from falling into the creek, such as placing a berm or other barrier between the mulch piles and the bank of the creek. It is their responsibility to remove any items that do fall into the creek.
- Update the Stormwater Pollution Prevention Plan (SPPP) to account for any new secondary containment or other BMPs put in place as a result of this inspection.

A follow-up inspection will be scheduled at the facility in approximately 6 months and the facility is expected to cooperate with the above requests.

No violations of environmental rules for other facilities within the area with various permits could be found, but Section 6: Review SWPP Annually and Update every three years, recommends that permitting and regulation database searches be updated annually.

Growth and Development – According to the Images of Davidson County website, the County’s population was approximately 157,000 people in 2006 which is projected to increase to over 174,000 by 2020. At present, Davidson County has five incorporated municipalities, Lexington, the county seat, Thomasville, Denton, and Wallburg, and Midway.

The table below shows the potential contaminant sources (PCSs) listed in the order of the risk they might pose to the surface water intake. In determining this order, the PCSs’ proximity to or likelihood that there is a direct pathway to the intake, quantity of contaminants on site, potential of health risk and history of compliance with environmental rules were taken into consideration. Risk was estimated and PCSs are grouped into categories of higher, moderate and lower risk.

PSC Site	Owner Contact	Potential Contaminant
Higher Risk Sources		
Kurtz Transfer Products 4939 N. NC Highway 150 Lexington, NC (Piedmont Converting, Inc.)	336-249-2169	Generator Class NCD116001280 LQG NPDES NCG050288 NCG0070637 Commercial Printing, Gravure Receiving Stream Reedy Creek UST Site 0-027119 Pollution Incident 5544 Groundwater Contamination Diesel
Pallet Resource of NC Inc 4572 N NC Hwy 150	800-457-7762 336-731-8338	Dye Mulch - Material Safety Data Sheets indicate that the dye that is used for mulch is water based and non-toxic. NCG210212 Stormwater
150 Mart 4423 N. NC Hwy 150		Pollution Incident #21438
Crossroads Williams Transcontinental Gas Pipeline Corp. 650 Becky Hill Road	336-787-3555	Tier II Site 750F1D6D69C0C56585256CBC004 E2F9E RCRA Gen./Trans. Facility NCD060299765 SQG
Cap’n Stevens Seafood Restaurant NCSR 170/Reedy Creek Lexington, NC 27295 336-731-8470		NPDES Permit NC0059218 Discharging 100% Domestic <1MGD Receiving Stream Reedy Creek

Old Country Store 6861 W Hwy 64 Lexington, NC 27295 336-787-5806	United Oil of the Carolinas PO Box 68 Gastonia, NC 28054-0068	UST Permit 0-011599
Moderate Risk Sources		
Reedy Creek Food Mart 3778 N Hwy 150	336-787-4441	Pollution Incident 30505
Thousand Trails 192 Thousand Trails Drive		NPDES Permit WQ0004972 Lagoon Spray Irrigation
Yadkin River Angus Hampton Road	Richard Childress 336-766-3414	
Childress Vineyards 1000 Childress Vineyard Road	Richard Childress 336-236-9463	
Tracy's Towing and Frame Shop 2252 N NC Hwy 150	336-787-3555	Auto Repair
Justice Tire & Automotive 2370 N Hwy 150	336-787-4093	Auto Repair
City of Lexington Power Station (Maple Grove Cemetery next door)	336-248-3920	
Carolina Customs Body & Frame Shop 5006 N Hwy 150	336-764-1993	Auto Repair
B & E Mart 2052 N Hwy 150 336-787-5554	Hill Oil Company PO Box 367 Lexington, NC 27293-0367	UST Permit 0-034635
Currytown Grocery 2181 N NC Hwy 150 Lexington, NC 27295	336-787-4055	UST Permit 0-012729
Servco 3778 Highway 150		USTs
384 Highway 150 Beside Daniels Tire		5 Fuel ASTs various sizes
H&C Hereford Farms (Progressive Soil) 4506 Arnold Farm Road	336-731-3418	AWD290030 Animal Operations
Circle R Mart 4222 W Center St Ext	336-248-8681	

C&R Garden Center 4650 W Center St Ext	336-787-4888	Small Nursery
Reedy Creek Tire & Auto 4866 N Hwy 150	336-764-3375	Auto Repair
Harry's Automotive Highway 150	336-787-5460	Auto Repair
Reedy Creek Tractor Co. 3721 N Hwy 150	336-787-5241	Engine Repair
Transmission Shop		
Booster Station Highway 150		
Friendship Farm		Animal Operations AWD290023
Charlie Barnes Farm		Animal Operations AWD3000005
William R. Carter Farm		Animal Operations AWD3000006
Yadkin Star Baptist Church 835 Koontz Road	336-787-4166	Cemetery
Happy Hill Farm	Henry C. Sink, Jr.	
Special Fab & Machine, Inc. 4133 Old Salisbury Rd	336-956-2121	
Lower Risk Sources		
T & T Convenience 689 S. Hwy 150	Hill Oil Company PO Box 367 Lexington, NC 27293- 0367 336-766-5504	UST Permit 0-033165
Shoaf Precast Septic Tank, Inc. 4130 US Hwy. 64 Lexington, NC 27295	336-787-5826 336-787-2826F	
Hill Oil Company, Inc. 6431 Highway 150 Lexington, NC 27295	336-764-0538	Non Discharge WQ0015102 GW Remediation
B & B Automotive Highway 150		Auto Repair
Daniels Tire Service 634 N Hwy 150	336-787-5233	Auto Repair
Fulton United Methodist Church 801 North		Cemetery

Elbaville United Methodist Church 801 North		Cemetery
Shiloh United Methodist Church 943 Hwy 150	336-787-5566 Parsonage 336-787-5916	Cemetery
Davidson Water, Inc. Water Treatment Plant 388 Koontz Rd	336-787-5800	Treatment Chemicals
Leonard's Junkyard Lanier Road		

Step 4: Management of the Drinking Water Protection Area

Prior to beginning this SWP planning process Davidson County officials recognized the importance of protecting its surface water intake. The county has chosen to increase protection of the intake by requiring that single family residential development will not exceed one dwelling unit per acre and a minimum fifty foot vegetative buffer for any buildings along perennial streams instead of the state required one dwelling unit per half acre and a 30 foot vegetative stream buffer.

Davidson Soil and Water Conservation District, a local unit of government created to address natural resource concerns within Davidson County, focuses on agricultural operations with special attention to measures that control erosion, improve soil quality, and protect water quality, provides technical and cost-sharing assistance to land users who choose to install conservation measures. Conservation measures to protect surface water might include conservation planning, conservation tillage, strip cropping, terraces, diversion, grassed waterways, filter strips, field borders, stream bank stabilization, animal waste management systems, nutrient management and many others. Cost-sharing for installing conservation measures is provided through various State, Federal, and grant programs that provide up to seventy-five percent of the cost for installing approved measures. These programs include the NC Agricultural Cost Share Program, the USDA Environmental Quality Incentives Program, the Conservation Reserve Program, and grant programs through the NC Foundation for Soil and Water Conservation. District programs also include conservation measures for non-agricultural land users. Assistance will be provided through the Community Conservation Assistance Program (CCAP) created to help in the management of storm water runoff on non-agricultural land. Measures included in the CCAP include backyard rain gardens, riparian buffers, backyard wetlands, stream bank and shoreline protection, vegetation establishment, and several other measures. As a result of this SWP Planning Process, beginning July 1, 2008 properties located within the Davidson Water, Inc. drinking water protection area will be given priority points on the Soil and Water Conservation District's NC Ag Cost Share Worksheet.

During a succession of meetings held from November of 2007 through August of 2008 (minutes are included in the appendix), the Stakeholder Committee completed brainstorming activities to help them identify the major areas of concern within their drinking water protection area and how they could best protect the water quality in the area draining to the drinking water intake.

The following questions were asked of committee members individually in a roundtable fashion. All the answers received were discussed and recorded and later a list of the compiled answers was sent to each committee member for them to prioritize.

1. What activities could improve or protect the quality of drinking water derived from the Yadkin River?
2. What do you see as major impediments to accomplishing source water protection objectives?
3. What strategies could make a protection plan dynamic? How can this effort be made "alive" and ongoing such that it has legs and gains momentum?
4. Positive promotion may attract others toward your objectives. How can your efforts best be promoted?

The prioritized solutions to perceived problems within the drinking water assessment area were combined into three major elements to become the management section of the Source Water Protection Plan. Once the Major Elements that the stakeholder group wanted to address were identified, assignments were made to further refine the committee's ideas. Subgroups were asked to write up each element providing very specific answers to what, who, how and when each of the elements would be accomplished. The elements are listed on the following page and the specific procedure to accomplish each element follows.

Major Elements:

Element	Who	When
Short Term		
1. Regulations and enforcement – Add Water Quality Policies to Davidson Counties Land Development Plan to encourage the protection of the Yadkin River and its tributaries.	Davidson County Planning and Zoning Department Davidson County Board of Commissioners, and volunteers from the SWP Stakeholder Committee	2009
2. Establish and maintain permanent partnerships with local groups or entities with the ability to impact Yadkin River's water quality, (Yadkin Riverkeepers, Stormwater Smart Program, Davidson County Soil and Water Conservation District, Winston Salem Wastewater Treatment Plant, Davie County, local industry, etc).	Davidson Water, Inc. system personnel and volunteers from the SWP Stakeholder Committee	2008
3. Organize a Public education, communication, and outreach Program to target all age groups throughout Davidson county. (Schools K-12, Civic Organizations, Davidson County Board of Commissioners, etc.)	Davidson Water, Inc. system personnel partnering with the Davidson County Soil and Water Conservation District	2008-2009
Long Term		
4. Support the transfer of enforcement of the state Erosion and Sedimentation Control Ordinance to Davidson County.	Yadkin Riverkeepers Friends of Rich Fork	2011
5. Support the creation of a local Stormwater Control Ordinance, promote education and require developers to contain stormwater generated by development.	Department of Public Works	

REGULATIONS AND ENFORCEMENT

Every waterway in Davidson County is affected by the land use adjacent to it, and upstream from it. The use of land determines the type and quantity of runoff that is produced that flows into the streams and creeks that are tributaries to our water supply sources. Runoff can carry contaminants such as gasoline and oil from roads and parking lots, sediment from erosion and chemicals from industry. Davidson County currently regulates runoff beyond what is required by the state Watershed Protection Ordinance created in 1994. It requires every new home within the watershed protection area or source water protection area to be placed on a minimum of 40,000 square feet of property. The purpose is to allow runoff from rooftops and driveways enough land to soak into the soil before reaching other impervious surfaces and then streams. The Ordinance also requires all non-residential development or multi-family residential developments to cover no more than 24% of their land with impervious surface. There is a limited amount of land in each protected watershed where the Board of Commissioners may allow a non-residential project to cover up to 70% impervious surface however, this allowance only makes up 10% of the total watershed area. And finally, the Ordinance requires all structures in a protected watershed area to be at least 50 feet from a perennial stream. These requirements are enforced through the Davidson County Planning Department. There are other ways that local government can mitigate runoff.

Under current zoning before anything that is not residential can be built in the source water protection area the proposed development must go before the planning and zoning department. Any nonresidential use of property has to be rezoned by the Board of Commissioners (BOC). The Land Development Plan is made up of seventeen different sections that address things such as commercialization, residential growth, air quality, and water quality. The Plan is made up of policies that guide the County in addressing each issue. Section 14 is for Water Quality.

Acton Plan

The Source Water Protection Committee (SWPC) will formally recommend to the Davidson County Board of Commissioners that the following new policies be added to the current Water Quality Policies.

14.5: The Yadkin River watershed is the water supplier for the county and should therefore, be regarded as sensitive when making land use decisions,

14.6: Land uses that can be recognized as harmful or potentially harmful to water quality, either by its proximity to tributaries, or by the products it uses, manufactures, or sells, should be discouraged,

These policies would be used by staff and the BOC to refuse to allow activities that might be detrimental to water quality.

ESTABLISH AND MAINTAIN PARTNERSHIPS

Drafters of our state constitution found that protection and conservation of the state’s natural resources were essential to create a sustainable future and provide for a rich quality of life. The members of the SWPC believe it is our challenge to continue this tradition and develop ways to protect and enhance our water basin.

Water is a resource we use daily, yet we rarely give a thought to where it comes from and where it goes to be disposed of. We expect safe drinking water and environmentally sound disposal of our wastewater. We also expect businesses, those already in our watershed or those considering locating in our watershed, will find clean plentiful water for their operations and thus follow sound environmental policy to keep it that way. We assume that farmers use best farming practices to prevent erosion and disposal of animal waste and that buffers are set and maintained.

The reality is that we face significant challenges to our environment and public health. These come from a growing population, concentration of that growth, increased demand for water and growing volumes of wastewater and stormwater for disposal. When coupled with complacency, we risk missing crucial opportunities to manage our water resources. It is imperative that there is continual monitoring of the Yadkin River for water quality and local laws that affect water quality in the Yadkin River basin.

The Davidson Water, Inc. SWPC feels that by partnering and belonging to organizations that show concern for protecting our water resources we will enhance the quality of water in our basin. “An ounce of prevention is worth a pound of cure,” is more relative today than ever. With it comes source water protection. “An ounce of action is worth a ton of theory,” also applies.

Alliances should be formed with the newly formed Yadkin Riverkeepers, the Stormwater Smart Program, Winston Salem Utility Commission, cities and governmental entities that are served by Davidson Water, Inc. Liaisons should be established with neighboring Davie County and with any other entity with the ability to impact water quality in the Yadkin River Watershed area.

Action Plan

1. Yadkin Riverkeepers - An effective relationship with the Yadkin Riverkeepers is an excellent opportunity to keep Source Water Protection initiatives alive. Protecting our water before it reaches our intakes makes treatment easier and more economical. First we should concentrate on partnering with the Riverkeepers, as this should be a very active group and their main or only emphasis will be on the Yadkin River and its tributaries to maintain or improve water quality. They can truly be the Watch Dog of the Yadkin River.

- A. A member of the SWPC will become a Yadkin Riverkeeper board member if possible
- B. At least two members of the Source Water Protection Committee (SWPC) will join the Yadkin Riverkeepers Organization and at least one member will attend all of their meetings.
 - i. A copy of minutes will be obtained for all of their meetings.
 - ii. A copy of the charter will be obtained.
 - iii. The importance of the Davidson Water, Inc. intake delineated source water protection area will be emphasized at their meetings and during clean-ups that take place along the river.

- C. Sampling records will develop a history of water quality (database). Expanded monitoring can give meaningful information about the state of the drinking water supply.

2. Quarterly SWPP Meetings – Davidson Water, Inc. will continue to hold quarterly meetings with Source Water Protection being the objective. An agenda will be developed that will facilitate and encourage the exchange of ideas to improve water quality within the source water protection area. The original SWPC will be invited and examples of other organization representatives who might be invited include but won't be limited to:

- A. Winston Salem Wastewater Treatment Plant,
- B. Winston Salem Water Treatment Plant,
- C. Winston Salem government officials,
- D. Stormwater Smart Program,
- E. Davie County government officials – Soil and Water Conservation
- F. North Davidson Chamber of Commerce representing local industry within the source water protection area,
 - 1. Pallet Resources
 - 2. Kurz Transfer Products
 - 3. Reedy Creek Food Mart
 - 4. 150 Mart
- G. City of Lexington officials,
- H. City of Thomasville officials
- I. The Handy Sanitary District,
- J. The City of Denton,
- K. The City of High Point
- L. City of Archdale
- M. Randolph County
- N. Girl Scouts groups and Sheriff's Department – inmates for litter pick-up in SWP area during Big Sweep,
- O. Land Trust Director – Jason Walser
- P. and any others with the ability to impact or protect water quality in the watershed.

PUBLIC EDUCATION, COMMUNICATION AND OUTREACH – It has been stated repeatedly by the SWPC that the importance of an effective education, communication and outreach program is crucial to the success of the entire Source Water Protection effort. Education will also be an important part of each element of this plan. It will be required to present a proposal to the County Board of Commissioners and will also be used to continue to hold SWP meetings, so a good campaign must be developed.

Action Plan

The SWPC will organize a public education, communication and outreach campaign that will target all age groups within Davidson and the surrounding counties that Davidson Water, Inc. serves. The campaign objective will emphasize the importance of a plentiful and clean drinking water source to the community.

1. Stormwater Smart – Davidson Water, Inc. will use the Stormwater Smart Program to help provide educational information to the citizens of Davidson and surrounding counties. The Program currently maintains a website designed to distribute educational material and it has a link to Davidson County that is not being used. A member of Davidson County Planning and Zoning who serves on the SWP Committee is also the contact for the county Stormwater Smart Program. Educational information about Source Water Protection and Stormwater BMPs will be collected and made available to the public through the Davidson County link on the stormwatersmart.org website. The Stormwater Education Coordinator contact phone number is 336-294-4950.

Since the Stormwater Smart Program is already working on water quality education in the County's schools, a contact will be made with the organization and the possibility of incorporating information about the Davidson Water, Inc. Source Water Protection Plan and education about methods to protect the area around the surface water intake will be proposed. These methods might include, but not be limited to:

- A. Promotion during school announcements
- B. Highly publicized poster contest and promotion of the winner – prize donated from area industry? Winning poster displayed in high traffic areas - Davidson Soil and Water Conservation District already does a poster contest about different topics some of which relate to protecting source water. It might be better to cooperate with this contest somehow.
- C. Extension services “Clean Streams” program?
- D. Make educational material available through websites.
 - 1. Thirstin's Drinking Water Games & Activities K-12 CD
EPA Office of Water 816-C-04-008
 - 2. Consider the Source – An Interactive Guide to Protecting America's Drinking Water CD
EPA Office of Water 816-C-04-003
 - 3. Water on Tap: What You Need to Know CD
EPA Office of Water 816-C-04-006
 - 4. Virtual Water Treatment Plant Tour CD
EPA Office of Water 816-C-06-002
 - 5. USGS website has a number of educational tools available
<http://education.usgs.gov/>

2. Davidson Water, Inc.

- A. Source Water Protection educational information will be made available on the Davidson Water, Inc. website.
- B. Research the possibility of sending e-mail notifications to water customers asking them to click on a link for information about protecting their drinking water as an educational tool.
- C. Davidson Water bills – 3 sentence message or asking customers to visit the website for more information.
- D. Consumer Confidence Reports
- E. Present Source Water Protection Information during Water Week.

3. Public notices - either printed or sent by organizations via e-mail

- A. Newspaper, Newsletters – Generate another press release
- B. Small community papers – Focus
- C. Church newsletters
- D. School newsletters

4. Radio, TV

- A. Public Service Announcements or News Segments
- B. Personal Interviews on morning radio talk shows (WSJS, WLXN)

5. Inserts into other Utility bills

- A. City of Lexington
- B. City of Thomasville
- C. Time Warner
- D. Lex Com

6. Presentations by Water Professionals:

- A. Civic groups, organizations, clubs
- B. County Commissioners, City Councils
- C. Town Hall type meetings

Other – Develop an icon or slogan to promote drinking water protection

“Water is Life”



Long Term Goals

1. Support the transfer of enforcement of the state Sedimentation and Erosion Control Ordinance to Davidson County. Encourage the adoption and implementation of a Sedimentation and Erosion Control Ordinance which regulates land disturbing activities where more than one contiguous acre is disturbed that will be enforced at the county level. Presently, the State of North Carolina enforces these regulations under a state-wide Ordinance. However, it is common knowledge that the State would rather have each County create their own Ordinance due to the limited amount of staff the State has in relation to the enormous amount of land in each region. If desired, Davidson County could create and adopt its own Erosion Control Ordinance specifically designed for Davidson County with knowledge of its particular terrain, water resources, growth patterns and conservation goals.

2. Support the creation of a local Stormwater Control Ordinance. The State of North Carolina recently passed Phase II Stormwater Regulations for counties that are designated as urban in development. Davidson County escaped that classification, and is therefore not under the Phase II requirement. However, due to the number of designated impaired streams inside Davidson County, officials have discussed the possibility of creating a local Stormwater Control Ordinance. Steps have already been taken to educate local school children about stormwater issues in anticipation of future State regulations. If a local Ordinance was created, developers of land could be required to contain, within their property, the stormwater generated by their development.

Budget for 2009

Regulations and Enforcement	\$	250.00
Establish and Maintain Permanent Partnerships	\$	1,000.00
Organize a Public Education, Communication and Outreach Program	\$	2,500.00
Long Term Initiatives	\$	<u>250.00</u>
 TOTAL	\$	 4,000.00

Step 5: Contingency Plan

For additional information in the case of an emergency, please consult Davidson Water, Inc.'s Emergency Response Plan. The primary person responsible for implementing the emergency contingency plan is the Manager. The back-up person responsible for implementation is the Plant Superintendent.

Should a major oil or chemical spill occur within the Source Water Protection Area, appropriate emergency agencies would be notified. The first of these would include the Davidson County Fire Department and the Davidson County Emergency Coordinator.

Davidson County Fire Department

911

**Davidson County Emergency Management
Governmental Center
913 Greensboro Street
Lexington, NC 27292
Phone 336-242-2270
Fax 336-249-7863**

Two large 2000 kw generators for emergency use and load management have been installed at our water plant. Three portable units can be used at booster pump stations during power outages to keep members with water service. A large 750 kw generator has been installed at the Hyattown pumping station. They also have a 350 kw generator at the office facility. A new telemetering system working off of radio signals has been installed to control tank levels and pump station status. They have installed a mapping system of our water lines displaying valve locations, hydrant locations and pressure, meter locations and much more valuable information. Phone calls after hours are automatically transferred to the water plant, which is manned 24 hours a day.

If evidence exists that indicates there is contamination in the system, it will immediately be taken off line and not returned to service until it is determined that water quality from the intake is in compliance with standards governing public water supplies. If it were determined that contaminants had entered the distribution system, residents would be notified by radio, television and newspaper not to drink the water until further notice. The regional office of the Public Water Supply Section would be notified immediately of the situation and asked for assistance. Sampling (i.e. bacteriological, VOCs, SOCs, etc.) would begin to determine the contaminant involved and the extent of contamination. A systematic flushing of the distribution system would begin with follow-up sampling conducted as needed until the system was determined to be free of contamination and in compliance with standards governing public water supplies. After consultation with the Public Water Supply Section, residents would be notified that Davidson Water, Inc. System's water was once again safe for consumption.

Short and Long term contingency plan – Davidson Water, Inc. has 27 tanks in the system with the capacity to store 15,625,000 gallons for immediate use in an emergency. In the event of a long term disruption of water supply the county is interconnected with the Cities of Winston Salem, Lexington, High Point, Thomasville and Archdale and Handy Sanitary District, so they could receive water from or supply water to these entities.

Emergency Contact Numbers and Additional Resources:

Name	Resource
Primary person responsible for implementing emergency contingency plan Manager Gregg Stabler Cell – 336-731-5525	Emergency Response
Secondary person Water Plant Superintendent Ron Farnsworth Cell – 336-248-7691	Emergency Response
Public Water Supply Section 1634 Mail Service Center Raleigh, NC 27699-1634 919-715-2853	Technical Assistance Regulatory guidance
NC Department of Environment & Natural Resources Winston Salem Regional Office 585 Waughtown Street Winston-Salem, NC 27107 336/771-5000 Main FAX 336/771-4631 Water Quality Main FAX 336/771-4630	Regional Water Quality Section, Public Water Supply Section, UST Section, Groundwater Section, Hazardous Waste Section, Spills, Regulatory information and technical assistance
Department of Transportation State Traffic Engineer Mr. Ken Ivey 1561 Mail Service Center Raleigh, North Carolina 27699-1561 252-733-3915	Emergency spill notification
NC Army National Guard 3515 Armory Drive 201 W. 9 th Avenue Lexington, NC 336-248-0800 High Point, NC 336-889-4256 130 Culbreth Avenue Thomasville, NC 336-472-7032	Emergencies, as available: Generators, 400-gallon water trailers, bottled water, transportation
NC Rural Water Association Post Office Box 590 Welcome, NC 27374 336-731-6963 www.ncrwa.com	Technical assistance Education
North Carolina Cooperative Extension Service Campus Box 7602 North Carolina State University Raleigh, NC 27695-7602 919-515-2811	Educational brochures, publications

http://www.ces.ncsu.edu/ http://www.soil.ncsu.edu/assist/homeindx.html	HomeASyst Fact Sheets
US EPA Regional Office Region IV Atlanta Federal Center 61 Forsythe St. Atlanta, GA 30303-8960 www.epa.gov http://www.epa.gov/owm/septic/pubs/septic_sticker.pdf http://www.epa.gov/epaoswer/osw/ http://www.epa.gov/nscep/ordering.htm http://www.epa.gov/watertrain/pdf/swpbmp.pdf	Educational brochures, publications
Division of Pollution Prevention and Environmental Assistance Ron Pridgeon 1639 Mail Service Center Raleigh, NC 27699-1639 919-715-6517 www.p2pays.org	Technical and non-regulatory assistance to reduce waste
National Small Flows Clearinghouse West Virginia University Post Office Box 6064 Morgantown, WV 26506-6064 800-624-8301 www.nesc.wvu.edu/nsfc/nsfc_index.htm	Pamphlets, brochures, training aids
North Carolina Division of Water Quality 512 N. Salisbury St. Raleigh, NC 27604 919-733-7015 http://h2o.enr.state.nc.us/nps/ http://h2o.enr.state.nc.us/basinwide/ http://h2o.enr.state.nc.us/	Regulatory Guidance, pamphlets, brochures
eCivis Grants Network http://www.ecivis.com/indexFlash.cfm	Fee based service that helps communities to apply for grants.

Step 6: Review SWPP Annually and Update every three years:

Date Reviewed	Reviewed by	Changes or Comments

Davidson Water, Inc. is aware that an effective Source Water Protection Plan is an ongoing process. Public water system officials or planning team members will review public records available at hazardous waste and waste disposal facilities and potential contamination source sites located within the source water protection area annually in order to ensure program compliance. Every three years, the contaminant source inventory will be updated using the same procedures used to develop the original contaminant source inventory.

Appendix

THE DISPATCH

LEXINGTON, N.C.

SATURDAY, DECEMBER 8, 2007

WWW.THE-DISPATCH.COM

Davidson Water commits to protect water

Officials from Davidson Water are initiating a voluntary Source Water Protection Plan for their Yadkin River intakes and the surrounding watershed.

The resulting plan will define strategies to protect public drinking water derived from this source. The cooperative effort will encourage public participation and promote partnerships with other groups and North Carolina agencies.

"We are very excited that Davidson Water has taken this step," said Jay Frick of the N.C. Department of Environment and Natural Resources. "Their effort is purely voluntary and demonstrates a proactive commitment to protect drinking water. We are eager to assist Davidson Water with this effort."

Other groups, such as the N.C. Rural Water Association, will play an essential role in the process.

The Source Water Protection Team is made up of Max Walser, county commissioner; Scott Leonard, Davidson County planner/watershed administrator; Thom Hege, Robana Farms; Ronald Farnsworth, Davidson

Water plant superintendent; Tim Gwaltney, Davidson Water lab tech; and Gregg Stabler, manager of Davidson Water. Frick and Lee Spencer from DENR will provide their expertise to the team along with Debbie Maner, source water protection specialist with North Carolina Rural Water.

Any citizen or local group wishing to participate is encouraged to contact Davidson Water. Much help will be needed once action plans are finalized by the Source Water Protection Committee. Stabler will lead the effort to initiate source water protection.

"We have traditionally enjoyed high-quality drinking water, and we want to keep it that way," Stabler said. "Maintaining clean drinking water is not only good for public health but has economic advantages as well."

An approved protection plan will give Davidson Water priority to obtain grants and low-interest loans that can be used to improve the system and implement watershed protection measures.

Davidson Water removes 12 million gallons on an average and almost 18 million gallons on a max-

imum day from the Yadkin River and supplies drinking water to approximately 140,000 people. In a recent analysis by DENR, the Davidson Water drinking assessment area scored a "higher" susceptibility for contamination. A susceptibility rating of "higher" does not imply poor water quality. The rating indicates the potential for the water source to become polluted by contaminant sources within the assessment area.

An initial step was taken Oct. 6 when Davidson Water employees, along with others, participated in the "Big Sweep" concentrating on areas above their Yadkin River intakes. With the help of Girl Scout Junior Troop 61 and county employees, a large area was cleaned of all types of trash.

More information regarding drinking water quality and Davidson Water can be found online at deh.enr.state.nc.us/pws/SWAP and then by clicking "SWAP Reports" at the bottom of the page. Information and updates on the Source Water Protection Plan can be found on Davidson Water's Web site at www.davidsonwater.com.

www.the-dispatch.com

References

North Carolina Department of Environment and Natural Resources, Division of Environmental Health, Public Water Supply Section, The North Carolina Source Water Protection Guidebook, Developing a Local Surface Water Protection Plan, 2006

North Carolina Department of Environment and Natural Resources, Division of Environmental Health, Public Water Supply Section, North Carolina's Source Water Assessment Program Plan, October 21, 1999

North Carolina Department of Environment and Natural Resources, Division of Hazardous Waste and Division of Water Quality, Winton Salem Regional Office and Raleigh Office files

Davidson Water, Inc. website

<http://www.davidsonwater.com/general-info/general-info.asp>

Images of Davidson County website

http://imagesdavidsoncounty.com/index.php/site/article_overview/community_profile/

Glossary of acronyms and abbreviations

AST-Above ground Storage Tank

BMP-Best Management Practice

CAP-Corrective Action Plan

DPPEA-Division of Pollution Prevention and Environmental Assistance

DWA-Drinking Water Assessment Area

DWM-Division of Waste Management

DWQ-Division of Water Quality

EPA-Environmental Protection Agency

GPD-gallons per day

Gpm-gallons per minute

NCDEH-North Carolina Department of Environmental Health

NCDENR-North Carolina Department of Environment and Natural Resources

NOV-Notice of Violation

NPDES-National Pollutant Discharge Elimination System

PCS-Potential Contamination Source

Ppb-parts per billion

Ppm-parts per million

PWS-Public Water Supply

PWSS-Public Water Supply Section

SOC-Semi-volatile Organic Compound

SPCC-Spill Prevention Control and Countermeasures

SWAP-Source Water Assessment Program

SWP-Source Water Protection Plan

UIC-Underground Injection Control

UST-Underground Storage Tank

µg/L-micrograms per liter=parts per billion

Mg/L-milligrams per liter=parts per million

VOC-Volatile Organic Compound