City of Laurinburg
North Carolina

WELLHEAD PROTECTION PROGRAM

PWSID: 03-83-010

SCOTLAND COUNTY
MAY 30, 2017

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NC RWA
TRAINING SUPPORT

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BACKGROUND

In 1986, Safe Water Drinking Act (SWDA) amendments added Section 1428, "State Programs to Establish Wellhead Protection Areas", which requires each state to develop a program to "protect wellhead areas within their jurisdiction from contaminants which may have any adverse effects on the health of persons." The term wellhead protection area is defined in the law as "the surface and subsurface area surrounding a water well or well field, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or well field." North Carolina's Environmental Protection Agency (EPA) approved Wellhead Protection Program (WHPP) provides technical support to local governments and public water supply systems in their endeavors to develop and implement their own Wellhead Protection Plans.

North Carolina's objective in developing a protection plan is to provide a process for public water system operators to learn more about their groundwater systems and how to protect them. Wellhead Protection Plans allow communities to take charge of protecting the quality of their drinking water by identifying and carefully managing areas that supply groundwater to their public wells.

Regulations of the **Division of Water Resources (DWR), under the Department of Environmental Quality** require wellhead protection measures for any public water supply wells to be used as a community or non-transient, non-community water system to meet the following requirements:

1. The well shall be located on a lot so that the area within 100 feet of the well shall be owned or controlled by the person supplying the water. The supplier of water shall be able to protect the well lot from potential sources of pollution and to construct landscape features for drainage and diversion of pollution.
2. The minimum horizontal separation between the well and known potential sources of pollution shall be as follows:
    (a) 100 feet from any sanitary sewage disposal system, sewer, or a sewer pipe unless the sewer is constructed of water main materials and joints, in which case the sewer pipe shall be at least 50 feet from the well;
    (b) 200 feet from a subsurface sanitary sewage treatment and disposal system designed for 3000 or more gallons of wastewater a day flows, unless it is determined that the well water source utilizes a confined aquifer;
    (c) 500 feet from a septage disposal site;
    (d) 100 feet from buildings, mobile homes, permanent structures, animal houses or lots, or cultivated areas to which chemicals are applied;
    (e) 100 feet from surface water;
    (f) 100 feet from a chemical or petroleum fuel underground storage tank with secondary containment;
    (g) 500 feet from a chemical or petroleum fuel underground storage tank without secondary containment;

(h) 500 feet from the boundary of a ground water contamination area;

(i) 500 feet from a sanitary landfill or non-permitted non-hazardous solid waste disposal site;

(j) 1000 feet from a hazardous waste disposal site or in any location which conflicts with the North Carolina Hazardous Waste Management Rules cited as 15A NCAC 13A;

(k) 300 feet from a cemetery or burial ground; and 100 feet from any other potential source of pollution.

1. The Department may require greater separation distances or impose other protective measures then necessary to protect the well from pollution; the Department shall consider as follows:

   (a) The hazard or health risk associated with the source of pollution;

   (b) The proximity of the potential source to the well;

   (c) The type of material, facility or circumstance that poses the source or potential source of pollution;

   (d) The volume or size of the source or potential source of pollution;

   (e) Hydrogeological features of the site which could affect the movement of contaminants to the source water;

   (f) The effect which well operation might have on the movement of contamination;

   (g) The feasibility of providing additional separation distances or protective measures.

2. The lot shall be graded or sloped so that surface water is diverted away from the wellhead. The lot shall not be subject to flooding.

3. When the supplier of water is unable to locate water from any other approved source and when an existing well can no longer provide water that meets the requirement of this Subchapter, a representative of the Division may approve a smaller well lot and reduced separation distances for temporary use.

In addition, communities are encouraged to establish wellhead protection plans, which include the following:

1. The formation of a wellhead protection committee to establish and implement the wellhead protection program whose role it is to conduct a potential contaminant source inventory, provide options for the management of the WHP area, seek public input into the creation of the WHP plan, seek approval of the WHP program and to implement the WHP program;

2. Delineation of the contributing areas of the water sources;

3. Identification of potential contamination sources within the wellhead protection area;

4. Develop and implement wellhead protection area management actions to protect the water sources;
5. Develop an emergency contingency plan for alternative water supply sources in the event the groundwater supply becomes contaminated and emergency response planning for incidents that may impact water quality;
6. Development of a public education program;
7. Conduct new water source planning to insure the protection of new water source locations and to augment current supplies.

Wellhead protection for public water supply wells is a voluntary program, but water systems across the state are encouraged to take the above steps in protecting all groundwater sources.

The Public Water Supply Section (PWSS) provides the final approval for WHP Programs. The NC Wellhead Protection Program Coordinator is:

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INTRODUCTION

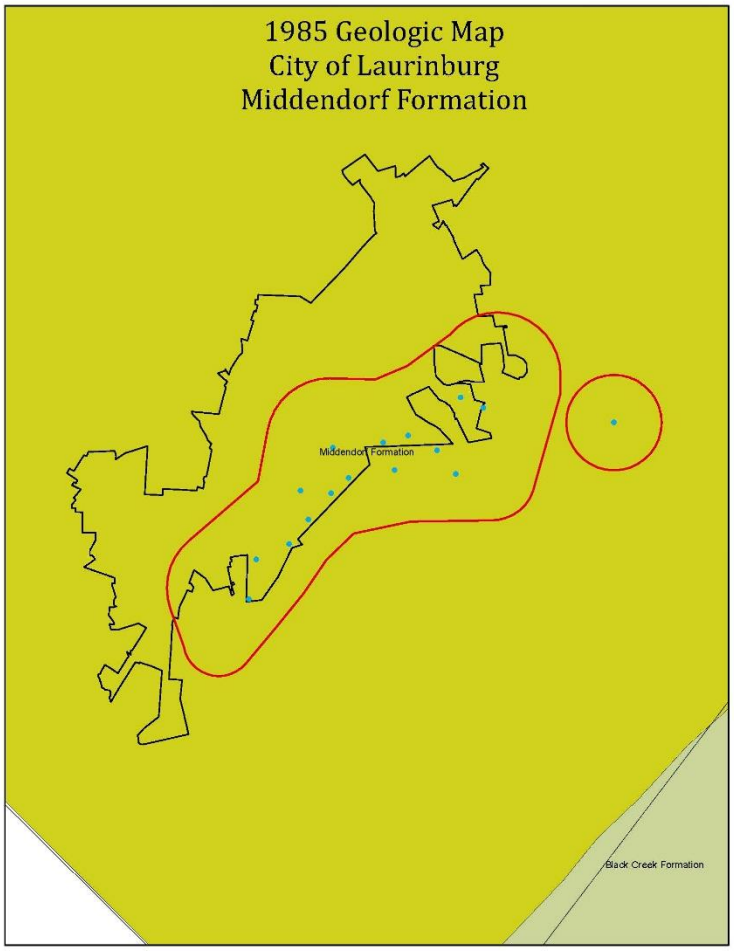
The City of Laurinburg, (PWSID # 03-83-010), incorporated in February of 1877, is located in the southeastern portion of North Carolina and is the county seat of Scotland County. Located in the western portion of the coastal plain, Scotland County is bordered by Richmond, Moore, Hoke, and Robeson Counties in North Carolina and Marlboro County in South Carolina. The county has an area of approximately 205,331 acres. The 2010 census showed a population of 36,157 for the county and 15,962 for the City of Laurinburg.

The areas around the city, as well as throughout the county, are mainly agriculture in nature. The relatively short, mild winters and long, hot summers permit a wide range of crop choices. The agriculture of today includes livestock, row crops, and agri-tourism. In addition to agriculture, advanced manufacturing, from automotives to plastics and biotech and pharmaceutical industries, has contributed greatly to the economic growth of the county.

Laurinburg is located on US Highway 74, a major east-west four-lane highway, US Highway 401, a major north-south four-lane highway, and minutes away from Interstate 95 which runs from Maine to Florida. Also located just 43 miles from Fayetteville and Fort Bragg, Laurinburg is conveniently located for residential or business purposes for the expansion generated by Base Realignment and Closing (BRAC) and the impending growth of Fort Bragg. Elevation in the vicinity of Laurinburg is approximately 226 feet above sea level. Laurinburg is located in the northern Lumber River drainage basin. Nearly all of Scotland County is drained by the many tributaries that flow southward to the Lumber River and the Little Pee Dee River. The major tributaries are Gum Swamp, Juniper, Jordans, Big Shoe Heel, and Little Shoe Hill Creeks.

The City withdraws its water from the Black Creek Aquifer through a total of sixteen (16) wells whose depths range from 118 feet to 363 feet with an average yield of 583 gallons per minute. Average daily water use for the City is 2.380 million gallons per day (mgd). Laurinburg's water system serves a population of 20,198 through approximately 200 miles of distribution lines maintaining approximately 9,600 water taps. The water system has a finished storage capacity of 3.00 million gallons. The Water Treatment Plant located at 603 Lauchwood Drive was dedicated in October 1980. Laurinburg's plant was one of North Carolina's first ground water facilities, complete with pre-treatment aeration, retention

basin, and filters. Today, this facility has a treatment capacity of 8.0 mgd. Average daily water produced is 6.0 mgd from fifteen (15) of the sixteen (16) wells. Wells are rotated on a daily basis to allow for a 24 hour period of recharge and to regulate chemical treatment. The chemicals that are added to the City of Laurinburg's water are Hydrofluorosilicic Acid (fluoride), Sodium Hydroxide (caustic), Sodium Hypochlorite (chlorine), and Hexa Meta Phosphate. There is an interconnection with the Laurinburg-Maxton Airport water system (PWSID# 03-83-107) used to purchase water, during emergencies only, for the eastern part of the city. Laurinburg provides bulk water sales to Scotland County Water – South (PWSID# 03-83-035) on a daily basis.



The 1985 Geologic Map of North Carolina shows that the City of Laurinburg is located on the Middendorf Formation. This formation includes fluvial-deltaic sands and clays commonly exposed on valley slopes and uplands in the Sandhills. The Middendorf formation consists of loose sand, poorly indurated sandstone, thin layers or lenses of mudstone, poorly sorted clayey sands, and laminated layers of sand and mudstone. It is characterized by its lack of homogeneity. Outcrops may show massive sand with thin discontinuous mudstone layers or lenses, thick mudstone lenses changing horizontally to sand, cross-bedded sands with mudstones occurring as layers, pods, balls and irregular masses, and more or less uniform layering. Cross-bedding is common, though some sand layers lack any evidence of this structure. The cross-bedding is of medium scale and the festoon type has been observed in several outcrops. Clay-ball conglomerates commonly without quartz pebbles are common adjacent to the mudstone layers.

Loose sand and clayey soils in the vicinity allow recharge to the water table of about 600,000 gallons per day per square mile.

Well Sites	Geocode	Formation	Description
2, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	Km	Middendorf	Sand, sandstone, and mudstone, gray to pale gray with an orange cast, mottled; clay balls and iron-cemented concretions common, beds laterally discontinous, cross-bedding common

I. THE WELLHEAD PROTECTION COMMITTEE

A Wellhead Protection Committee (WPC) was formed to develop a Wellhead Protection Plan for the City of Laurinburg. The committee consists of:

- Mr. Robert Ellis, Treatment Plants Director and ORC
- Ms. Jean Hewett, Records and Operation Aide
- Mr. Stacey McQuage, Public Utilities Director
- Mrs. Alicia Melton, North Carolina Rural Water Association

The City Council for the City of Laurinburg is responsible for implementing the Wellhead Protection Plan and have accepted the recommendations made in the plan by the WPC. The City Council has granted the Treatment Plants Director and the Public Utilities Director the authority to implement the plan and to approve any revisions that may be necessary to obtain approval from the Public Water Supply Section (PWSS). The City of Laurinburg will begin implementation of the plan immediately following its approval by the PWSS of the North Carolina Department of Environmental Quality (DEQ) and will complete implementation within ninety (90) days.

Goals and Commitments

The staff at the City of Laurinburg Water Department work around the clock to provide top quality water to every tap. The constant goal is to deliver a safe and dependable supply of drinking water. A safe, reliable water supply is critical to the success of any community. The City of Laurinburg encourages all customers to help protect our water sources, which are the heart of the community, our way of life, and our children's future. Long-term goals and visions established by the WPC include:

- Adequate supply of drinking water
- Thorough survey of potential contamination sources
- Public education for prevention of contamination
- Review and update of the WHP plan on a regular basis

II. DELINEATION OF THE WELLHEAD PROTECTION AREA

Delineation of the Wellhead Protection Areas involves making an inventory of all Public Water Supply (PWS) wells included under the plan and gathering basic information about each well. The most important part of this step is to identify the area(s) that must be managed to reduce the likelihood of contamination to the wells — the Wellhead Protection Area(s) (WHPA). Simply stated, the WHPA is the part of the landscape — above or below ground — which contributes water that will eventually reach the pumping well. If a contaminant reaches groundwater within the well system's contribution area, the contaminant can move with the groundwater into the well. If the contributing area for the well is identified, and management strategies are set in place to manage certain activities, the possibility that the well might become contaminated can be significantly reduced. This is the area where the wellhead protection (WHP) plan will apply.

The estimated average recharge rate is typically used to estimate the size of the WHPA for wells withdrawing water from unconfined surficial aquifers. However, the aquifer source volume method is recommended for highly-confined and semi-confined aquifers because if the rate of recharge to these aquifers was used, the resulting WHPA would encompass an unmanageably large area. "Aquifer source volume" refers to the volume of the source aquifer that supplies the withdrawals from a well for a specified period of time. A time of travel calculation uses the rate of groundwater movement to estimate how long water or a contaminant will take to reach a well from a point within the aquifer. In NC, a ten (10) year time of travel period is used, instead of a five (5) year time period as used in other states, to provide a more appropriate timeframe for assessing the potential impact of any groundwater contamination discovered within a WHPA and for developing appropriate remediation and management strategies for the water supply.

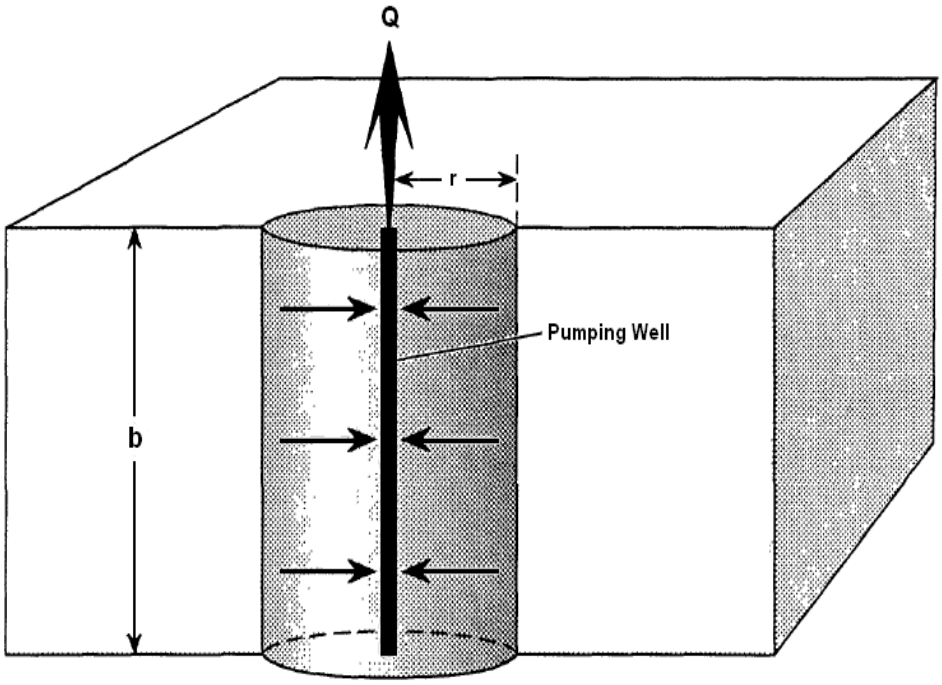
After reviewing information from SDWIS (State Drinking Water Information System) and/ or well construction records for the City of Laurinburg, it was determined that a ten-year time-of-travel aquifer source volume method would be used to establish the Wellhead Protection Areas since all sixteen (16) water supply wells withdraw water from the Black Creek Aquifer. The size and shape of the protection areas were determined by estimating the volume of aquifer material in cubic feet (V_a) that supplies withdrawals for a ten-year period. The volume of aquifer that supplies ten years of withdrawals can be estimated with the following equation:

$$V_a = Q \left(\frac{gal}{\min}\right) \times t_d \left(\frac{\min}{day}\right) \times \left(\frac{ft^3}{7.48\ gal}\right) \times \left(\frac{365.25\ days}{year}\right) \times \frac{P\ (years)}{n}$$

Where: V_a = the volume of aquifer in cubic feet that supplies water for time P
Q = well yield in gallons per minute
t_d = the daily pumping period in minutes per day
p = the period of withdrawals in years
n = estimated porosity, dimensionless

The well yield *Q* is the maximum sustained pumping rate possible for the well (not the daily pumping rate) as determined from a 24-hour drawdown test pursuant to North Carolina Administrative Code 15A NCAC 18C.0402(g). If well yield information is unavailable, the maximum capacity of the pump installed on the well may be substituted. The daily pumping period t_d is the number of minutes per day that the well is pumped and should equal 720 (the number of minutes in 12 hours). This value is used because State regulations require that the yield of a public water supply well provide the average daily demand in 12 hours. If the actual pumping period exceeds 12 hours, then the actual pumping period in minutes per day should be used. Using a daily pumping period t_d of 720 minutes per day, a period of withdrawal P of 10 years and an estimated porosity of 0.2, the above equation, rounded, reduces to: $V_a = 1{,}757{,}888 \times Q$

Because the units of gallons and minutes cancelled when the equation was reduced, the volume of the aquifer, in cubic feet, can be calculated by multiplying the well yield, in gallons per minute, by the value given above. For ease (convenience) in applying the ASV method, it is assumed that the volume is contained in a cylinder centered on the well.



$$r = \sqrt{\frac{V_a}{\pi b}}$$

To determine the radius of the cylinder of aquifer that provides water to the wells within a 10-year time of travel, V_a is substituted into the above equation where:

r = the radius of the Wellhead Protection Area in feet,
V_a = the volume of the aquifer, in ft^3, that supplies 10 years of withdrawals,
Π = 3.1416, and
b = the aquifer thickness or the length of the screened or open-hole section(s), in feet.

Where screened interval information was available, the difference between the top screen and the bottom screen of the last interval was used for *b* as the length of screened interval. Where no screened interval information was available for Wells 2, 14, 15 and 17, the yield was used to determine the wellhead protection area radius in accordance with Table 1 on page 15 of the *Proposed Revisions to the North Carolina Wellhead Protection Program*. Each of these wells, having a yield > 500 gpm and < 1,000 gpm, will have a WHPA radius of 3,000 ft.

Table 1 shows the well data including the screened intervals obtained from SDWIS and/or the well construction records. The distances listed in the table are depth below land surface. Table 2 lists the wellhead protection area delineation calculation results determined as described above.

Well	Location	Yield (gmp)	Depth	Screened Intervals	Total Screened ft.	Latitude	Longitude
W02	401 Willow Dr.	550	250	-	34*	34.755056	-79.470406
W05	523 Baker Ct.	703	140	80 ft. - 130 ft.	50	34.755944	-79.459947
W06	605 Lauchwood Dr.	650	210	80 ft. - 192 ft.	112	34.749786	-79.467139
W08	1767 Berwick Dr.	625	314	90 ft. - 196 ft.	106	34.742618	-79.475477
W09	1801 Berwick Dr.	625	363	80 ft. - 172 ft.	92	34.738385	-79.475477
W10	2218 Elm Ave.	650	333	80 ft. - 122 ft.	42	34.735693	-79.486371
W11	281 Magnolia Dr.	458	178	66 ft. - 166 ft.	100	34.747556	-79.477147
W12	11159 Hasty Rd.	545	190	76 ft. - 182 ft.	106	34.728798	-79.487872
W13	Eastover Dr.	700	141	64 ft. - 130 ft.	66	34.751219	-79.457520
S14	455 Sugar Rd.	600	188	-	37*	34.757226	-79.454682
S15	649 Hall St.	627	178	-	39*	34.759595	-79.411631
S16	14029 Dixie Guano Rd.	350	148	64 ft. - 143 ft.	79	34.762006	-79.438936
S17	639 Hall St.	556	170	-	35*	34.763790	-79.443703
S18	13308 Old Johns Rd.	550	169	98 ft. - 165 ft.	67	34.750612	-79.444704
S19	13198 Eastover Ln.	600	118	62.6 ft. - 112.6 ft.	50	34.754609	-79.448631
W20	1731 Berwick Dr.	527	164.5	85 ft. - 159 ft.	74	34.747105	-79.470794

* where formula used to calculate total screened feet is $b = \frac{V_a}{\pi r^2}$ using 3,000 ft. as r

Table 1. Laurinburg Well Data

Well	Q (gal/min)	t_d (min/day)	P (years)	n porosity	V (ft^3)	b (screened length)	r (WHPA radius)	WHPA Feet^2	Miles^2
W02	550	720	10	0.2	966,838,235	34	3000	28,274,334	1.01
W05	703	720	10	0.2	1,235,795,053	50	2805	24,715,901	0.89
W06	650	720	10	0.2	1,142,627,005	112	1802	10,202,027	0.37
W08	625	720	10	0.2	1,098,679,813	106	1816	10,364,904	0.37
W09	625	720	10	0.2	1,098,679,813	92	1950	11,942,172	0.43
W10	650	720	10	0.2	1,142,627,005	42	2943	27,205,405	0.98
W11	458	720	10	0.2	805,112,567	100	1601	8,051,126	0.29
W12	545	720	10	0.2	958,048,797	106	1696	9,038,196	0.32
W13	700	720	10	0.2	1,230,521,390	66	2436	18,644,264	0.67
S14	600	720	10	0.2	1,054,732,620	37	3000	28,274,334	1.01
S15	627	720	10	0.2	1,102,195,588	39	3000	28,274,334	1.01
S16	350	720	10	0.2	615,260,695	79	1575	7,788,110	0.28
S17	556	720	10	0.2	977,385,561	35	3000	28,274,334	1.01
S18	550	720	10	0.2	966,838,235	67	2143	14,430,422	0.52
S19	600	720	10	0.2	1,054,732,620	50	2591	21,094,653	0.76
W20	527	720	10	0.2	926,406,818	74	1996	12,519,011	0.45

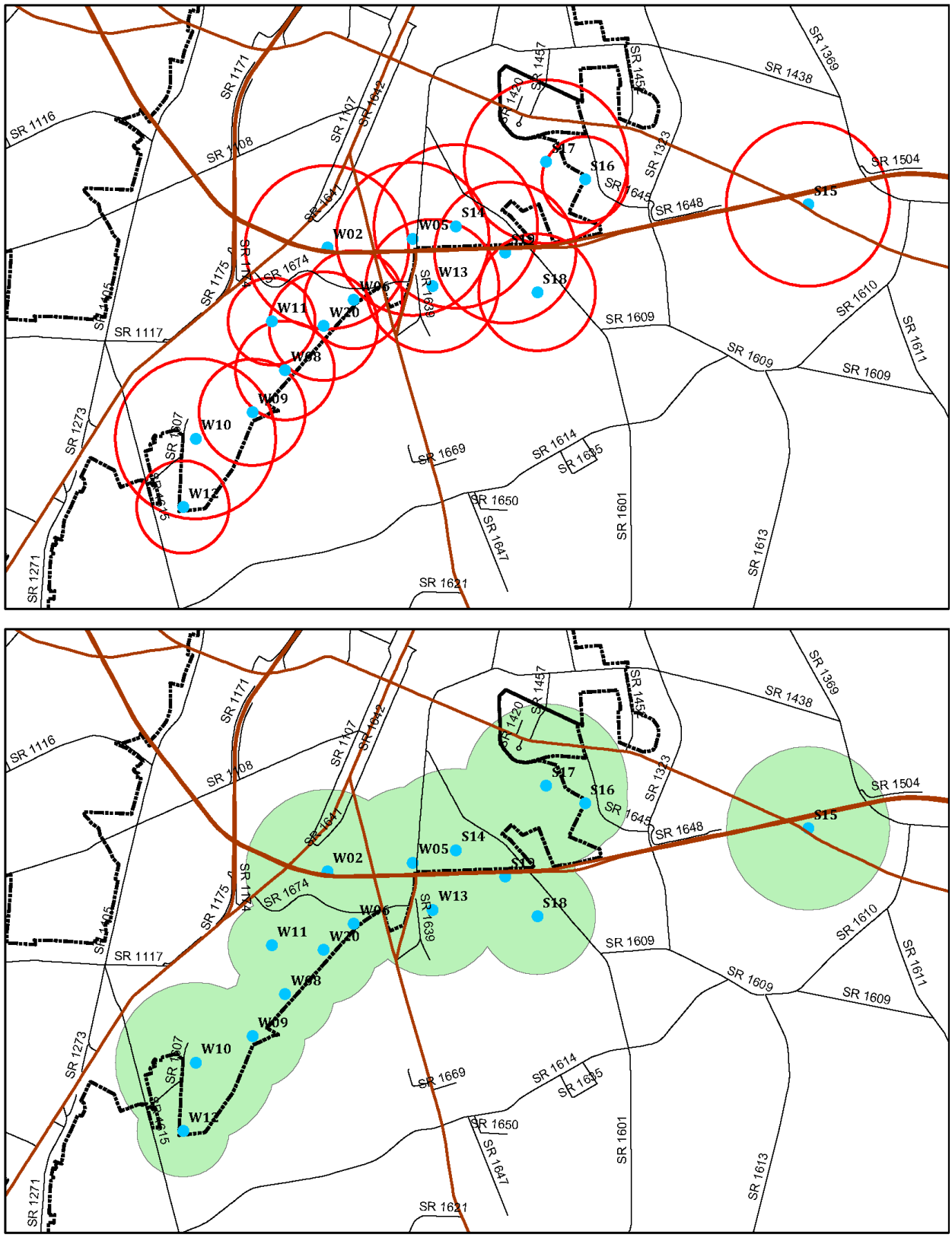
Table 2. Laurinburg Delineation Data

Table 1 & 2. Well and Delineation Information

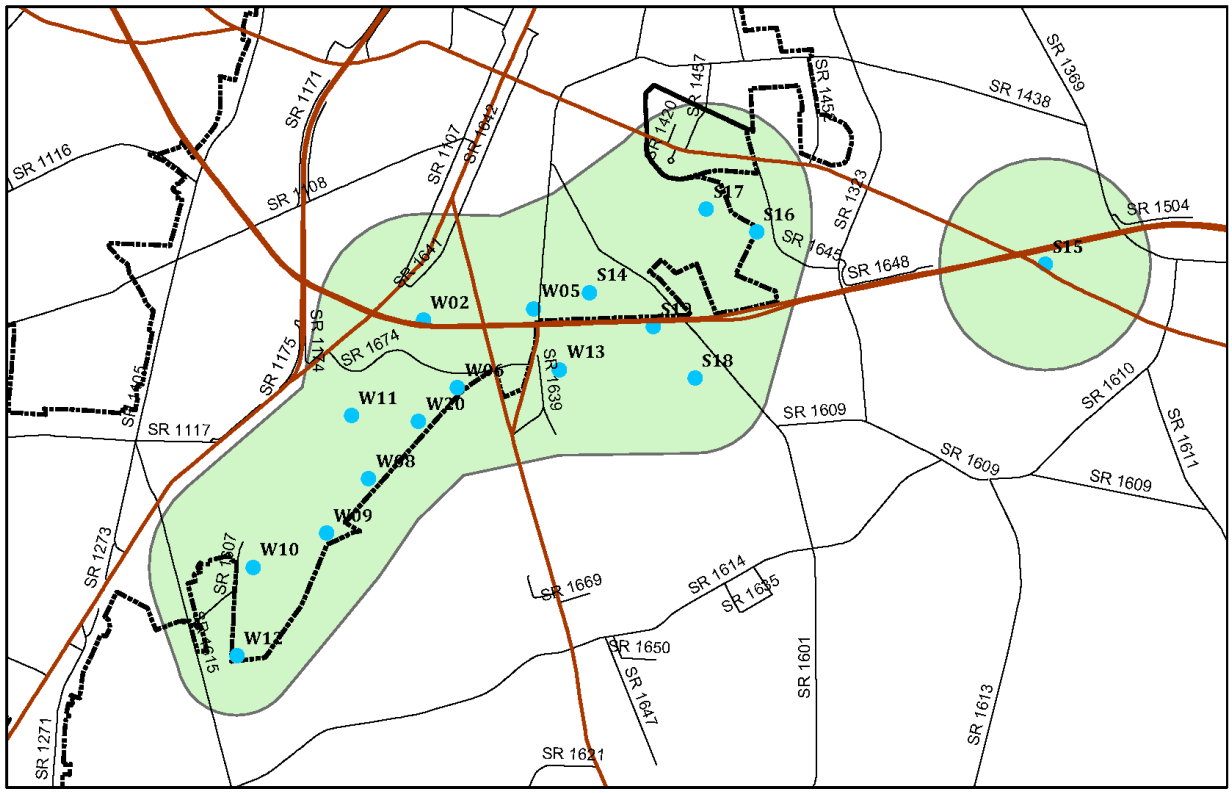
- Coordinates were provided by the PWSS of DEQ for consistency with shapefile records.

•• Copies of Well Construction Records are included in the appendix (these documents may include information on intermittent screened intervals, well locations, well depths and latitudes and longitudes).

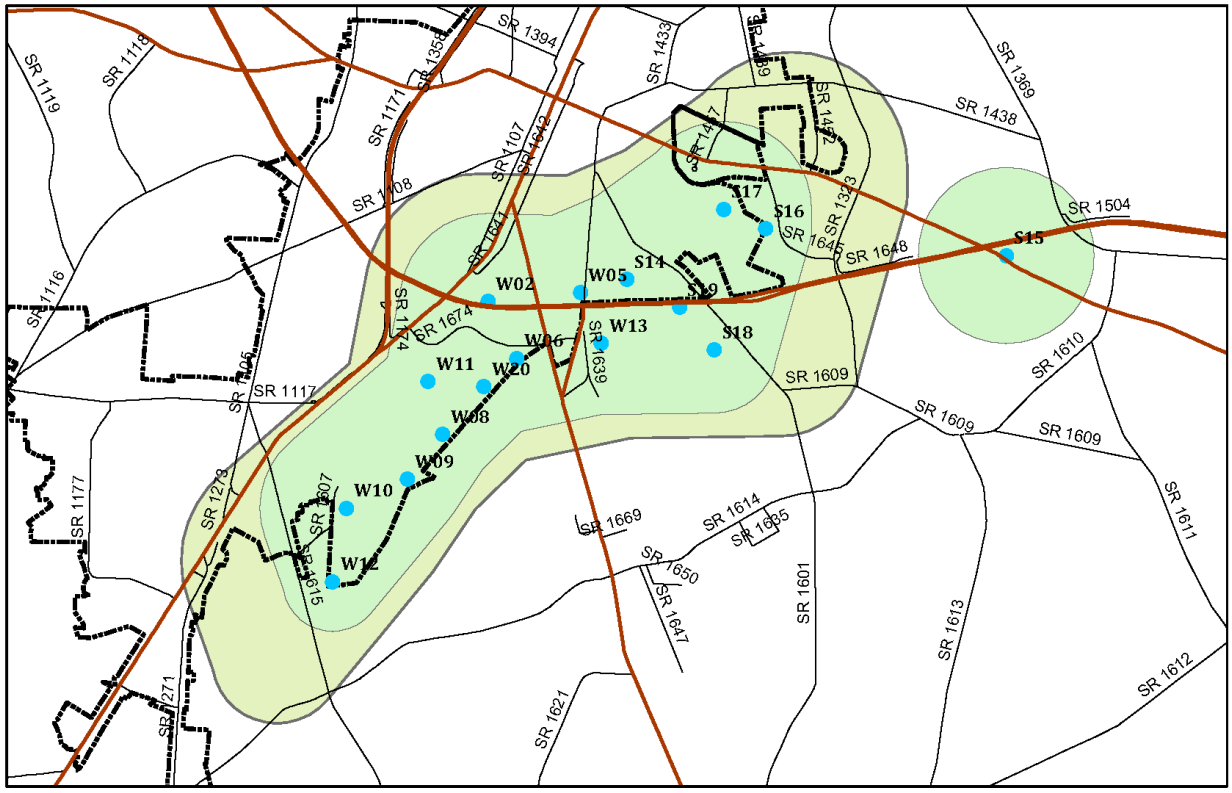
The wellhead protection areas, based solely on the delineated area (r) for each individual well, are shown below. The first image shows the significant overlapping of areas and the second image shows the delineated WHPAs as a whole:



Due to the significant overlapping of the WHPAs, barriers were dissolved and two WHPAs were formed. Well 15 has a WHPA independent of the others. The area of the remaining wells was combined and the boundary was smoothed by removing the scalloped areas between the overlapping areas, as shown below.



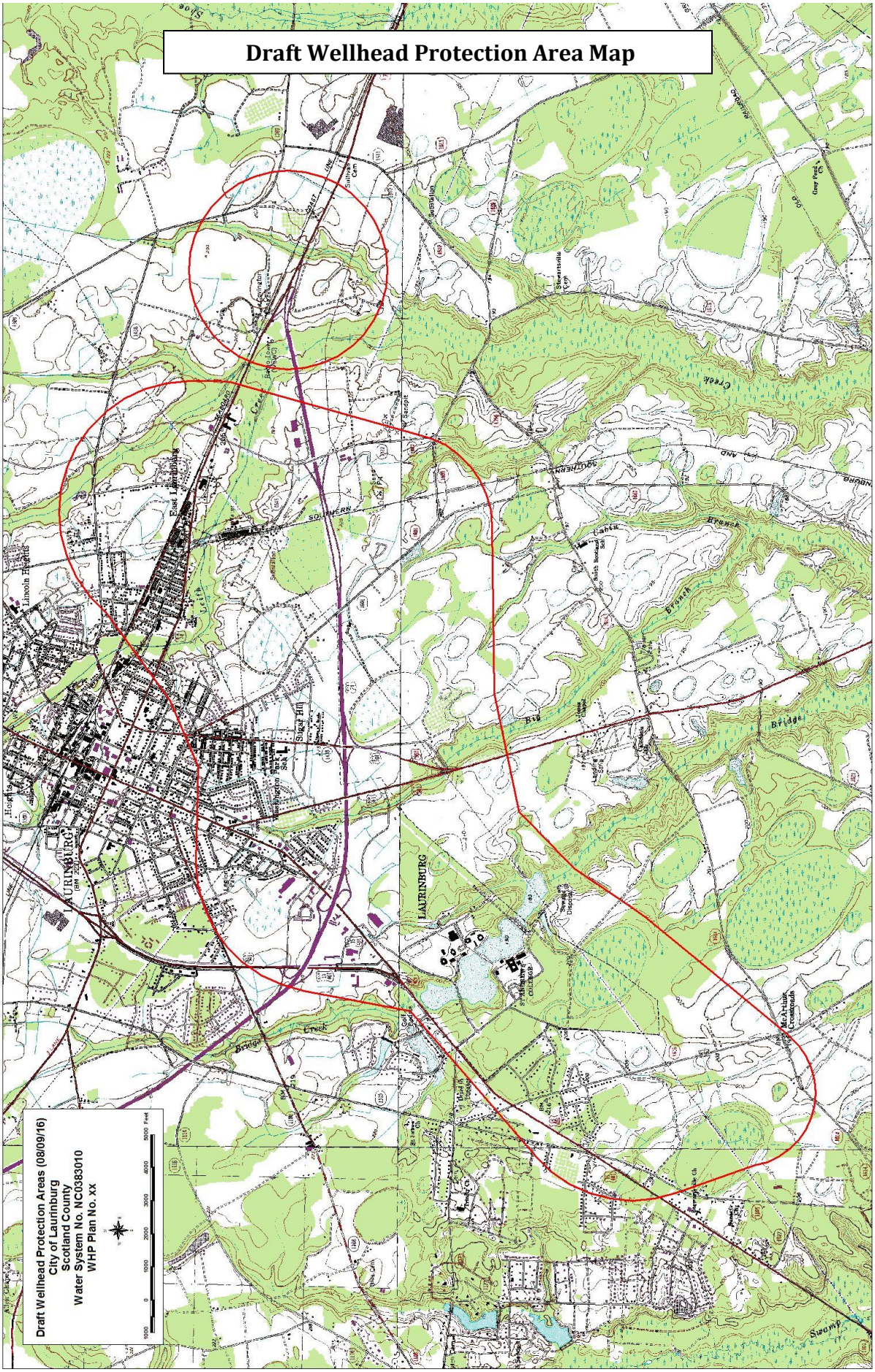
The total land area of the WHPAs as delineated, excluding Well 15, is 260,819,191 sq. ft. Therefore, the boundary of the combined WHPA was enlarged evenly to account for the overlapping area of the independent wells.



The resulting wellhead protection area map for the City of Laurinburg is shown on the following page.

The City of Laurinburg WPC has agreed to utilize the yield totals and screen intervals provided from the SDWIS, when not provided on well construction records, along with the associated delineated draft WHPAs. In addition, the WPC agreed that changes should be made to future Local Water Supply Plans to show consistency in data where necessary.

Draft Wellhead Protection Area Map



III. INVENTORY OF POTENTIAL CONTAMINANT SOURCES

A ***Potential Contaminant Source*** (PCS) is any substance or activity that could adversely affect the quality of your drinking water supply. The PCS inventory is a complete listing, including mapped locations, of past and present land use activities within the wellhead protection area (WHPA) that threaten groundwater quality. Each of the potential contaminant sources that were identified was assigned a code according to the category into which it falls. The potential contaminant categories and corresponding codes are listed in Table 3.

PCS Categories	Map Code	PCS Categories	Map Code
PIRF	A	Machine Shop/Repair	R
RCRA	B	Pump Station	S
CERCLIS	C	Storage	T
Tier II Site	D	Manufacturing	U
Pre-Sanitary Landfill	E	Animal Operation/Poultry	V
UST	F	Laundromat/Dry Cleaner	W
NPDES	G	Print/Sign Shop	X
Communications Tower	H	Agriculture/ Ag. Operations	Y
Recreational Facility	I	Electrical Substation/Storage	Z
Carwash	J	Gas Station	AA
Medical Facility/Hospital	K	Salvage Yard	BB
WWTP	L	Demolition Site	CC
Maintenance Shop	M	Cemetery	DD
Water Treatment/Supply	N	Chemical Storage	EE
Hardware/Lumber/Parts Store	O	Wood Processing	FF
Automobile Repairs/Sales	P	Motor Pool	GG
AST	Q		

Table 3. Potential Contaminant Source Categories

The inventory process begins by looking at the Source Water Assessment Program Report for the City of Laurinburg. Information from sixteen (16) State and Federal Databases is combined into that report, and this information is used as a starting point to research files at the various state agencies. A description of each of the regulatory databases researched can be found in the appendix.

Source Name	Susceptibility Rating
WELL #2	Higher
WELL #5	Moderate
WELL #6	Higher
WELL #8	Moderate
WELL #9	Moderate
WELL #10	Moderate
WELL #11	Moderate
WELL #12	Moderate
WELL #13	Moderate
WELL #14	Moderate
WELL #15	Moderate
WELL #16	Moderate
WELL #17	Higher
WELL #18	Moderate
WELL #19	Moderate
WELL #20	Moderate

Table 4. SWAP Susceptibility Rating

NC SWAP Reports (Source Water Assessment and Protection) - The Source Water Assessment Program (SWAP) information is compiled by the Public Water Supply (PWS) Section from available electronic PCS databases with statewide coverage obtained from various State agencies. The SWAP information is an extremely valuable starting point for conducting a PCS inventory. However, it is not a comprehensive database of all PCSs. Because it includes only those databases with statewide coverage that are available to the PWS Section in an electronic format, PCS information specific to the area of interest may not be included. Databases (both hardcopy and electronic) maintained by local, county, state, and federal agencies may contain information about known PCSs occurring within the WHPA (e.g., areas of pesticide or fertilizer application, pesticide storage areas, landfills or dumps, inactive hazardous waste sites, underground storage tanks, above ground storage tanks, areas with septic systems, improperly constructed/abandoned wells, etc.) The NC SWAP Report was reviewed by the WPC and the Susceptibility for each well was ranked by the NC PWS Section as shown in Table 4 above. Susceptibility is an indication of a water supply's potential to become contaminated by the identified PCSs within the assessment area. All relevant information found in the SWAP report is reflected in the PCS tables and in the following summaries. The City of Laurinburg's SWAP Report can be located at the following website:
http://www.ncwater.org/files/swap/SWAP_Reports/0383010_7_14_2015_85_11.pdf

The WPC conducted a **windshield survey** of the WHPAs and identified each potential contamination source (PCS) facility or activity that might exist within each WHPA. Onsite visits were made and additional information was obtained regarding quantity and types of contaminants kept on site. The PCS Data Charts show the sources identified during the inventory along with quantities and types of contaminants found at the site. The PCS Inventory Maps show the location of each of the identified potential contaminant sources

within the WHPAs. A list of example potential contamination sources by risk category is included in the appendix.

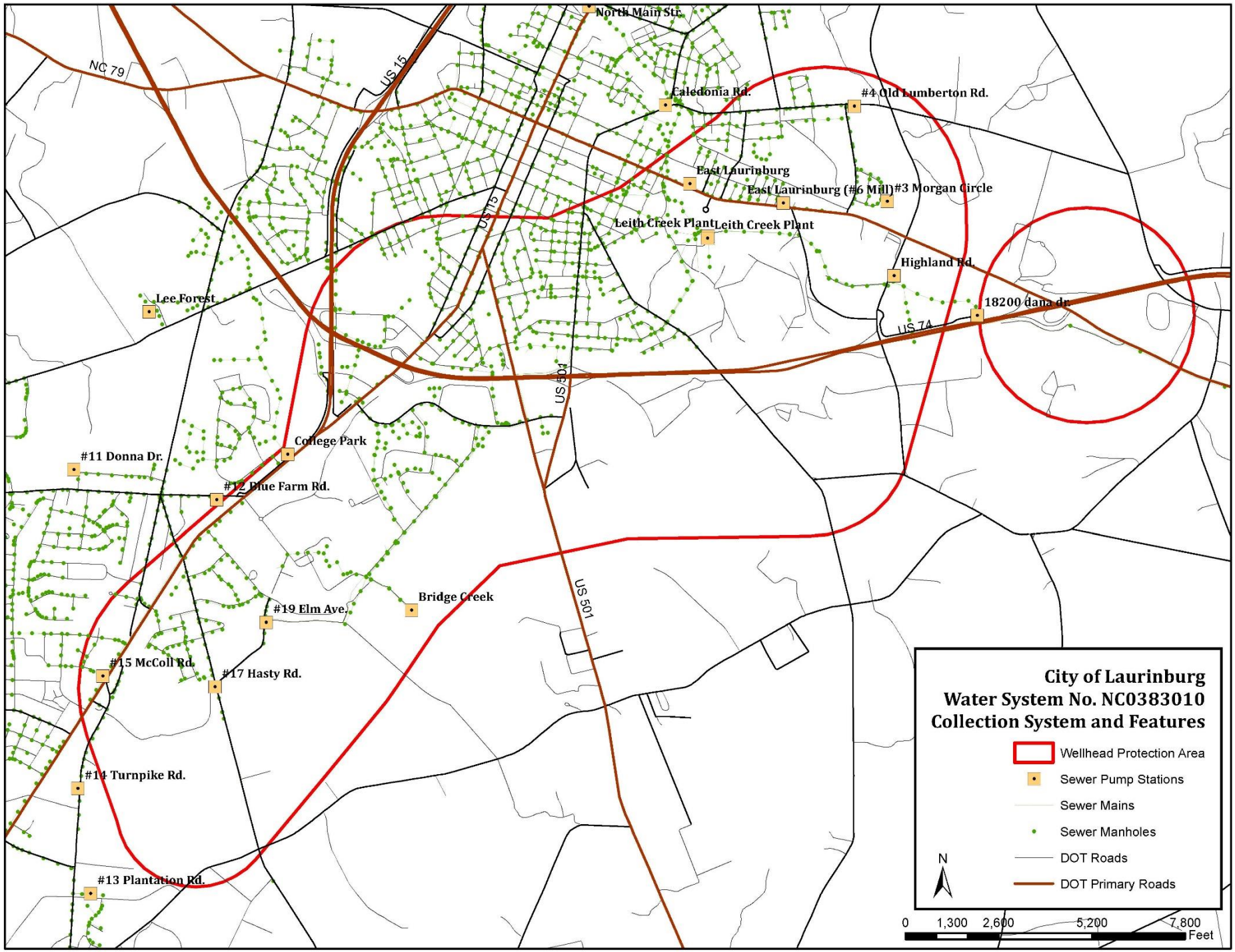
Septic Tanks – A public sewer system, owned and operated by the City of Laurinburg, collects almost all sewage waste in the WHPAs. Scotland County Health Department is responsible for the inspection of all septic tanks in the county. If any properties are identified as having a private septic system in any WHPA, a brochure and/or educational materials will be delivered to the property owner, and/or property occupant, regarding proper maintenance of a septic system.

Abandoned Wells – Wells 1, 3, and 7 have been properly abandoned. Well 7 was replaced with Well 20. Well 4 is no longer in use due to contamination; however, it is a USGS monitoring site. The abandonment record for Well 1 and 3 are included in the appendix. The Scotland County Health Department was contacted concerning privately owned abandoned wells. There are no privately owned abandoned wells known of in the WHPAs at this time.

Lift Stations – The following chart is a listing of sewage lift stations located in the WHPAs for the City of Laurinburg or within 150 feet from the WHPA boundary. These lift stations are close enough to the WHPA to monitor since the hydraulic conductivity and hydraulic gradient are unknown. Please see the following Collection System and Features map for the location of each site, in addition to sewer collection system line and manhole locations.

Pump #	Physical Location	Avg. GPM
3	17231 Morgan Circle	50
4	17900 Old Lumberton Rd.	110
15	11758 McColl Rd., US 401 & Turnpike Rd.	65
17	11400 Hasty Rd. & Elm Street	100
19	2212 Elm Avenue	1,500
22	13971 Highland Rd.	350
23	17980 Highway 74 Business E. Lbg. #6 Mill	250
24	16401 Hwy 74 Business E. Lbg. School	100
28	1721 Berwick Dr., Bridge Creek (Behind St. Andrews)	1,400
29	1811 S. Main Street (College Park Subdivision & Pizza Hut)	580
32	Leith Creek WWTP (LC#1)	1,800
-	Leith Creek WWTP (LC#2)	2,500
Liftstations w/in 50 ft. of WHPA		
21	74-Bypass, 18200 Dana Drive (Beside Dana)	2,500
Liftstations w/in 150 ft. of WHPA		
12	13460 Blue Farm Rd. (Blue Farm Apt. Complex	86

Table 5. Locations of Lift Stations within WHPAs


North Main Str.
NC 79
US 15
Caledonia Rd.
#4 Old Lumberton Rd.
East Laurinburg
East Laurinburg (#6 Mill)
#3 Morgan Circle
Leith Creek Plant
Leith Creek Plant
US 15
Highland Rd.
Lee Forest
18200 dana dr.
US 74
US 501
College Park
#11 Donna Dr.
#12 Blue Farm Rd.
Bridge Creek
#19 Elm Ave.
US 501
#15 McColl Rd.
#17 Hasty Rd.
#14 Turnpike Rd.
#13 Plantation Rd.
City of Laurinburg
Water System No. NC0383010
Collection System and Features
Wellhead Protection Area
Sewer Pump Stations
Sewer Mains
Sewer Manholes
DOT Roads
DOT Primary Roads
N
0
1,300
2,600
5,200
7,800
Feet

Permitted Ground Water Sources – One other permitted groundwater source is located within 150 ft. of the WHPA boundary of Well 15.

- PSWID: 5083001
  System Name: Murphy-Brown Sanitation-Laurinburg
  System Type: Transient Non-Community
  Susceptibility: Moderate

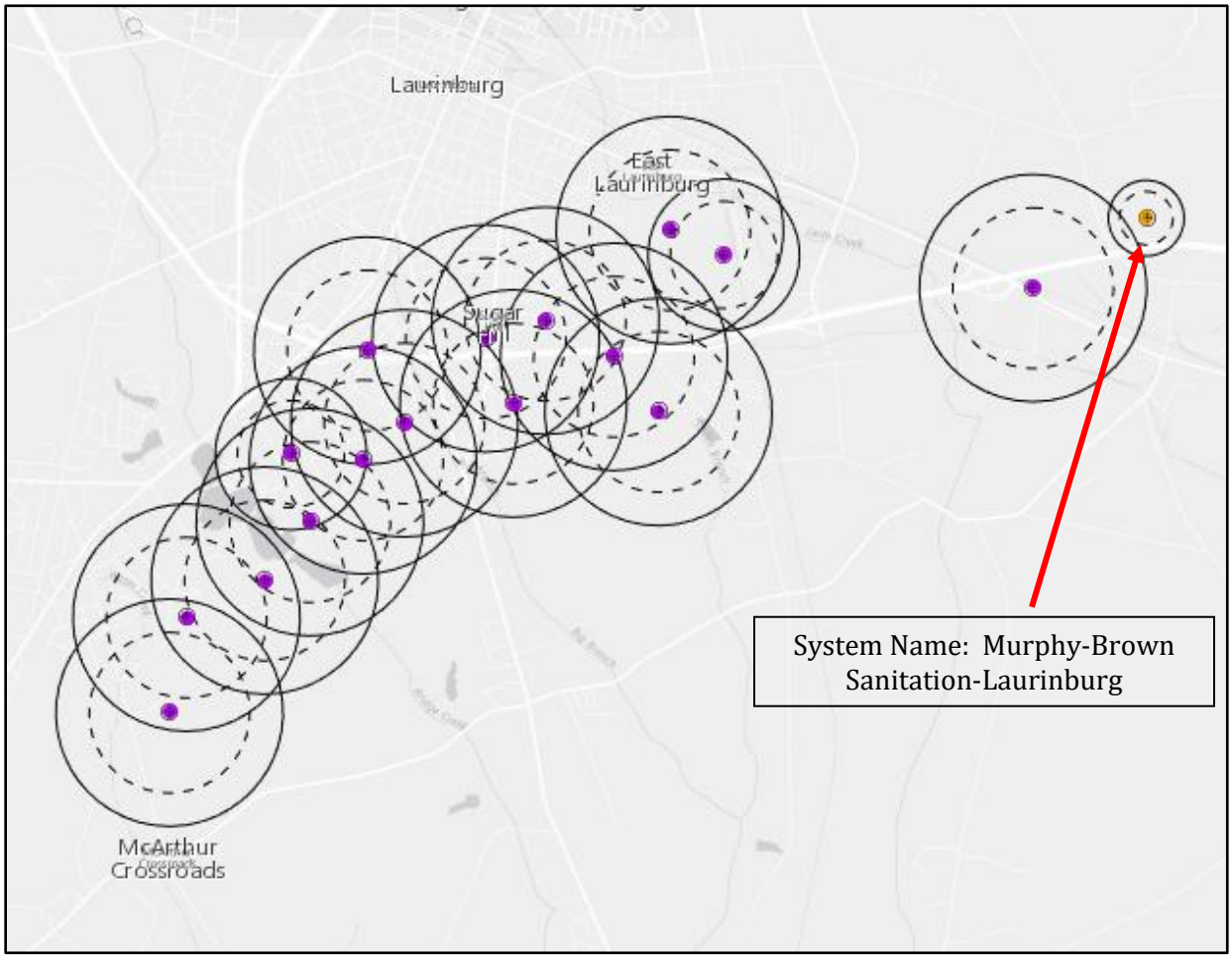
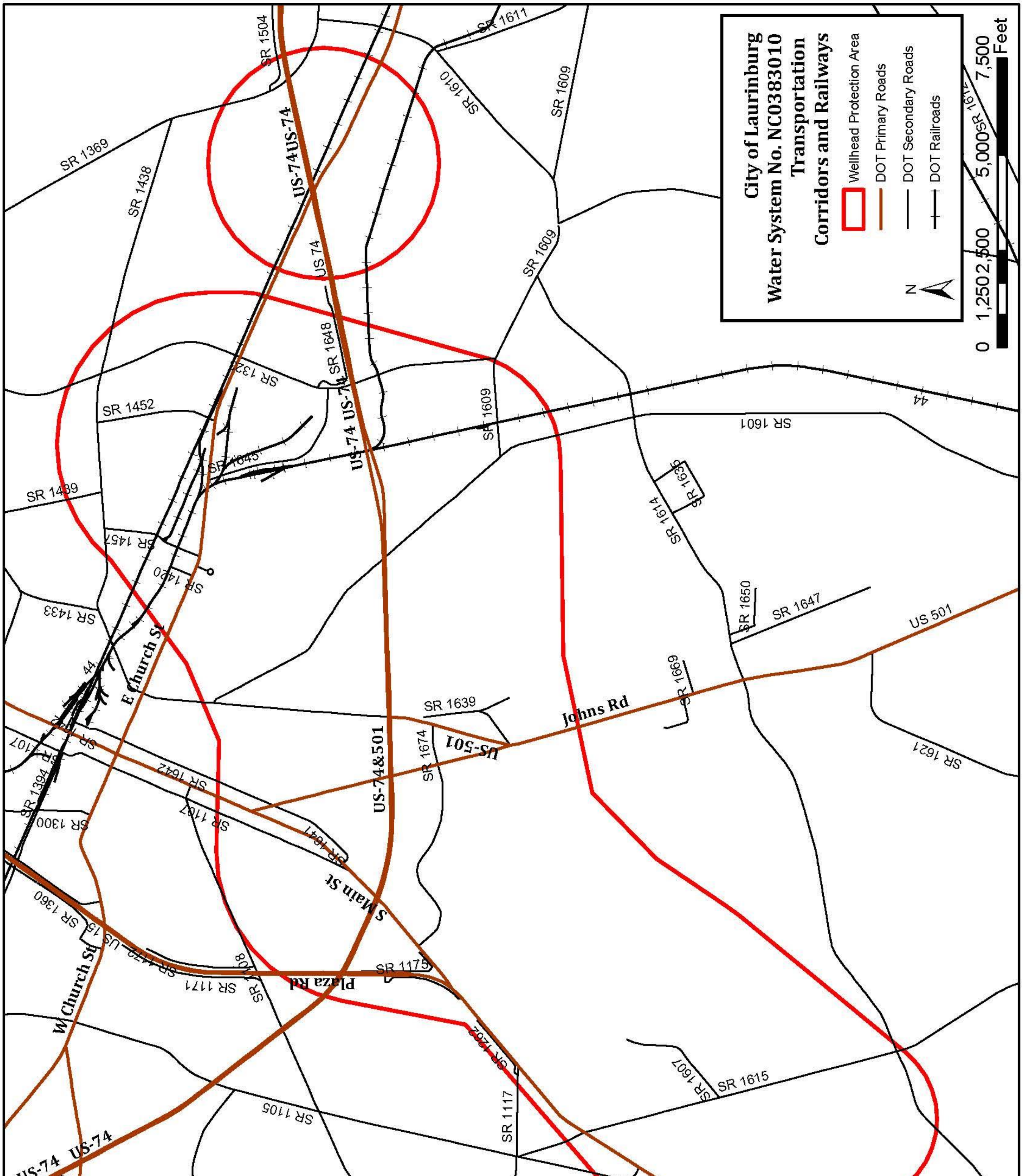


Image taken from SWAP 2.0

Transportation Corridors and Railways - The following map displays major transportation corridors and railways located within WHPAs. Heavy areas of transportation or cargo carriage are more susceptible to contamination from continuous exposure to substances through spills and wreckage.


City of Laurinburg
Water System No. NC0383010
Transportation
Corridors and Railways
Wellhead Protection Area
DOT Primary Roads
DOT Secondary Roads
DOT Railroads
N
0 1,250 2,500 5,000 7,500
Feet
US-74 US-74
US 74
US-74 US-74
US-74&501
US-501
US 501
Johns Rd
E Church St
W Church St
S Main St
Plaza Rd
Gibson Rd
NC 79
US-15&401
SR 1369
SR 1438
SR 1504
SR 1611
SR 1610
SR 1609
SR 1648
SR 1452
SR 1645
SR 1439
SR 1457
SR 1420
SR 1433
SR 1601
SR 1614
SR 1650
SR 1647
SR 1669
SR 1639
SR 1674
SR 1621
SR 1642
SR 1167
SR 1394
SR 1300
SR 1641
SR 1360
SR 1172
SR 1171
SR 1175
SR 1105
SR 1117
SR 1607
SR 1615
SR 1273
SR 1116
SR 1177
SR 1627
SR 1271

Several local, state and federal databases were searched. Information describing these databases and types of contaminants located in each are provided in the appendix. A summary of the findings of this research is shown below. Pollution incident records located at the NC DEQ, Division of Waste Management, UST Section of the Fayetteville Regional Office were reviewed and a summary for current/open case pollution incidents has been included. For additional information pertaining to any case, please contact the UST Section at the Fayetteville Regional Office of NC DEQ by calling 910-433-3300.

Regulatory Agency Databases Researched for PCSs	
Database	**Results**
Animal Operations	None
CERCLIS Sites	One (1)
National Priority List Sites	None
Non-Discharge Permits	None
NPDES Permits	Three (3)
Old Landfill Sites	Two (2)
PCB Sites	None
Pollution Incidents	Sixteen (16)
RCRA Hazardous Waste Generators/Transporters	Three (3)
RCRA TSD Sites	None
Septage Disposal Sites	None
Soil Remediation Sites	None
Solid Waste Facilities	None
Tier II Sites	Four (4)
UIC Permits	None
UST Permits	Eleven (11)

Table 6. Regulatory Agency Database PCSs per Type

Current Pollution Incidents (UST Releases and Non-UST Releases)

 # 830001 One Hour Cleaners – 1514 S. Main St. - From SVE Progress Report No. 5 dated 3/22/2016: A SVE system was installed at the One Hour Cleaners site in Laurinburg, NC in 2010 to address PCE impacts in vadose zone soil at the site. System performance data indicate that the SVE system has significantly reduced the mass of PCE in the subsurface since system start-up in October 2010 through removal of approximately 1,064 lbs. (79 gallons) of PCE. During the period from late August 2015 through early January 2016, the system ran continuously and PCE extraction rates decreased to the lowest levels measured since the start of system operation. During the O&M visit in December 2015, the PCE

extraction rate was measured at only 0.05 lbs./day. The system was turned off on January 5, 2016 due to water being pulled into the system from a historically high water table. Water accumulated in the knock-out drums was removed from the site for disposal on January 8, 2016. Based on SVE performance data, reduced PCE removal efficiency, and a high water table, H&H did not restart the SVE system during the January 8, 2016 O&M site visit, and the system currently remains off. Due to the recent low removal efficiency and high cost of operating the system, H&H recommends the system be left off for the foreseeable future with the possibility of permanent shutdown. (**Map Code: A-1**)

 # 830002 Village Cleaners – 1691 S. Main St. - In 1997, while performing a project on adjacent property, EA's laboratory analysis of groundwater sample revealed a Tetrachloroethylene (PCE) concentration of 3.3 ug/l, exceeding the standard of 0.7 ug/l. Information was forwarded to the Fayetteville Regional Office of NCDENR. In November of 2011, soil tested for tetrachloroethylene and TMW-3 at concentration levels exceeding the NC 2L Groundwater Quality Standard. This property was enrolled into the Dry-Cleaning Solvent Cleanup Program. (**Map Code: A-2**)

 # 29681 City of Laurinburg Public Works – 503 Hall Street – This release was discovered on December 1, 2010 during the removal of five (5) USTs. TPH analysis confirmed impacted soil. Over-excavation occurred on December 13, 2010 with the removal of approximately 1,860 tons of soil. There were three (3) UST basins that were over-excavated along with a lengthy product line trench with some additional soils being excavated from the tops of two (2) USTs adjacent to Hall Street as they were being upgraded. A total of seven (7) soil samples were reported to exceed maximum contaminant levels. Because groundwater was encountered in the bottom of the excavation sites, four (4) monitoring wells were constructed for the Initial Abatement Action Report. This report was received by the FRO on January 18, 2011. A Limited Site Assessment was received on April 11, 2011. A Risk, rank, and abatement score of I-80-R was given for this site on April 25, 2011. On August 8, 2011, this site was considered conditionally eligible for reimbursement from the Commercial Trust Fund for reasonable and necessary costs incurred for any environmental assessment and cleanup of the site. (**Map Code: A-3**)

 # 29996 Community Mart – 16440 Andrew Jackson Hwy. – A petroleum release was discovered at this site on March 29, 2016 during UST removal activities. One (1) 2,000 gallon kerosene UST and associated dispensers and product piping were removed from this site with three (3) 8,000 gallon gasoline USTs remaining currently active. No free product was witnessed during excavation; however, strong petroleum odors were noted in the UST basin. An Initial Abatement Action Report was submitted to the FRO on May 11, 2016 where testing results confirmed a release of product with contamination exceeding regulatory action levels. A total of 31.88 tons of petroleum contaminated soil has been removed from the site. A Notice of Regulatory Requirements was issued on May 19, 2016 by the FRO. A Limited Site Assessment Report was submitted to the FRO on July 14, 2016 recommending a risk classification of “intermediate” and the completion of a Comprehensive Site Assessment. (**Map Code: A-4**)

 # 15449 South Main Exxon – 1659 S. Main St. – In December 1994, a petroleum release was detected during the removal of seven (7) USTs. According to a January 1995 Initial Abatement Measures and Site Check Report, approximately 150 cubic yards of contaminated soil was removed from the gasoline tank pit and transported to a nearby site to be land farmed. Groundwater contamination was confirmed during a previous investigation were all target compounds were reported above maximum contaminant limits. A 1998 site visit and review determined this site to be ranked as "low." (**Map Code: A-5**)

 # 29582 St. Andrews College Physical Plant – 1700 Dogwood Mile – This release is located in the wellhead protection areas of wells 11, 8, and 20 (former 7) and is of most concern to the UST Section of the Fayetteville Regional Office. In February 2009, a petroleum release was discovered upon the removal of one (1) 500 gallon diesel UST and two (2) 1,000 gallon gasoline USTs. The release was primarily gasoline with little or no diesel being detected. Approximately 330.36 tons of soil was removed from the site with samples being taken from the sidewalls of the excavated area. No base samples were collected due to the presence of groundwater in the excavation pit. Along the north excavation wall, Isopropylbenzene, 1,3,5-Trimethylbenzene, C5-c8 Aliphatics, C9-C12 Aliphatics, C9-C10 aromatics and Toluene exceeded the MSCCs. Groundwater intercepted the excavation and tank bottoms and contamination indicated Benzene and Isopropyl ether above the Gross Contamination Limits, and Toluene, Xylenes, Naphthalene, n0Propylbenzene, and 1,2,4-Trimethylbenzene exceeding the groundwater standard. There were also exceedances of contamination levels approximately 95 ft. southeast of the site. Lead in excess of the groundwater quality standards was detected in all monitoring wells sampled. Because water supply wells are within 1,000 ft. of the release and groundwater contaminant levels are above standards, the risk classification for this site is "high". A Corrective Action Plan was approved in December 2010 requiring regularly submitted monitoring reports. Sampling from 2014 shows contaminant levels to remain above groundwater standards, including lead. As of April 2017, a Notice of Violation was issued for failure to submit a monitoring report as approved in the corrective action plan. (**Map Code: A-6**)

 # 6362 Royster Co. – Business Hwy. 74 East – A petroleum release was discovered during tank removal of six (6) USTs, one (1) diesel and five (5) gasoline, during November 1990. Contaminated soils in the amount of 20 yd^3 was stockpiled and approved to be spread onsite. Monitoring wells were installed in 1991. In January 1993, a Corrective Action Plan was submitted to the FRO. Groundwater sampling showed positive results for multiple petroleum byproducts from approximately three (3) plumes. A Hydrogeologic Investigation Phase III was submitted at the same time as the Corrective Action Plan concluding that even though contamination was detected, they were at very low levels. It was noted in the report that a swamp (i.e. a discharge zone for the site) is located just downgradient. The results of phase III of the ground water investigation indicated that for all practical purposes the downgradient extent of contamination has been reached. (**Map Code: A-7**)

 # 11621 City Limits Grocery – An undetermined amount of contaminated soil was discovered during the abandonment of two (2) 550 gallon USTs in September 1993. Approximately 30 cu/yds of impacted soil was excavated for disposal. Lab results for soil

samples show 953 mg/kg FRO and 240 mg/kg GRO. No other work is documented in the file. (**Map Code: A-8**)

 # 22848 Servco 02611 – 16700 Andrew Jackson Hwy. – For details related to this event, contact the UST section of the Fayetteville Regional Office at (910) 433-3300. This file was unavailable for review at the time of record inspection. No information could be found through the digital database. (**Map Code: A-9**)

 # 90169 Wallace Trucking – Spill on Hwy. 74 East – On March 26, 2015 at approximately 4:30 pm, a diesel fuel spill from a tractor trailer accident occurred on Hwy 74 East about ¼ mile prior to Exit 186. There was a loss of approximately 150 gallons. EHC vacuum truck recovered about 150 gallons of fuel from saddle tanks and puddles of fuel on the ground. Soil removal was scheduled for April 2, 2015. A Notice of Regulatory Requirements was issued by the FRO on April 1, 2015. No other work is documented in the file. (**Map Code: A-10**)

 # 29930 Nic's Pic Kwik 9 – 11761 McColl Rd. – There was a suspected release from a 2,000 gallon kerosene UST that has been out of service, reportedly, since 2012. The date of the release is not known but there was possibly a release of up to 600 gallons. Initial response efforts were to remove the remaining product from the UST. This discovery is at a facility where the STF Branch has for years been monitoring a state lead site. The state lead contractor measured product in MW-9 on October 29, 2014 which was later to be confirmed as kerosene. A private consultant was hired to gauge/sample MW-9 and reportedly, no free product was measured. On April 15, 2015, Ken Currie and Wayne Randolph of the FRO gauged MW-9 with both an oil/water interface probe and poly bailer. No product was detected with the interface probe and although no visible product was observed in the bailer, there exhibited a slick coating on the bailer exterior and water dripping from the bailer created a significant sheen in runoff water standing in the well vault. A groundwater sample was collected and showed minor target detections. For lack of other possible sources, the RP was to conduct a site check around the kerosene UST and conduct free product recovery. (**Map Code: A-11**)

 # 2857 Quick Stop Store 50 – 11761 McColl Rd. – A 2010 Monitoring Report states that a file review for this incident at the FRO indicated that in August 1984, a release was reported at the site when it was discovered that the on-site water supply well had been impacted by petroleum contaminants. The on-site water supply well was abandoned in 1985. One (1) 4,000 gallon and one (1) 10,000 gallon UST were closed by removal on June 12, 1991. Contaminated soils were removed from the former tank basin, product lines, and north side of the dispenser island. Agra Environmental, Inc. (Agra) conducted a site visit and monitoring well installation at the site on December 9, 2009. During the visit, MW 5 and 6 were found to be destroyed and MW 4 was found to be significantly damaged. None of the on-site monitoring wells revealed petroleum contamination exceeding the regulatory standards during this time. A series of events for this property can be found in the Subsequent Monitoring Report dated September 26, 2016 submitted to the FRO, as well as recommendations for the continuance of monitoring at this site. (**Map Code: A-12**)

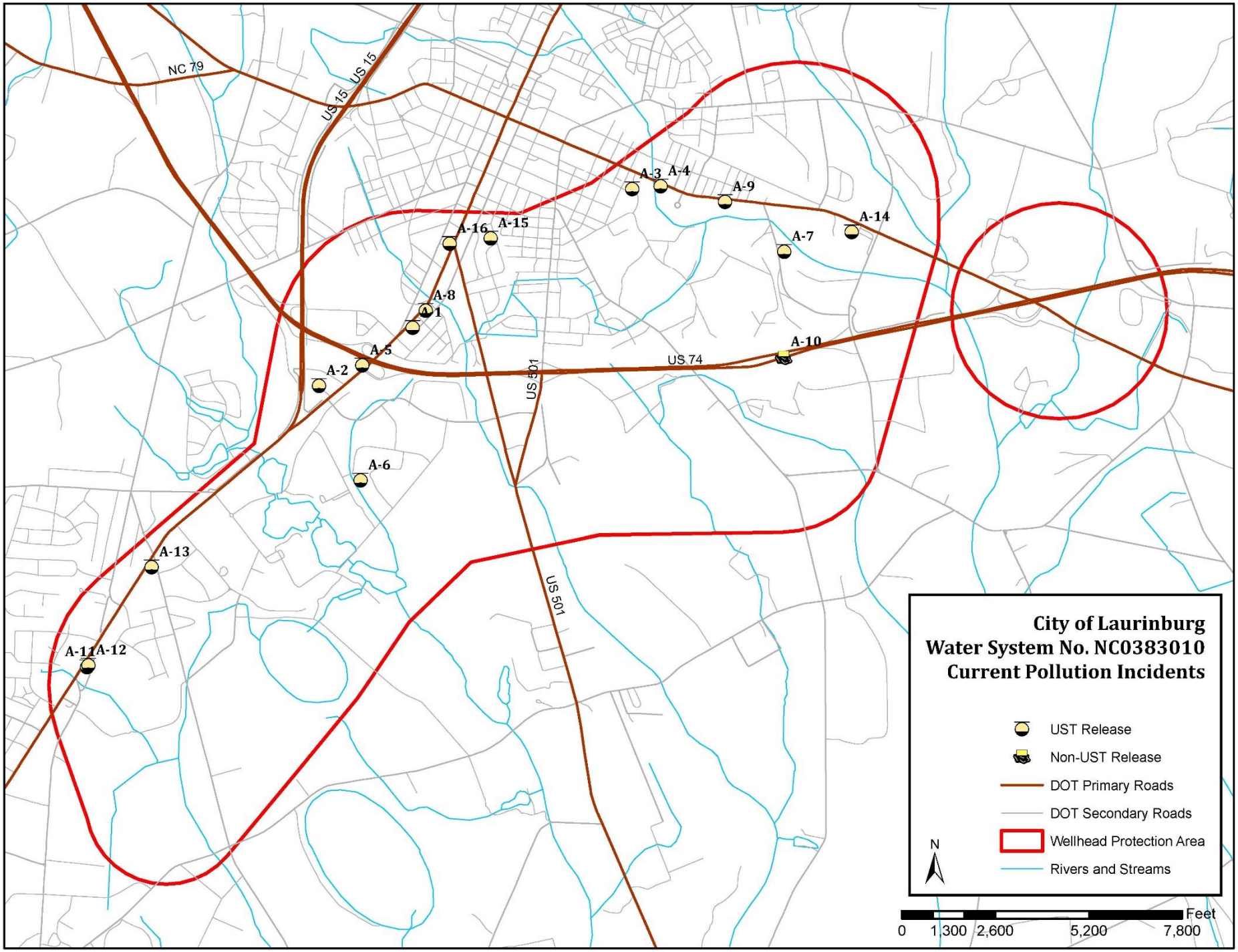
 # 2856 Nic's Pic Kwik – 1201 McColl Hwy. - A petroleum release of approximately 7,000 gallons occurred in 1984. Soil sampling and testing from installed monitoring wells took place between 1988 and 1991. In March on 1991, NCDENR requested a site assessment which was completed and received in March of 1992. This report showed evidence of petroleum fuel hydrocarbon contamination in six (6) monitoring wells. An inspection report from June 2004 indicated that there were damaged monitoring wells on the property that need to be properly abandoned. An irrigation well was found to be located within 300 ft. of the site. A Notice of Regulatory Requirements was issued on October 13, 2006 because no assessment work or corrective actions had been recorded since the site assessment in 1992. A response letter was received at the DENR Fayetteville Regional Office on December 13, 2006 disputing the responsibility of the cleanup by Quality Oil Company. No further information was available in the file. Currently, there are only ASTs at this facility. (**Map Code: A-13**)

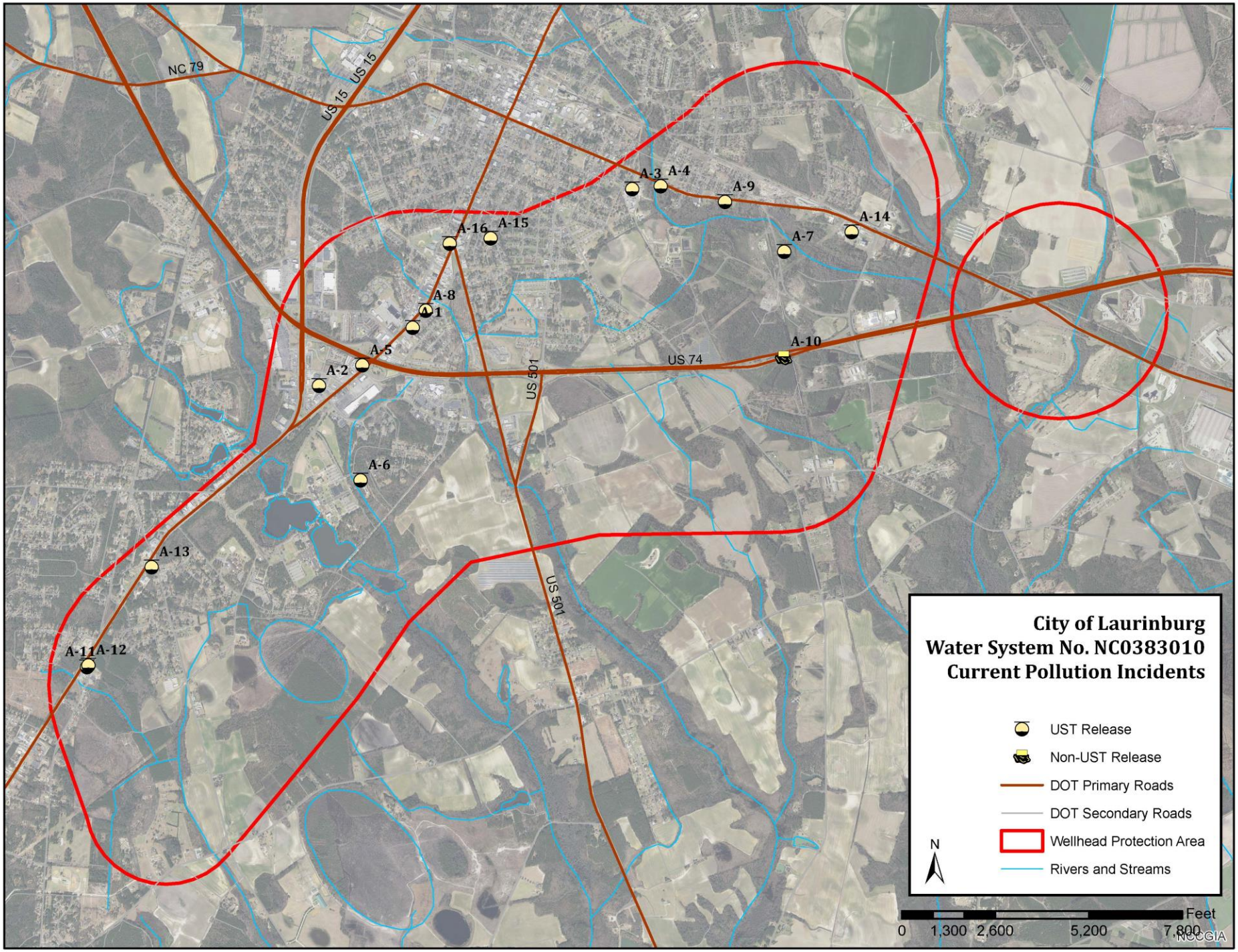
 # 14737 Service Oil – Bulk Storage Fac. – Bus. Hwy 74 East. - There is very little information in this file at the FRO. A Notice of Regulatory Requirements dated November 2, 1995 indicates receiving information on April 17, 1995 confirming a release from the UST at this site. This letter notified the Service Oil Bulk Plant Facility of the legal requirements pertaining to the release. (**Map Code: A-14**)

 # 23945 John Cartrette Property – 1017 S. Pine St. – Available records from the online database indicate that soil contamination was discovered during a 550 gallon heating oil release. The release was not reported and known about by the Fayetteville Regional Office until the 20-day report was received. A site visit was performed on November 3, 2002 where soil was hand augured to 7 ft. below land surface. A petroleum odor was present at 7 ft. below land surface; however, no sample was obtained. (**Map Code: A-15**)

 # 7222 Pat's Place – 1019 South Main St. – A petroleum release was discovered upon the removal of one (1) 1,000 gallon UST at this location in January 1992, according to a tank removal analysis submitted to the FRO by Environmental Hydrogeological Consultants, Inc. Original sampling results showed soil contamination, not groundwater contamination. A proposed Corrective Action Plan was received at the FRO on February 24, 1992 which detailed the discovery of an orphaned tank onsite. Bain, Palmer & Associates, Inc. were retained for services by Service Oil Company to provide hydrogeological services. A letter of preliminary findings was received at the FRO on December 1, 1994 describing three separate areas of contamination onsite with no cause for concern of risk to human health or the environment. This site was visited by the FRO on August 28, 1998 to confirm the priority ranking and to determine if the incident could be closed out using available data. The review and site visit determined the ranking to be "low"; however, this incident could not be closed under the risk-based rules without additional soil and groundwater testing. There remains to be a dispute of responsible party. (**Map Code: A-16**)

Please see the following maps for the location of each incident described above, indicated by the referenced map code.


NC 79
US 15
US 15
A-3
A-4
A-9
A-14
A-16
A-15
A-7
A-8
A-1
A-5
A-2
US 74
A-10
US 501
A-6
A-13
US 501
A-11
A-12
City of Laurinburg
Water System No. NC0383010
Current Pollution Incidents
UST Release
Non-UST Release
DOT Primary Roads
DOT Secondary Roads
Wellhead Protection Area
Rivers and Streams
N
Feet
0
1,300
2,600
5,200
7,800


NC 79
US 15
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A-8
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DOT Secondary Roads
Wellhead Protection Area
Rivers and Streams
N
Feet
0
1,300
2,600
5,200
7,800
NCCGIA

Closed/Historic Pollution Incidents (UST Releases and Non-UST Releases)

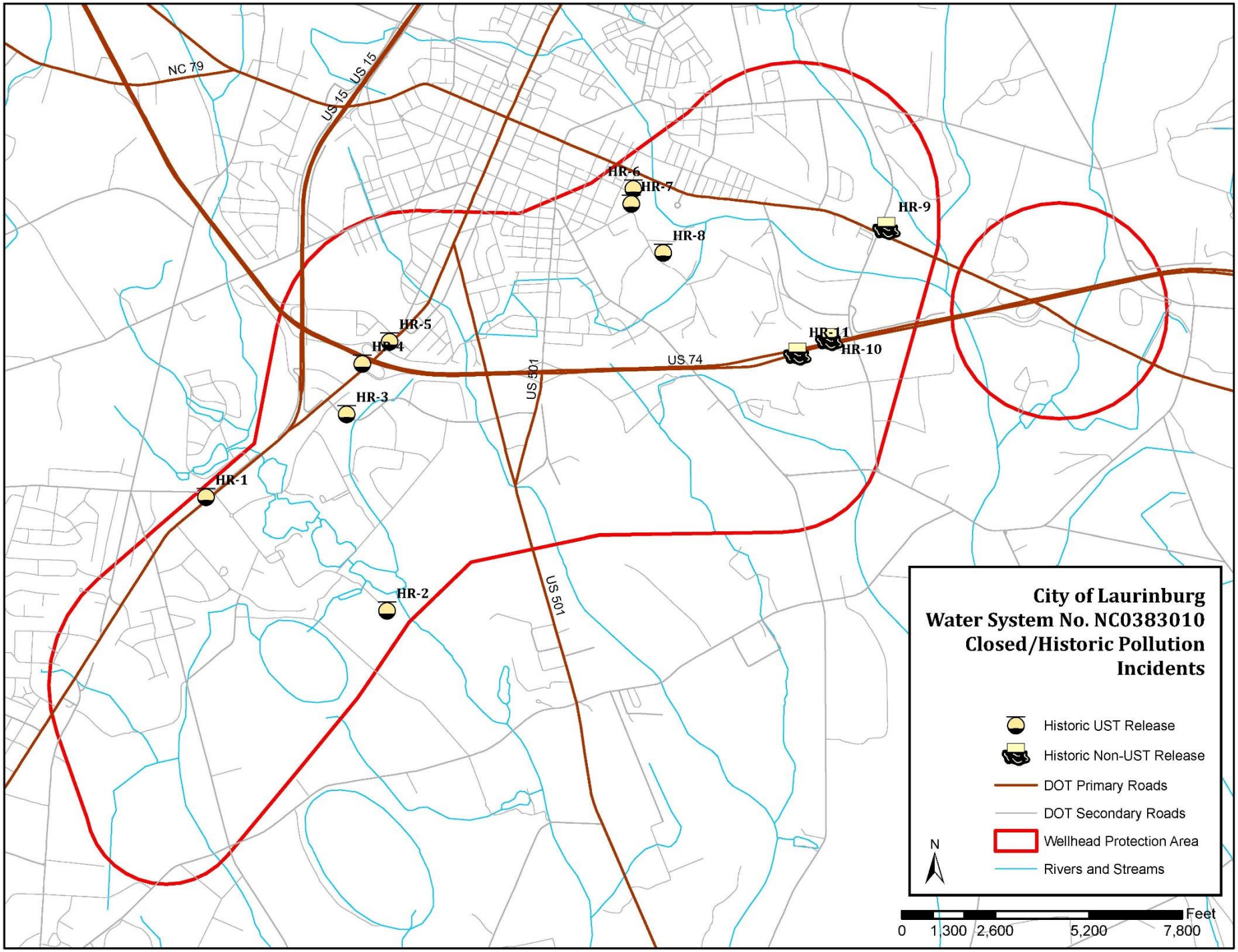
These events do not appear as potential threats on the current Potential Contaminant Source Inventory or Inventory Maps as these are considered closed events by the UST Section of the Fayetteville Regional Office. However, a listing and map of closed/historic pollution incidents has been included for reference. In addition, details regarding each case have been provided electronically by the UST section of the Fayetteville Regional Office and are available to the Wellhead Protection Committee.

WHPA	Map Code	Location	File #	Archived File Location	Latitude	Longitude
CA-10	HR-1	Community Stop 3 2100 401 South And Blues Farm Rd.	15451	CD-594/FA-839	34.745072	-79.490556
9	HR-2	Bridge Creek Pump Station Elm Street Extension	22847	CD-361/FA-1221	34.736492	-79.473752
2, 11	HR-3	Kmart Auto Center (former) 1690 South Main St.	29746	CD-594/FA-3822	34.751460	-79.477580
2	HR-4	Scotchman 198 1659 South Main St.	29858	CD-594/FA-3569	34.755320	-79.476150
2	HR-5	McLaurin-McArthur Chevrolet 1609 South Main St.	11987	CD-242/FA-670	34.757019	-79.473617
17	HR-6	City of Laurinburg Garage 503 Hall St.	7515	CD-175/FA-281	34.768793	-79.451118
17	HR-7	City of Laurinburg Public Works 503 Hall St.	29875	CD-594/FA-3949	34.767643	-79.451305
17	HR-8	Leith Creek Pump Station Hall St. Extension	22852	CD-360/FA-1226	34.763912	-79.448330
CA-17	HR-9	Rostra Presion Controls 14141 Highland Rd.	90023	CD-561/FA-88150	34.765811	-79.427677
CA-17	HR-10	UPS Truck Accident Hwy 74 Bypass & Highland Rd.	90120	CD-624/FA-88285	34.757315	-79.432931
CA-17	HR-11	Universal Intermodal Services Hwy 74 near MM 186	90165	CD-624/FA-88347	34.756182	-79.435891

CA = Contributing Area

Table 7. Closed/Historic Pollution Incidents (UST Releases and Non-UST Releases)

To research these pollution incidents, please visit the NC Department of Environmental Quality, Division of Waste Management's UST Section Laserfiche Weblink research tool for archived files at: http://edocs.deq.nc.gov/WasteManagement/Welcome.aspx?cr=1. Please see the following maps for the location of each incident listed above, indicated by the referenced map code.


NC 79
US 15
US 15
HR-6
HR-7
HR-8
HR-9
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HR-4
HR-3
HR-11
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City of Laurinburg
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N
Feet
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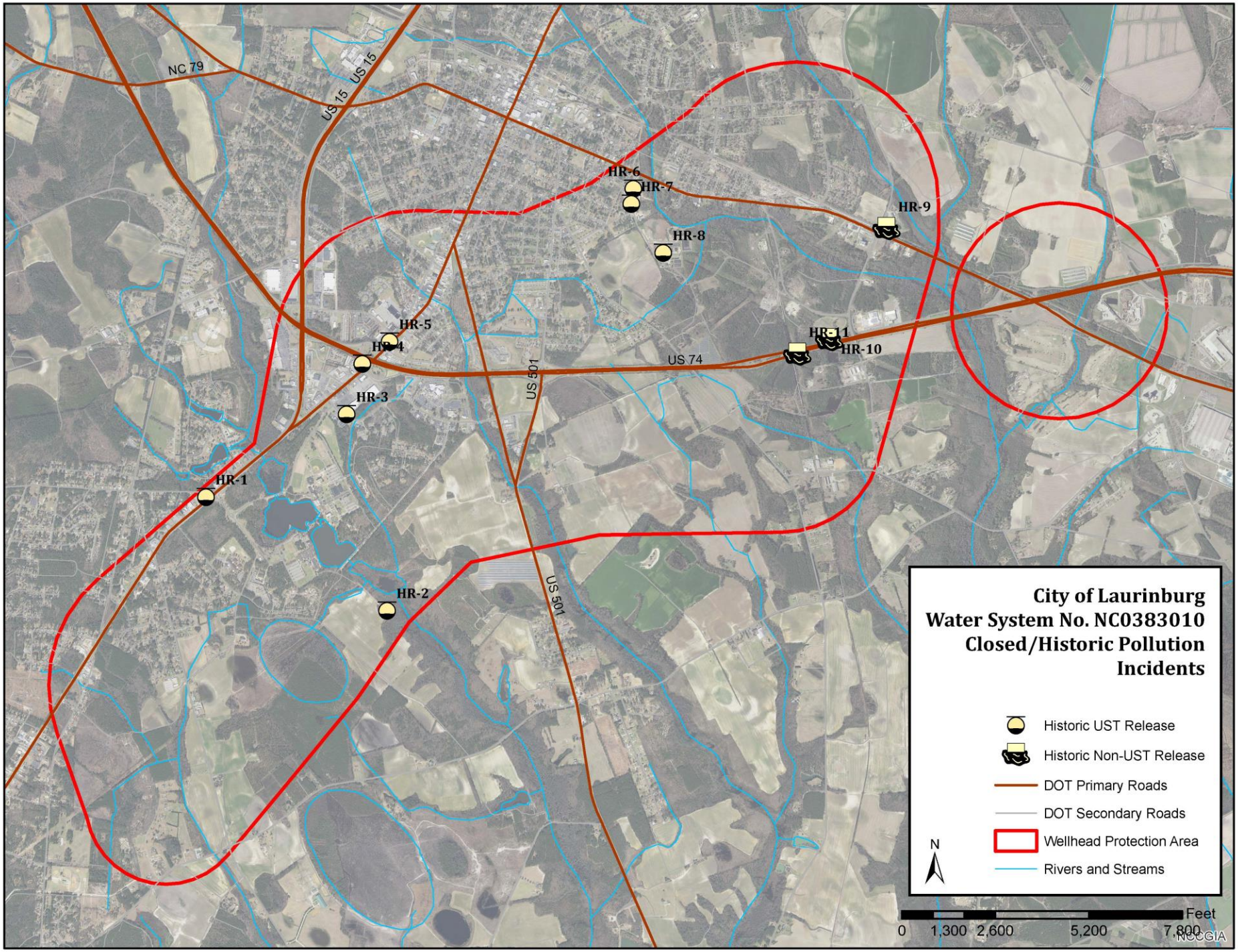
1,300
2,600
5,200
7,800


NC 79
US 15
US 15
HR-6
HR-7
HR-8
HR-9
HR-5
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HR-3
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HR-11
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City of Laurinburg
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Closed/Historic Pollution
Incidents
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Rivers and Streams
N
Feet
0
1,300
2,600
5,200
7,800
NCCGIA

Potential Contaminant Source Inventory

Tables and Maps

The following tables list the potential sources of contamination in the City of Laurinburg's wellhead protection areas. The exception to this are the numerous home heating oil tanks and septic tanks used at many residences, and which remain off the inventory for this reason. The tables have map codes used to identify the potential sources of contamination on the PCS Inventory Map. For more detailed information about each potential contaminant source, including information relevant in providing educational materials to owners, please see the PCS Data Charts in the Appendix. Where listed on the PCS Data Charts "low quantities" means less than 100-gallons or 100-pounds. The map codes used to identify each potential contaminant site category are detailed in Table 3.

Within this section, you will find a comprehensive chart listing all potential contaminant sources within the two wellhead protection areas of the City of Laurinburg, followed by corresponding maps showing each PCS indicated by the referenced map code.

Following the comprehensive PCS inventory chart and maps is information specific to each individual well site. This information is provided to better depict the potential of contamination to each individual well site. As described in the delineation of the WHPAs, the original delineated area of contribution to each well site was combined and expanded to form one WHPA where overlapping occurred. Potential contaminants located outside of the determined radius for each individual well (located in the expanded portion of the WHPA) are listed and shown separately as Indirect Potential Contaminant Sources of Wellhead Protection Areas.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
18	Agriculture/Ag. Operations	Y-2	Sinclair Lumber Co	17401 Harry Malloy Rd. Laurinburg, NC 28352
17	Agriculture/Ag. Operations, AST	Q-15 Y-1	Allan Baucom	17840 Old Lumberton Rd. Laurinburg, NC 28352
15	Animal Operation/Poultry	V-1	Carmichael Farm	18668 Old Lumberton Rd. Laurinburg, NC 28352
2	AST	Q-9	South Fire Station - Station 6	1547 Hickory St. Laurinburg, NC 28352
2	AST	Q-10	Moe's Chicken	1600 S. Main St. Laurinburg, NC 28352
18	AST, Chemical Storage	Q-13 EE-5	Pate Z V Incorporated	17401 Harry Malloy Rd. Laurinburg, NC 28352
18	AST, Chemical Storage, CERCLIS	Q-12 EE-4 C-1	Helena Chemical	17321 Harry Malloy Rd. Laurinburg, NC 28352
16, 17	AST, PIRF	Q-11 A-14	Service Oil - Bulk Storage Fac. PIRF Inc.: 14737	17600 U.S. 74 Business Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-1	Scotland Motors	1609 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-2	Doug's Tire Shop	1411 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-3	Safeway Motors Sales & Rental	1134 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-4	Allstate Glass	1411 Atkinson St. Laurinburg, NC 28352
17	Automobile Repairs/Sales	P-6	Caulder's Service Center	104 Sanford Rd. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-7	Haney's Tire & Recapping Services	1663 S. Main St. Laurinburg, NC 28352
10	Automobile Repairs/Sales	P-8	C&R Automotive & Towing	1171 McColl Rd. Laurinburg, NC 28352
17	Automobile Repairs/Sales AST	P-9 Q-16	Martin Transport	14201 Highland Rd. Laurinburg, NC 28352
2	Carwash	J-1	Taylor's Detailing	1407 S. Main St. Laurinburg, NC 28352
2	Carwash	J-2	Exxon Car Wash (Manual)	1200 S. Main St. Laurinburg, NC 28352
10	Carwash	J-3	Nic's Pic Kwik 9 Carwash	11761 McColl Rd. Laurinburg, NC 28352
10	Carwash	J-4	Nic's 8 Carwash	12001 McColl Rd. Laurinburg, NC 28352
10	Carwash	J-5	Ron's Precision Car Wash	12200 McColl Rd. Laurinburg, NC 28352

Potential Contaminant Source Inventory Chart

WHPA	PCS Category	Map Code	PCS Site	Physical Location
15	Cemetery	DD-1	Covington Cemetary	Off of Hwy 74 Laurinburg, NC 28352
2	Chemical Storage	EE-1	Byrd's Pool Services	1545 Atkinson St. Laurinburg, NC 28352
16, 17	Chemical Storage, NPDES	EE-3 G-3	Ready Mix Concrete Company	13842 Dixie Guano Rd. Laurinburg, NC 28352
5, 6, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352
2	Communications Tower, AST	H-2 Q-5	American Tower Corporation Site Name: Legion Park NC Site #: NC 021292 FCC Tower Reg No. - 1056789	111 Plaza Rd. Laurinburg, NC 28352
16, 17	Communications Tower, AST	H-3 Q-6	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
17	Demolition Site	CC-1	Prince Plant #3	23 Commonwealth St. Laurinburg, NC 28352
17	Demolition Site, RCRA, AST	CC-2, B-3 Q-7	Waverly Mills Plant #3	50 5th St. Laurinburg, NC 28352
2	Dry Cleaner, RCRA, PIRF	W-1 B-1 A-1	One Hour Cleaners PIRF Inc.: 830001	1514 S. Main St. Laurinburg, NC 28352
2	Dry Cleaner, RCRA, PIRF	W-2 B-2 A-2	Village Cleaners PIRF Inc.: 830002	1691 S. Main St. Laurinburg, NC 28352
16, 17	Electrical Substation	Z-2	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
2	Electrical Substation	Z-4	City of Laurinburg	728 Midland Way Laurinburg, NC 28352
2	Hardware/Lumber/ Parts Stores	O-1	Advance Auto Parts	1216 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/ Parts Stores	O-2	AutoZone	1203 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores	0-4	O'Reilly Auto Parts	1123 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores	O-5	Napa Auto Parts Barnes Motor & Parts Company	104 Johns Rd. Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores, AST	O-3	Lowes Home Improvement Center	910 US 15-401 By-Pass Laurinburg, NC 28352
2, 6	Hospital, AST, UST	K-2 Q-2 F-11	Scotland Memorial Hospital	500 Lauchwood Dr. Laurinburg, NC 28352

Potential Contaminant Source Inventory Chart cont.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
17	Machine Shop/Repair	R-1	Averitt's Electric Motor Repair	14121 Highland Rd. Laurinburg, NC 28352
5	Maintenance Shop	M-1	Laurinburg Housing Authority	1351 Woodlawn St. Laurinburg, NC 28352
16, 17	Manufacturing	U-1	Rostra Precision Controls	2519 Dana Dr. Laurinburg, NC 28352
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352
17	Motor Pool	GG-3	Mikki Caulders Towing	102 Sanford Rd. Laurinburg, NC 28352
17	Motor Pool Chemical Storage Electrical Storage Automobile Repair	GG-2 EE-2 Z-1 P-5	Sanitation Dept. Public Works Facility	501 Hall St. Laurinburg, NC 28352
2	Motor Pool, NPDES	GG-1 G-2	National Guard Armory	1520 S. Main St. Laurinburg, NC 28352
16, 17	PIRF	A-7	Royster Co. PIRF Inc.: 6362	14001 Dixie Guana Rd. Laurinburg, NC 28352
2	PIRF	A-8	City Limits Grocery PIRF Inc.: 11621	Main St. Laurinburg, NC 28352
17	PIRF	A-9	Servco 02611	16700 Andrew Jackson Hwy. Laurinburg, NC 28352
5	PIRF	A-15	John Cartrette Property PIRF Inc.: 23945	1017 S. Pine St. Laurinburg, NC 28352
2	PIRF	A-16	Pat's Kitchen PIRF Inc.: 7222	1019 S. Main St. Laurinburg, NC 28352
17	PIRF	A-10	Wallace Trucking	Hwy 74 East Laurinburg, NC 28352
10	PIRF	A-12	Quick Stop Store 50 PIRF Inc.: 2857	11761 McColl Rd. Laurinburg, NC 28352
2	PIRF	A-16	Pat's Kitchen PIRF Inc.: 7222	1019 S. Main St. Laurinburb, NC 28352
2	PIRF	A-5	South Main Exxon PIRF Inc.: 15449	1659 S. Main St. Laurinburg, NC 28352
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352
17	Pre-Sanitary Landfill	E-1	Laurinburg Dump UDS321 - Old Landfill	600 Hall St. Laurinburg, NC 28352

Potential Contaminant Source Inventory Chart cont.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
17	Print/Sign Shop	X-1	Speedy Sign Shop	16800 Andrew Jackson Hwy. Laurinburg, NC 28352
2	Print/Sign Shop	Y-2	Eastcoast Signs & Graphics	1659 S. Main St. Laurinburg, NC 28352
2	Print/Sign Shop	X-3	Woody's Printing & Copy Shop	200 John's Rd. Laurinburg, NC 28352
10, 12	Pump Station	S-1	Pump Station #17	11400 Hasty Rd. Laurinburg, NC 28352
10	Pump Station	S-2	Pump Station #19	2212 Elm Ave. Laurinburg, NC 28352
17	Pump Station	S-3	Pump Station #24	16401 Andrew Jackson Hwy. Laurinburg, NC 28352
9	Pump Station	S-4	Pump Station #28	1721 Berwick Dr. Laurinburg, NC 28352
17	Pump Station	S-5	Leith Creek Pump Station PS(LC#1)	605 Hall St. Laurinburg, NC 28352
17	Pump Station	S-6	Leith Creek Pump Station PS(LC#2)	605 Hall St. Laurinburg, NC 28352
17	Pump Station	S-7	Pump Station #23	17980 Andrew Jackson Hwy. Laurinburg, NC 28352
16, 17	Pump Station	S-8	Pump Station #22	13971 Highland Rd. Laurinburg, NC 28352
10	Pump Station	S-9	Pump Station #15	11758 McColl Rd. Laurinburg, NC 28352
11	Pump Station	S-10	Pump Station #29	1811 S. Main St. Laurinburg, NC 28352
17	Pump Station	S-11	Pump Station #4	17900 Old Lumberton Rd. Laurinburg, NC 28352
17	Pump Station	S-12	Pump Station #3	17231 Morgan Cir. Laurinburg, NC 28352
11	Recreational Facility	I-1	St. Andrews University Baseball Field	1700 Dogwood Mile St. Laurinburg, NC 28352
15	Recreational Facility	I-2	Cypress Creek Golf Link	19400 Andrew Jackson Hwy. Laurinburg, NC 28352
2	Recreational Facility	I-3	Scotland Post #50	311 Yadkin Ave. Laurinburg, NC 28352
16, 17	Salvage Yard	BB-1	Scotland Salvage & Recycling	13820 Dixie Guano Rd. Laurinburg, NC 28352
2	Storage	T-1	Storage Solution Self Storage	1620 S. Main St. Laurinburg, NC 28352
2	UST Gas Station	F-1 AA-1	Scotland Stop & Shop Fac. ID: 0-009151 Cert #: 20120478201	1612 S. Main St. Laurinburg, NC 28352
2	UST Gas Station	F-3 AA-3	Community Stop One/Exxon Fac. ID: 0-008341 Cert #: 20120193701	1200 S. Main St. Laurinburg, NC 28352

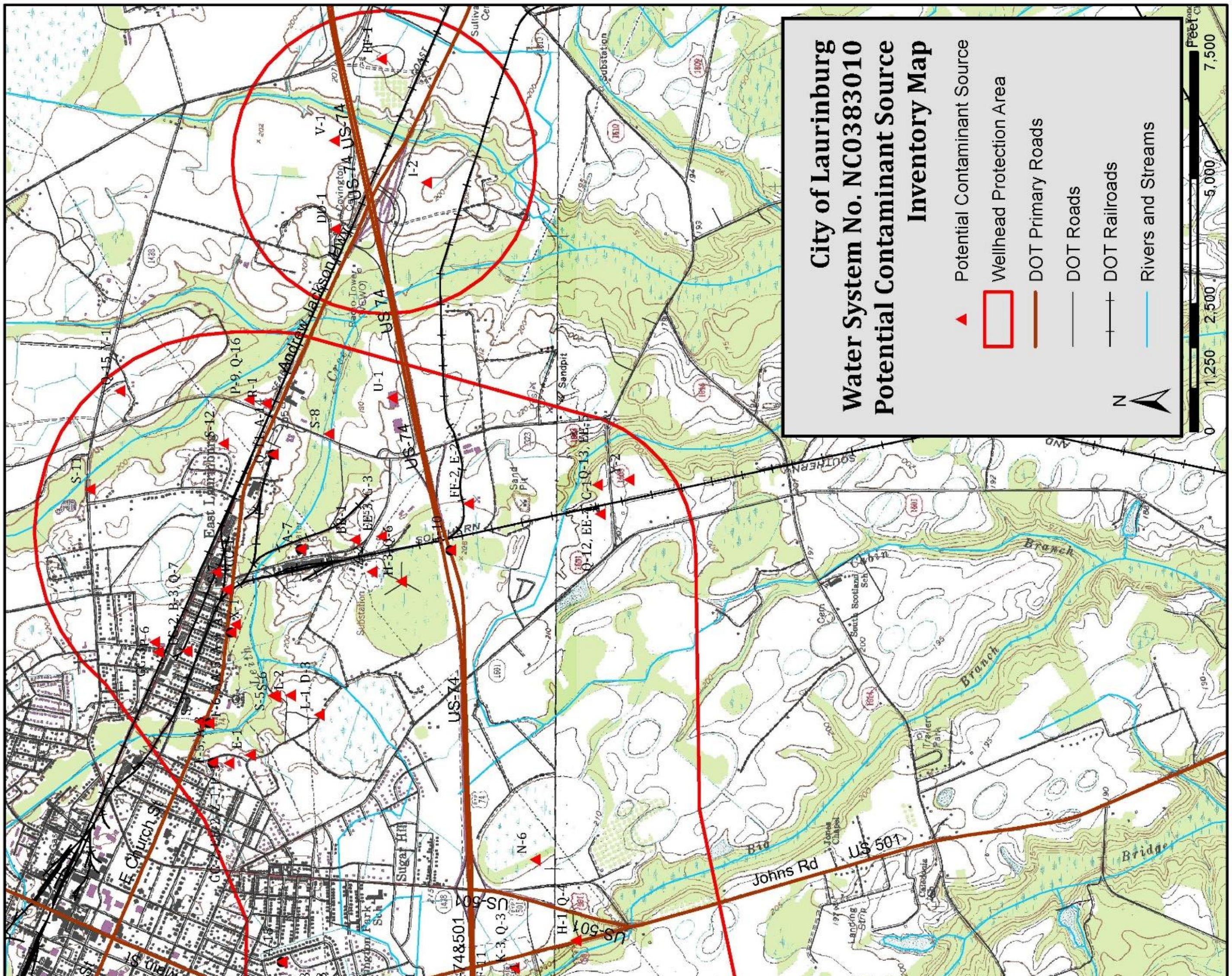
Potential Contaminant Source Inventory Chart cont.

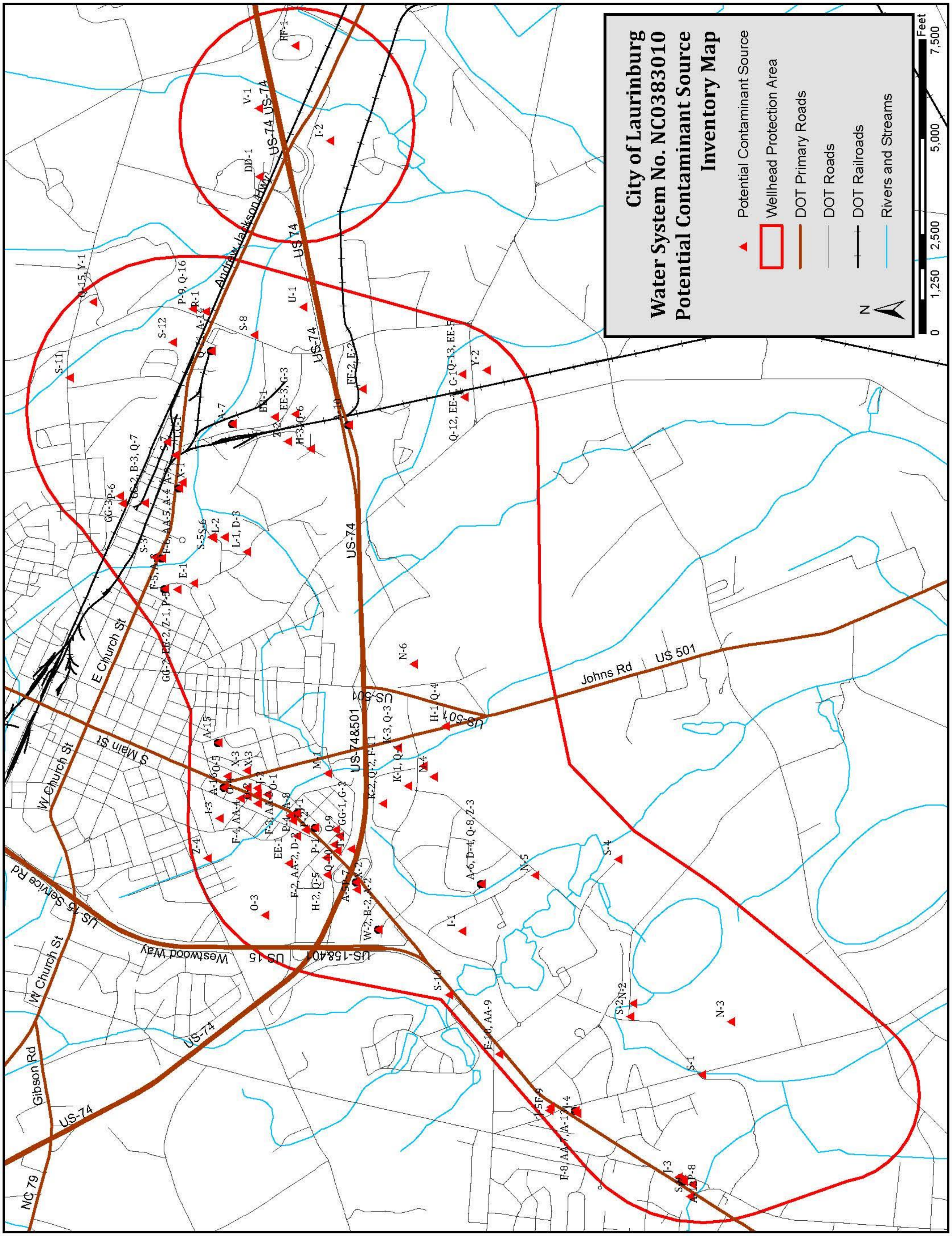
WHPA	PCS Category	Map Code	PCS Site	Physical Location
2	UST Gas Station	F-4 AA-4	Circle K Stores Inc. Fac. ID: 0-023253 Cert. #: 20150700501	1135 S. Main St. Laurinburg, NC 28352
10	UST Gas Station	F-9 AA-8	Corner Pantry Gibson Oil & Gas Co. Inc. Fac. ID: 0-009381 Cert. #: 20150286701	12200 McColl Rd. Laurinburg, NC 28352
10	UST Gas Station	F-10 AA-9	Community Stop 3 Fac. ID: 0-008342 Cert. #: 20160125301	12500 Hwy. 401 S. Laurinburg, NC 28352
17	UST Gas Station PIRF	F-6 AA-5 A-4	Community Mart/Citgo Gibson Oil & Gas Co. Inc. PIRF Inc.: 29996 Fac. ID: 0-023417 Cert. #: 20150286901	16440 Andrew Jackson Hwy. Laurinburg, NC 28352
10	UST Gas Station PIRF	F-7 AA-6 A-11	Nic's Pic Kwik 9 PIRF: 29930 Fac. ID: 0-008086 Cert. #: 20150531201	11761 McColl Rd. Laurinburg, NC 28352
10	UST Gas Station PIRF	F-8 AA-7 A-13	Nic's 8 PIRF: 2856 Fac. ID: 0-009250 Cert. #: 20150532201	12001 McColl Rd. Laurinburg, NC 28352
2	UST Gas Station Tier II Site	F-2 AA-2 D-2	WilcoHess Tier II: 4054984 Fac. ID: 0-009289 Cert #: 20140088101	1425 S. Main St. Laurinburg, NC 28352
17	UST, PIRF	F-5 A-3	City of Laurinburg Fleet Fuel Station PIRF Inc.: 29681 Fac. ID: 0-008045 Cert. #: 20150557501	503 Hall St. Laurinburg, NC 28352
10	Water Supply	N-2	Well Site 10	2218 Elm Avenue Laurinburg, NC 28352
10, 12	Water Supply	N-3	Well Site 12	11159 Hasty Rd., Laurinburg, NC 28352
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352
8, 9	Water Supply	N-5	Well Site 8	1767 Berwick Dr. Laurinburg, NC 28352
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352

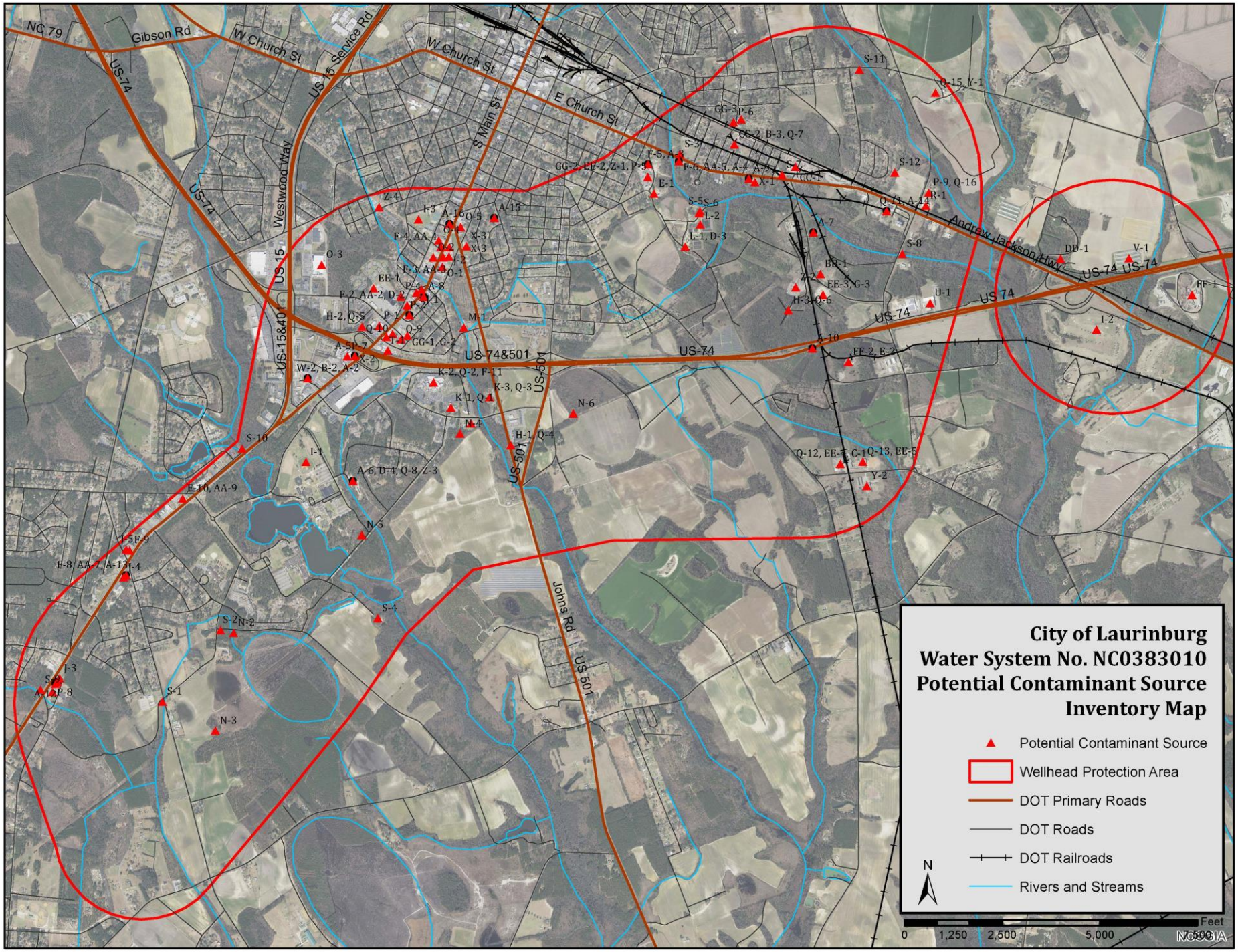
Potential Contaminant Source Inventory Chart cont.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
15	Wood Processing	FF-1	Edwards Wood Products	19500 Old Lumberton Rd. Laurinburg, NC 28352
18	Wood Processing Pre-Sanitary Landfill	FF-2 E-2	Carter Lumber UDS538 - Old Landfill	13402 Highland Rd. Laurinburg, NC 28352
17	WWTP (Drying Beds, Lined Sewage Basin)	L-2	Laurinburg WWTP, Drying Beds	620 Hall St. Laurinburg, NC 28352
14	WWTP, Tier II Site	L-1 D-3	Laurinburg WWTP Fac. ID: 5818693	620 Hall St. Laurinburg, NC 28352

Potential Contaminant Source Inventory Chart cont.


City of Laurinburg
Water System No. NC0383010
Potential Contaminant Source
Inventory Map
Potential Contaminant Source
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
0 1,250 2,500 5,000 7,500
Feet


City of Laurinburg
Water System No. NC0383010
Potential Contaminant Source
Inventory Map
Potential Contaminant Source
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
0
1,250
2,500
5,000
7,500
Feet
Andrew Jackson Hwy
US-74
E Church St
W Church St
S Main St
Johns Rd
US 501
US-74&501
US-15&401
US 15
Westwood Way
US-15 Service Rd
Gibson Rd
NC 79

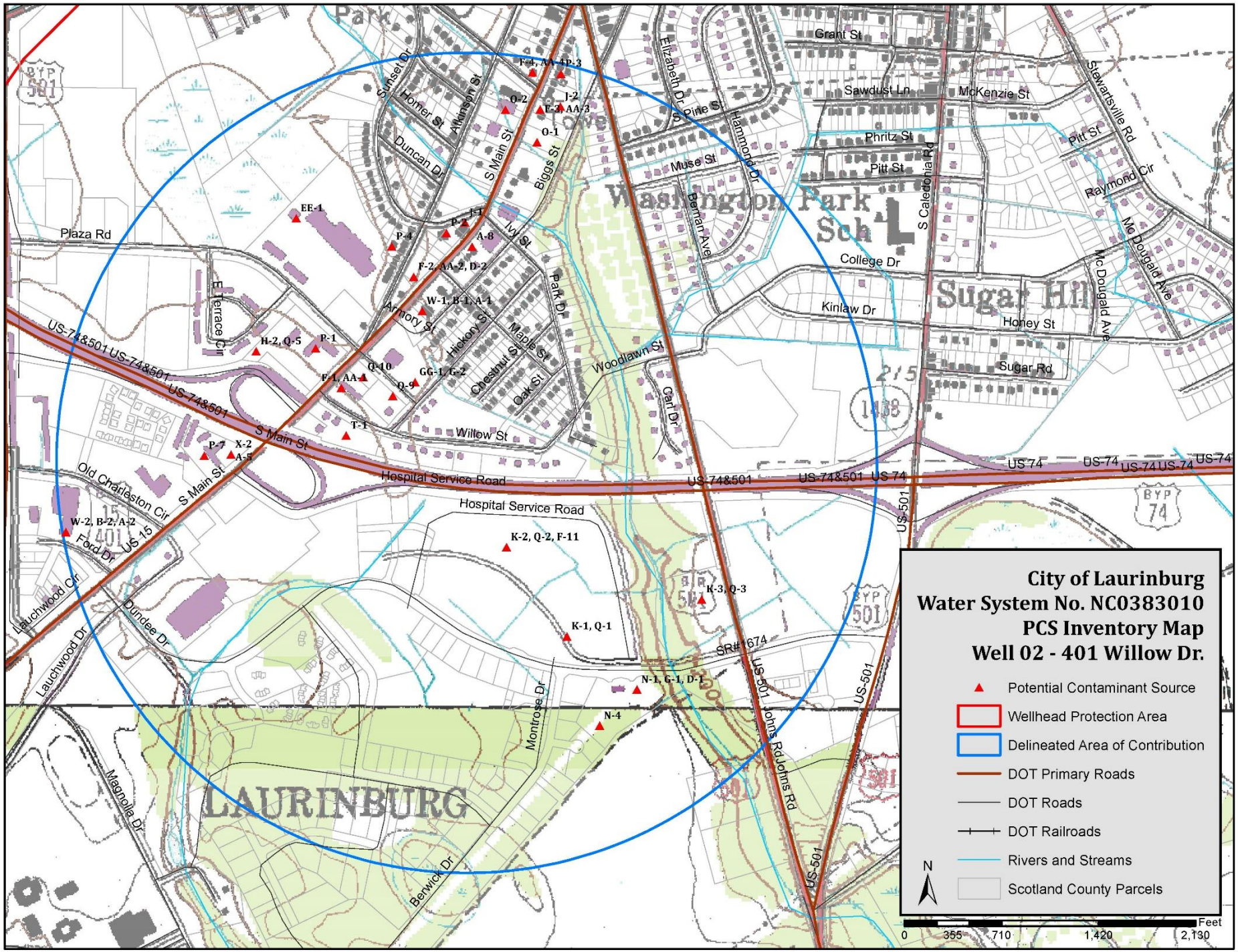

City of Laurinburg
Water System No. NC0383010
Potential Contaminant Source
Inventory Map
Potential Contaminant Source
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
Feet
0
1,250
2,500
5,000
NC0383A
NC 79
Gibson Rd
W Church St
E Church St
S Main St
US-15 Service Rd
US-74
US-15
US-15&401
Westwood Way
US-74&501
US-501
Johns Rd
Andrew Jackson Hwy

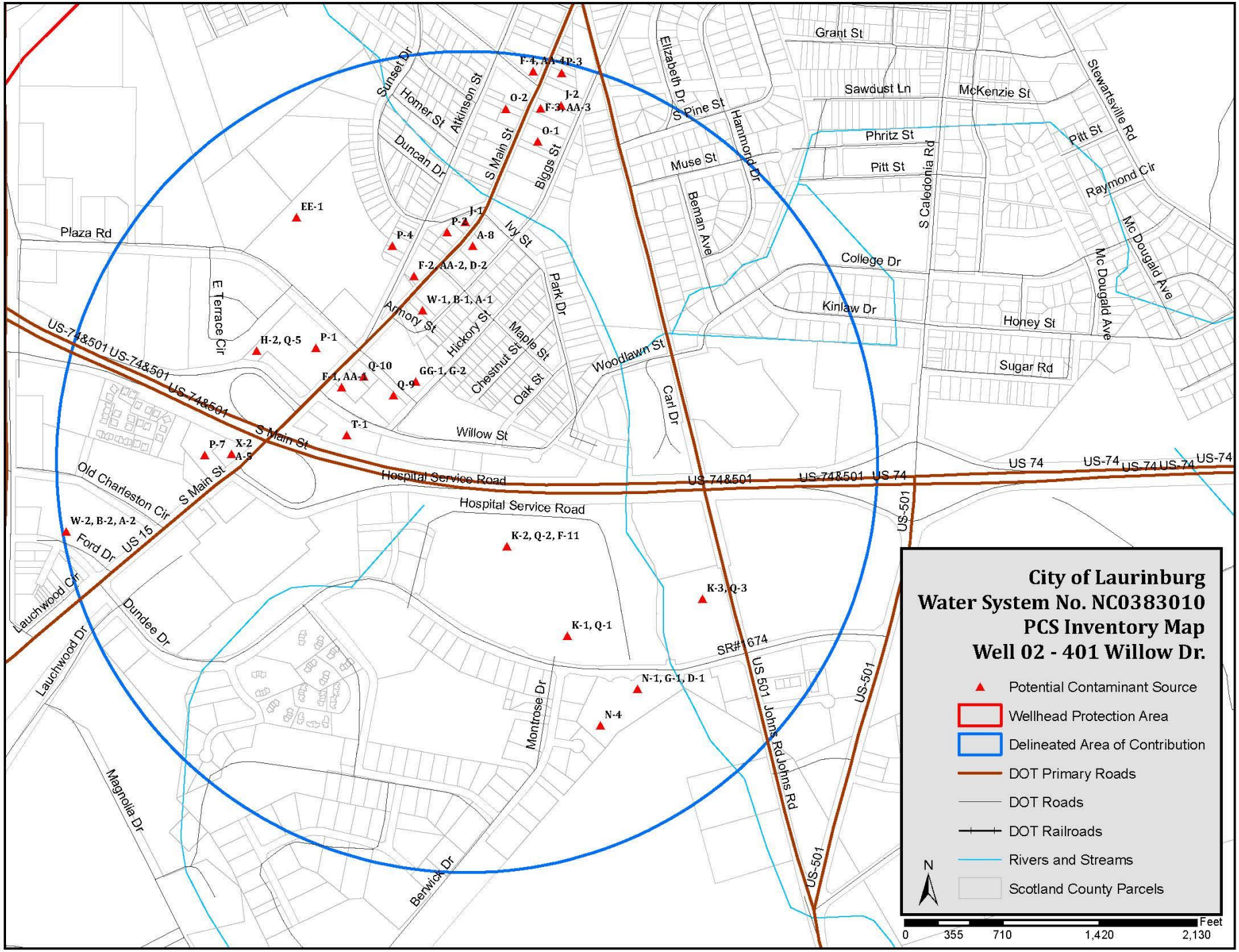
Potential Contaminant Source Inventory
Well 02 - 401 Willow Drive

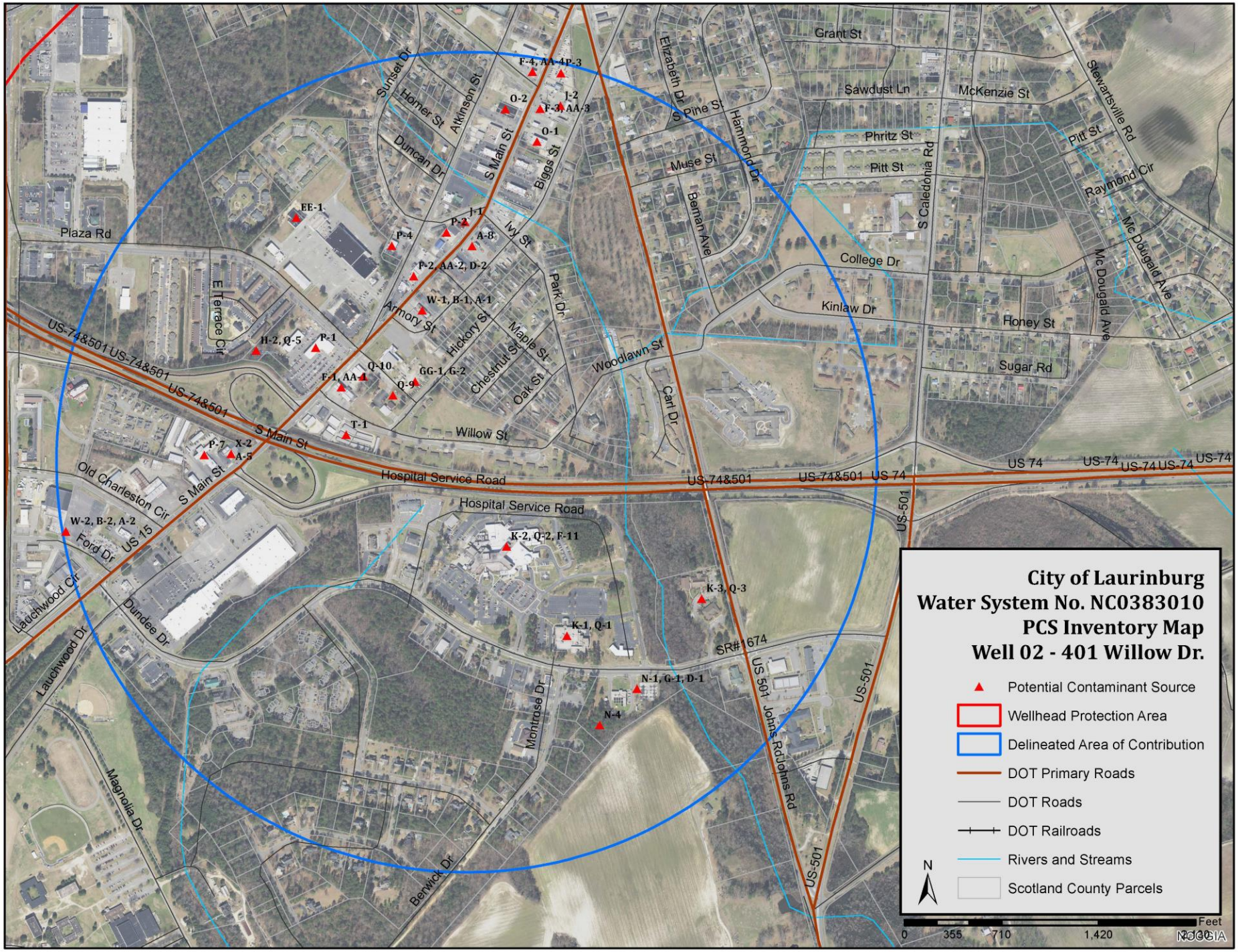
WHPA	PCS Category	Map Code	PCS Site	Physical Location
2	AST	Q-9	South Fire Station - Station 6	1547 Hickory St. Laurinburg, NC 28352
2	AST	Q-10	Moe's Chicken	1600 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-1	Scotland Motors	1609 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-2	Doug's Tire Shop	1411 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-3	Safeway Motors Sales & Rental	1134 S. Main St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-4	Allstate Glass	1411 Atkinson St. Laurinburg, NC 28352
2	Automobile Repairs/Sales	P-7	Haney's Tire & Recapping Services	1663 S. Main St. Laurinburg, NC 28352
2	Carwash	J-1	Taylor's Detailing	1407 S. Main St. Laurinburg, NC 28352
2	Carwash	J-2	Exxon Car Wash (Manual)	1200 S. Main St. Laurinburg, NC 28352
2	Chemical Storage	EE-1	Byrd's Pool Services	1545 Atkinson St. Laurinburg, NC 28352
2	Communications Tower, AST	H-2 Q-5	American Tower Corporation Site Name: Legion Park NC Site #: NC 021292 FCC Tower Reg No. - 1056789	111 Plaza Rd. Laurinburg, NC 28352
2	Dry Cleaner, RCRA, PIRF	W-1 B-1 A-1	One Hour Cleaners PIRF Inc.: 830001	1514 S. Main St. Laurinburg, NC 28352
2	Dry Cleaner, RCRA, PIRF	W-2 B-2 A-2	Village Cleaners PIRF Inc.: 830002	1691 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/ Parts Stores	O-1	Advance Auto Parts	1216 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/ Parts Stores	O-2	AutoZone	1203 S. Main St. Laurinburg, NC 28352
2, 6	Hospital, AST, UST	K-2 Q-2 F-11	Scotland Memorial Hospital	500 Lauchwood Dr. Laurinburg, NC 28352
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352
2	Motor Pool, NPDES	GG-1 G-2	National Guard Armory	1520 S. Main St. Laurinburg, NC 28352
2	PIRF	A-8	City Limits Grocery PIRF Inc.: 11621	Main St. Laurinburg, NC 28352

Potential Contaminant Source Inventory
Well 02 - 401 Willow Drive

WHPA	PCS Category	Map Code	PCS Site	Physical Location
2	PIRF	A-5	South Main Exxon PIRF Inc.: 15449	1659 S. Main St. Laurinburg, NC 28352
2	Print/Sign Shop	X-2	Eastcoast Signs & Graphics	1659 S. Main St. Laurinburg, NC 28352
2	Storage	T-1	Storage Solution Self Storage	1620 S. Main St. Laurinburg, NC 28352
2	UST Gas Station	F-1 AA-1	Scotland Stop & Shop Fac. ID: 0-009151 Cert #: 20120478O1	1612 S. Main St. Laurinburg, NC 28352
2	UST Gas Station	F-3 AA-3	Community Stop One/Exxon Fac. ID: 0-008341 Cert #: 20120193701	1200 S. Main St. Laurinburg, NC 28352
2	UST Gas Station	F-4 AA-4	Circle K Stores Inc. Fac. ID: 0-023253 Cert. #: 20150700501	1135 S. Main St. Laurinburg, NC 28352
2	UST Gas Station Tier II Site	F-2 AA-2 D-2	WilcoHess Tier II: 4054984 Fac. ID: 0-009289 Cert #: 20140088101	1425 S. Main St. Laurinburg, NC 28352
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352

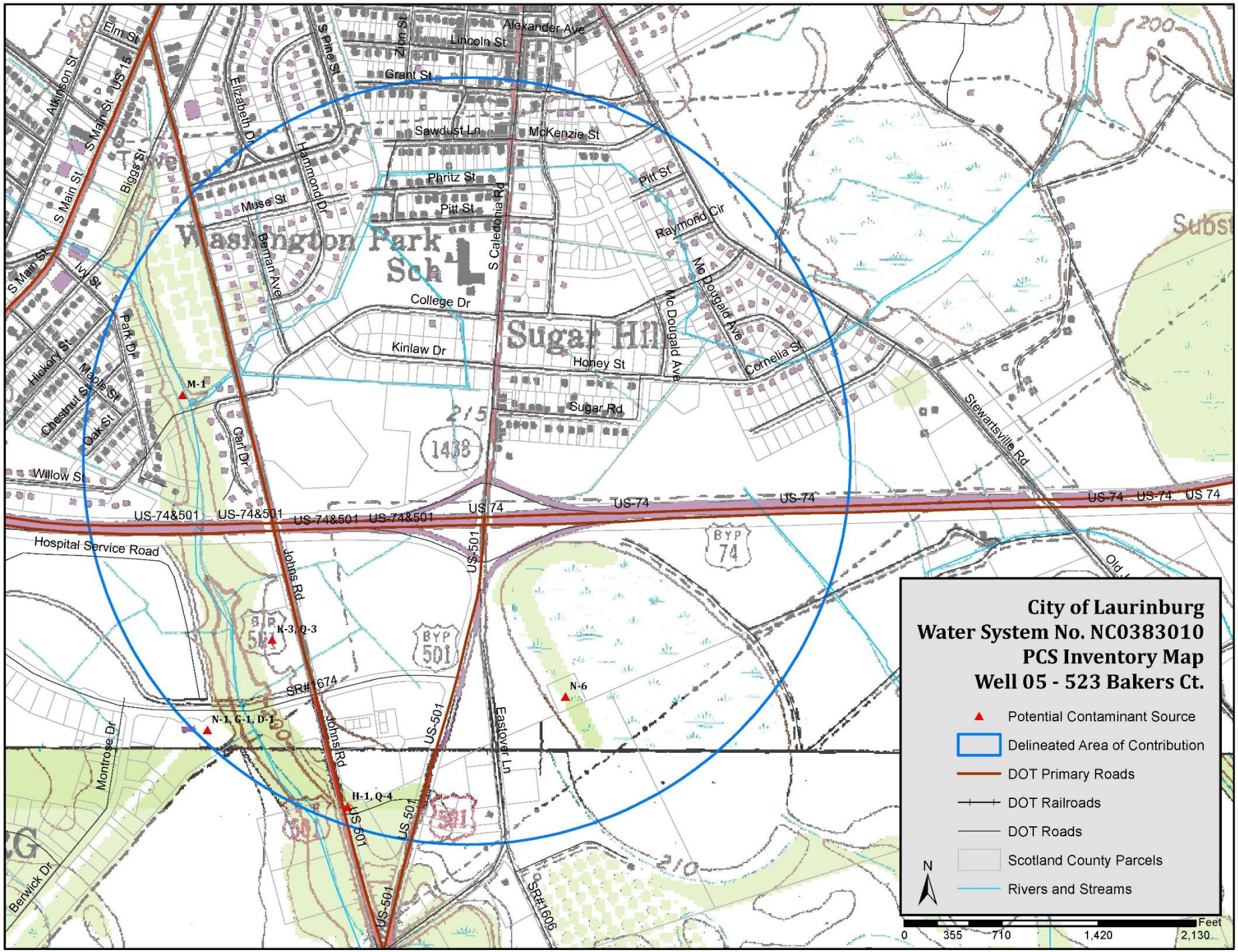

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 02 - 401 Willow Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
Scotland County Parcels
N
Feet
0
355
710
1,420
2,130
LAURINBURG
Washington Park Sch
Sugar Hill
EE-1
P-2, J-1
P-4
A-8
F-2, AA-2, D-2
W-1, B-1, A-1
H-2, Q-5
P-1
Q-10
F-1, AA-1
Q-9
GG-1, G-2
T-1
P-7
X-2
A-5
W-2, B-2, A-2
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
N-1, G-1, D-1
N-4
F-4, AA-4, P-3
Q-2
J-2
E-3, AA-3
O-1
Plaza Rd
Sunset Dr
Homer St
Atkinson St
Duncan Dr
S Main St
Biggs St
Ivy St
Park Dr
Armory St
Hickory St
Maple St
Chestnut St
Oak St
Woodlawn St
Willow St
Terrace Cir
Elizabeth Dr
Pine St
Hammond Dr
Bernan Ave
Grant St
Sawdust Ln
McKenzie St
Phritz St
Muse St
Pitt St
S Caledonia Rd
Stewartsville Rd
Raymond Cir
Mc Dougald Ave
College Dr
Kinlaw Dr
Honey St
Sugar Rd
Carl Dr
US-74&501
US-74
Hospital Service Road
Old Charleston Cir
Ford Dr
US 15
Lauchwood Cir
Lauchwood Dr
Dundee Dr
Magnolia Dr
Berwick Dr
Montrose Dr
SR# 1674
US-501
Johns Rd
BYP 501
BYP 74
BR 501

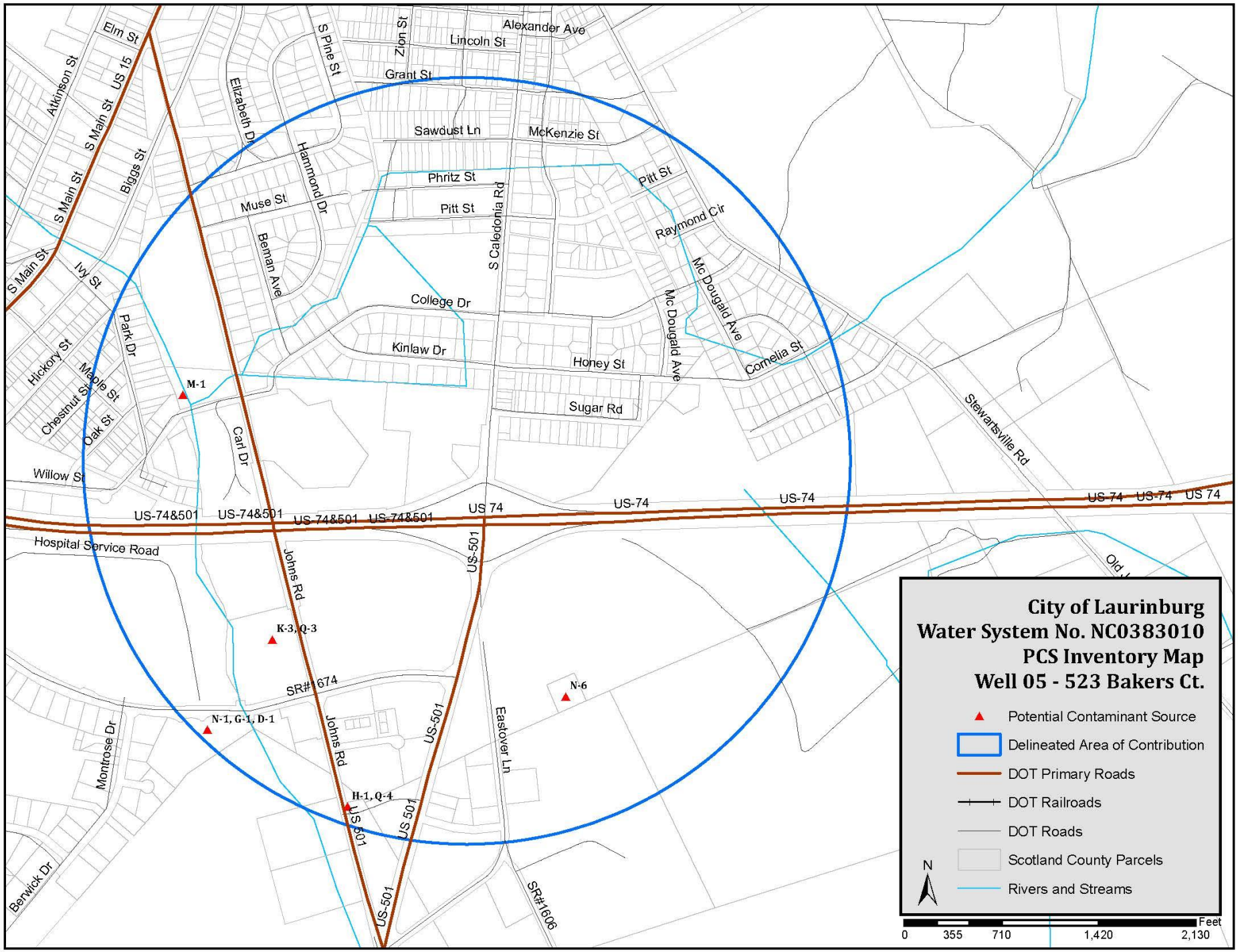

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 02 - 401 Willow Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
Scotland County Parcels
N
Feet
0
355
710
1,420
2,130
EE-1
F-4, AA-4, P-3
O-2
J-2
F-3, AA-3
O-1
J-1
P-2
A-8
P-4
F-2, AA-2, D-2
W-1, B-1, A-1
H-2, Q-5
P-1
Q-10
F-1, AA-1
Q-9
GG-1, G-2
T-1
P-7
X-2
A-5
W-2, B-2, A-2
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
N-1, G-1, D-1
N-4
Grant St
Sawdust Ln
McKenzie St
Stewartsville Rd
Elizabeth Dr
S Pine St
Hammond Dr
Phritz St
Pitt St
Muse St
Beman Ave
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
College Dr
Kinlaw Dr
Honey St
Sugar Rd
Sunset Dr
Homer St
Atkinson St
S Main St
Biggs St
Duncan Dr
Plaza Rd
Ivy St
Park Dr
E Terrace Cir
Armory St
Hickory St
Maple St
Chestnut St
Oak St
Woodlawn St
Carl Dr
Willow St
US-74&501
US 74
S Main St
Hospital Service Road
Old Charleston Cir
US 15
Ford Dr
Lauchwood Cir
Lauchwood Dr
Dundee Dr
Magnolia Dr
Berwick Dr
Montrose Dr
SR# 1674
US 501 Johns Rd
US-501

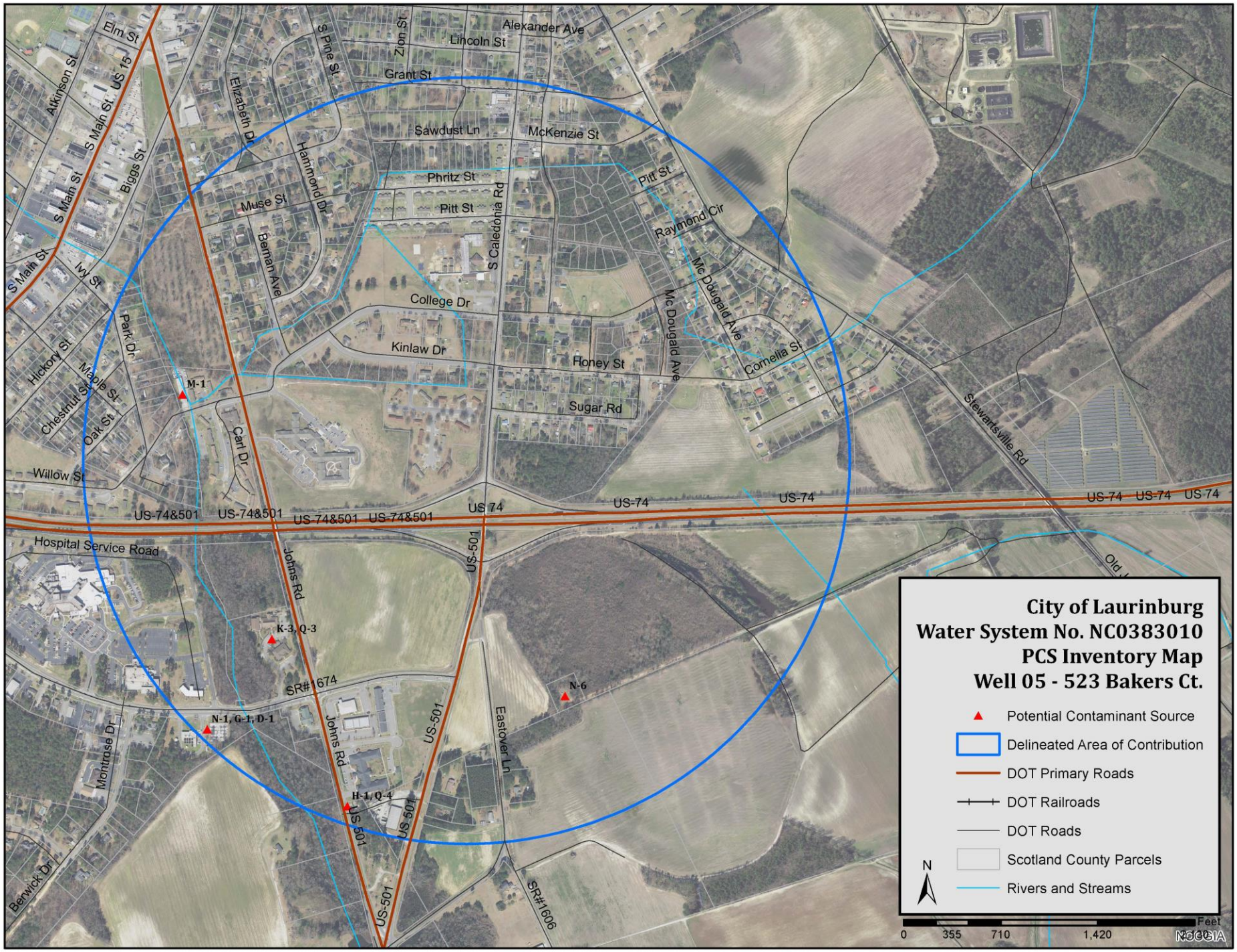

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 02 - 401 Willow Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
Scotland County Parcels
N
Feet
0
355
710
1,420
EE-1
P-4
J-1
P-2
A-8
P-2, AA-2, D-2
W-1, B-1, A-1
H-2, Q-5
P-1
Q-10
F-1, AA-1
GG-1, G-2
Q-9
T-1
P-7
X-2
A-5
W-2, B-2, A-2
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
N-1, G-1, D-1
N-4
O-2
F-4, AA-4, P-3
J-2
F-3, AA-3
O-1
Plaza Rd
E Terrace Cir
Sunset Dr
Homer St
Atkinson St
Duncan Dr
S Main St
Biggs St
Ivy St
Armory St
Hickory St
Park Dr
Maple St
Chestnut St
Oak St
Woodlawn St
Carl Dr
Willow St
Old Charleston Cir
Ford Dr
US 15
Lauchwood Cir
Lauchwood Dr
Dundee Dr
Magnolia Dr
Berwick Dr
Montrose Dr
Hospital Service Road
US-74&501
US 74
US-501
SR#1674
Johns Rd
Johns Rd
Elizabeth Dr
S Pine St
Hammond Dr
Berman Ave
Muse St
Grant St
Sawdust Ln
McKenzie St
Phritz St
Pitt St
Pitt St
S Caledonia Rd
Stewartsville Rd
Raymond Cir
Mc Dougald Ave
Mc Dougald Ave
College Dr
Kinlaw Dr
Honey St
Sugar Rd

Potential Contaminant Source Inventory
Well 05 - 523 Bakers Ct.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
5, 6, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352
5	Maintenance Shop	M-1	Laurinburg Housing Authority	1351 Woodlawn St. Laurinburg, NC 28352
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352

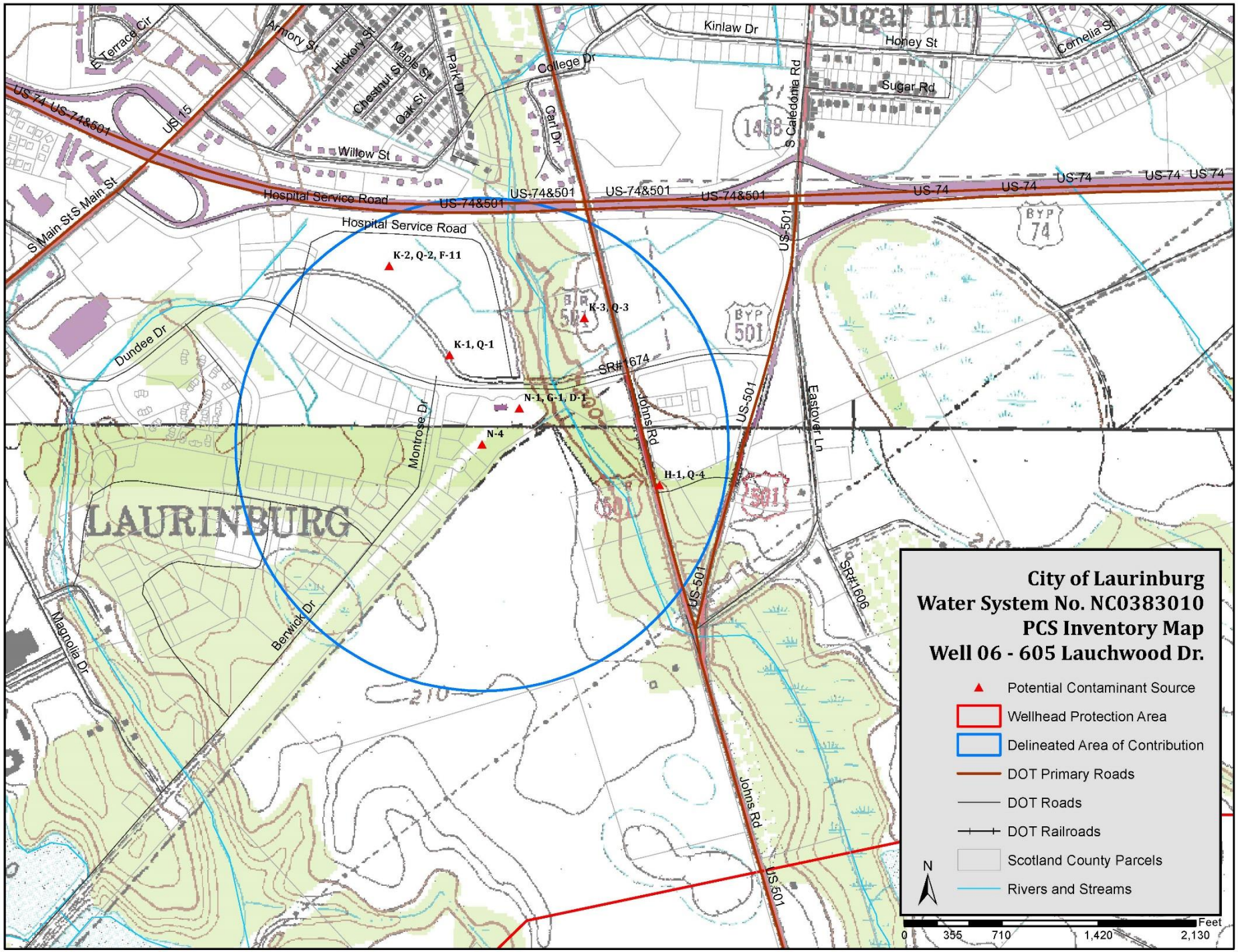

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 05 - 523 Bakers Ct.
Potential Contaminant Source
Delineated Area of Contribution
DOT Primary Roads
DOT Railroads
DOT Roads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
M-1
K-3, Q-3
N-1, G-1, D-1
H-1, Q-4
N-6
US-74
US-74&501
US-501
BYP 74
BYP 501
SR#1674
SR#1606
Hospital Service Road
Sugar Rd
College Dr
Kinlaw Dr
Honey St
Pitt St
Phritz St
Sawdust Ln
McKenzie St
Grant St
Lincoln St
Alexander Ave
Muse St
Willow St
Eastover Ln
Johns Rd
Stewartsville Rd
Washington Park Sch
Sugar Hill

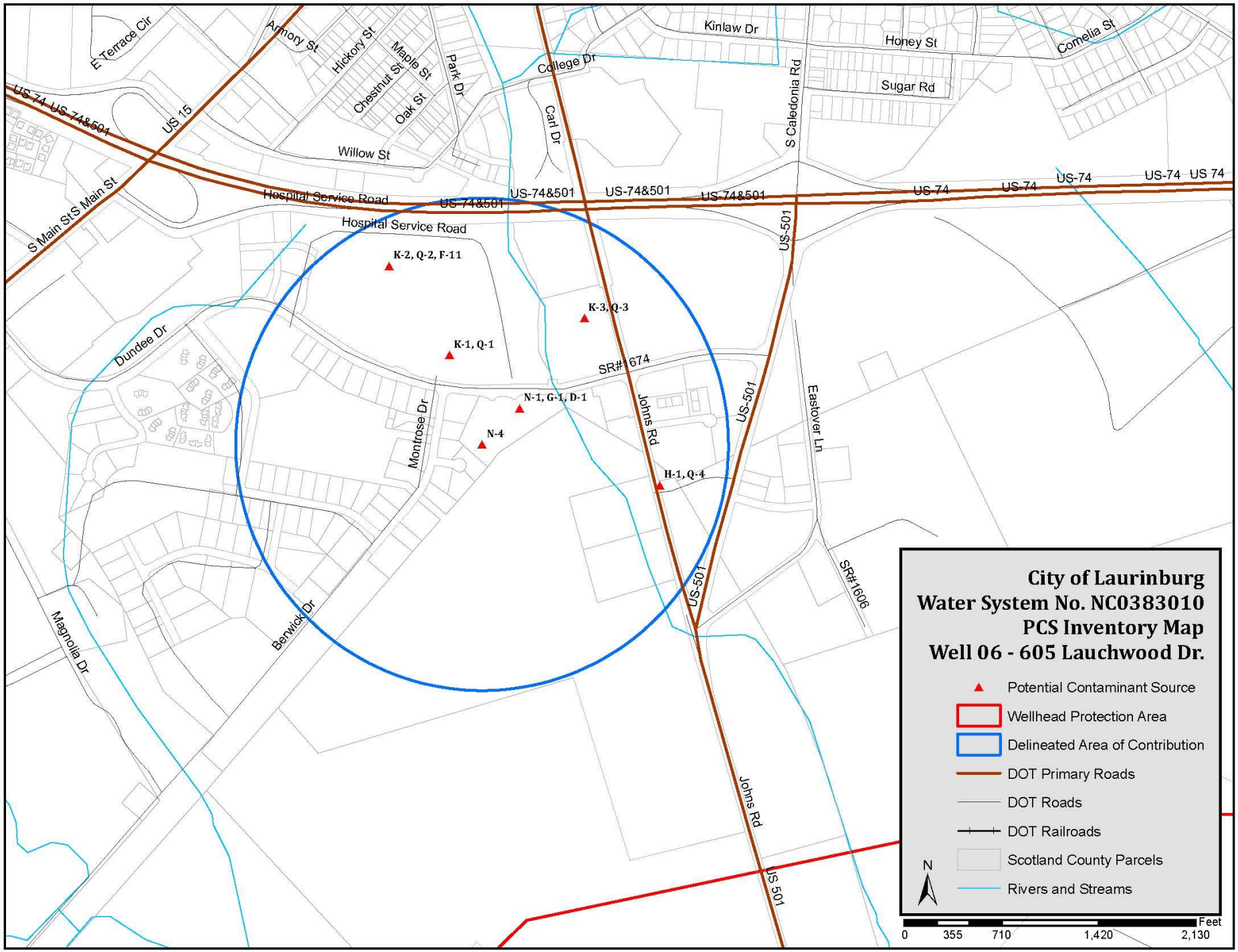

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 05 - 523 Bakers Ct.
Potential Contaminant Source
Delineated Area of Contribution
DOT Primary Roads
DOT Railroads
DOT Roads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
M-1
K-3, Q-3
N-1, G-1, D-1
H-1, Q-4
N-6
Elm St
Atkinson St
S Main St
US 15
Biggs St
Elizabeth Dr
S Pine St
Zion St
Alexander Ave
Lincoln St
Grant St
Sawdust Ln
McKenzie St
Hammond Dr
Phritz St
Pitt St
Muse St
Beman Ave
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
College Dr
Kinlaw Dr
Honey St
Cornelia St
Sugar Rd
Stewartsville Rd
Ivy St
Park Dr
Hickory St
Chestnut St
Maple St
Oak St
Carl Dr
Willow St
US-74&501
US 74
US-74
Hospital Service Road
Johns Rd
US-501
SR#1674
Eastover Ln
SR#1606
Montrose Dr
Berwick Dr

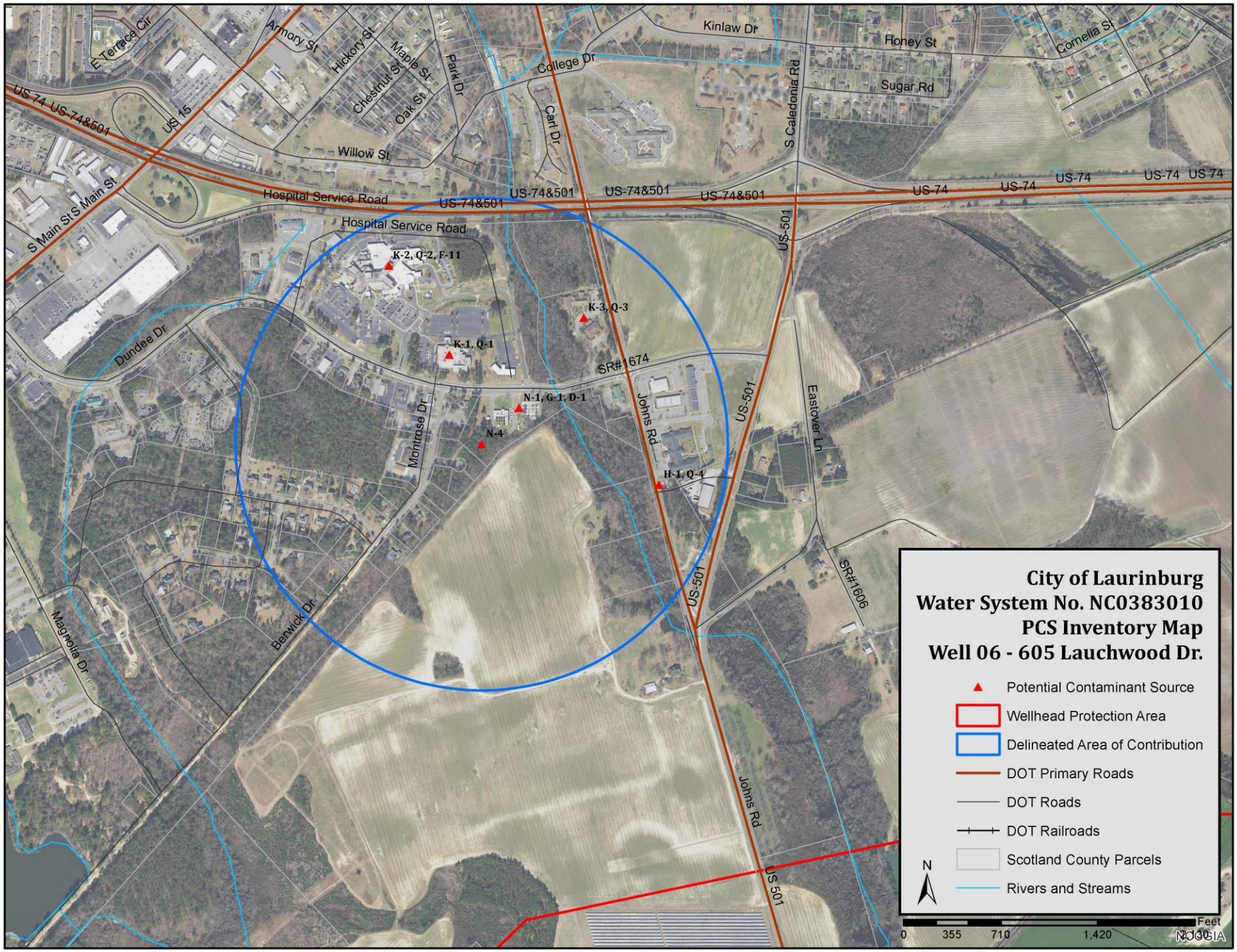

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 05 - 523 Bakers Ct.
Potential Contaminant Source
Delineated Area of Contribution
DOT Primary Roads
DOT Railroads
DOT Roads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
M-1
K-3, Q-3
N-1, G-1, D-1
H-1, Q-4
N-6
Elm St
Atkinson St
S Main St
US 15
Biggs St
Elizabeth Dr
S Pine St
Zion St
Alexander Ave
Lincoln St
Grant St
Sawdust Ln
McKenzie St
Hammond Dr
Phritz St
Muse St
Pitt St
Beman Ave
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
College Dr
Kinlaw Dr
Honey St
Sugar Rd
Cornelia St
Stewartsville Rd
Ivy St
Park Dr
Hickory St
Chestnut St
Maple St
Oak St
Carl Dr
Willow St
US-74&501
US 74
US-74
Hospital Service Road
Johns Rd
US-501
SR#1674
Montrose Dr
Eastover Ln
SR#1606
Berwick Dr

Potential Contaminant Source Inventory
Well 06 - 605 Lauchwood Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
5, 6, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352
2, 6	Hospital, AST, UST	K-2 Q-2 F-11	Scotland Memorial Hospital	500 Lauchwood Dr. Laurinburg, NC 28352
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352

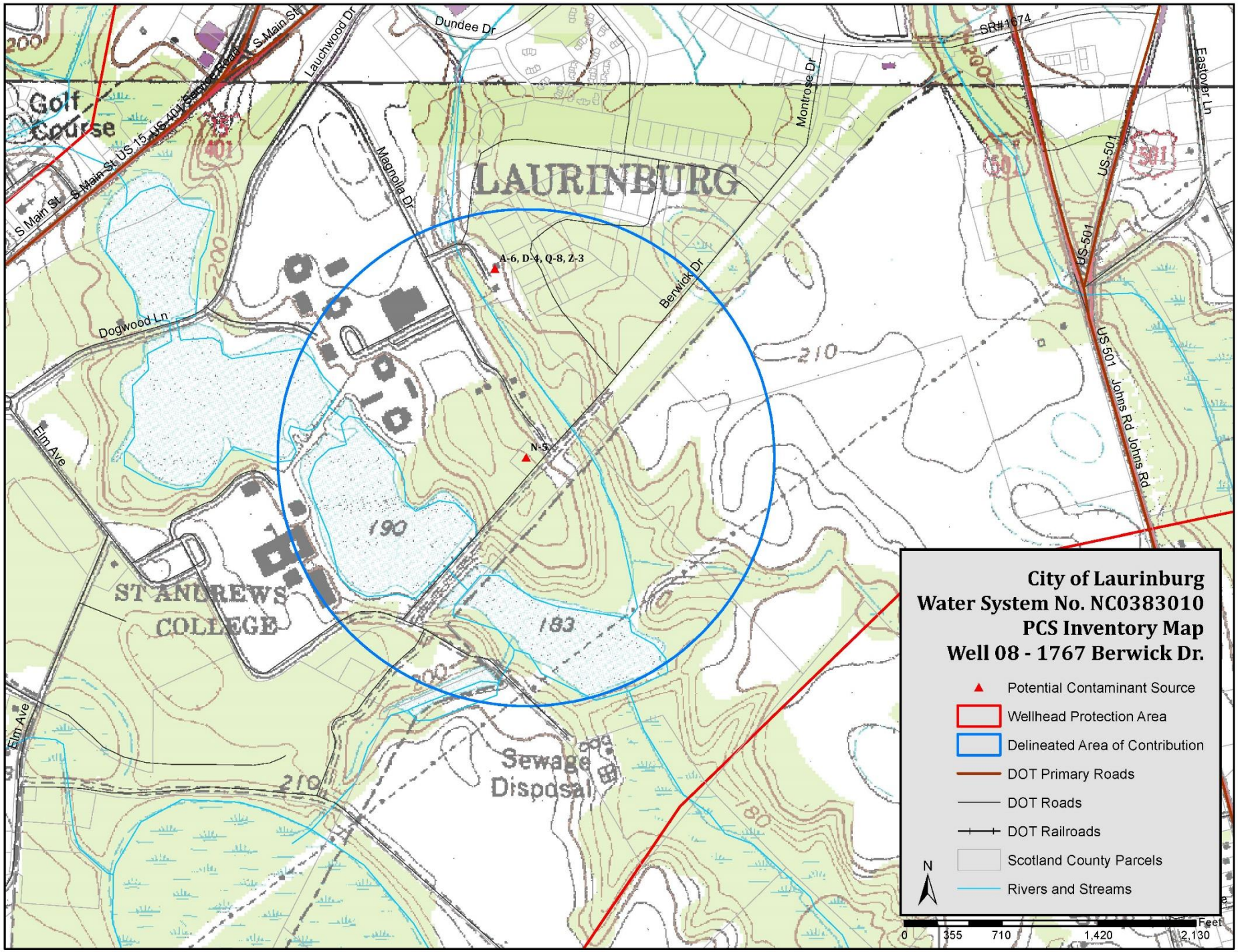

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 06 - 605 Lauchwood Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
N-1, G-1, D-1
N-4
H-1, Q-4
LAURINBURG
Hospital Service Road
US-74&501
US-74
US-501
SR#1674
SR#1606
Johns Rd
Kinlaw Dr
Honey St
Sugar Rd
College Dr
Carl Dr
Park Dr
Willow St
Armory St
Hickory St
Chestnut St
Maple St
Oak St
Terrace Cir
S Main St
S Caledonia Rd
Cornelia St
Dundee Dr
Montrose Dr
Berwick Dr
Magnolia Dr
Eastover Ln

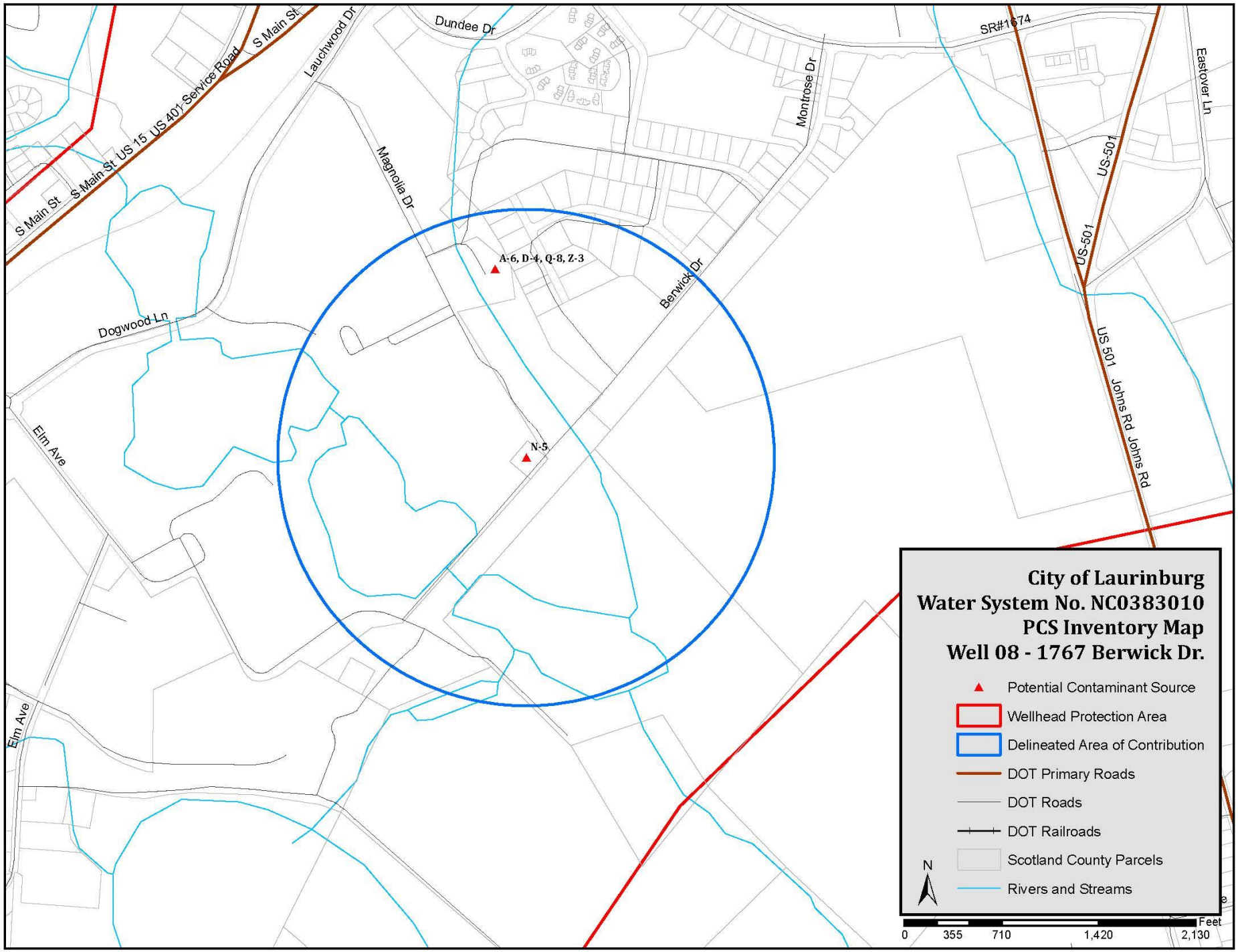

E Terrace Cir
Armory St
Hickory St
Maple St
Chestnut St
Oak St
Park Dr
College Dr
Kinlaw Dr
Honey St
Cornelia St
Sugar Rd
S Caledonia Rd
US-74 US-74&501
US 15
Willow St
Carl Dr
S Main St
S Main St
Hospital Service Road
US-74&501
US-74
US-501
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
Dundee Dr
SR# 1674
N-1, G-1, D-1
N-4
Montrose Dr
Johns Rd
Eastover Ln
H-1, Q-4
Berwick Dr
Magnolia Dr
SR#1606
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 06 - 605 Lauchwood Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

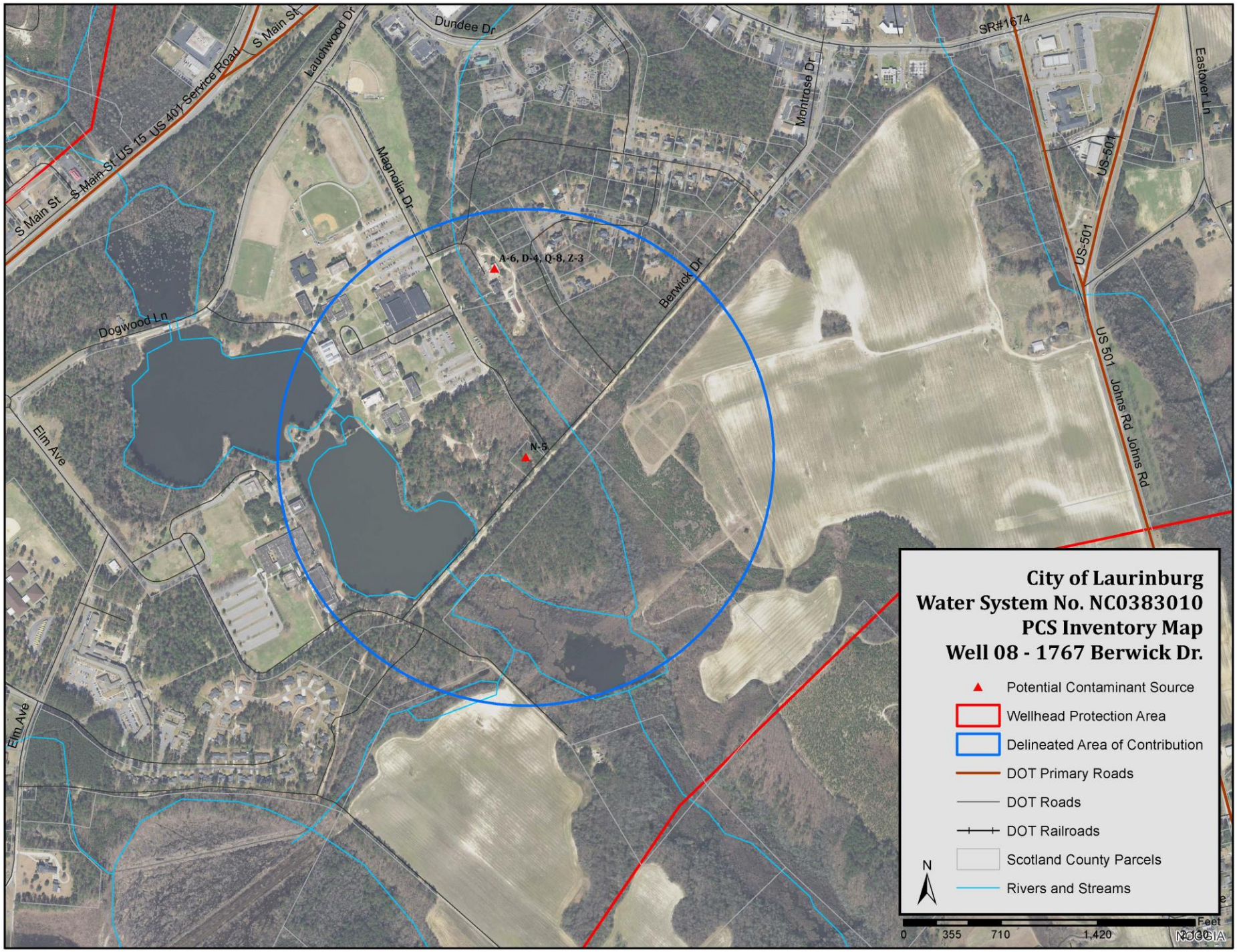

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 06 - 605 Lauchwood Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
K-2, Q-2, F-11
K-3, Q-3
K-1, Q-1
N-1, G-1, D-1
N-4
H-1, Q-4
US-74
US-74&501
US-501
US 15
Hospital Service Road
Willow St
College Dr
Kinlaw Dr
Honey St
Sugar Rd
Cornelia St
S Caledonia Rd
Armory St
Hickory St
Chestnut St
Maple St
Oak St
Park Dr
Carl Dr
E Terrace Cir
S Main St
Dundee Dr
SR#1674
Johns Rd
Eastover Ln
Montrose Dr
Benwick Dr
Magnolia Dr
SR#1606

Potential Contaminant Source Inventory
Well 08 - 1767 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352
8, 9	Water Supply	N-5	Well Site 8	1767 Berwick Dr. Laurinburg, NC 28352

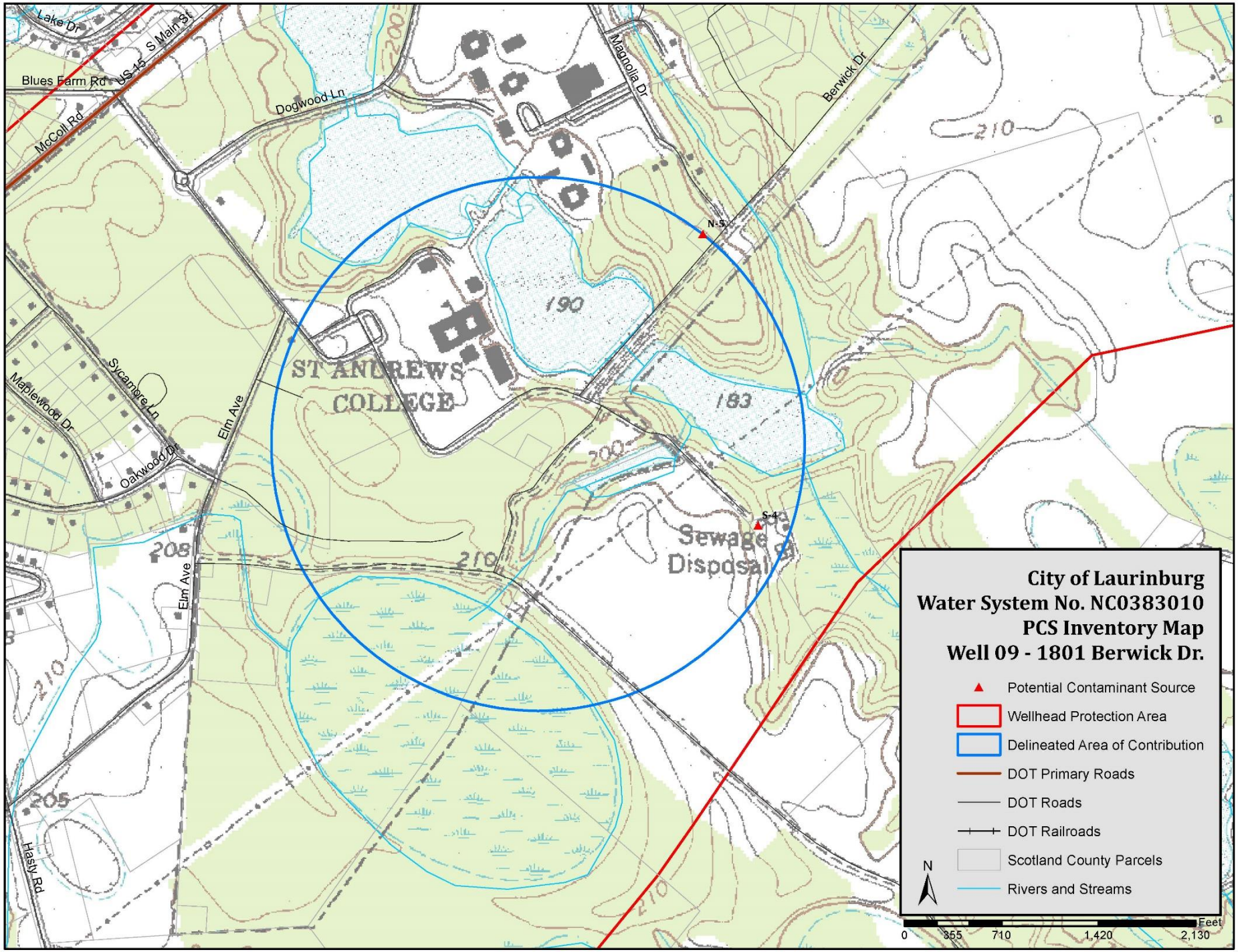

LAURINBURG
Golf Course
ST ANDREWS COLLEGE
Sewage Disposal
A-6, D-4, Q-8, Z-3
N-5
Dundee Dr
Lauchwood Dr
S Main St
US 15-401 Scenic Route
Magnolia Dr
Montrose Dr
SR#1674
Eastover Ln
US-501
Johns Rd
Berwick Dr
Dogwood Ln
Elm Ave
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 08 - 1767 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

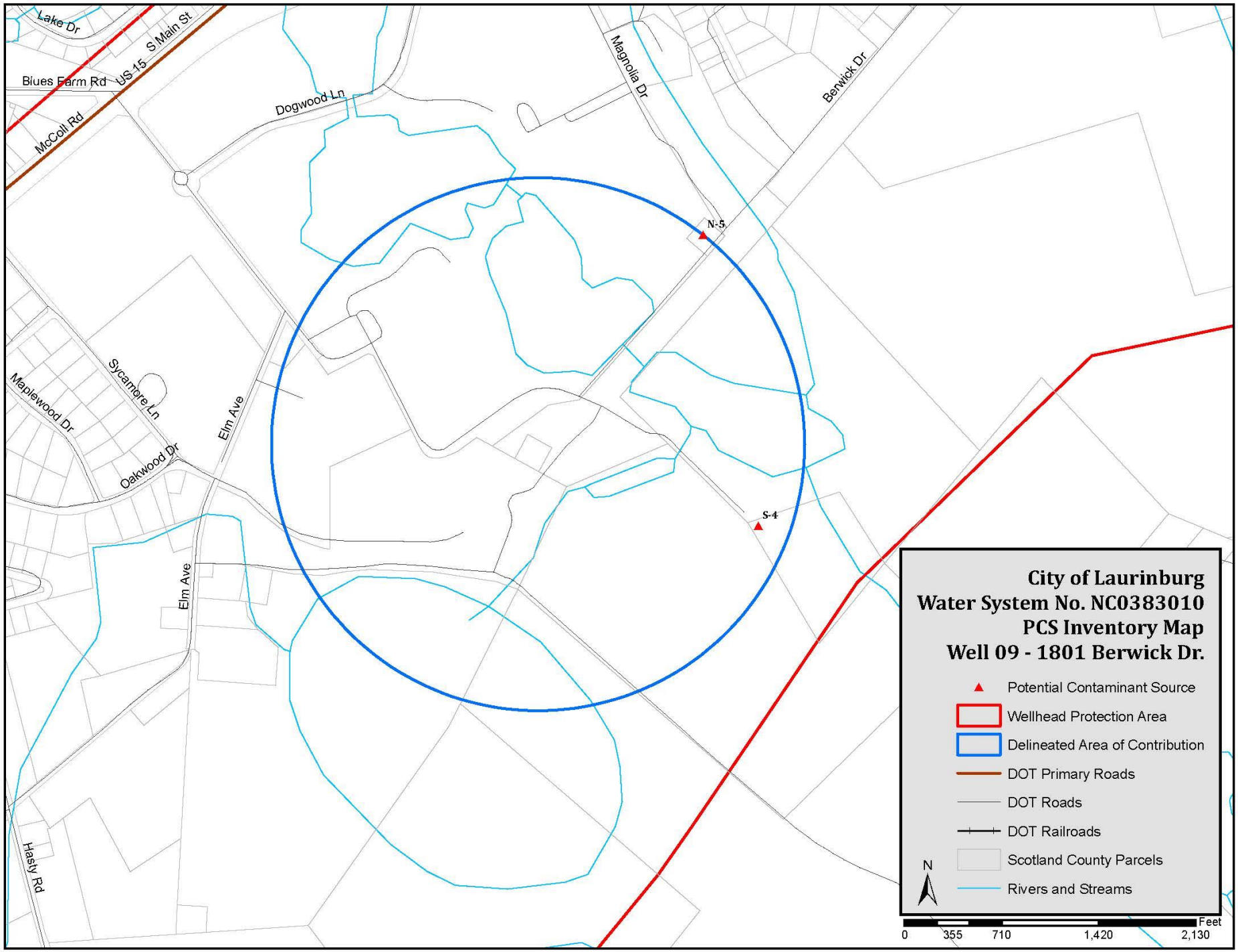

S Main St
S Main St
US 15 US 401 Service Road
S Main St
Lauchwood Dr
Dundee Dr
Magnolia Dr
Montrose Dr
SR#1674
Eastover Ln
US-501
US-501
US 501 Johns Rd Johns Rd
Berwick Dr
A-6, D-4, Q-8, Z-3
N-5
Dogwood Ln
Elm Ave
Elm Ave
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 08 - 1767 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

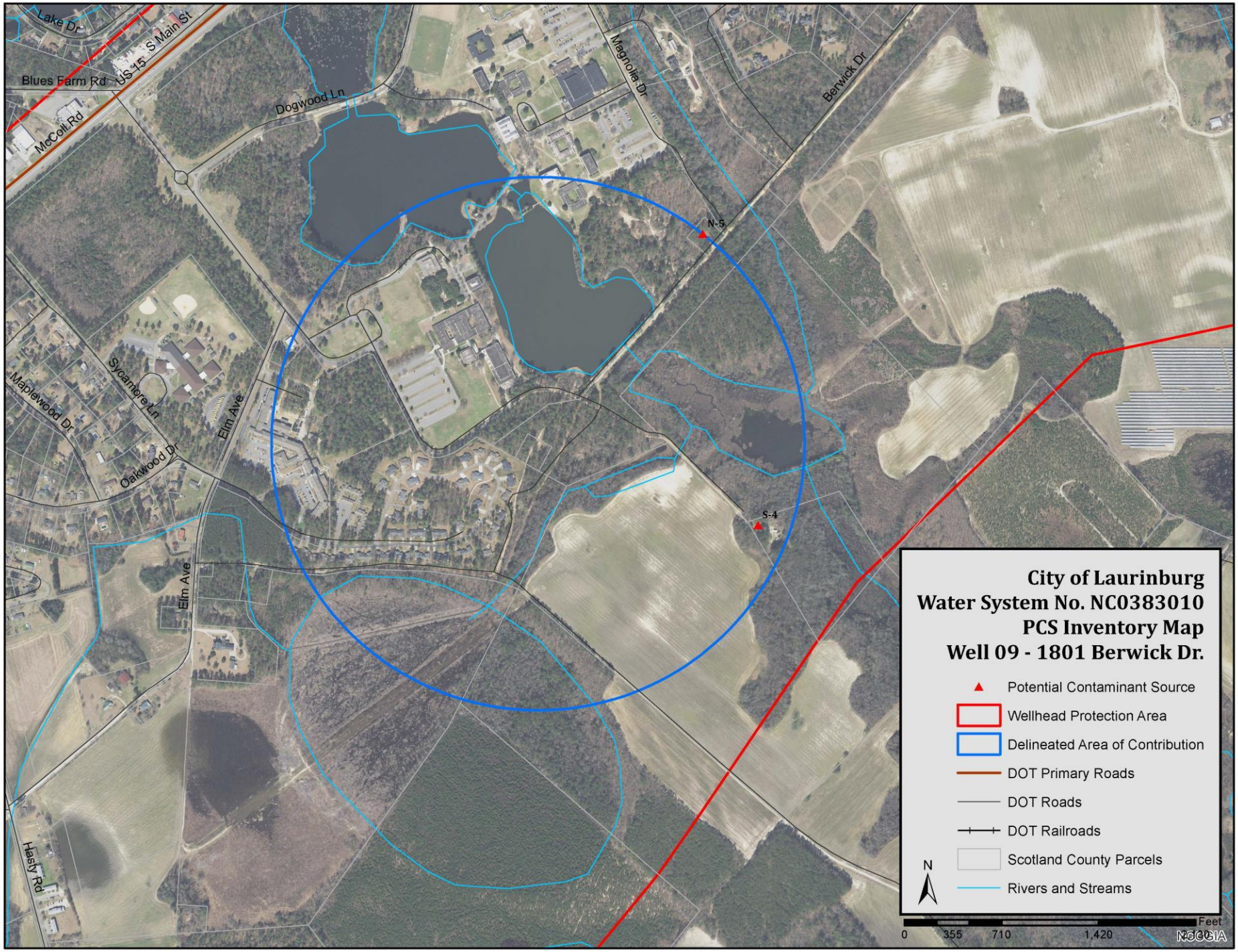

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 08 - 1767 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
A-6, D-4, Q-8, Z-3
N-5
S Main St
S Main St US 15 US 401 Service Road
Lauchwood Dr
Dundee Dr
Magnolia Dr
Mohtrose Dr
SR#1674
Eastover Ln
US-501
US 501 Johns Rd
Berwick Dr
Dogwood Ln
Elm Ave

Potential Contaminant Source Inventory
Well 09 - 1801 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
9	Pump Station	S-4	Pump Station #28	1721 Berwick Dr. Laurinburg, NC 28352
8, 9	Water Supply	N-5	Well Site 8	1767 Berwick Dr. Laurinburg, NC 28352

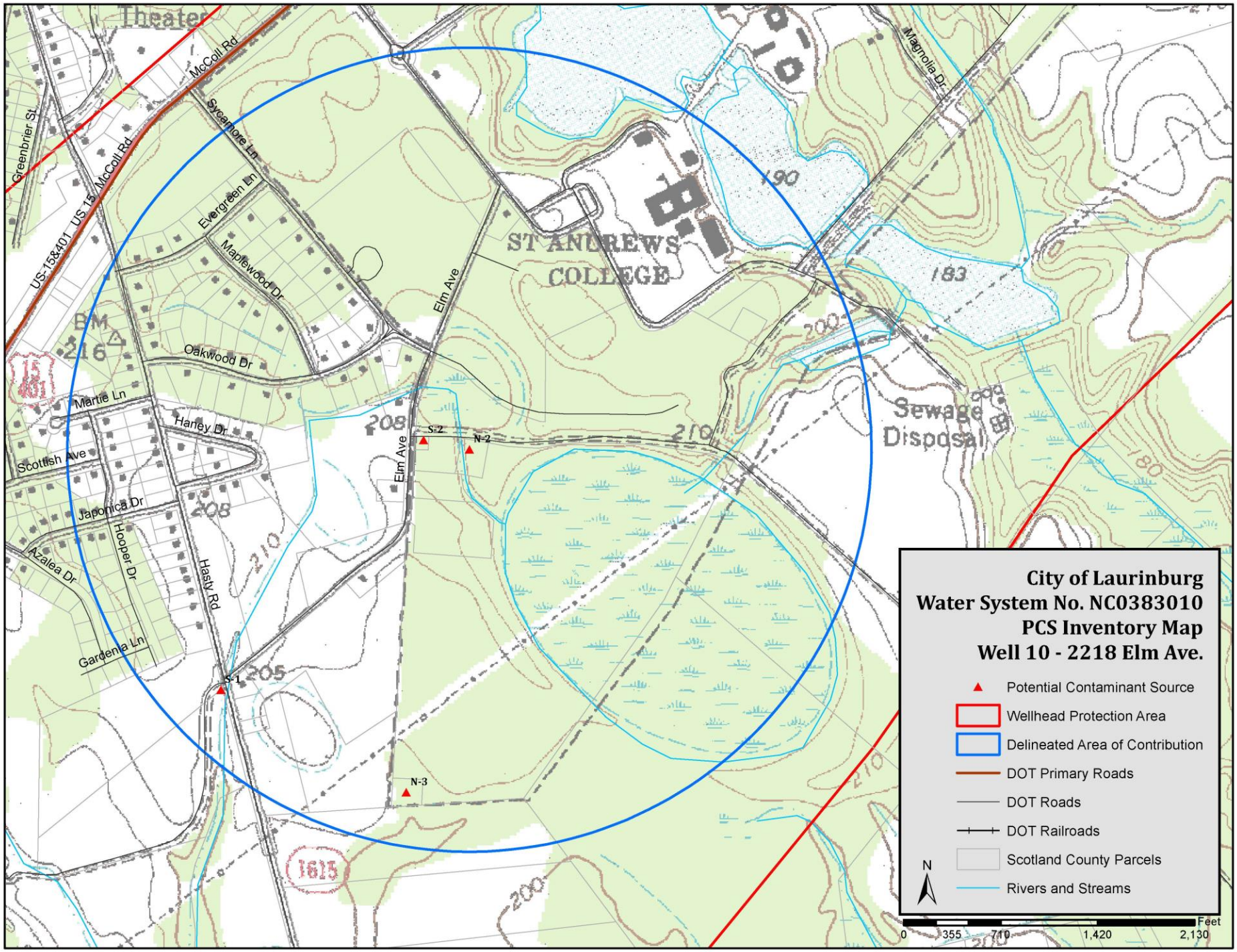

Lake Dr
S Main St
Blues Farm Rd
US 45
McColl Rd
Dogwood Ln
Magnolia Dr
Berwick Dr
210
N-5
190
ST ANDREWS
COLLEGE
183
Sycamore Ln
Maplewood Dr
Elm Ave
Oakwood Dr
200
S-4
Sewage
Disposal
208
210
Elm Ave
205
Hasty Rd
210
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 09 - 1801 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

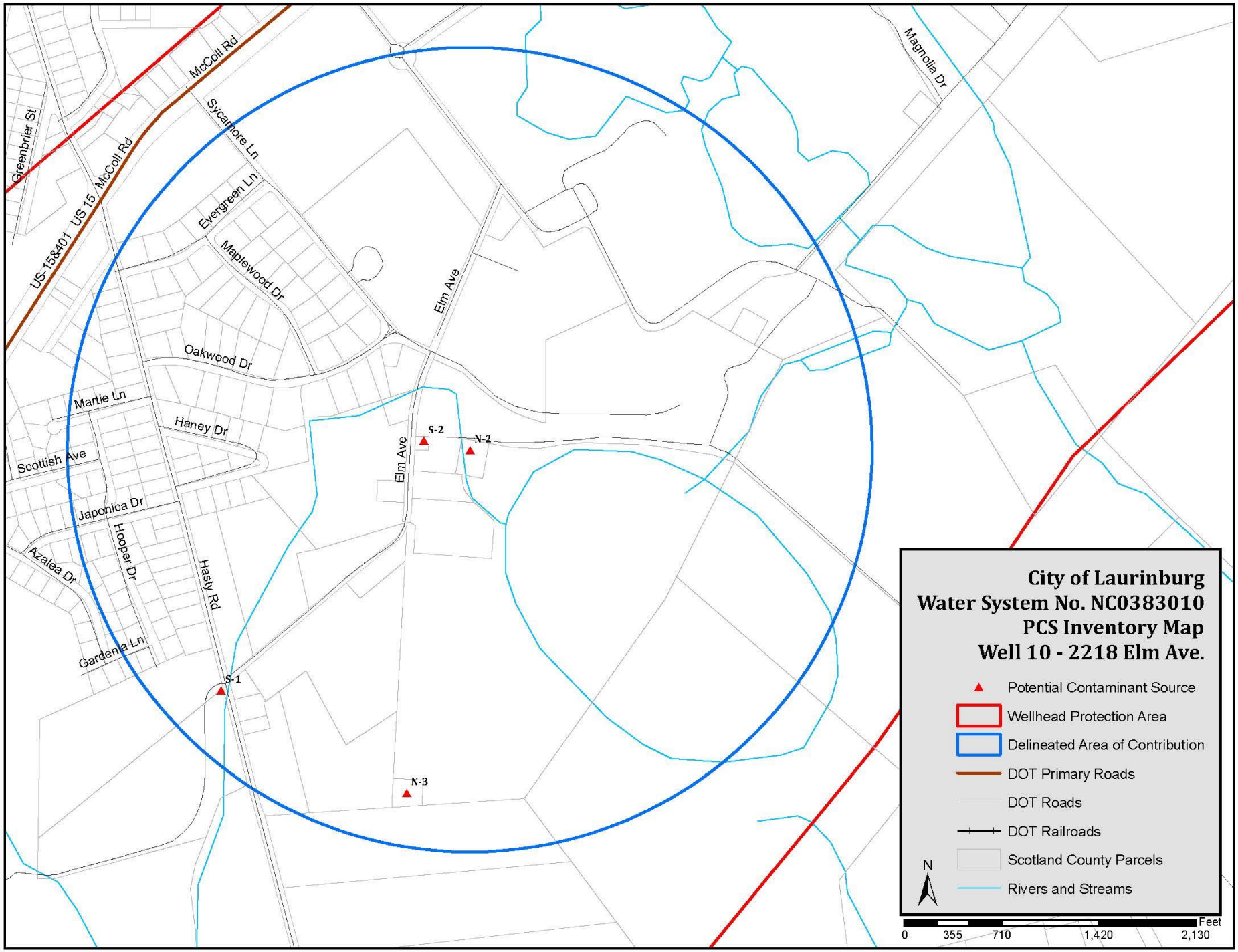

Lake Dr
S Main St
US-15
Blues Farm Rd
McColl Rd
Dogwood Ln
Magnolia Dr
Berwick Dr
N-5
S-4
Sycamore Ln
Maplewood Dr
Oakwood Dr
Elm Ave
Elm Ave
Hasty Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 09 - 1801 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

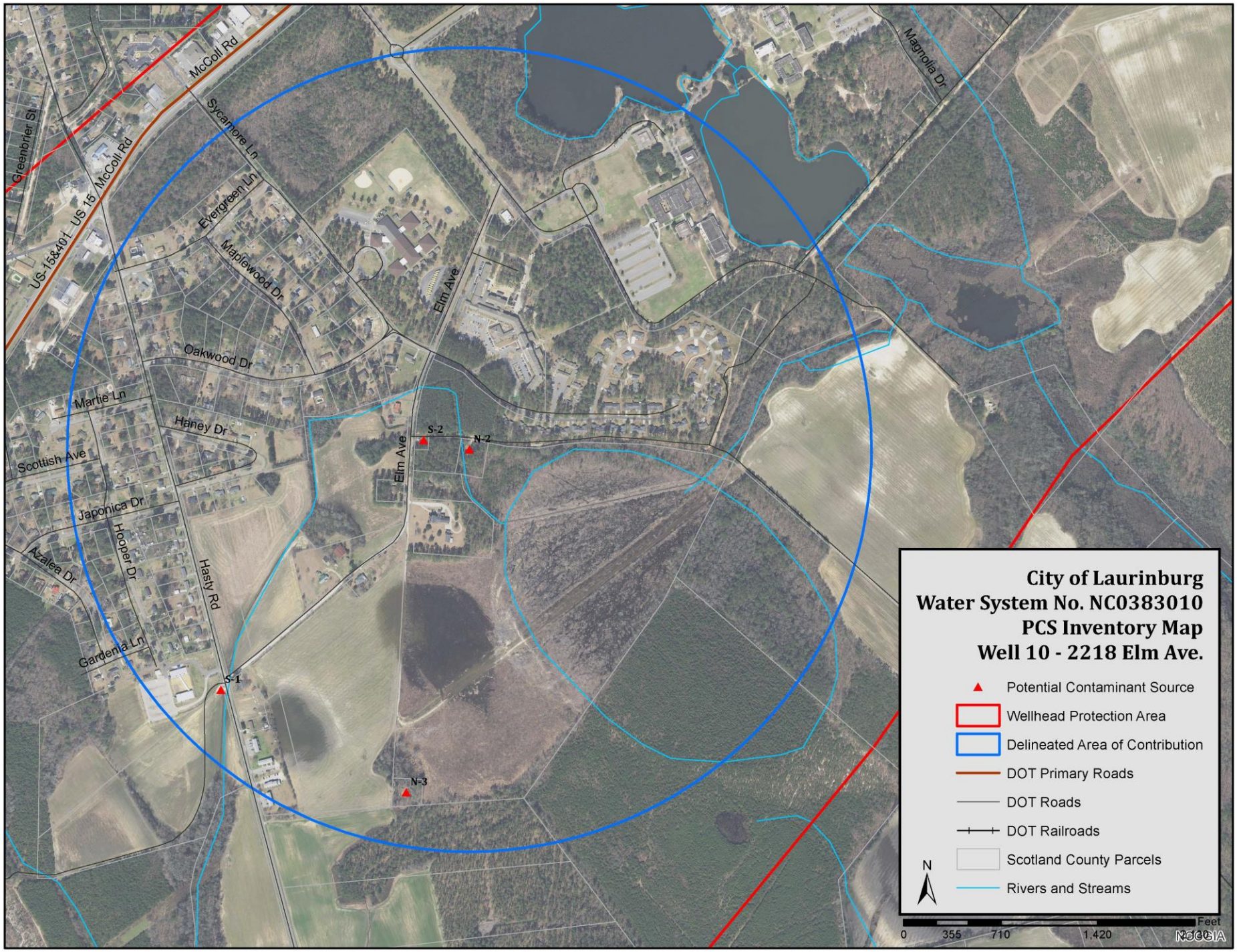

Lake Dr
US-15 S Main St
Blues Farm Rd
McColl Rd
Dogwood Ln
Magnolia Dr
Berwick Dr
N-5
S-4
Sycamore Ln
Maplewood Dr
Elm Ave
Oakwood Dr
Elm Ave
Hasty Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 09 - 1801 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420

Potential Contaminant Source Inventory
Well 10 - 2218 Elm Ave.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
10, 12	Pump Station	S-1	Pump Station #17	11400 Hasty Rd. Laurinburg, NC 28352
10	Pump Station	S-2	Pump Station #19	2212 Elm Ave. Laurinburg, NC 28352
10	Water Supply	N-2	Well Site 10	2218 Elm Avenue Laurinburg, NC 28352
10, 12	Water Supply	N-3	Well Site 12	11159 Hasty Rd., Laurinburg, NC 28352

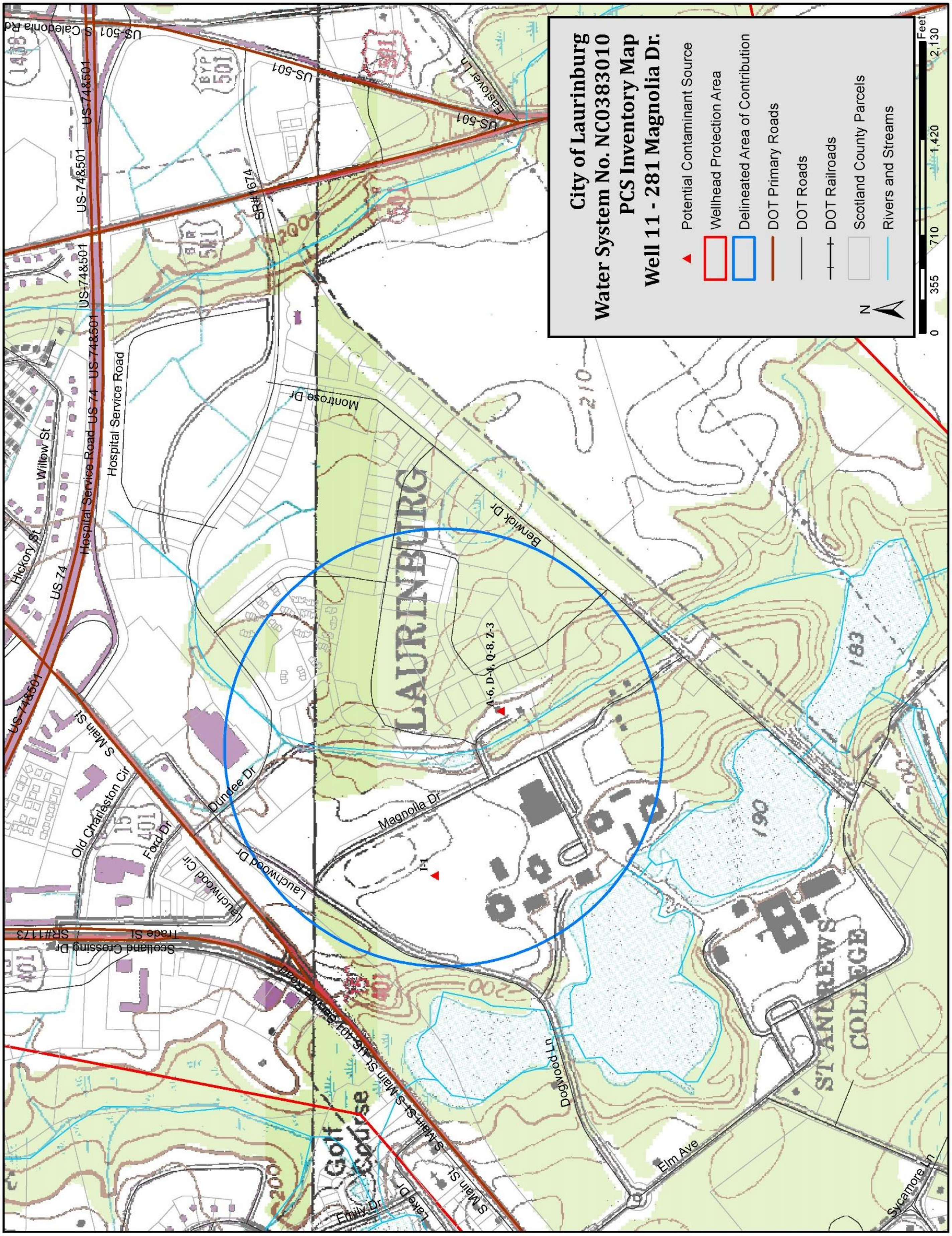

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 10 - 2218 Elm Ave.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
S-1
S-2
N-2
N-3
ST ANDREWS COLLEGE
Sewage Disposal
Theater
McColl Rd
US-15&401
Greenbrier St
Sycamore Ln
Evergreen Ln
Maplewood Dr
Oakwood Dr
Martie Ln
Harley Dr
Scottish Ave
Japonica Dr
Azalea Dr
Hooper Dr
Gardenia Ln
Hasty Rd
Elm Ave
Magnolia Dr
BM 216
1615

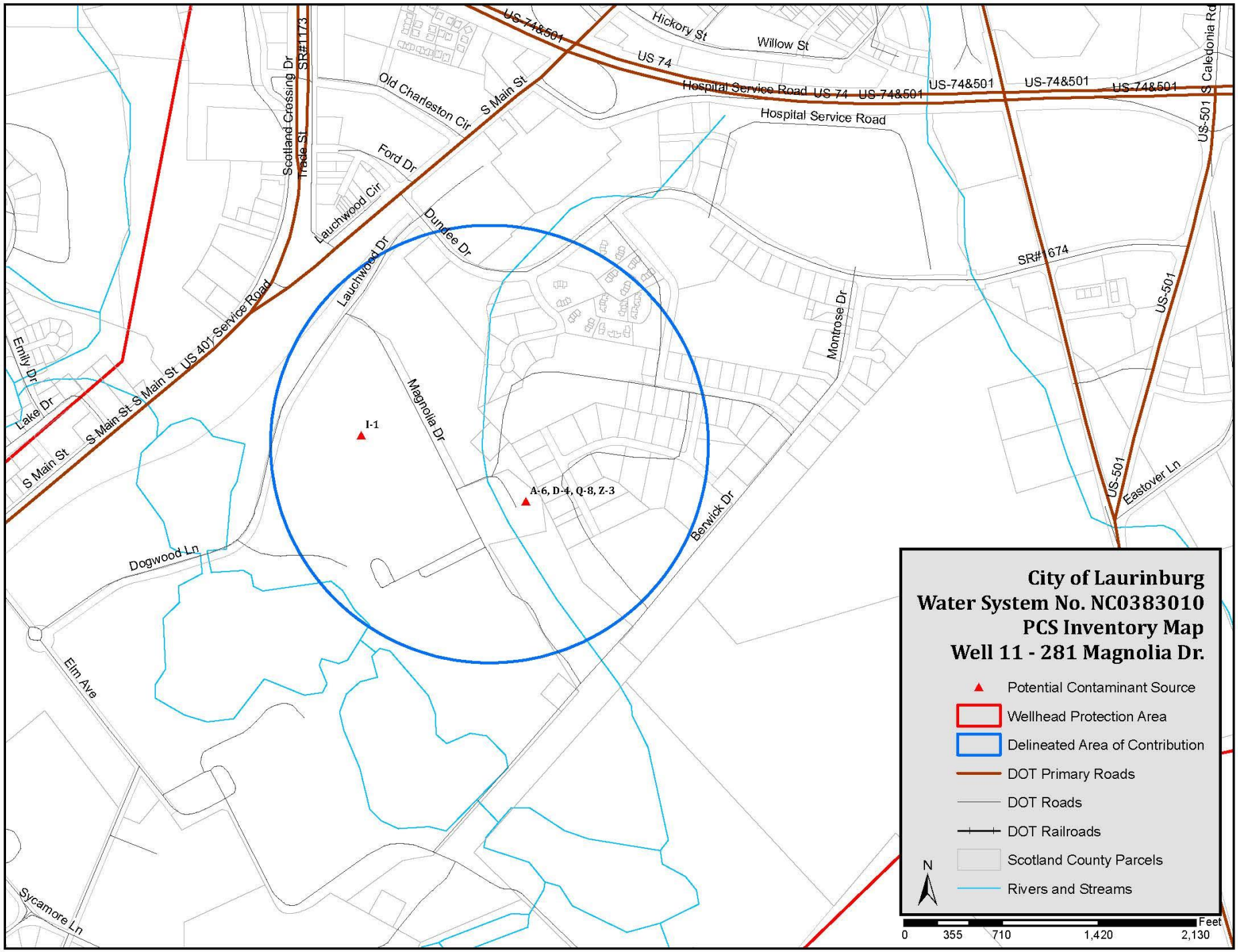

McColl Rd
US-15&401 US 15 McColl Rd
Greenbrier St
Sycamore Ln
Evergreen Ln
Maplewood Dr
Elm Ave
Magnolia Dr
Oakwood Dr
Martie Ln
Haney Dr
Scottish Ave
Japonica Dr
Hooper Dr
Azalea Dr
Hasly Rd
Gardenia Ln
S-1
S-2
N-2
N-3
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 10 - 2218 Elm Ave.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

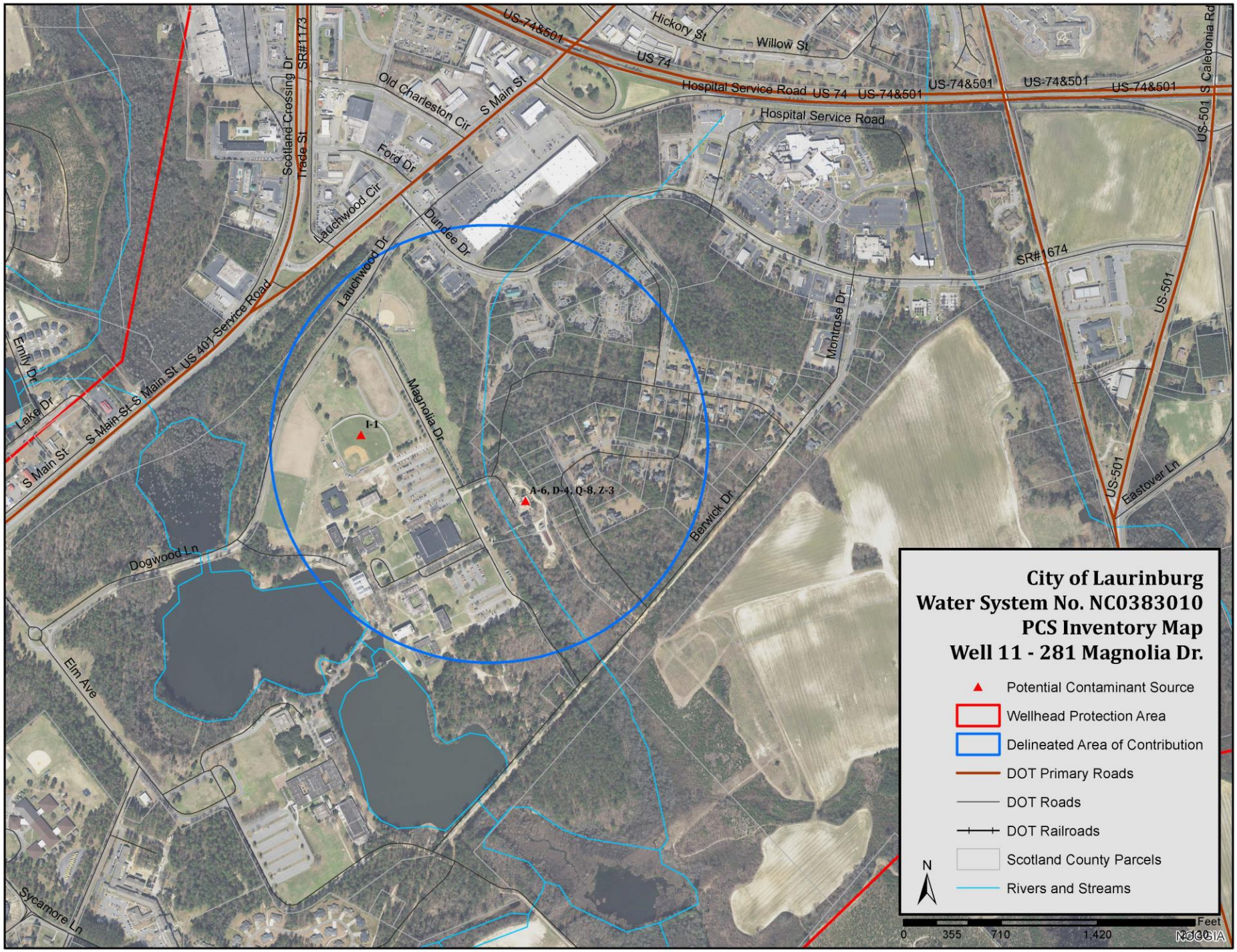

McColl Rd
Greenbrier St
US-15&401
US 15 McColl Rd
Sycamore Ln
Evergreen Ln
Maplewood Dr
Elm Ave
Magnolia Dr
Oakwood Dr
Martie Ln
Haney Dr
Scottish Ave
Japonica Dr
Hooper Dr
Azalea Dr
Hasty Rd
Gardenia Ln
S-1
S-2
N-2
N-3
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 10 - 2218 Elm Ave.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420

Potential Contaminant Source Inventory
Well 11 - 281 Magnolia Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352
11	Recreational Facility	I-1	St. Andrews University Baseball Field	1700 Dogwood Mile St. Laurinburg, NC 28352

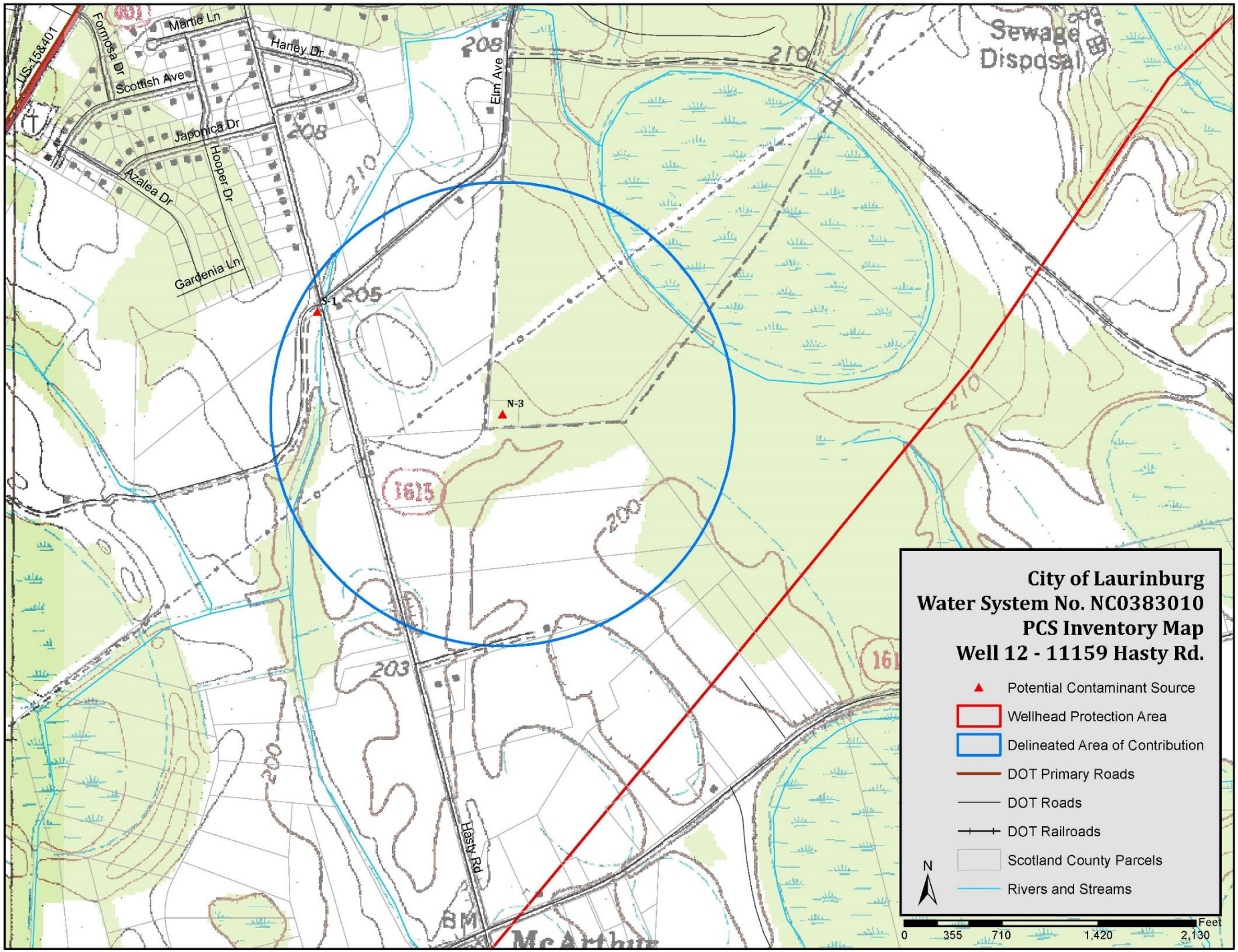

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 11 - 281 Magnolia Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet
A-6, D-4, Q-8, Z-3
F-1
LAURINBURG
ST ANDREWS COLLEGE
Golf Course
Magnolia Dr
Lauchwood Dr
Dundee Dr
Berwick Dr
Montrose Dr
Hospital Service Road
S Main St
Elm Ave
Dogwood Ln
Sycamore Ln

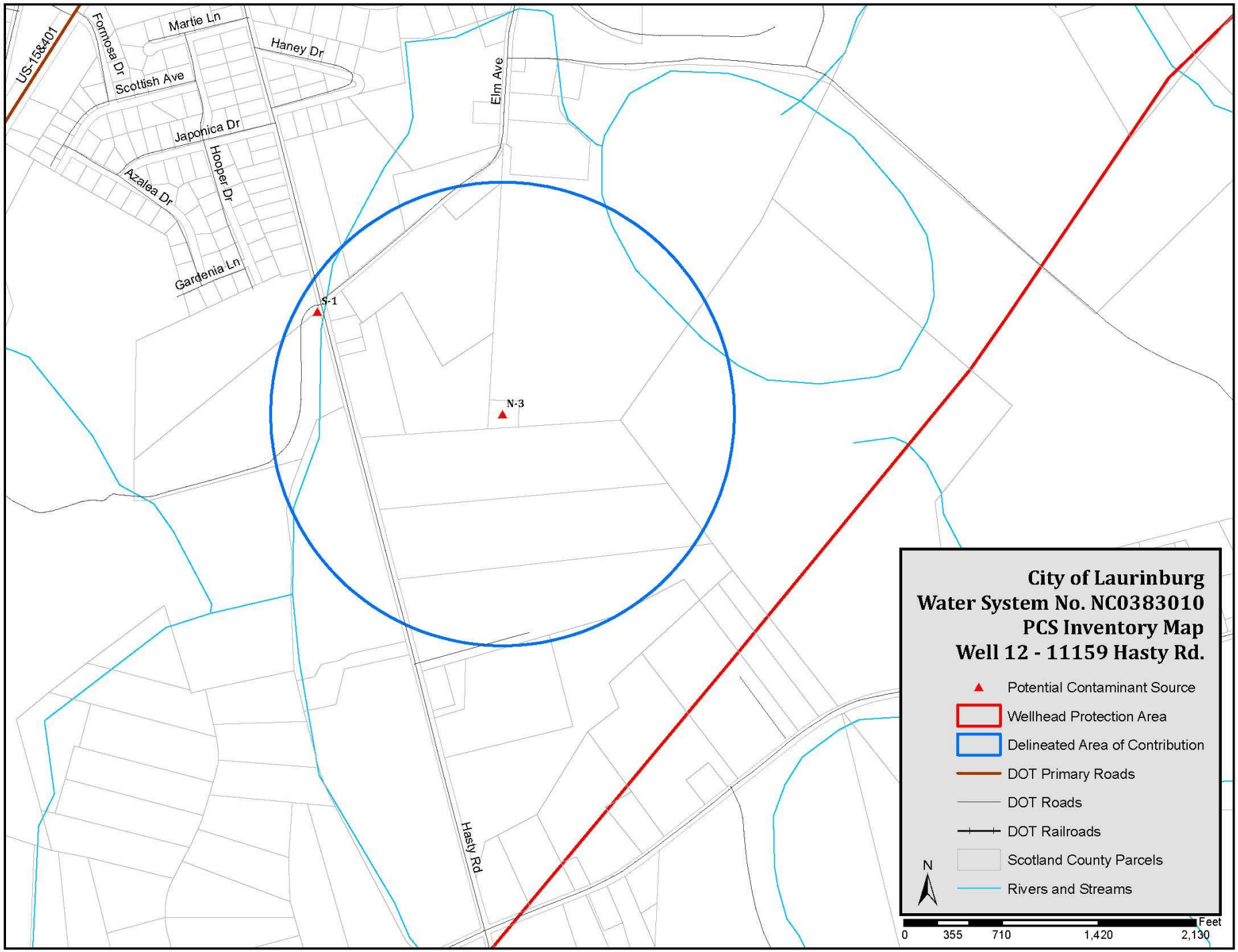

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 11 - 281 Magnolia Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
I-1
A-6, D-4, Q-8, Z-3
US-74&501
US 74
Hickory St
Willow St
Hospital Service Road
Old Charleston Cir
S Main St
Scotland Crossing Dr
SR#1173
Trade St
Ford Dr
Lauchwood Cir
Lauchwood Dr
Dundee Dr
SR#1674
US-501
S Caledonia Rd
Montrose Dr
Magnolia Dr
Berwick Dr
Eastover Ln
Emily Dr
Lake Dr
S Main St
S Main St
US 401 Service Road
Dogwood Ln
Elm Ave
Sycamore Ln


City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 11 - 281 Magnolia Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
I-1
A-6, D-4, Q-8, Z-3
US-74&501
US 74
Hickory St
Willow St
Hospital Service Road
Old Charleston Cir
S Main St
Scotland Crossing Dr
SR#1173
Trade St
Ford Dr
Lauchwood Cir
Dundee Dr
Lauchwood Dr
US 401 Service Road
Emily Dr
Lake Dr
S Main St
Magnolia Dr
Montrose Dr
SR#1674
US-501
S Caledonia Rd
Eastover Ln
Berwick Dr
Dogwood Ln
Elm Ave
Sycamore Ln

Potential Contaminant Source Inventory
Well 12 - 11159 Hasty Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
10, 12	Pump Station	S-1	Pump Station #17	11400 Hasty Rd. Laurinburg, NC 28352
10, 12	Water Supply	N-3	Well Site 12	11159 Hasty Rd., Laurinburg, NC 28352

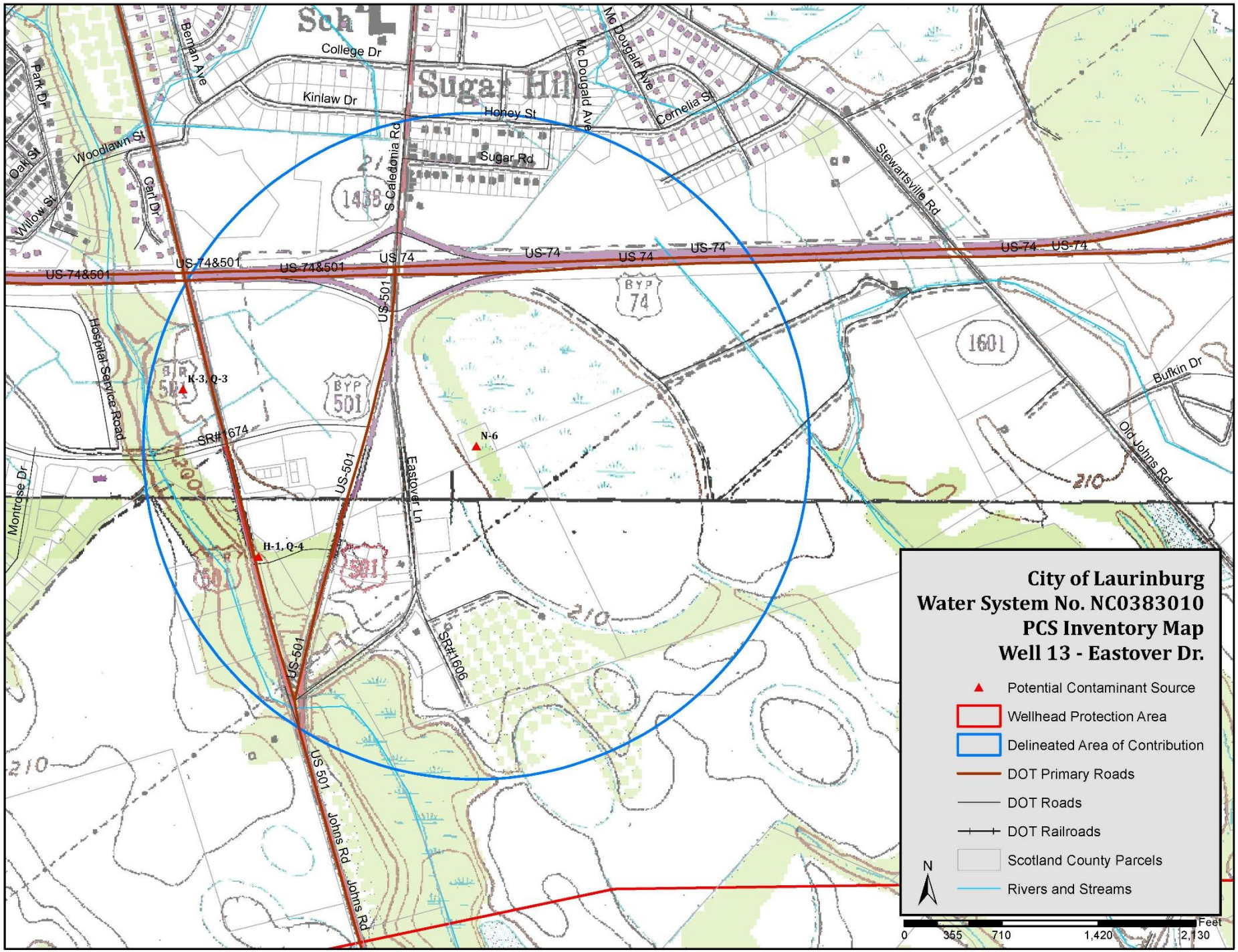

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 12 - 11159 Hasty Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
S-1
N-3
Martie Ln
Harley Dr
Scottish Ave
Formosa Dr
US-15&401
Japonica Dr
Azalea Dr
Hooper Dr
Gardenia Ln
Elm Ave
Hasty Rd
Sewage Disposal
McArthur
1615
208
210
205
203
200

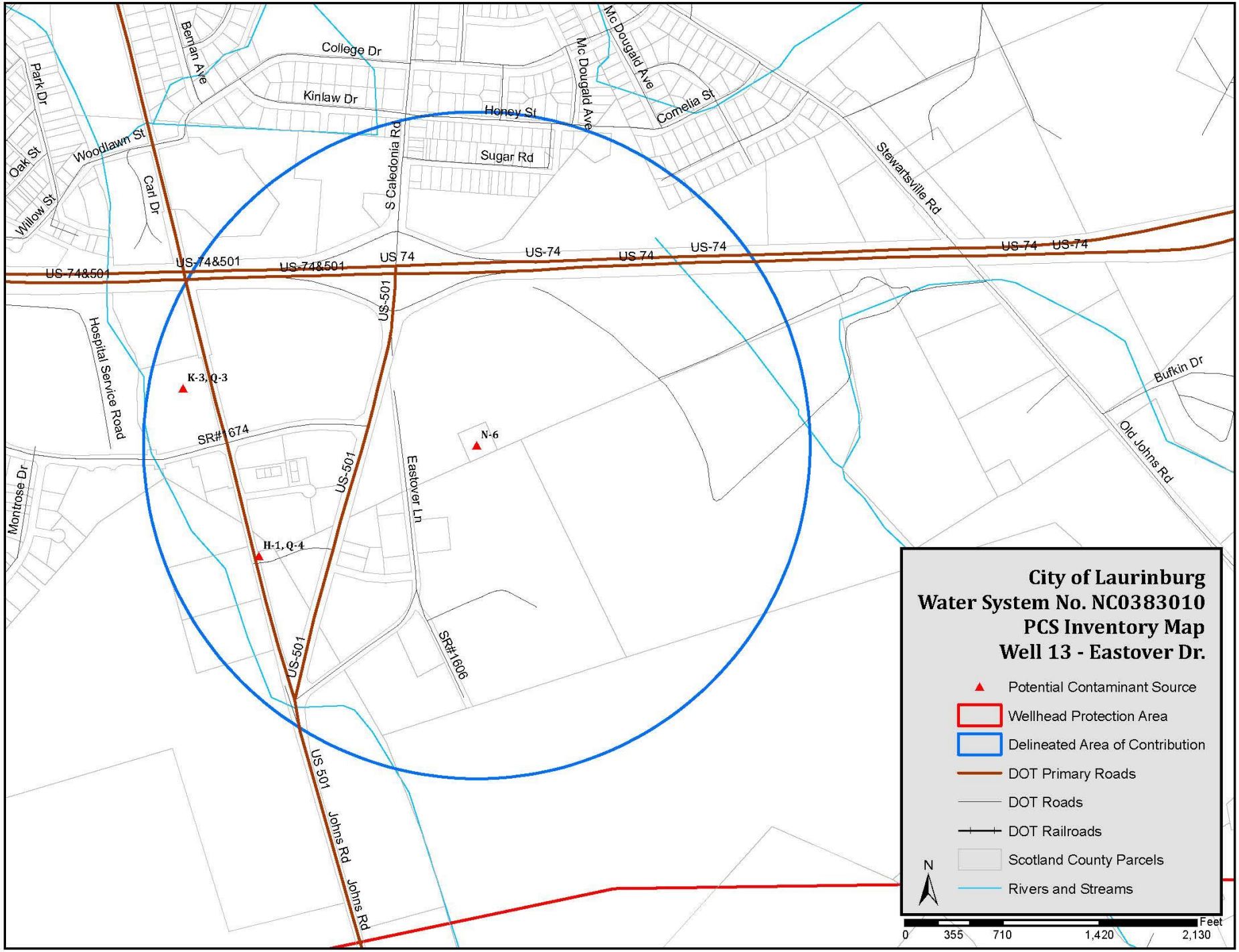

US-15&401
Formosa Dr
Martie Ln
Haney Dr
Scottish Ave
Elm Ave
Japonica Dr
Hooper Dr
Azalea Dr
Gardenia Ln
S-1
N-3
Hasty Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 12 - 11159 Hasty Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

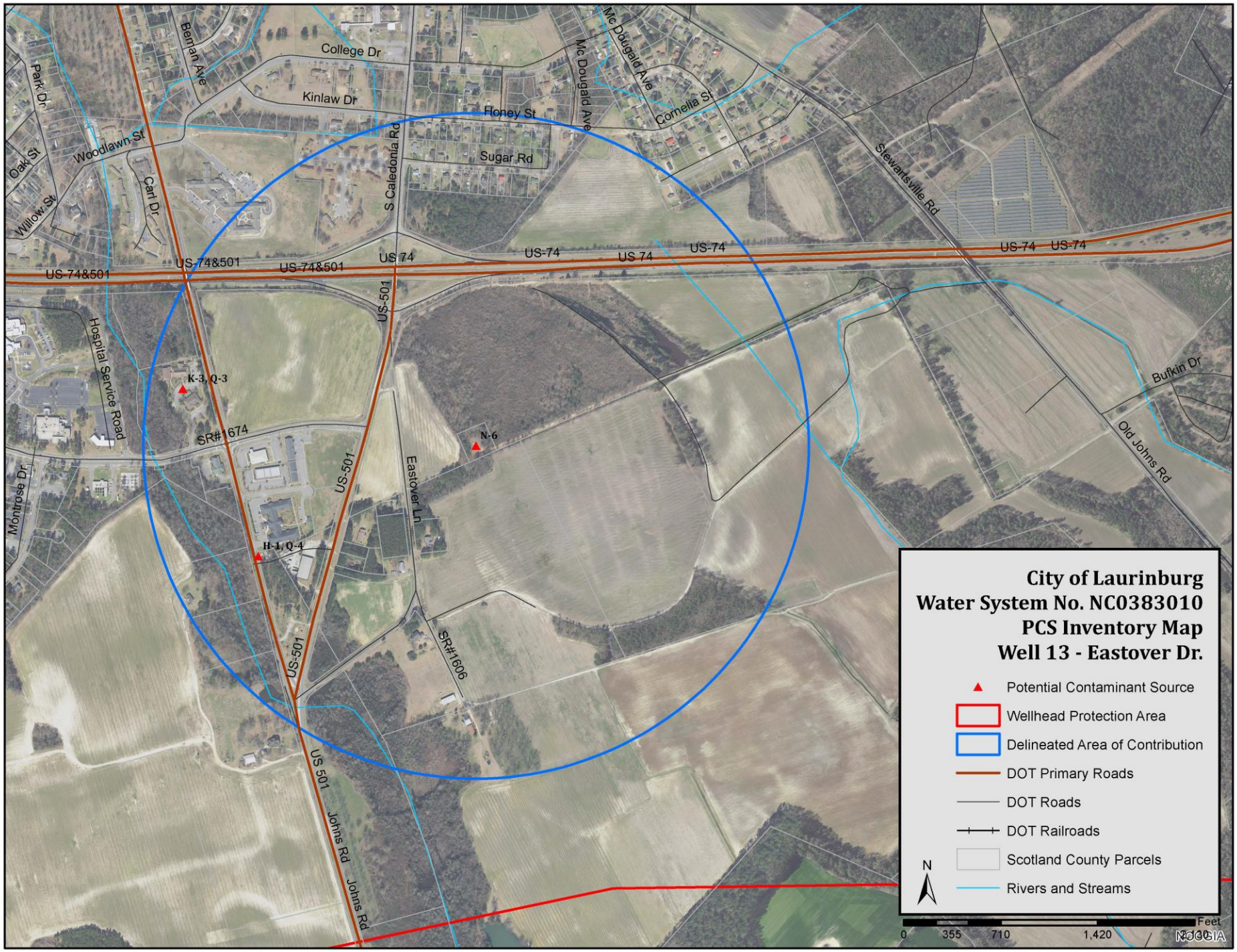

US-15&401
Formosa Dr
Martie Ln
Haney Dr
Scottish Ave
Elm Ave
Japonica Dr
Hooper Dr
Azalea Dr
Gardenia Ln
S-1
N-3
Hasty Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 12 - 11159 Hasty Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420

Potential Contaminant Source Inventory
Well 13 - Eastover Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
5, 6, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352

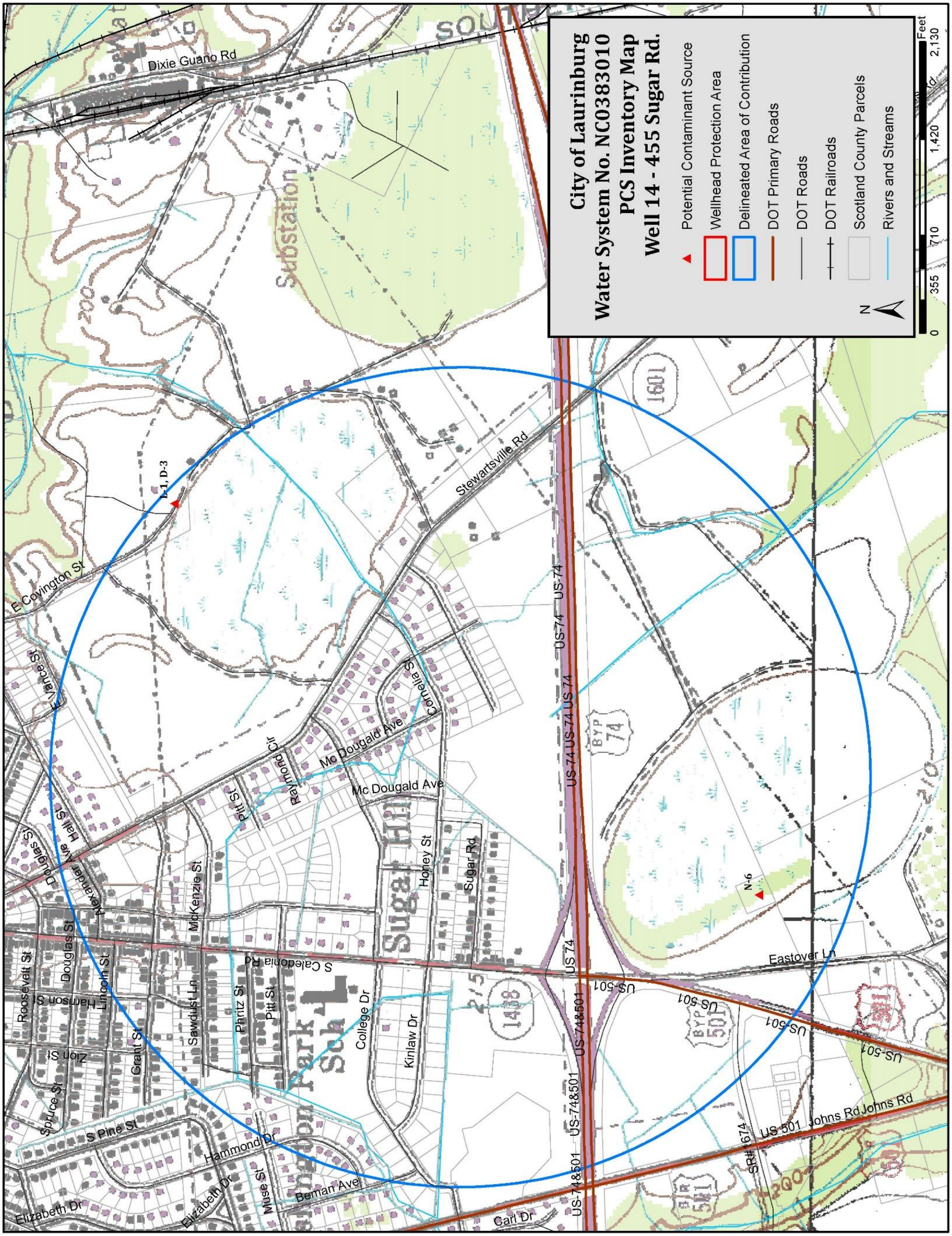

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 13 - Eastover Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
K-3, Q-3
H-1, Q-4
N-6
College Dr
Kinlaw Dr
Honey St
Sugar Rd
Sugar Hill
Berman Ave
Park Dr
Oak St
Woodlawn St
Willow St
Carl Dr
McDougald Ave
Cornelia St
Stewartsville Rd
S Caledonia Rd
US-74&501
US-74
US-501
BYP 74
BYP 501
1601
1438
Hospital Service Road
SR# 1674
SR# 1606
Eastover Ln
Montrose Dr
Bufkin Dr
Old Johns Rd
Johns Rd
200
210

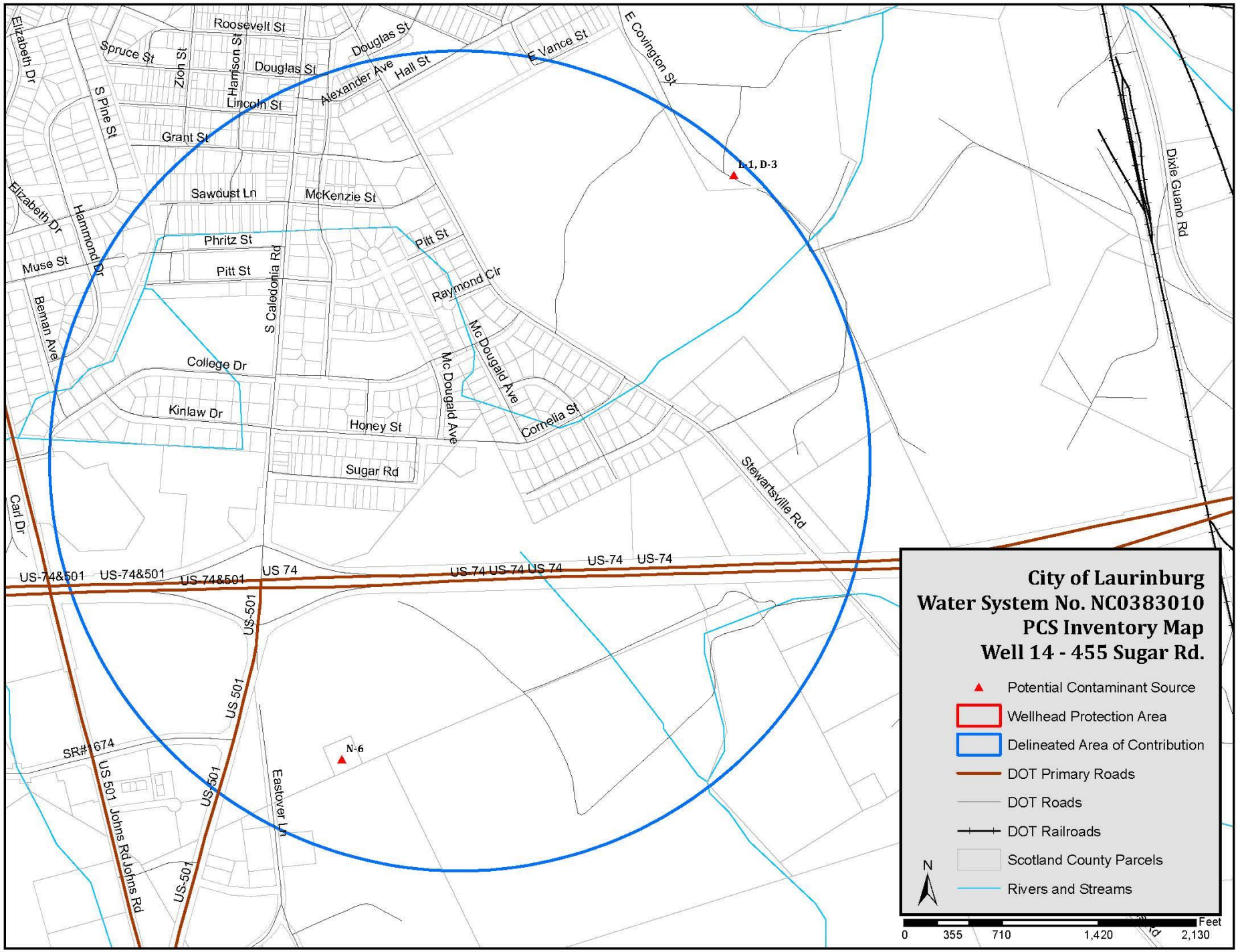

College Dr
Kinlaw Dr
Honey St
Sugar Rd
Mc Dougald Ave
Mc Dougald Ave
Cornelia St
Stewartsville Rd
Bernan Ave
Park Dr
Oak St
Woodlawn St
Willow St
Carl Dr
S Caledonia Rd
US-74&501
US-74&501
US-74&501
US 74
US-74
US-74
US-74
US-74
US-74
US-501
Hospital Service Road
K-3, Q-3
SR#1674
N-6
Eastover Ln
US-501
US-501
Monitrose Dr
H-1, Q-4
SR#1606
US 501
Johns Rd
Johns Rd
Bufkin Dr
Old Johns Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 13 - Eastover Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

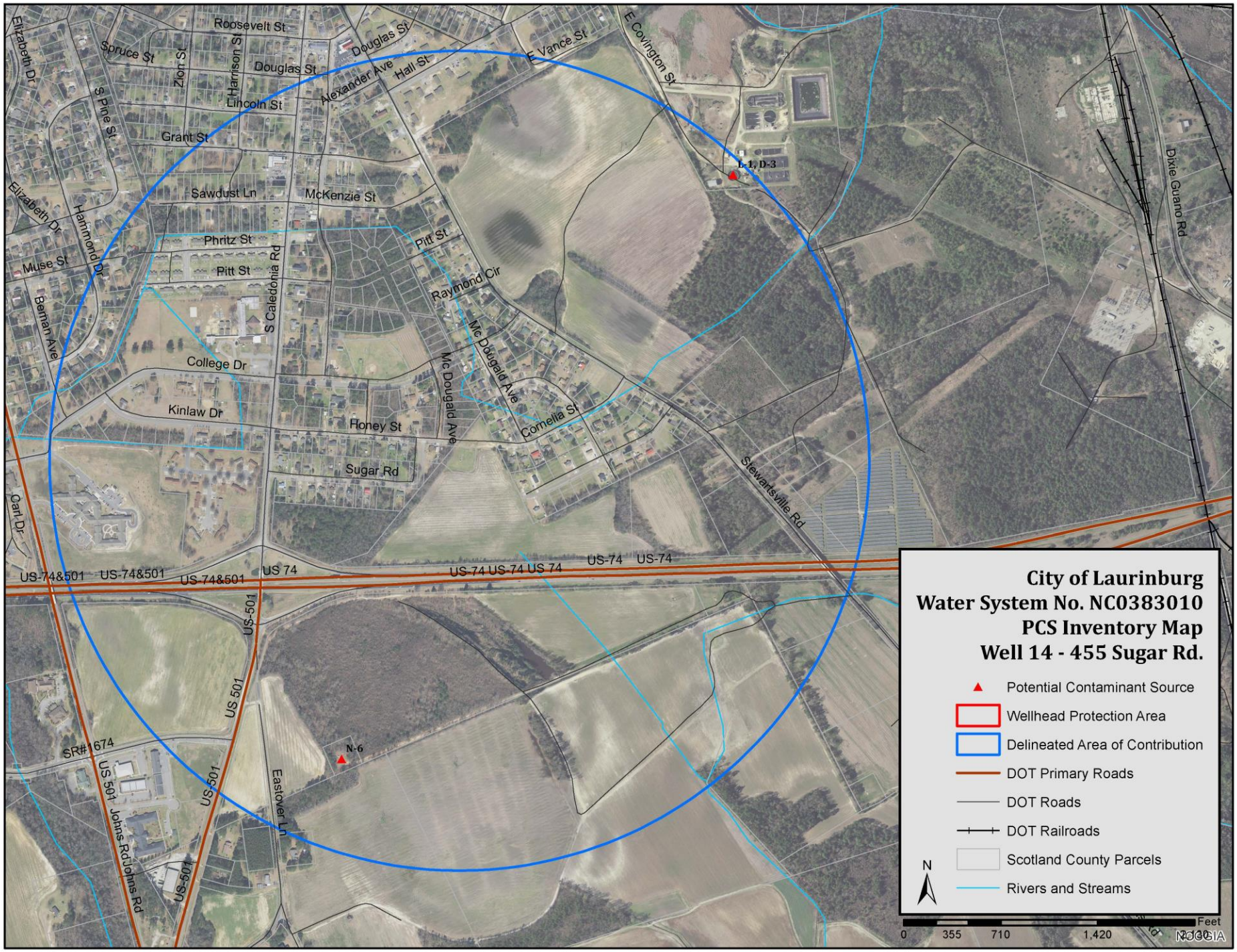

College Dr
Kinlaw Dr
Honey St
Sugar Rd
Woodlawn St
Park Dr
Oak St
Willow St
Cart Dr
Berman Ave
S Caledonia Rd
Mc Dougald Ave
Cornelia St
Stewartsville Rd
US-74&501
US-74
US-501
Hospital Service Road
Montrose Dr
SR#1674
Eastover Ln
SR#1606
Bufkin Dr
Old Johns Rd
Johns Rd
K-3, Q-3
N-6
H-1, Q-4
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 13 - Eastover Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420

Potential Contaminant Source Inventory
Well 14 - 455 Sugar Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352
14	WWTP, Tier II Site	L-1 D-3	Laurinburg WWTP Fac. ID: 5818693	620 Hall St. Laurinburg, NC 28352

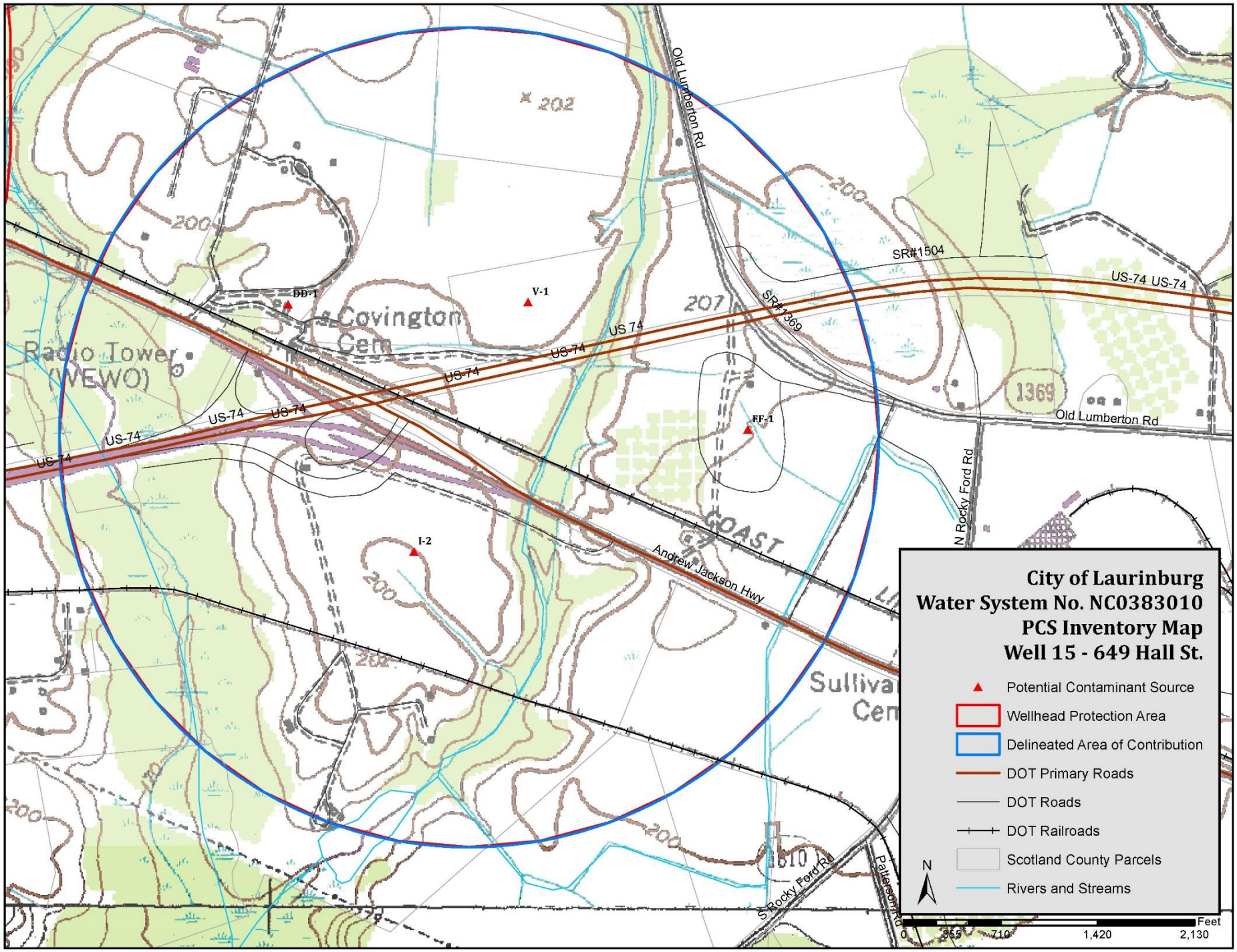

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 14 - 455 Sugar Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0 355 710 1,420 2,130
Feet

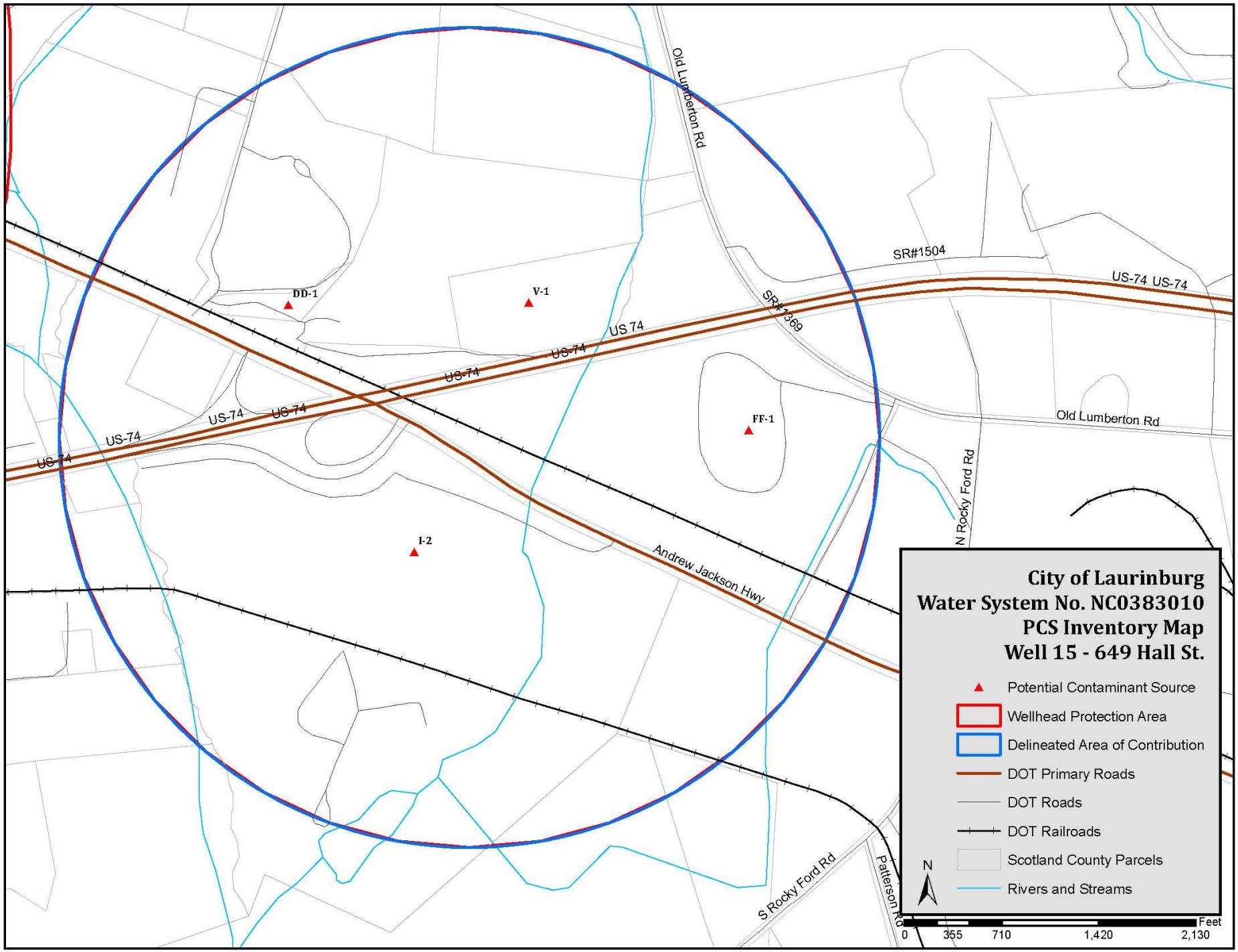

Roosevelt St
Douglas St
Spruce St
Zion St
Harrison St
Douglas St
Alexander Ave
Hall St
E Vance St
E Covington St
Elizabeth Dr
S Pine St
Lincoln St
Grant St
Sawdust Ln
McKenzie St
Elizabeth Dr
Hammond Dr
Phritz St
Pitt St
Pitt St
Muse St
Raymond Cir
Beman Ave
S Caledonia Rd
Mc Dougald Ave
College Dr
Mc Dougald Ave
Kinlaw Dr
Honey St
Cornelia St
Sugar Rd
Stewartsville Rd
Carl Dr
US-74&501
US-74&501
US-74&501
US 74
US 74 US 74 US 74
US-74
US-74
US-501
US 501
SR# 674
US 501
Johns Rd
Johns Rd
US-501
US-501
Eastover Ln
L-1, D-3
N-6
Dixie Guano Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 14 - 455 Sugar Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

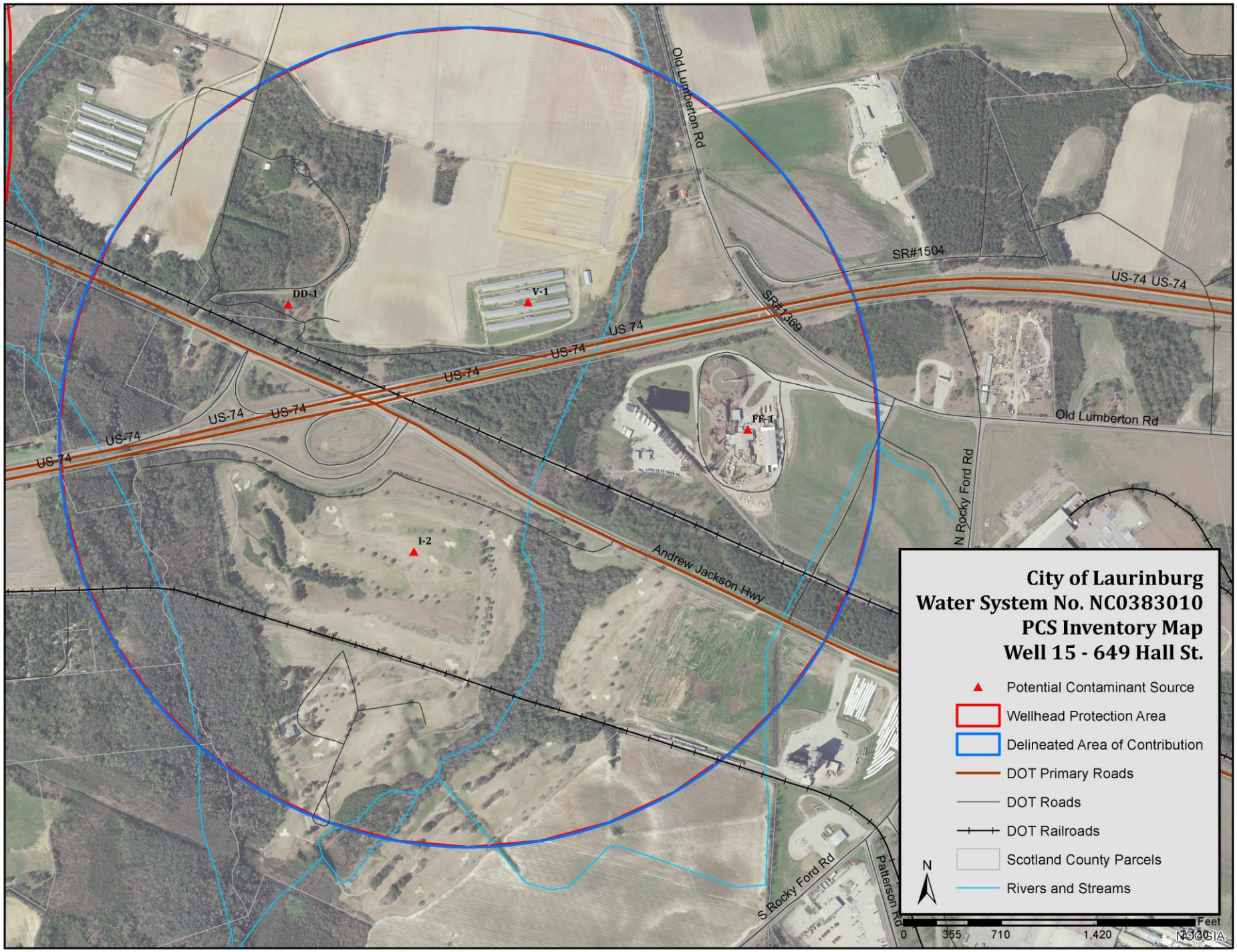

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 14 - 455 Sugar Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
L-1, D-3
N-6
Roosevelt St
Douglas St
E Vance St
E Covington St
Spruce St
Zion St
Harrison St
Alexander Ave
Hall St
Lincoln St
Grant St
S Pine St
Elizabeth Dr
Sawdust Ln
McKenzie St
Dixie Guano Rd
Phritz St
Pitt St
Muse St
Hammond Dr
S Caledonia Rd
Raymond Cir
Berman Ave
College Dr
Mc Dougald Ave
Kinlaw Dr
Honey St
Cornelia St
Sugar Rd
Stewartsville Rd
Carl Dr
US-74&501
US 74
US-74
US-501
SR# 674
Johns Rd
Eastover Ln

Potential Contaminant Source Inventory
Well 15 - 649 Hall St.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
15	Animal Operation/Poultry	V-1	Carmichael Farm	18668 Old Lumberton Rd. Laurinburg, NC 28352
15	Cemetery	DD-1	Covington Cemetary	Off of Hwy 74
15	Recreational Facility	I-2	Cypress Creek Golf Link	19400 Andrew Jackson Hwy. Laurinburg, NC 28352
15	Wood Processing	FF-1	Edwards Wood Products	19500 Old Lumberton Rd. Laurinburg, NC 28352

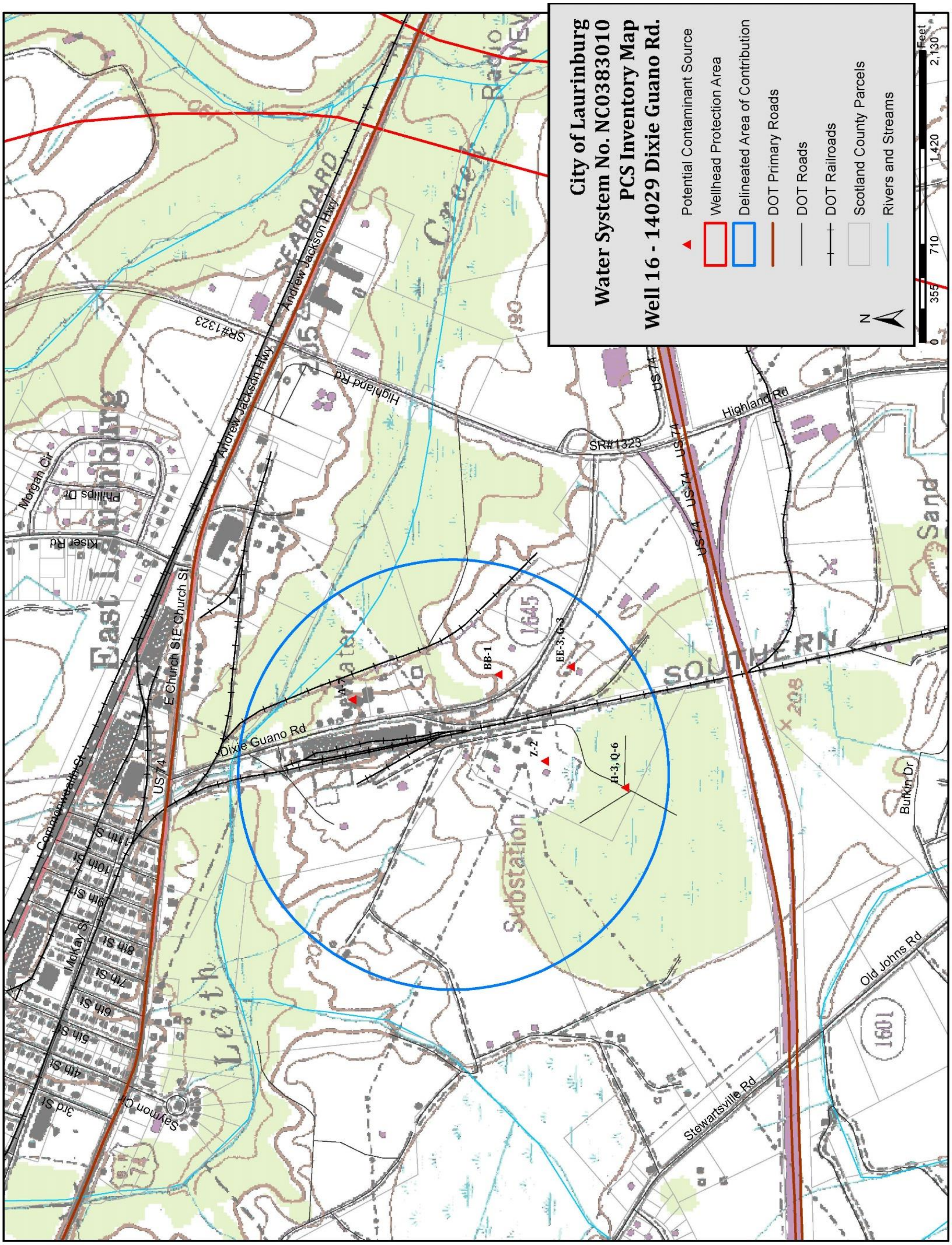

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 15 - 649 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
DD-1
V-1
FF-1
I-2
Old Lumberton Rd
SR#1504
US-74 US-74
SR#1369
US 74
US-74
Radio Tower (WEWO)
Covington Cem
1369
N Rocky Ford Rd
Andrew Jackson Hwy
S Rocky Ford Rd
Patterson Rd
1610
202
200
207

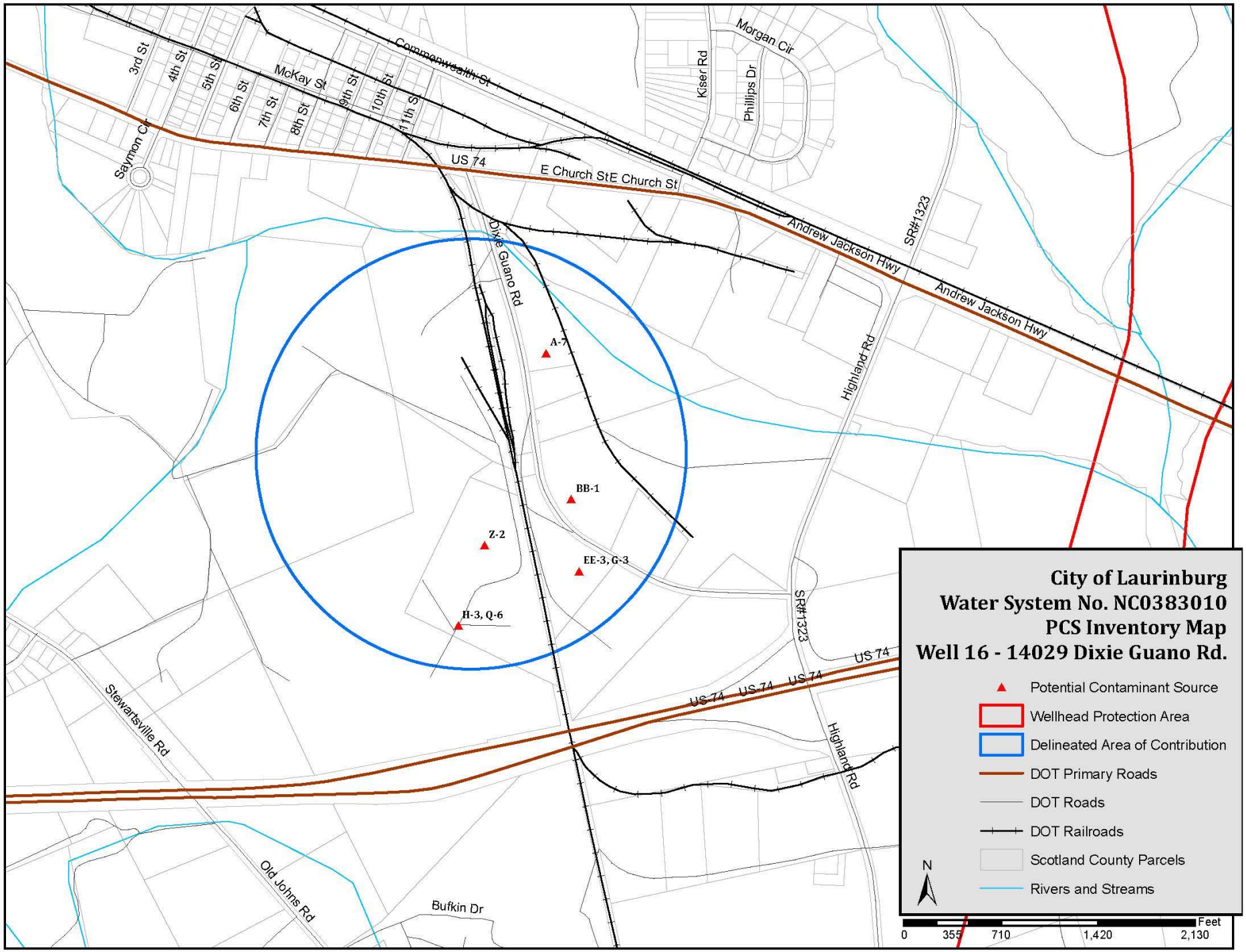

DD-1
V-1
FF-1
I-2
Old Lumberton Rd
SR#1504
US-74 US-74
SR#1369
US 74
US-74
US-74
US-74
US-74
US-74
Old Lumberton Rd
N Rocky Ford Rd
Andrew Jackson Hwy
S Rocky Ford Rd
Patterson Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 15 - 649 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

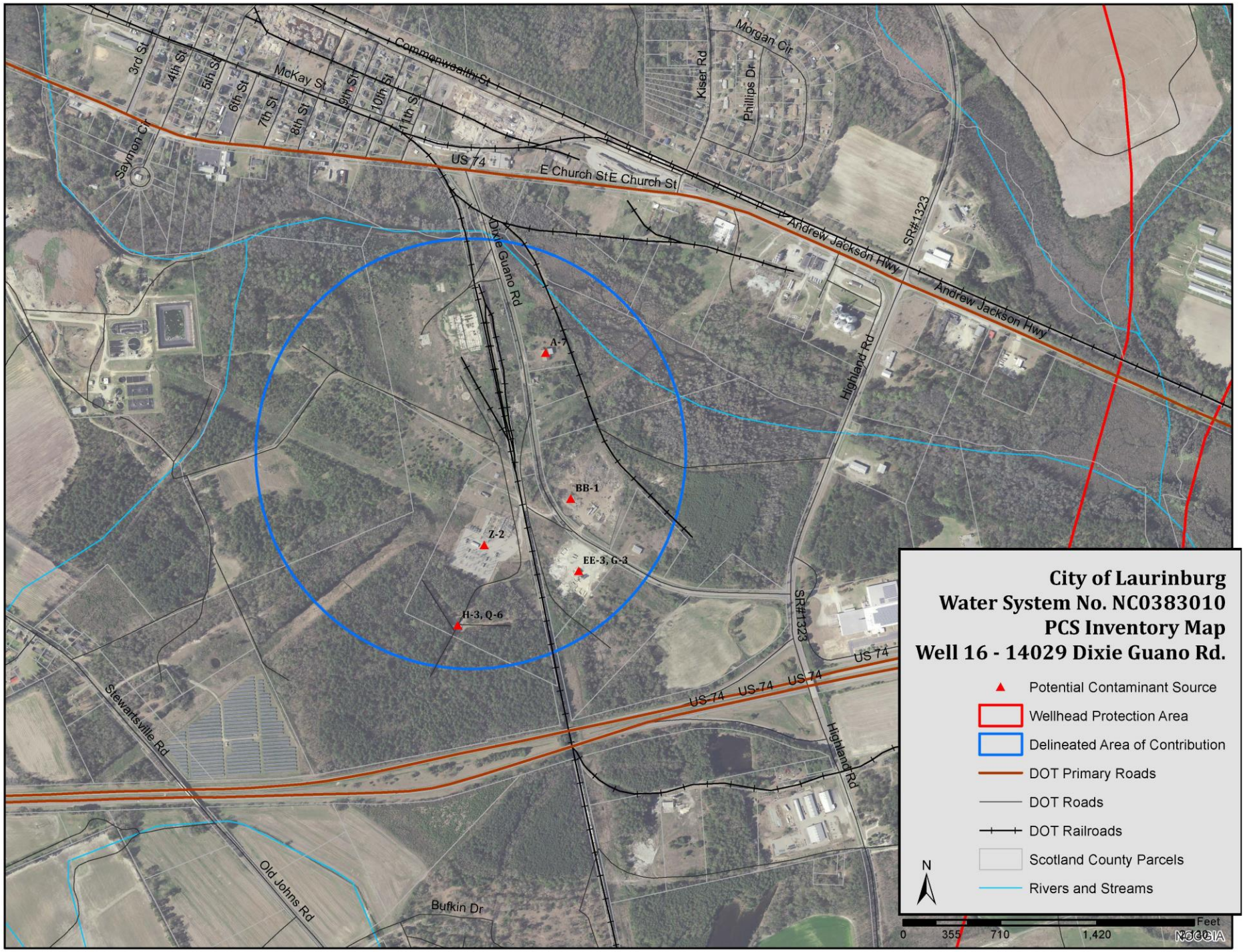

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 15 - 649 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
DD-1
V-1
I-2
FF-1
US-74
SR#1504
SR#1369
Old Lumberton Rd
N Rocky Ford Rd
S Rocky Ford Rd
Patterson Rd
Andrew Jackson Hwy

Potential Contaminant Source Inventory
Well 16 - 14029 Dixie Guano Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
16, 17	Chemical Storage, NPDES	EE-3 G-3	Ready Mix Concrete Company	13842 Dixie Guano Rd. Laurinburg, NC 28352
16, 17	Communications Tower, AST	H-3 Q-6	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
16, 17	Electrical Substation	Z-2	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
16, 17	PIRF	A-7	Royster Co. PIRF Inc.: 6362	14001 Dixie Guana Rd. Laurinburg, NC 28352
16, 17	Salvage Yard	BB-1	Scotland Salvage & Recycling	13820 Dixie Guano Rd. Laurinburg, NC 28352


City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 16 - 14029 Dixie Guano Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet
A-7
BB-1
EE-3, G-3
Z-2
H-3, Q-6
Dixie Guano Rd
E Church St
US 74
Highland Rd
SR#1323
Andrew Jackson Hwy
SOUTHERN
SEABOARD
Substation
Old Johns Rd
Stewartsville Rd
Bulkin Dr
Commonwealth St
McKay St
Morgan Cir
Phillips Dr
Kiser Rd
Saymon Cir
3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St
East Laurinburg
Leith
Creek


3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St
McKay St
Commonwealth St
Saymon Cir
US 74
E Church StE Church St
Kiser Rd
Morgan Cir
Phillips Dr
SR#1323
Andrew Jackson Hwy
Andrew Jackson Hwy
Dixie Guano Rd
Highland Rd
A-7
BB-1
Z-2
EE-3, G-3
H-3, Q-6
SR#1323
US 74
US 74
US 74
US 74
US 74
Stewartsville Rd
Highland Rd
Old Johns Rd
Bufkin Dr
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 16 - 14029 Dixie Guano Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

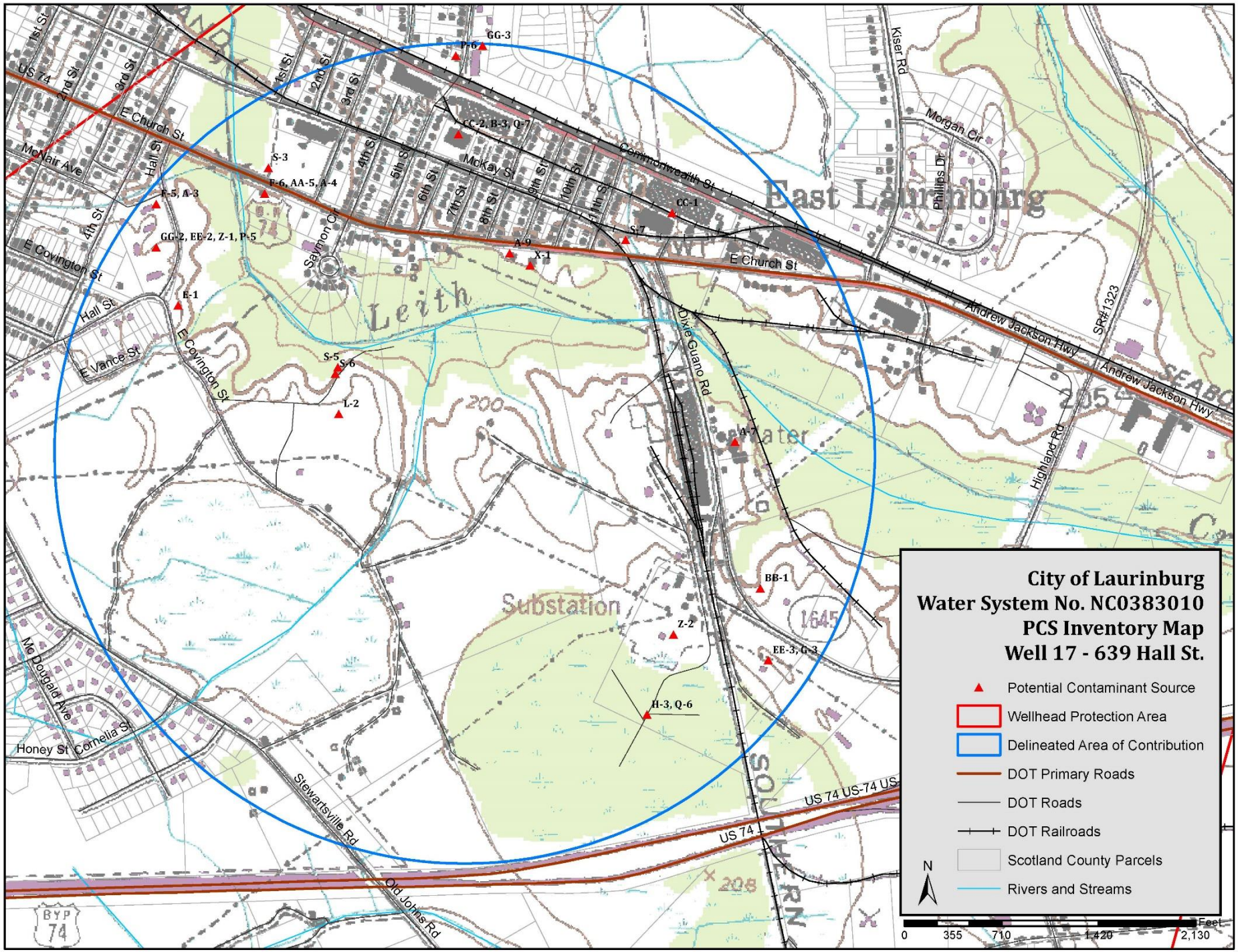

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 16 - 14029 Dixie Guano Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
A-7
BB-1
Z-2
EE-3, G-3
H-3, Q-6
US 74
E Church St
Andrew Jackson Hwy
SR#1323
Dixie Guano Rd
Highland Rd
Stewartsville Rd
Old Johns Rd
Bufkin Dr
Commonwealth St
McKay St
Kiser Rd
Morgan Cir
Phillips Dr
Saxmon Cir
3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St

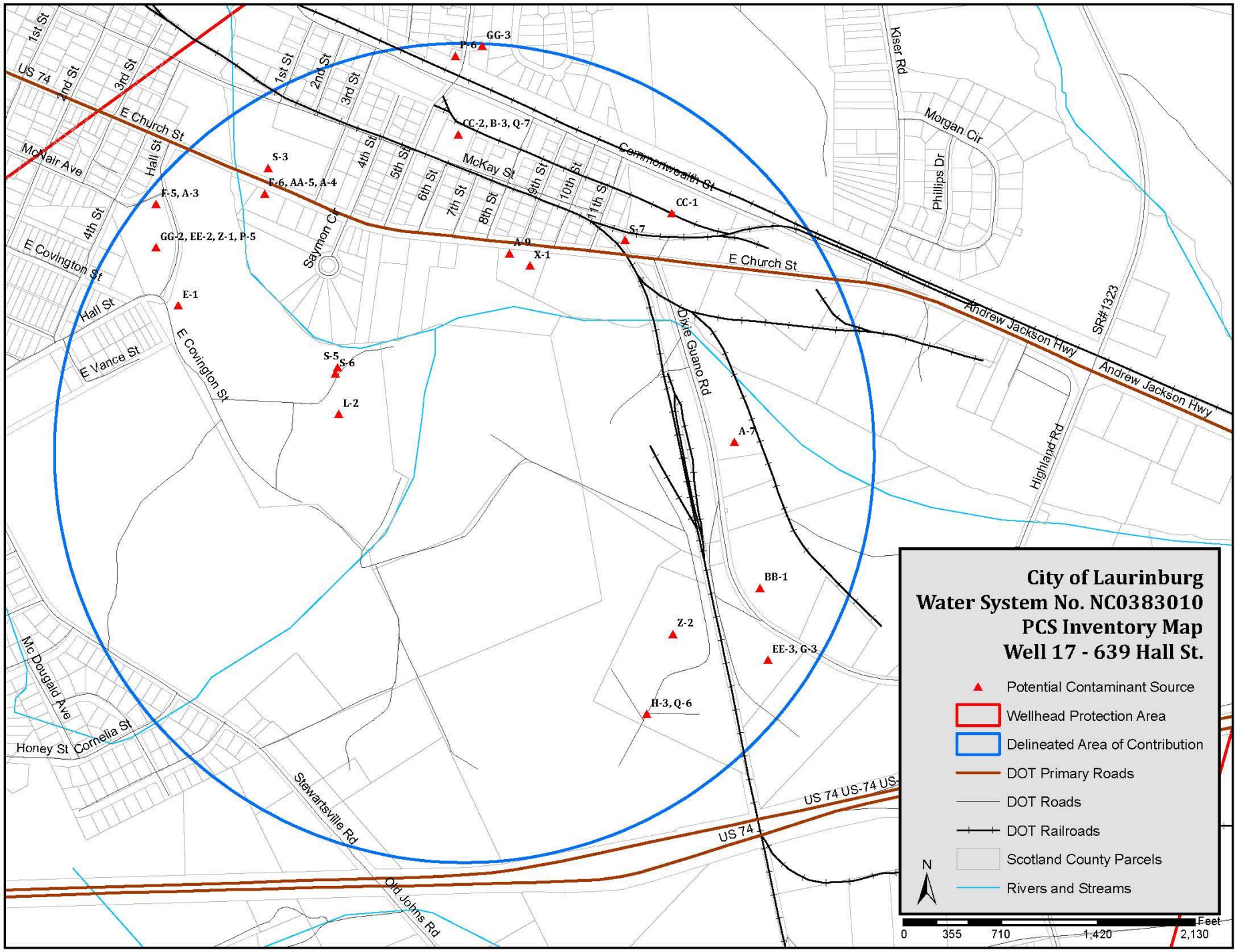
Potential Contaminant Source Inventory
Well 17 - 639 Hall St.

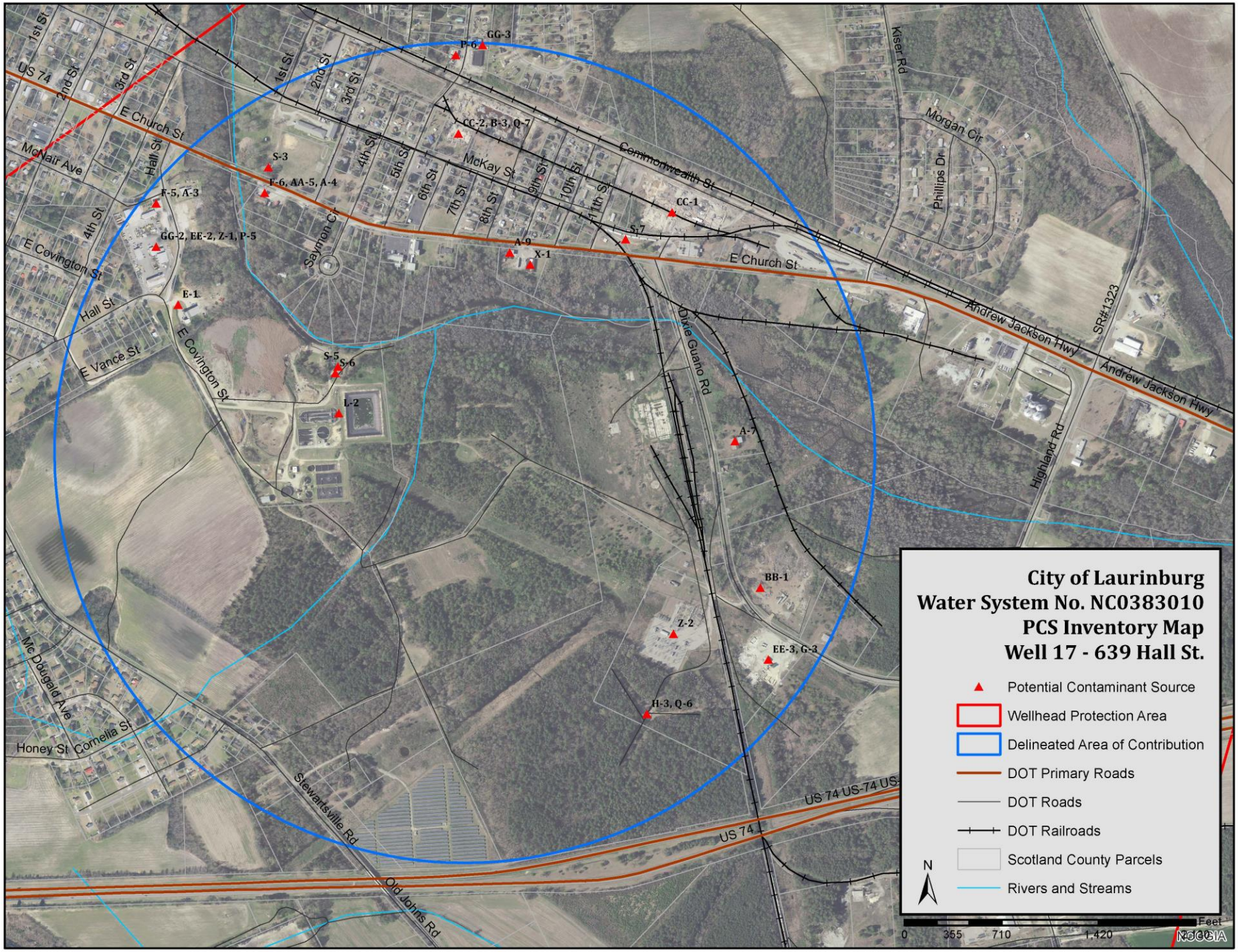
WHPA	PCS Category	Map Code	PCS Site	Physical Location
17	Automobile Repairs/Sales	P-6	Caulder's Service Center	104 Sanford Rd. Laurinburg, NC 28352
16, 17	Chemical Storage, NPDES	EE-3 G-3	Ready Mix Concrete Company	13842 Dixie Guano Rd. Laurinburg, NC 28352
16, 17	Communications Tower, AST	H-3 Q-6	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
17	Demolition Site	CC-1	Prince Plant #3	23 Commonwealth St. Laurinburg, NC 28352
17	Demolition Site, RCRA, AST	CC-2, B-3 Q-7	Waverly Mills Plant #3	50 5th St. Laurinburg, NC 28352
16, 17	Electrical Substation	Z-2	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352
17	Motor Pool	GG-3	Mikki Caulders Towing	102 Sanford Rd. Laurinburg, NC 28352
17	Motor Pool Chemical Storage Electrical Storage Automobile Repair	GG-2 EE-2 Z-1 P-5	Sanitation Dept. Public Works Facility	501 Hall St. Laurinburg, NC 28352
16, 17	PIRF	A-7	Royster Co. PIRF Inc.: 6362	14001 Dixie Guana Rd. Laurinburg, NC 28352
17	PIRF	A-9	Servco 02611	16700 Andrew Jackson Hwy. Laurinburg, NC 28352
17	Pre-Sanitary Landfill	E-1	Laurinburg Dump UDS321 - Old Landfill	600 Hall St. Laurinburg, NC 28352
17	Print/Sign Shop	X-1	Speedy Sign Shop	16800 Andrew Jackson Hwy. Laurinburg, NC 28352
17	Pump Station	S-3	Pump Station #24	16401 Andrew Jackson Hwy. Laurinburg, NC 28352
17	Pump Station	S-5	Leith Creek Pump Station PS(LC#1)	605 Hall St. Laurinburg, NC 28352
17	Pump Station	S-6	Leith Creek Pump Station PS(LC#2)	605 Hall St. Laurinburg, NC 28352
17	Pump Station	S-7	Pump Station #23	17980 Andrew Jackson Hwy. Laurinburg, NC 28352

Potential Contaminant Source Inventory
Well 17 - 639 Hall St.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
16, 17	Salvage Yard	BB-1	Scotland Salvage & Recycling	13820 Dixie Guano Rd. Laurinburg, NC 28352
17	UST Gas Station PIRF	F-6 AA-5 A-4	Community Mart/Citgo Gibson Oil & Gas Co. Inc. PIRF Inc.: 29996 Fac. ID: 0-023417 Cert. #: 20150286901	16440 Andrew Jackson Hwy. Laurinburg, NC 28352
17	UST, PIRF	F-5 A-3	City of Laurinburg Fleet Fuel Station PIRF Inc.: 29681 Fac. ID: 0-008045 Cert. #: 20150557501	503 Hall St. Laurinburg, NC 28352
17	WWTP (Drying Beds, Lined Sewage Basin)	L-2	Laurinburg WWTP, Drying Beds	620 Hall St. Laurinburg, NC 28352


City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 17 - 639 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
GG-3
P-6
CC-2, B-3, Q-7
S-3
F-6, AA-5, A-4
F-5, A-3
GG-2, EE-2, Z-1, P-5
E-1
S-5
S-6
L-2
A-9
X-1
CC-1
S-7
A-7
BB-1
Z-2
EE-3, G-3
H-3, Q-6
East Laurinburg
Leith
Substation
Water
US 74
E Church St
Commonwealth St
McKay St
Andrew Jackson Hwy
Dixie Guano Rd
Kiser Rd
Morgan Cir
Phillips Dr
Highland Rd
SR#1323
Hall St
E Covington St
E Vance St
McNair Ave
Saymon Ct
Mc Dougald Ave
Honey St
Cornelia St
Stewartsville Rd
Old Johns Rd
1st St
2nd St
3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St
1645
205 FT
208
200
BYP 74

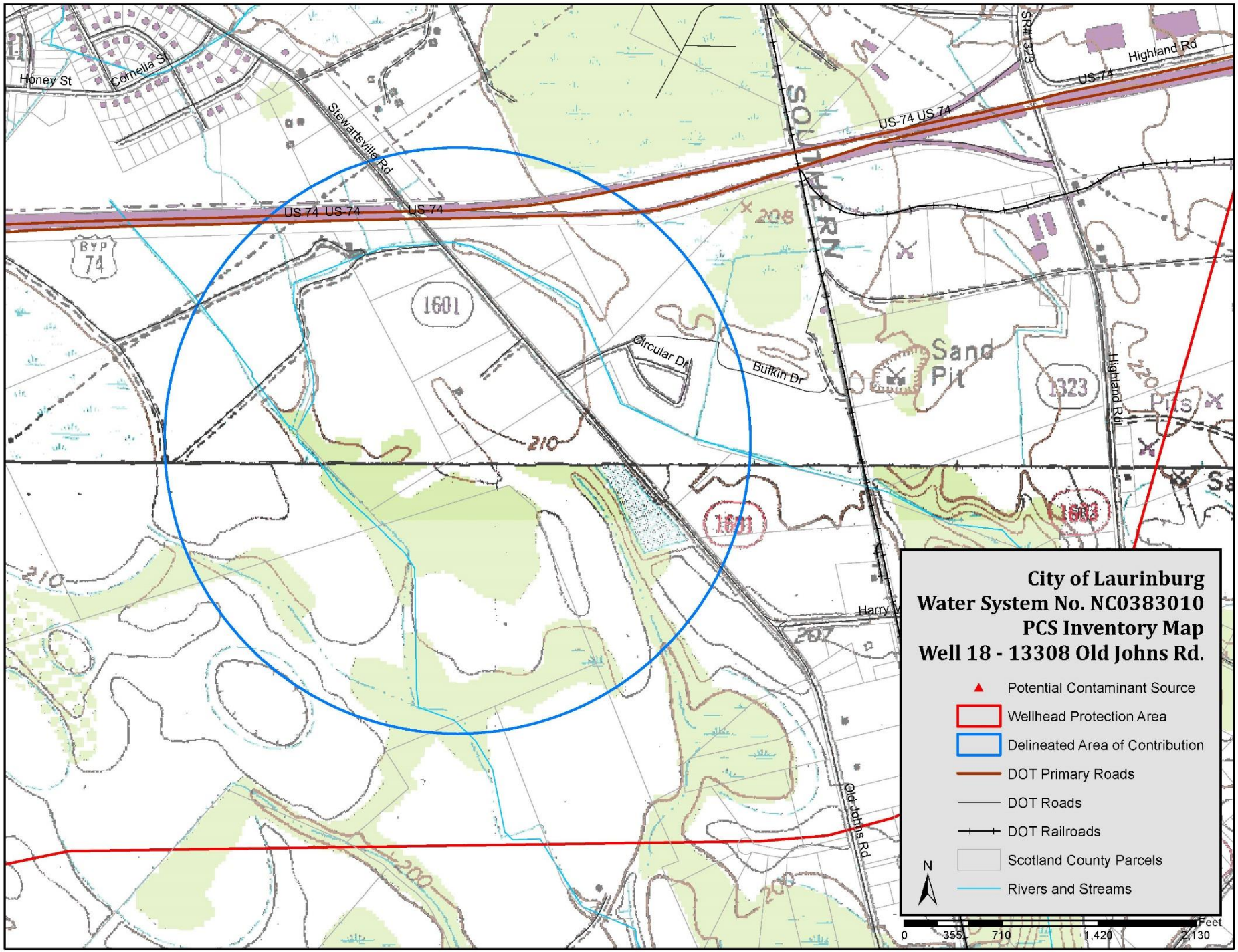

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 17 - 639 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet
P-6
GG-3
CC-2, B-3, Q-7
S-3
F-6, AA-5, A-4
F-5, A-3
GG-2, EE-2, Z-1, P-5
E-1
S-5
S-6
L-2
A-9
X-1
S-7
CC-1
A-7
BB-1
Z-2
EE-3, G-3
H-3, Q-6
US 74
E Church St
McNair Ave
Hall St
E Covington St
E Vance St
Honey St
Cornelia St
Mc Dougald Ave
Stewartsville Rd
Old Johns Rd
McKay St
Commonwealth St
Saymon Ct
Dixie Guano Rd
Kiser Rd
Morgan Cir
Phillips Dr
Andrew Jackson Hwy
SR#1323
Highland Rd
1st St
2nd St
3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St


City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 17 - 639 Hall St.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
Feet
NCOGIA
GG-3
P-6
CC-2, B-3, Q-7
S-3
F-6, AA-5, A-4
F-5, A-3
GG-2, EE-2, Z-1, P-5
CC-1
S-7
A-9
X-1
E-1
S-5
S-6
L-2
A-7
BB-1
Z-2
EE-3, G-3
H-3, Q-6
US 74
E Church St
Commonwealth St
McKay St
McNair Ave
Hall St
E Covington St
E Vance St
Saymon Ct
Dixie Guano Rd
Andrew Jackson Hwy
SR#1323
Highland Rd
Kiser Rd
Morgan Cir
Phillips Dr
Mc Dougald Ave
Honey St
Cornelia St
Stewartsville Rd
Old Johns Rd
1st St
2nd St
3rd St
4th St
5th St
6th St
7th St
8th St
9th St
10th St
11th St

Potential Contaminant Source Inventory
Well 18 - 13308 Old Johns Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
18				

Note: There are no known individual potential sources of contamination within the contribution area of this well. Any contamination event would likely be caused by agricultural/farming operations or spillage along a transportation corridor.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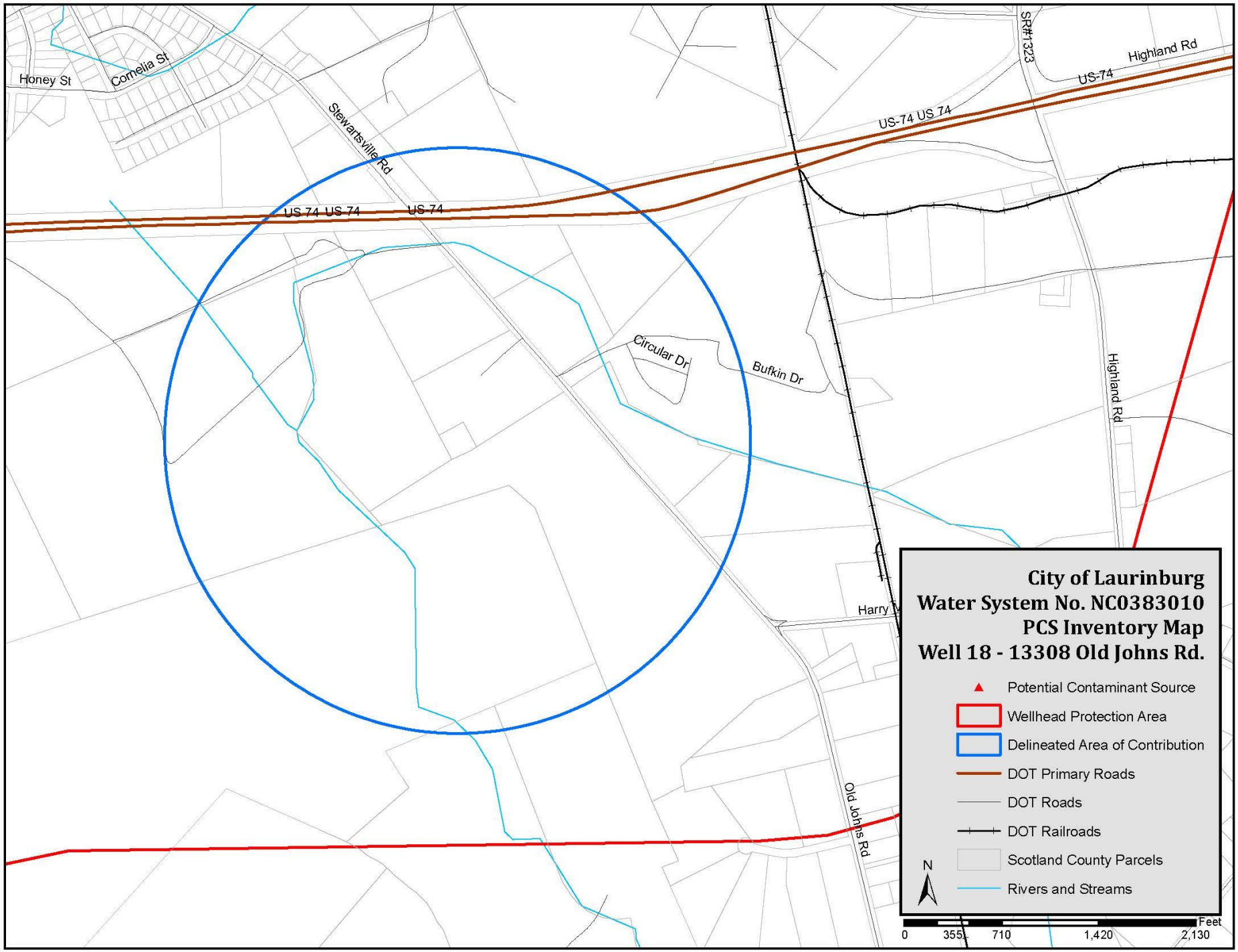
Stewartsville Rd
US 74 US-74
US-74
US-74 US 74
SR#1323
Highland Rd
SOUTHERN
BYP 74
1601
Circular Dr
Bufkin Dr
Sand Pit
1323
Highland Rd
210
208
220
200
207
Old Johns Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 18 - 13308 Old Johns Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet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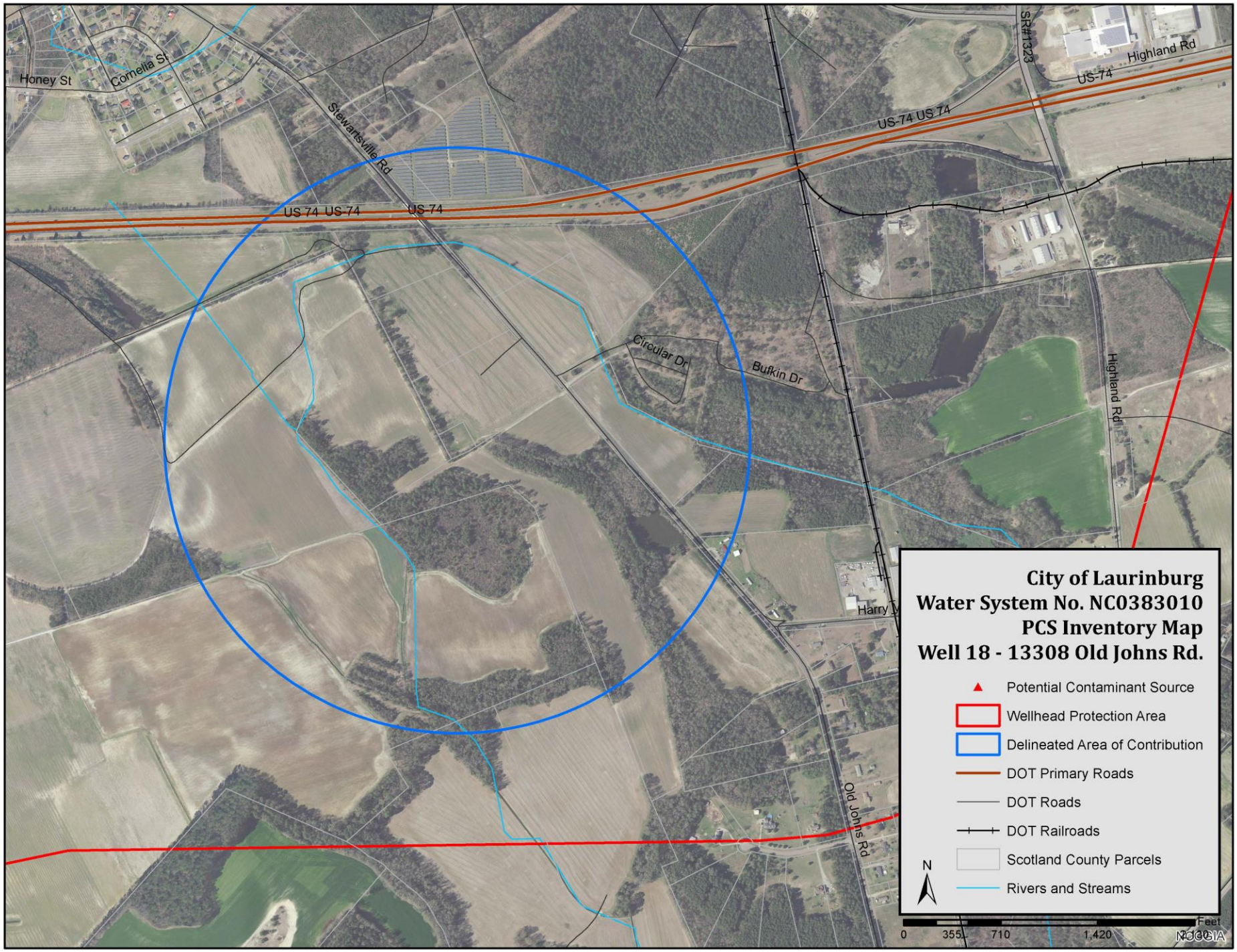
Cornelia St
Stewartsville Rd
US-74 US-74
US-74
US-74 US 74
SR#1323
Highland Rd
US-74
Circular Dr
Bufkin Dr
Highland Rd
Harry
Old Johns Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 18 - 13308 Old Johns Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130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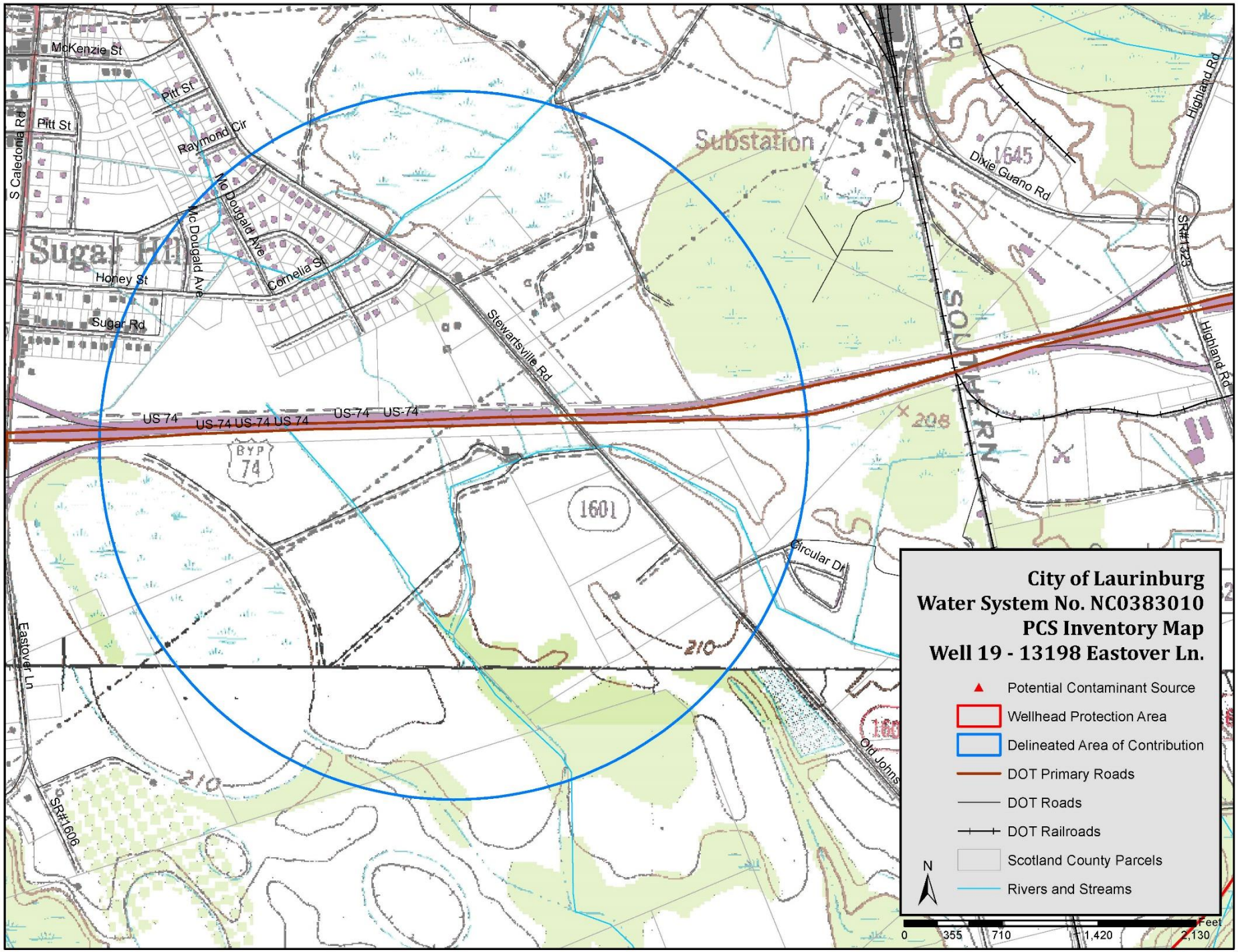
Cornelia St
Stewartsville Rd
US 74 US-74
US-74
US-74 US 74
SR#1323
US-74
Highland Rd
Highland Rd
Circular Dr
Bufkin Dr
Harry M
Old Johns Rd
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 18 - 13308 Old Johns Rd.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
Feet

Potential Contaminant Source Inventory
Well 19 - 13198 Eastover Ln.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
19				

Note: There are no known individual potential sources of contamination within the contribution area of this well. Any contamination event would likely be caused by agricultural/farming operations or spillage along a transportation corridor.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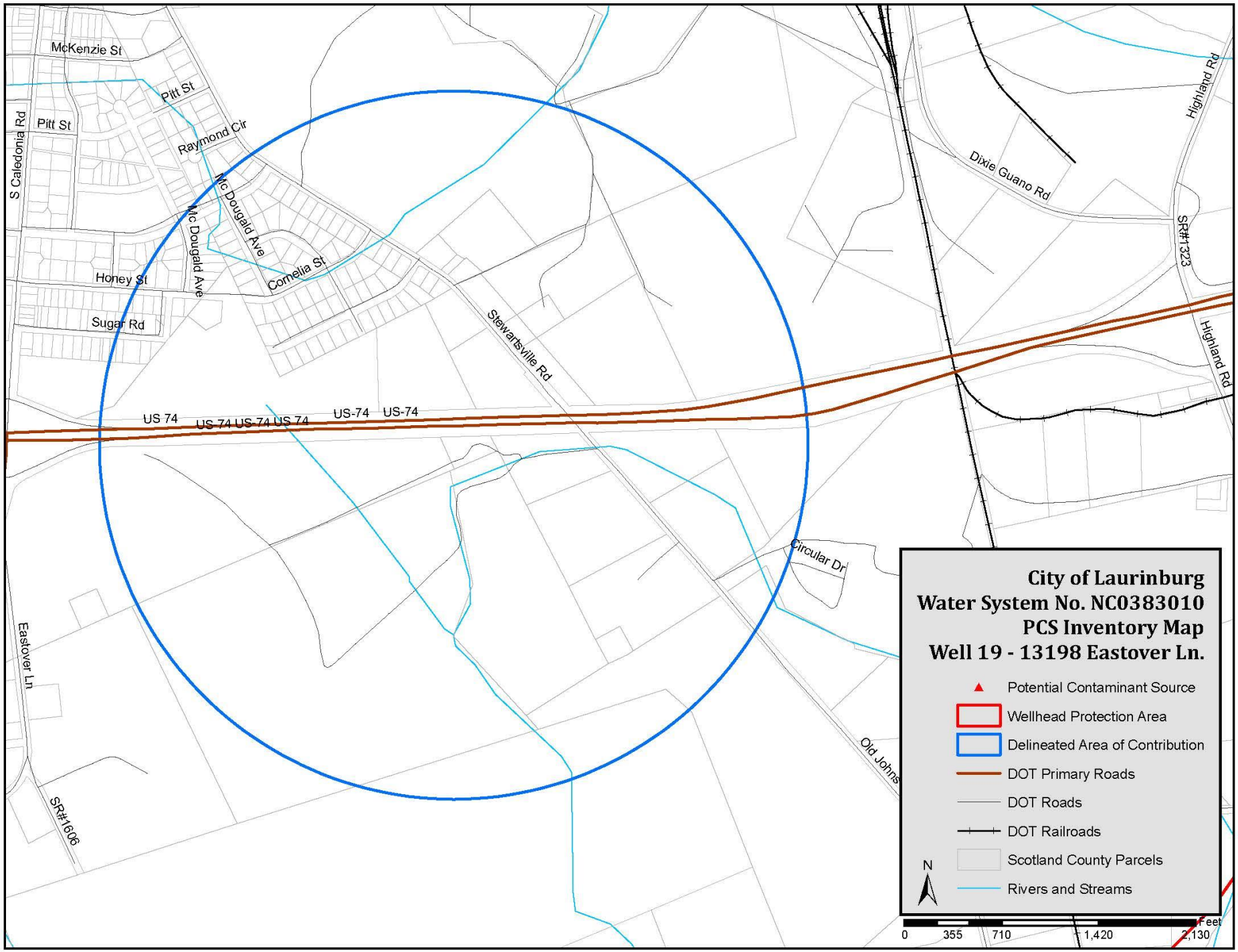
Pitt St
Pitt St
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
Mc Dougald Ave
Cornelia St
Honey St
Sugar Rd
Sugar Hill
Substation
Stewartsville Rd
Dixie Guano Rd
1645
Highland Rd
SR#1323
Highland Rd
SOUTHERN RN
US 74
US-74 US-74 US 74
US-74
US-74
BYP
74
208
1601
Circular Dr
210
Eastover Ln
210
SR#1606
Old Johns
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 19 - 13198 Eastover Ln.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet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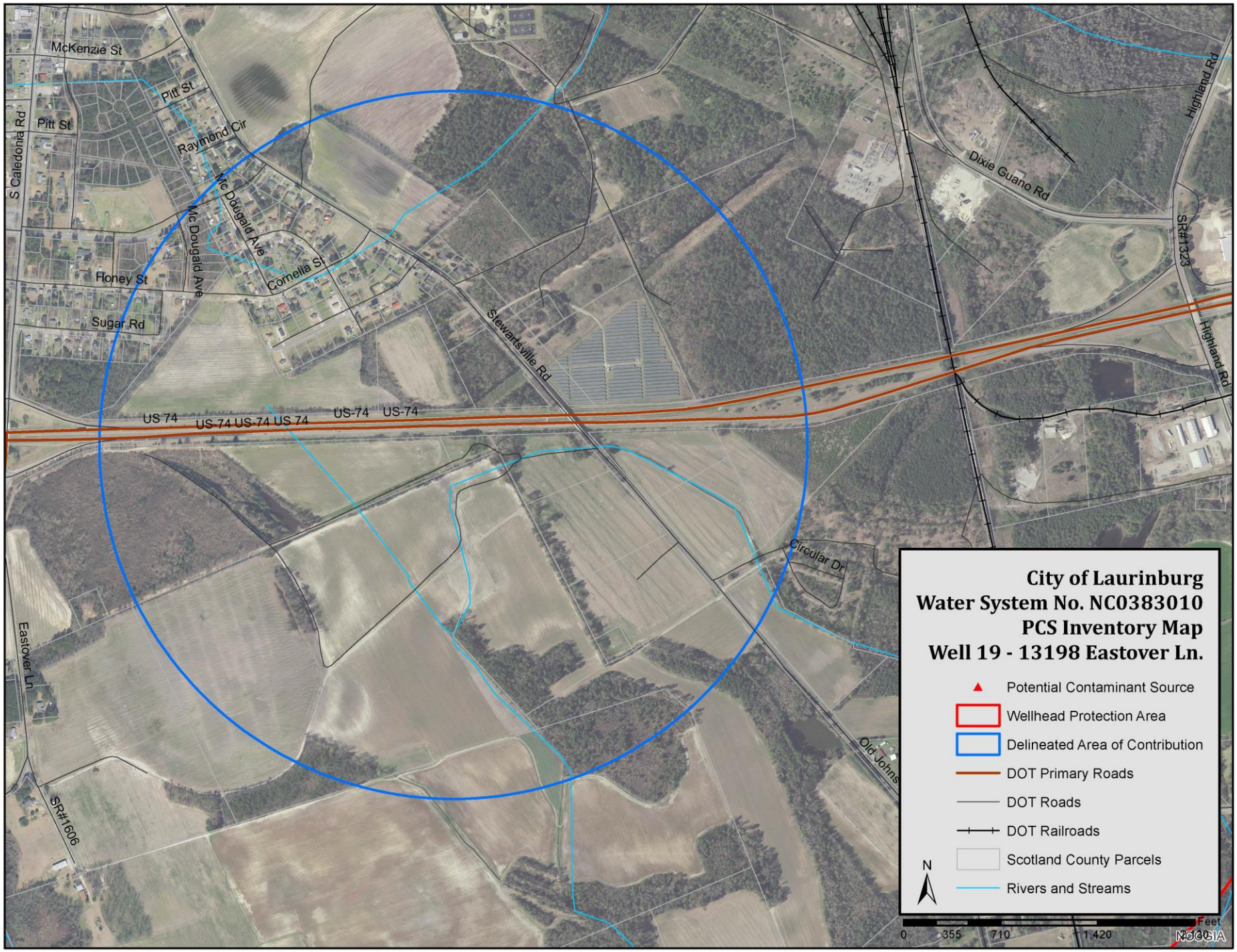
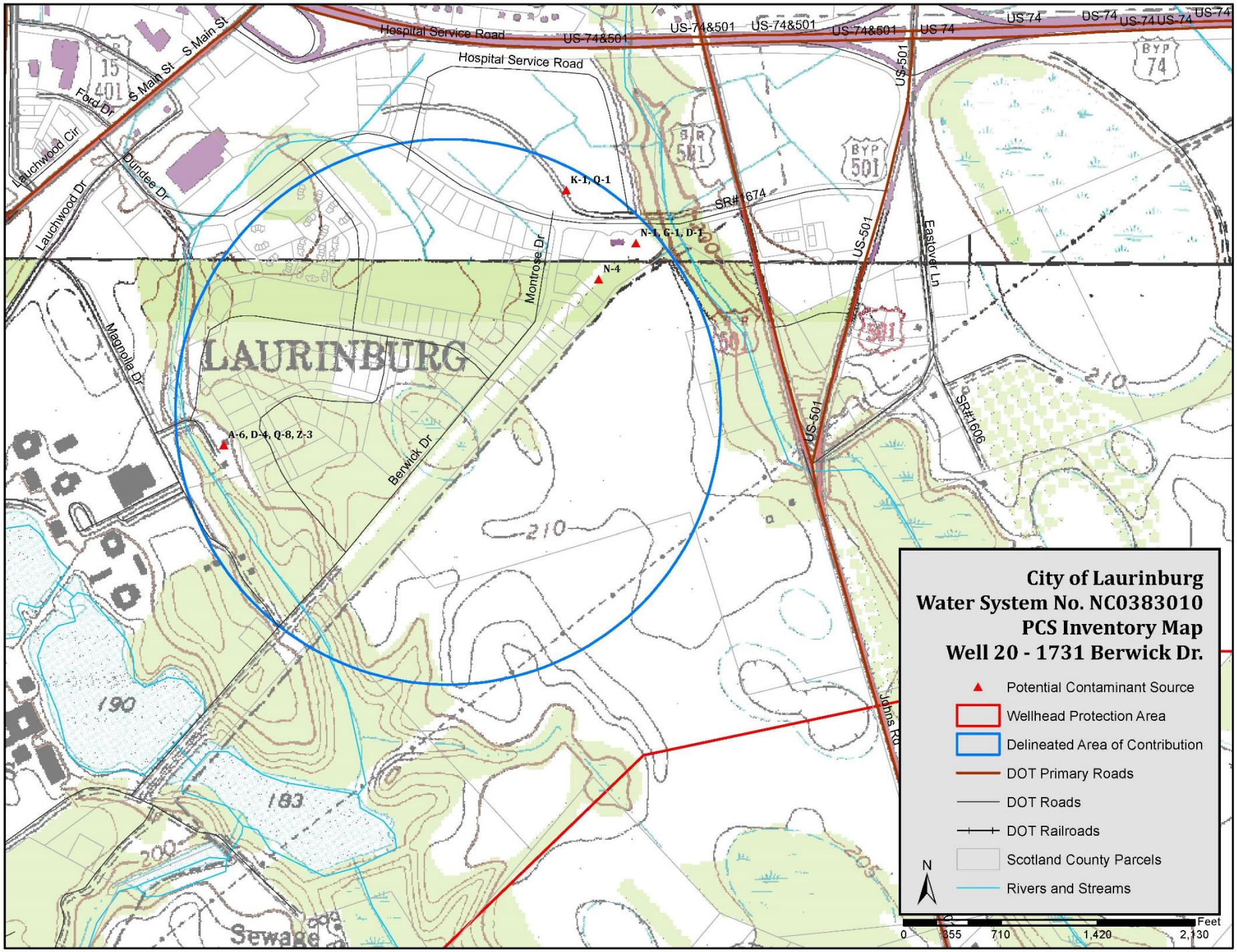
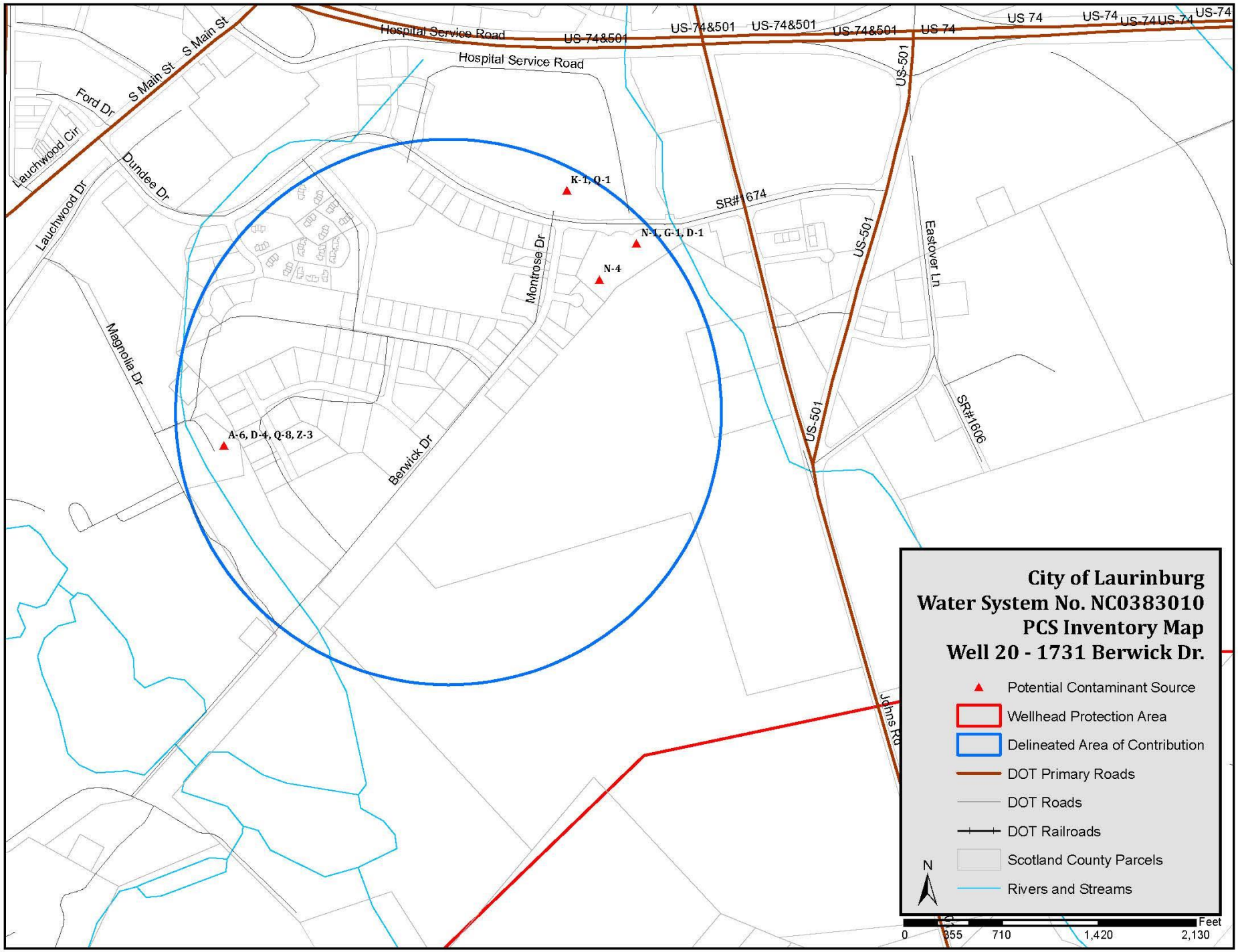
Pitt St
Pitt St
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
Mc Dougald Ave
Cornelia St
Honey St
Sugar Rd
Stewartsville Rd
US 74
US 74 US 74 US 74
US-74
US-74
Dixie Guano Rd
Highland Rd
SR#1323
Highland Rd
Circular Dr
Old Johns
Eastover Ln
SR#1606
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 19 - 13198 Eastover Ln.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
0
355
710
1,420
2,130
Feet


McKenzie St
Pitt St
Pitt St
S Caledonia Rd
Raymond Cir
Mc Dougald Ave
Mc Dougald Ave
Cornelia St
Honey St
Sugar Rd
Stewartsville Rd
US 74
US-74 US-74 US 74
US-74
US-74
Dixie Guano Rd
Highland Rd
SR#1323
Highland Rd
Circular Dr
Old Johns
Eastover Ln
SR#1606
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 19 - 13198 Eastover Ln.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
NCGIA

Potential Contaminant Source Inventory
Well 20 - 1731 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352


City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 20 - 1731 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130
LAURINBURG
Hospital Service Road
US-74&501
US-74
US-501
SR#1674
SR#1606
S Main St
Ford Dr
Lauchwood Cir
Lauchwood Dr
Dundee Dr
Montrose Dr
Magnolia Dr
Berwick Dr
Eastover Ln
Johns Rd
K-1, Q-1
N-1, G-1, D-1
N-4
A-6, D-4, Q-8, Z-3
BYP 74
BYP 501
BR 501
210
190
183
200
Sewage


Hospital Service Road
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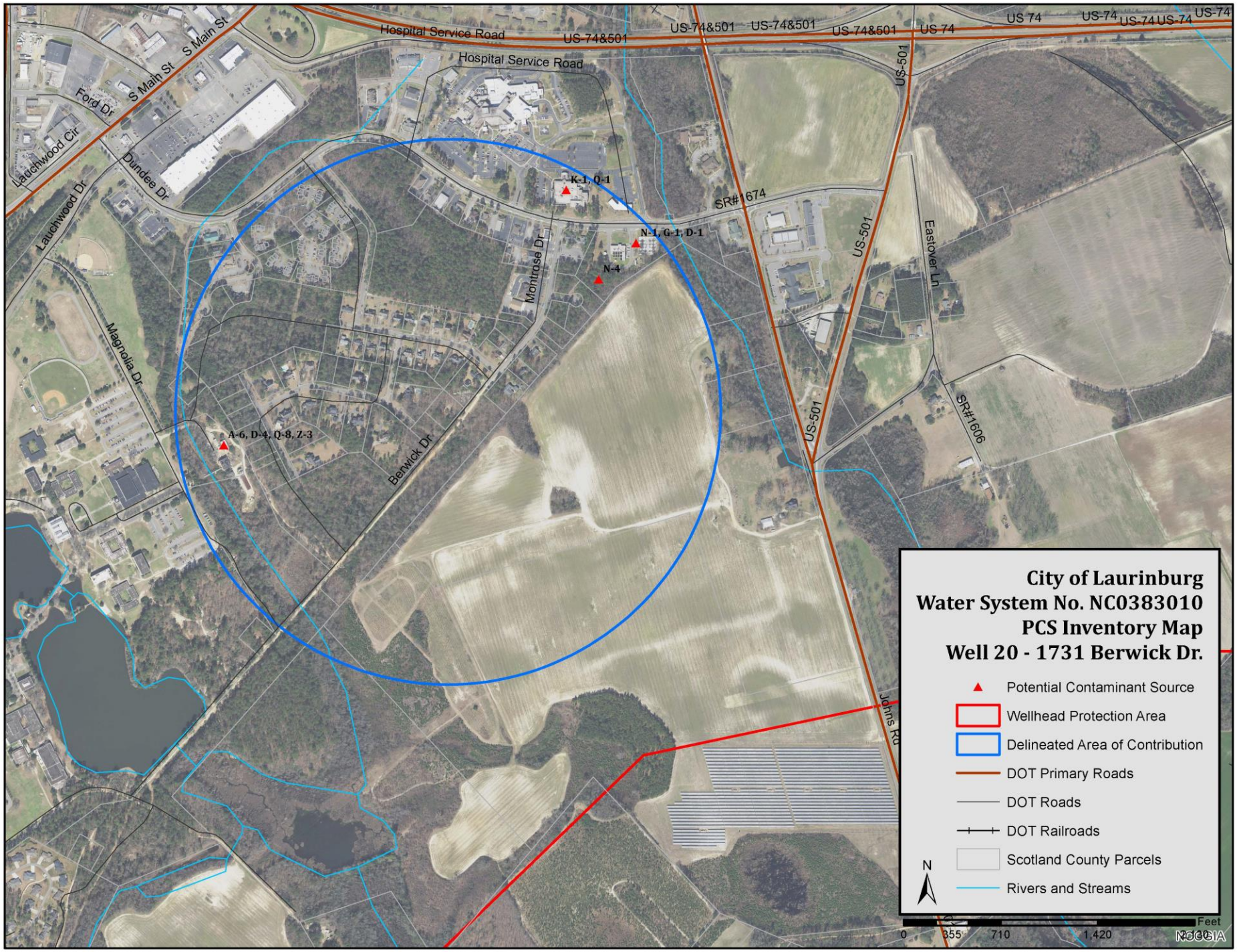
US-74
US-501
S Main St
Ford Dr
Lauchwood Cir
Lauchwood Dr
Dundee Dr
SR#1674
Montrose Dr
Eastover Ln
SR#1606
Magnolia Dr
Berwick Dr
Johns Rd
K-1, Q-1
N-1, G-1, D-1
N-4
A-6, D-4, Q-8, Z-3
City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 20 - 1731 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
2,130

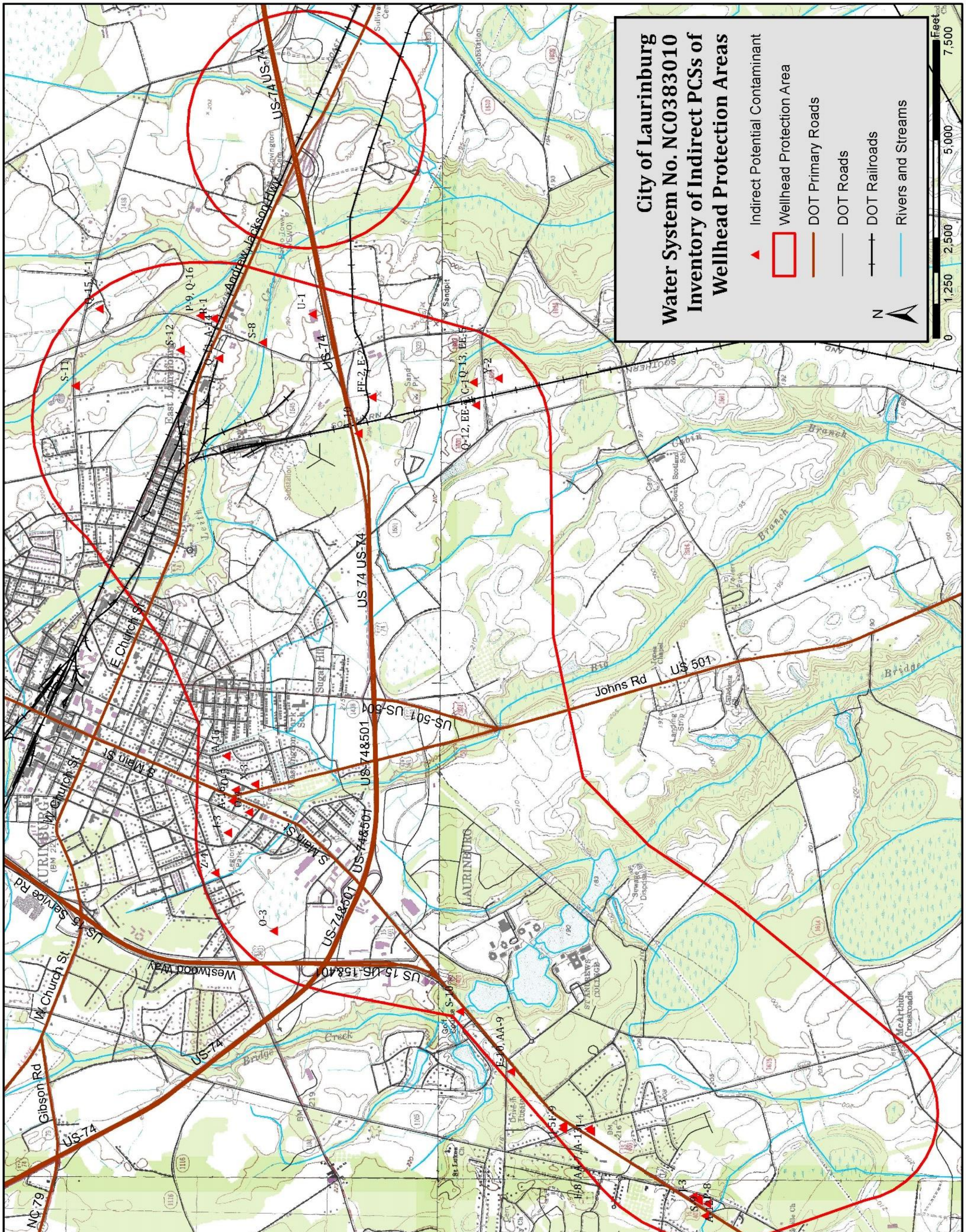

City of Laurinburg
Water System No. NC0383010
PCS Inventory Map
Well 20 - 1731 Berwick Dr.
Potential Contaminant Source
Wellhead Protection Area
Delineated Area of Contribution
DOT Primary Roads
DOT Roads
DOT Railroads
Scotland County Parcels
Rivers and Streams
N
Feet
0
355
710
1,420
A-6, D-4, Q-8, Z-3
K-1, Q-1
N-1, G-1, D-1
N-4
Hospital Service Road
US-74&501
US-74
US-501
SR#1674
SR#1606
S Main St
Ford Dr
Lauchwood Cir
Lauchwood Dr
Dundee Dr
Magnolia Dr
Berwick Dr
Montrose Dr
Eastover Ln
Johns Rd

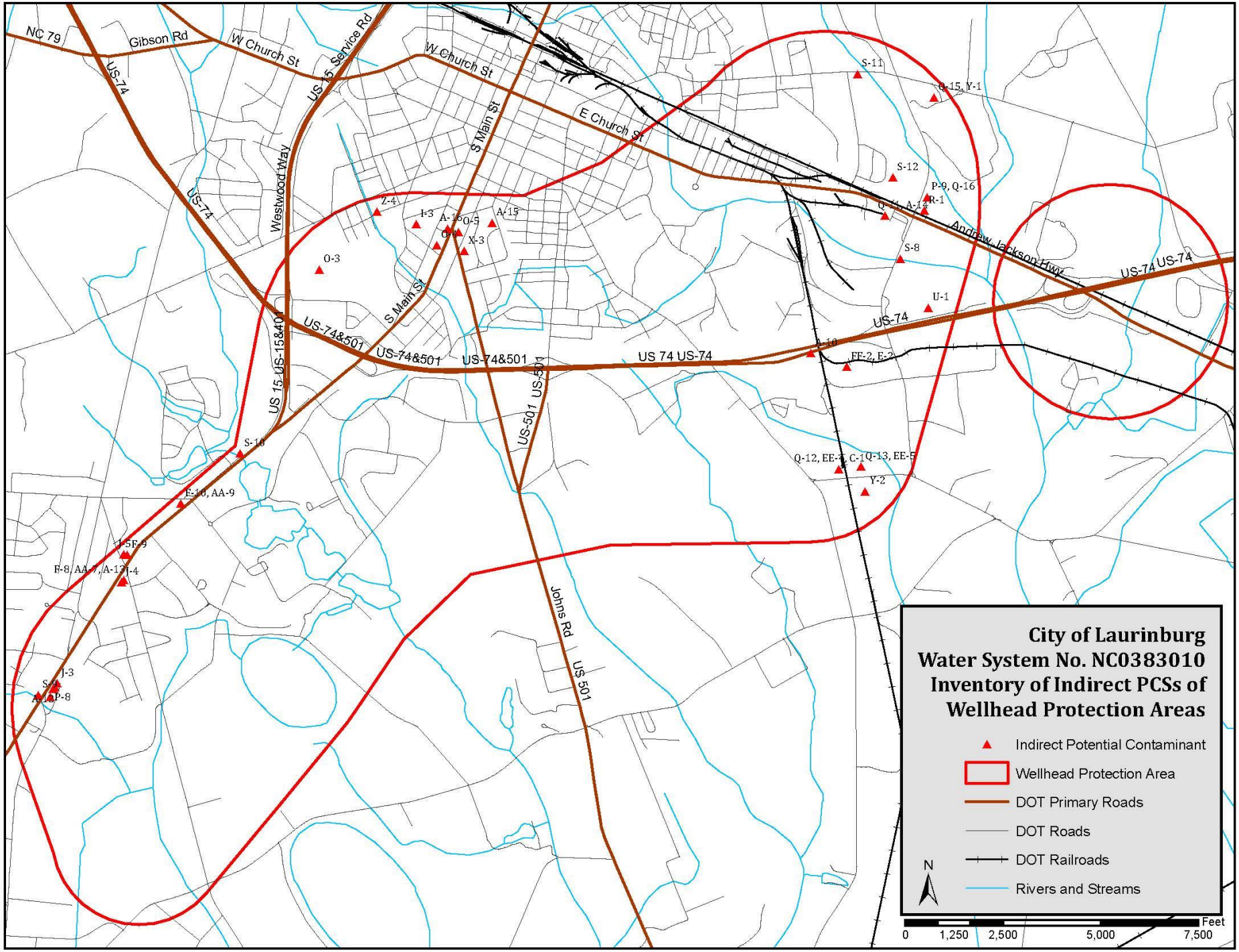
Inventory of Indirect Potential Contaminant Sources of Wellhead Protection Areas

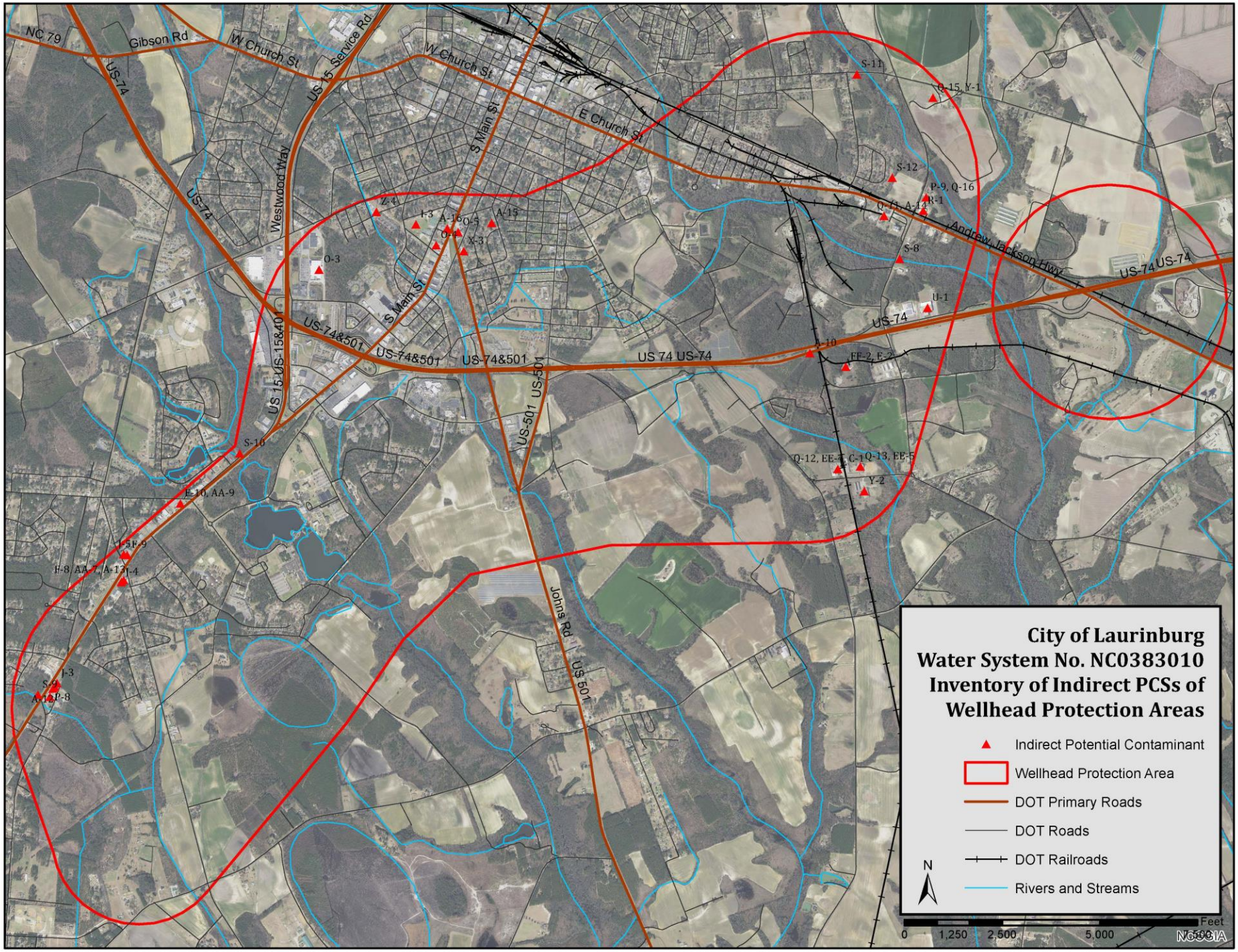
Nearest Contributing Well Area	PCS Category	Map Code	PCS Site	Physical Location
18	Agriculture/Ag. Operations	Y-2	Sinclair Lumber Co	17401 Harry Malloy Rd. Laurinburg, NC 28352
17	Agriculture/Ag. Operations, AST	Q-15 Y-1	Allan Baucom	17840 Old Lumberton Rd. Laurinburg, NC 28352
18	AST, Chemical Storage	Q-13 EE-5	Pate Z V Incorporated	17401 Harry Malloy Rd. Laurinburg, NC 28352
18	AST, Chemical Storage, CERCLIS	Q-12 EE-4 C-1	Helena Chemical	17321 Harry Malloy Rd. Laurinburg, NC 28352
16, 17	AST, PIRF	Q-11 A-14	Service Oil - Bulk Storage Fac. PIRF Inc.: 14737	17600 U.S. 74 Business Laurinburg, NC 28352
10	Automobile Repairs/Sales	P-8	C&R Automotive & Towing	1171 McColl Rd. Laurinburg, NC 28352
17	Automobile Repairs/Sales AST	P-9 Q-16	Martin Transport	14201 Highland Rd. Laurinburg, NC 28352
10	Carwash	J-3	Nic's Pic Kwik 9 Carwash	11761 McColl Rd. Laurinburg, NC 28352
10	Carwash	J-4	Nic's 8 Carwash	12001 McColl Rd. Laurinburg, NC 28352
10	Carwash	J-5	Ron's Precision Car Wash	12200 McColl Rd. Laurinburg, NC 28352
2	Electrical Substation	Z-4	City of Laurinburg	728 Midland Way Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores	O-4	O'Reilly Auto Parts	1123 S. Main St. Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores	O-5	Napa Auto Parts Barnes Motor & Parts Company	104 Johns Rd. Laurinburg, NC 28352
2	Hardware/Lumber/Parts Stores, AST	O-3	Lowes Home Improvement Center	910 US 15-401 By-Pass Laurinburg, NC 28352
17	Machine Shop/Repair	R-1	Averitt's Electric Motor Repair	14121 Highland Rd. Laurinburg, NC 28352
16, 17	Manufacturing	U-1	Rostra Precision Controls	2519 Dana Dr. Laurinburg, NC 28352

Inventory of Indirect Potential Contaminant Sources of Wellhead Protection Areas

Nearest Contributing Well Area	PCS Category	Map Code	PCS Site	Physical Location
5	PIRF	A-15	John Cartrette Property PIRF Inc.: 23945	1017 S. Pine St. Laurinburg, NC 28352
2	PIRF	A-16	Pat's Kitchen PIRF Inc.: 7222	1019 S. Main St. Laurinburg, NC 28352
17	PIRF	A-10	Wallace Trucking	Hwy 74 East
10	PIRF	A-12	Quick Stop Store 50 PIRF Inc.: 2857	11761 McColl Rd. Laurinburg, NC 28352
2	Print/Sign Shop	X-3	Woody's Printing & Copy Shop	200 John's Rd. Laurinburg, NC 28352
16, 17	Pump Station	S-8	Pump Station #22	13971 Highland Rd. Laurinburg, NC 28352
10	Pump Station	S-9	Pump Station #15	11758 McColl Rd. Laurinburg, NC 28352
11	Pump Station	S-10	Pump Station #29	1811 S. Main St. Laurinburg, NC 28352
17	Pump Station	S-11	Pump Station #4	17900 Old Lumberton Rd. Laurinburg, NC 28352
17	Pump Station	S-12	Pump Station #3	17231 Morgan Cir. Laurinburg, NC 28352
2	Recreational Facility	I-3	Scotland Post #50	311 Yadkin Ave. Laurinburg, NC 28352
10	UST Gas Station	F-9 AA-8	Corner Pantry Gibson Oil & Gas Co. Inc. Fac. ID: 0-009381 Cert. #: 20150286701	12200 McColl Rd. Laurinburg, NC 28352
10	UST Gas Station	F-10 AA-9	Community Stop 3 Fac. ID: 0-008342 Cert. #: 20160125301	12500 Hwy. 401 S. Laurinburg, NC 28352
10	UST Gas Station PIRF	F-7 AA-6 A-11	Nic's Pic Kwik 9 PIRF: 29930 Fac. ID: 0-008086 Cert. #: 20150531201	11761 McColl Rd. Laurinburg, NC 28352
10	UST Gas Station PIRF	F-8 AA-7 A-13	Nic's 8 PIRF: 2856 Fac. ID: 0-009250 Cert. #: 20150532201	12001 McColl Rd. Laurinburg, NC 28352
18	Wood Processing Pre-Sanitary Landfill	FF-2 E-2	Carter Lumber UDS538 - Old Landfill	13402 Highland Rd. Laurinburg, NC 28352


City of Laurinburg
Water System No. NC0383010
Inventory of Indirect PCSs of
Wellhead Protection Areas
Indirect Potential Contaminant
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
0 1,250 2,500 5,000 7,500
Feet


City of Laurinburg
Water System No. NC0383010
Inventory of Indirect PCSs of
Wellhead Protection Areas
Indirect Potential Contaminant
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
Feet
0
1,250
2,500
5,000
7,500
NC 79
Gibson Rd
W Church St
US-74
US-15 Service Rd
Westwood Way
S Main St
E Church St
Andrew Jackson Hwy
US-74 US-74
US-74&501
US 74 US-74
US 15-US-15&401
US-501 US-501
Johns Rd
US 501
S-11
Q-15, Y-1
S-12
P-9, Q-16
R-1
A-14
S-8
U-1
C-10
FF-2, E-2
Q-12, EE-4, C-1
Q-13, EE-5
Y-2
S-10
E-10, AA-9
F-8, AA-7, A-12
I-4
J-3
P-8
Z-4
I-3
A-15
O-5
X-3
O-3


City of Laurinburg
Water System No. NC0383010
Inventory of Indirect PCSs of
Wellhead Protection Areas
Indirect Potential Contaminant
Wellhead Protection Area
DOT Primary Roads
DOT Roads
DOT Railroads
Rivers and Streams
N
Feet
0
1,250
2,500
5,000
NC0383A
NC 79
Gibson Rd
W Church St
US-15 Service Rd
US-74
Westwood Hwy
S Main St
E Church St
Andrew Jackson Hwy
US-74&501
US 74 US-74
US-501
Johns Rd
S-11
Q-15, Y-1
S-12
P-9, Q-16
R-1
Q-13, A-14
S-8
U-1
A-10
FF-2, F-2
Q-12, EE-4, C-1
Q-13, EE-5
Y-2
S-10
E-10, AA-9
F-9
H-8, AA-7, A-13
I-4
I-3
S-9
A-12
P-8
Z-4
I-3
A-15
O-5
O-4
X-3
A-15
O-3

IV. RISK ANALYSIS

The potential contaminant sources within each delineated area of contribution were evaluated to determine the risk posed to each well. Proximity to the well and the risk category of each potential source were used to rank the risk posed to the well.

Each potential source was assigned to a risk category of higher, moderate, or lower based on information adapted from the EPA (1993), and from the Oregon Wellhead Protection Program. Each potential contaminant source was assigned a numerical "category" score to correspond with the risk category (e.g., higher-3, moderate-2, and lower-1). Each site of potential contamination was then assigned a "proximity" score calculated with the following equation:

proximity score =1-(distance from the well/radius of the WHPA)

The final potential contaminant source (PCS) ranking was obtained by multiplying the category score by the proximity score for each potential contaminant site. This resulted in a relative ranking of each PCS within a given delineated area of contribution based on the threat posed to the water supply well. This risk analysis provided information that was used to determine which water supply well is at greater risk of contamination and which PCSs should be considered first with regard to wellhead protection. Table 9 displays the potential risk of contamination to each individual well from highest probability to lowest.

Well Site	Physical Location	Yield (gpm)	Total Risk Score (H to L)
Well #02	401 Willow Dr.	550	30.23
Well #17	639 Hall St.	556	14.31
Well #06	605 Lauchwood Dr.	650	8.24
Well #16	14029 Dixie Guano Rd.	350	5.56
Well #10	2218 Elm Ave.	650	5.43
Well #13	Eastover Dr.	700	3.71
Well #08	1767 Berwick Dr.	625	3.66
Well #15	649 Hall St.	627	3.44
Well #12	11159 Hasty Rd.	545	3.13
Well #11	281 Magnolia Dr.	458	2.49
Well #05	523 Baker Ct.	703	2.03
Well #20	1731 Berwick Dr.	527	1.71
Well #14	455 Sugar Rd.	600	0.71
Well #09	1801 Berwick Dr.	625	0.38
Well #18	13308 Old Johns Rd.	550	0.00
Well #19	13198 Eastover Ln.	600	0.00

Risk Assessment of Contamination to Individual Well Sites

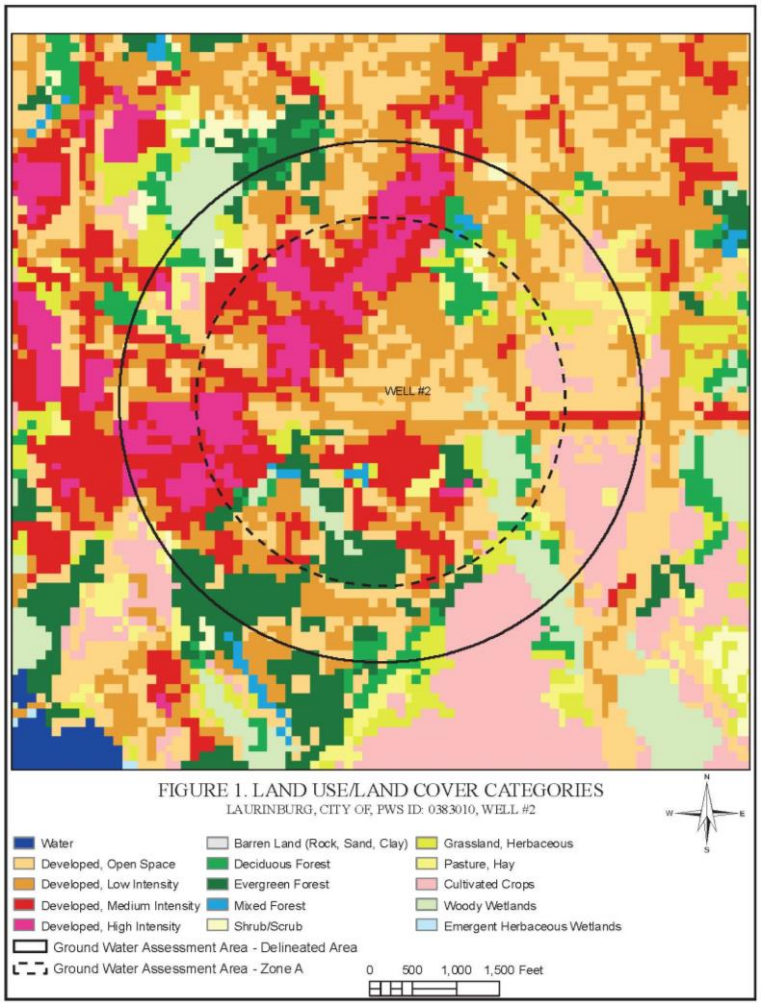
Results of the individual risk assessments for each well site, ranking potential contaminant sources according to their final risk score from highest to lowest, can be found in the appendix.

Vulnerability Assessment

Based upon the risk assessment above, the following vulnerability assessment was derived for the City of Laurinburg's public drinking water supply wells. Taking into consideration the nature and number of PCSs and the overall score of each PCS from the risk assessment, the following wells are considered most vulnerable to contamination. The results of this risk assessment are in congruency with the most recent SWAP Report compiled by the NCDEQ, Water Resources Division, ranking each of the following with a vulnerability score of "higher".

1. Well # 02 – 401 Willow Dr.
2. Well # 17 – 639 Hall St.
3. Well # 06 – 14029 Dixie Guano Rd.

Well # 02 – 401 Willow Dr. – The Wellhead Protection Committee feels that Well # 02 is at the greatest risk of contamination due to the land usage in the delineated area of contribution. There are currently four (4) ongoing petroleum release incidents within this area, in addition to five (5) facilities with permitted and operating underground storage tanks holding petroleum product. Multiple AST's contain petroleum products including multiple onsite generators.

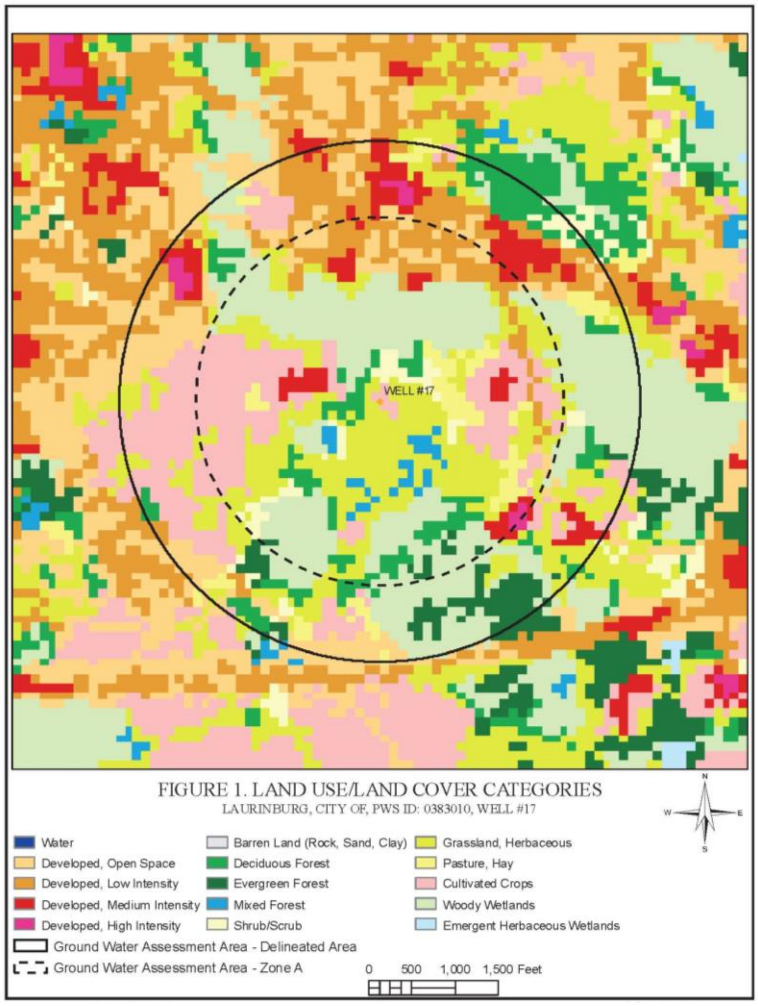


This well is located adjacent to Hwy 74 Bypass, a major transportation corridor susceptible to spillage.

The majority of the land within this contribution area is developed, or built upon, land increasing the risk of contamination from stormwater runoff including oils, grease, and rubber residue from vehicles.

This well does have a certain level of protection from contamination as it draws its water supply with a well depth of 250 ft. with approximately 34 ft. of screened interval.

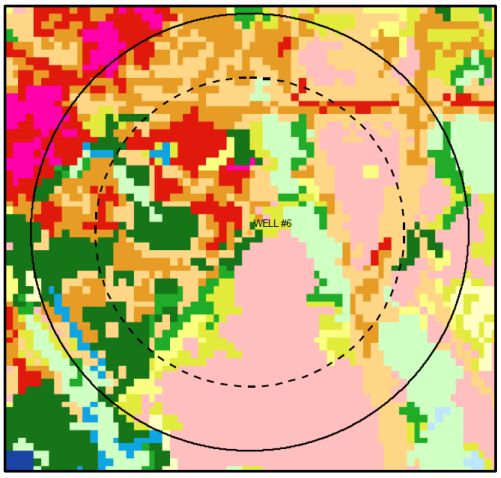
Well # 17 – 639 Hall St. – The Wellhead Protection Committee feels that Well # 17 is at a great risk of contamination due to the land usage in the delineated area of contribution. Multiple federally regulated potential contaminant sources are located within this area, including UST's, Pollution Incidents, and a pre-sanitary landfill. All of the City's fleet maintenance, electrical utility equipment, and public works operations are housed within the area, in addition to the City's recycling operations. Also within the area, the City of Laurinburg manages a 4.0 mgd Wastewater Treatment Facility.



Major transportation corridors susceptible to spillage within the area of contribution are Laurinburg and Southern Railroad system and Andrew Jackson Hwy (Hwy 74).

The majority of the land within this contribution area is undeveloped forest, grassland, or used for cultivated crops. There are wetlands within the area as well. Most of the developed property is located in the northern area of contribution.

Well # 06 – 605 Lauchwood Dr. – The Wellhead Protection Committee feels that Well # 6 is at a higher risk of contamination due to the location of the well site in relation to multiple medical facilities that generate a large flow of traffic. In addition to traffic, multiple medical facilities have onsite backup generators with diesel fuel cells. One medical facility is permitted for the use of a 30,000 gallon UST.



In addition, the City of Laurinburg's water treatment facility is located with 500 ft. of the well site.

This facility houses multiple types of chemicals in large quantities for water treatment. This well does have a certain level of protection from contamination as it draws its water supply with a well depth of 210 ft.

Based on current conditions and records reviewed, **Wells 08, 11, and 20** are considered, by the Wellhead Protection Committee, at the greatest risk for contamination in the immediate future due to the petroleum contamination and lead contamination event occurring at the St. Andrews College Physical Plant. Well # 11 located at 281 Magnolia Dr. is within 500 feet of this event and is located within the triangulated area of these three well sites. A detailed account of this event, gathered from a UST file review at the Fayetteville Regional Office of DEQ, is included in the inventory of potential contaminants. The City of Laurinburg will monitor this contamination event on a regular basis.

V. MANAGEMENT OF THE WELLHEAD PROTECTION AREA

There are two methods of managing a Wellhead Protection Area, regulatory or non-regulatory. The City of Laurinburg has selected a non-regulatory approach to manage the wellhead protection area, which will include the following:

Public Education

The Treatment Plants Director and the Public Utilities Director have primary responsibility for implementing the public education program. The Wellhead Protection Committee may be consulted as required. The PCS Data Charts list owner contact information for the identified potential contaminant sources within the WHPA for distribution of educational brochures on best management practices.

A Wellhead Protection Brochure and/or newsletter will be made available to each resident, business, agricultural operation and industry within the Wellhead Protection Areas. Copies of this brochure will be made available at the City of Laurinburg Town Hall and other locations deemed necessary for public education on Wellhead Protection. In general, the brochure and/or newsletter will convey to each citizen/business the following information:

- An explanation of what groundwater is and the number of wells in their particular system,
- An explanation of the Wellhead Protection Program,
- Source of groundwater pollution,
- Tips on protecting their water supply,
- Information on proper disposal of household hazardous wastes and oils (i.e., not disposed of through septic systems, pouring on ground, or through regular garbage collection)
- Information of proper use of fertilizers, herbicides, and pesticides,
- Information on household hazardous waste collection opportunities,
- Information on proper maintenance of heating oil tanks and septic systems, and
- Phone numbers to contact for more information

The following management practices have been developed to meet current and future needs of managing multiple types of contaminants in the wellhead protection areas. Regulations adopted through Town Ordinances supersede the following.

Waste Management Practices

The City of Laurinburg will provide information to each business, industry, and farm located within the WHPAs on waste handling practices, best management practices, standard operating procedures, and waste oil disposal methods which could be employed to reduce the potential for ground water contamination. Also provided will be information regarding the North Carolina Division of Environmental Assistance and Customer Service (DEACS) to each business located within the WHPAs. Owners/operators of potential contamination sources will be encouraged to contact DEACS. DEACS provides free technical and other non-regulatory assistance to reduce the amount of waste released into the air and water and on the land. DEACS serves as a central repository for waste reduction and pollution prevention information. DEACS emphasizes waste reduction through pollution prevention, encourages companies and government agencies to go beyond compliance, and provides information about the environmental permitting process. This information is provided at no charge to North Carolina businesses, industries, government agencies, and the general public upon request. For additional information, DEACS may be contacted at (919) 707-8100 or (877) 623-6748. For environmental emergencies, the agency can be contacted at (800) 858-0368.

Currently, the City of Laurinburg offers weekly curbside collection of household garbage, bulky waste, and yard waste. Residential recycling service is available on a bi-weekly pickup schedule. More detailed information relating to Solid Waste/Recycling services may be found at: http://www.laurinburg.org/sanitation. A listing of all Scotland County Recycling/Solid Waste locations can be found in the Appendix. Currently there are five (5) recycling and solid waste collection centers in the county. Farmers may discard triple rinsed agricultural pesticide containers at the Sneads Grove and Livingston Quarters Recycle Centers or Landfill. Household Hazardous Waste such as used motor oil, transmission fluid or antifreeze, paints and solvents, residential pesticides and herbicides, furniture stripper and preservatives and swimming pool chemicals are accepted at all county sites. Other items accepted at all county locations are automobile items such as batteries and oils, electronics, plastics, white goods, and yard waste.

Personnel Training

Personnel at the City of Laurinburg will be educated on Wellhead Protection and steps they can take to reduce the potential for contamination (e.g., information about best management practices, standard operating procedures, waste handling practices, etc.). In addition, staff will be trained on how to handle contamination events. Also, the City will contact the DEACS to investigate steps that can be taken to reduce the amount of waste released into the air and water and on the land at Laurinburg owned and/or managed facilities.

Improperly Constructed or Abandoned Wells

In the instance that an improperly constructed or abandoned well is discovered and identified within the WHPAs, the owner will be provided information regarding the threat posed to the water supply by these wells. Owners of improperly constructed or abandoned wells will be encouraged to have these wells properly abandoned in accordance with state well construction standards found in 15A NCAC 2C, "Criteria and Standards Applicable to Water Supply and Certain Other Wells". If information exists that a well is improperly constructed or is contributing to the contamination of groundwater, the City of Laurinburg will notify the Ground Water Protection Section of the NC Division of Environmental Quality.

Underground Storage Tanks

A regulated UST system is any underground storage tank and associated piping that contains petroleum (including gasoline, diesel and used oil) or a hazardous substance as defined by the State rules (15A NCAC 2N). Tanks containing heating oil for use on the premises where stored are not regulated.

All owners/operators of regulated underground storage tanks (USTs) and other facilities subject to federal and/or state regulations located within the WHPAs will be requested to supply documentation that their facility is in compliance with said regulations. Operators of UST's will be asked to supply Laurinburg with a copy of their UST permit. If any UST sites are found to be non-compliant, the Underground Storage Tank Section of the NC Division of Waste Management of DEQ will be notified.

If an abandoned UST site is found, the City will contact the North Carolina Division of Waste Management, UST Section, to determine if a closure report was submitted demonstrating that no soil or groundwater contamination was identified during the removal of UST's. If a closure report was not submitted, the City will notify the UST Section of the location of the facility within the WHPA and its proximity to a public water supply well.

For soil or ground-water contamination incidents occurring within a WHPA, Laurinburg will contact the State agencies with oversight responsibilities for remediation to determine if remediation efforts are proceeding in a timely fashion and in accordance with any schedules established by these agencies. Through this process, the City will bring to the attention of the State agencies with oversight responsibilities for remediation any failures by the responsible parties to comply with required monitoring and corrective action. The City of Laurinburg will also notify the State agencies with oversight responsibilities for remediation of the location of the facility within the WHPA and its proximity to a public water supply well. The City will also contact the State agencies with oversight responsibilities for the contamination incidents and notify them of the locations of the sites issued notices of "No-Further Action" occurring within the WHPAs and will request a review of this assessment.

The City of Laurinburg will notify any individual, industry, business, or government agency installing or planning to install a regulated underground storage tank within wellhead protection areas of the following regulation: North Carolina Underground Storage Tank (UST) Regulation 15A NCAC 2N .0301 stipulates specific siting and secondary

containment requirements for UST systems installed after January 1, 1991. The rule is summarized as follows:

- No UST system may be installed within 100 feet of a public water supply well or within 50 feet of any other well used for human consumption.
- Secondary containment is required for UST systems within 500 feet of a well serving a public water supply or within 100 feet of any other well used for human consumption.

Violations of this regulation will be reported to the Division of Waste Management, Underground Storage Tank Section. The UST Section will also be notified of the location of the facility within the WHPA and its proximity to a public water supply well or any other well used for human consumption. *

Above Ground Storage Tanks

*Owners/facilities with an underground buried storage capacity of more than 42,000 gallons of oil, or an aggregate aboveground storage capacity greater than 1,320 gallons of oil, or an aboveground storage capacity of a single container in excess of 660 gallons are subject to the Oil Pollution Prevention regulations contained in Federal Regulations found in 40 CFR 112. In most cases, these facilities must prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan. The City of Laurinburg will request a copy of the spill plan for each UST/AST facility located within the WHPAs that require such document. The North Carolina General Statutes require registration of any facilities storing more than 21,000 gallons of petroleum product. Facilities with subject storage capacity found not to be in compliance with this regulation will be notified of their regulatory responsibility under this regulation. The WPC should also notify the Division of Environmental Quality, Ground Water Section, if such facilities do not promptly come into compliance.

Residential, Municipal, and Industrial Wastewater Discharge

All farms, residents, businesses, and industries in the WHPAs with septic tanks and home heating oil tanks will be distributed a copy of the Wellhead Protection brochure and/or newsletter and any other information Laurinburg can obtain from federal, county and/or state agencies on proper septic tank and heating oil tank maintenance. The City will obtain standard operating procedures for the maintenance of any wastewater collection system (including lift stations) operating in any WHPA. Laurinburg will also obtain annual wastewater reports from owners of municipal wastewater collection systems providing services in WHPAs. Reports will be reviewed to ensure that adequate maintenance, including but not limited to the interior cleaning of sewage lines, is performed routinely to reduce the potential for sanitary sewer overflows as required by the NCWQCS permits Sanitary sewer overflow information can be obtained from the Division of Environmental Quality, Water Quality Section, at the Fayetteville Regional Office by calling (910) 433-3300.

The City will contact the Division of Water Quality regarding facilities permitted to discharge wastewater to the land surface (Non-NPDES Permitted Facilities) to determine if any such operations located within the WHPA are in compliance with applicable regulatory and permit requirements pertaining to environmental protection such as routine monitoring

and reporting requirements. Notification will be made to the Division of Water Quality if it is determined that the facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. The City does not discharge water or wastewater of any sort onto the land surface and therefore is not a Non-NPDES Permitted facility.

Laurinburg will contact the Division of Water Quality regarding facilities with NPDES permits to determine if all such NPDES discharges are in compliance with applicable regulatory and permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. Notification will be made to the Division of Water Quality if it is determined that the facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements.

Pesticide Handling and Disposal

The City of Laurinburg will contact all facilities or agricultural operations within the WHPAs with pesticide storage or otherwise involved with the application of pesticides to ensure that they are pesticide operators licensed by the State of North Carolina and that proper records are maintained to ensure that all NC Pesticide Laws are adhered to. The City will provide information to these facilities or agricultural operations on waste handling practices, best management practices, standard operating procedures, and proper waste disposal methods which could be employed to reduce the potential for ground water contamination. Scotland County Cooperative Extension offers a bi-annual pesticide collection day, to be held next around April 2019. For more details on this event, contact the Scotland County Extension Office at 910-277-2422. These facilities will also be provided with information regarding the NC DEACS.

Animal Operations

The City of Laurinburg will contact the Division of Environmental Quality (DEQ) regarding any lagoons or animal operations located within its WHPAs if they suspect they may contaminate the ground water supply. It will also determine if facilities are in compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. Notification will be made to the Division of Environmental Quality if it is determined that a facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. A Wellhead Protection brochure and/or newsletter will be delivered to each animal operations facility, in addition to information on best management practices.

VI. EMERGENCY CONTINGENCY PLAN

The City of Laurinburg's Treatment Plants Director is the primary individual responsible for implementing contingency plans. The alternate responsibility lies with the Public Utilities Director. The WPC may be involved in decision-making in the event that response actions are required.

Short Term Contingency Plan (less than 48 hours)

The City of Laurinburg water system has a total combined storage capacity of 3.00 mgd. Its average daily usage is approximately 2.38 mgd. This confirms that the system has enough water stored for a little over a day's use. There is an interconnection with the Laurinburg-Maxton Airport water system (PWSID# 03-83-107) which should be used to purchase water, during emergencies only, for the eastern part of the city. In the event that the city would lose some/all of its raw water supply, treatment capabilities, or finished water pumping capability, Charles Underwood, Inc. of Sanford, NC would be notified immediately to assist in identifying inoperable/contaminated wells and to make repairs needed for restoration. In the event that an emergency arises in the treatment facility, the on-call personnel should be notified first, followed by the Treatment Plants Director. After arriving, the electrical services should be inspected. Electrical services are provided by two different electric utility companies throughout the service area from multiple transmission areas. If there is a finished water pumping emergency, there are three (3) 200 H.P. U.S. motors and three (3) stage Peabody pumps that are capable of delivering 2,800 gallons per minute at 230 ft. TDH and one (1) 75 H.P. U.S. motor (4) stage J-line pump that delivers 900 gallons per minute at 250 ft. TDH. If no finished water pump will operate from the main control panel, the operator on duty should go to the generator building and check for normal power or emergency power supplies. After making that determination (normal or emergency), the operator should inspect electrical current and heater conditions. Regardless of the power supply, the finished water pumps should operate in hand position on (hand off auto) by the switch on the pump control panel. If power is lost to the wells, there are on-site emergency generators available to supply power to wells 6, 8, 10, 12, and 13. Because this City of Laurinburg owns the electric utility in the area, power can be restored to town facilities with first prioritization.

Long Term Contingency Plan

In the event of a long-term power outage, additional generators will be rented until electric utilities can be restored. If evidence exists that indicates that a well is contaminated, it will immediately be taken off line and not returned to service until it is determined that water quality from the impacted well is in compliance with standards governing public water supplies. If one of Laurinburg's wells were to become contaminated, it would be isolated from the rest of the system by shut-off valve. If it were determined that contaminants had entered the distribution system, residents would be notified by radio, TV, newspaper, door-hangers, etc. not to drink the water until further notice. The Fayetteville 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 Laurinburg's water was once again safe for consumption.

For quality control purposes, pH and free residual chlorine analysis are performed hourly on filtered & finished water. Daily analysis of carbon dioxide, total alkalinity, total hardness, iron, fluoride, turbidity, and temperature are performed. Bacteriological test are

conducted daily on filtered and finished water at the plant and on 20 distribution samples from the system, monthly.

Should a major oil or chemical spill occur within a Wellhead Protection Area, appropriate emergency agencies will be notified. The first of these will be the Scotland County Emergency Management Coordinator.

Scotland County Emergency Coordinator: (910) 276-1313

Emergency contact resources and information are found in the appendix. This comprehensive listing includes contact information for emergency contacts, local utilities, local resources, county and municipal fire departments, and state and national agencies.

VII. IMPLEMENTING, MAINTAINING AND UPDATING THE WHP PLAN

Public Participation

The City of Laurinburg water system will post a notice in the local newspaper, the *Laurinburg Exchange*, explaining to its citizens what a Wellhead Protection Plan is and how they have the opportunity to review the City of Laurinburg's WHPP update and make comments. A draft copy of the narrative section of the City of Laurinburg's Wellhead Protection Plan will be made available for a fourteen (14) day period at the office of the City Clerk. Any substantive comments received from the public will be considered for incorporation into the final updated version of the City of Laurinburg's WHPP. A copy of the public notification showing the date the notification was published will be included within this document.

New Public Water Supply Wells

The City of Laurinburg will amend its Wellhead Protection Plan to include any new well(s) added to its water system. The following steps will be taken to address any new wells added to the water system.

1. Develop a preliminary WHPA for the proposed well in order to determine the area of vulnerability.
2. Develop a PCS inventory for the preliminary WHPA.
3. Submit the information obtained in items 1 and 2 above to the WPC. Any information required by the Public Water Supply Section (PWSS) relating to the development and construction of new public water supply (PWS) wells must also be submitted.
4. If the WPC grant provisional approval of the proposed WHP Plan and the PWSS grants approval to construct or expand the PWS well or well system, then work may proceed with well construction.
5. Finalize the WHPA delineation for the new well.
6. Finalize the PCS inventory for the WHPA(s).
7. Submit finalized WHPA and PCS inventory to the WPC.
8. Once approval is received, implement any necessary regulatory and or non-regulatory potential source management practices.

9. Submit the amended WHP Plan and all necessary supporting information to the PWSS for review and approval.

Future Wellhead Protection

The City of Laurinburg is aware that an effective local Wellhead Protection (WHP) Program is an ongoing process requiring monitoring of the Wellhead Protection Areas (WHPA) and periodic review and updating of an approved WHP plan. Therefore, the City of Laurinburg system officials and/or WPC will monitor the Wellhead Protection Area (WHPA) for any new or previously unidentified potential contaminant sources (PCS's) and activities occurring within the approved WHPA. They will amend the PCS inventory and other Plan components (e.g. the management strategies, emergency contingency plan, etc.) as necessary to incorporate any new threats to the systems groundwater sources of drinking water. Additionally, the PCS inventory will be updated annually using the same procedures used to develop the original PCS inventory. The City of Laurinburg will also fully update the WHP Plan every five years or at any time a new well is constructed for use with the water supply system or a major land use change occurs within a WHPA. The individual responsible for implementation of the WHP Plan will submit notification to the Public Water Supply Section annually upon completion of the PCS inventory update or immediately following the completion of a major revision. Any amended or revised sections of the approved WHP Plan resulting from an update or revision will also be submitted upon completion.

APPENDIX

- Emergency Contact Resources and Information
- Description of Regulatory Databases Researched for PCSs
- Potential Contamination Sources by Risk Category
- Potential Contaminant Source Data Charts
- Individual Well Site Risk Assessment Results
- Scotland County Solid Waste Site Locations
- Glossary of Acronyms and Abbreviations
- References
- NC Division of Environmental Assistance and Customer Service (DEACS) Brochure
- Laurinburg Educational Tri-fold Brochure on Wellhead Protection
- Managing Agricultural Fertilizer Application Flyer
- Gas/Service Station Best Management Practices Flyer
- Helena Chemical Inventory
- Well Records

Emergency Contact Resources and Information

Resources	Contact Information
Primary Emergency Respondent	Name: **Robert Ellis** Title: **Treatment Plants Director** Home #: 910-276-9374 Work #: 910-277-0214 Mobile #: 910-280-0898
Secondary Emergency Respondent	Name: **On Call Personnel** Mobile #: 910-280-2752
Local Utilities	
Water Provider	Facility: **City of Laurinburg** Contact #: 910-277-0214 Fax #: 910-277-3633
Electric Utility	Facility: **City of Laurinburg** Contact: **Robert Smith, Emerg. Electrical Crew** Office #: 910-276-2364 Mobile #: 910-610-7302
Local Resources	
Emergency Contractor	Facility: **Charles Underwood, Inc.** Contact #: 800-729-2463 Contact #: 919-775-2463
Emergency Management	Facility: **Scotland County Emergency Management** Coordinator: **Roylin Hammond** Work #: 910-276-1313 Mobile #: 910-276-6606
	Asst. Coord.: **Mike Edge** Work #: 910-276-1313 Mobile #: 910-280-0403
	Admin. Sec.: **Debbie Sandlin** Work #: 910-276-1313
Health Department	Facility: **Scotland County Health Department** Contact #: 910-277-2440
Hospital	Facility: **Scotland Memorial Hospital** Main #: 910-291-7000 Emer. Contact: Nelson Sargent - 910-291-7581 Emer. Contact: Ruth Glaser - 910-291-7502 Emer. Contact: Greg Wood - 910-291-7501
EMS	Facility: **Scotland County EMS** Contact #: 910-276-1313 Emergency #: 911
Police	Facility: **Laurinburg Police Department** Contact #: 910-276-3211 Emergency #: 911
Fire	Facility: **Laurinburg Fire Department** Contact #: 910-276-1811 Emergency #: 911

Local Television	Facility:	**WBTW - News 13**
	Contact #:	843-293-1301
	Facility:	**WPDE - News 15**
	Contact #:	843-234-9733
Local Radio	Facility:	**Hometown Radio WLNC - 1300 AM**
	Contact #:	910-276-1300
	Fax #:	910-276-1319
Local Newspaper	Facility:	**Laurinburg Exchange**
	Contact #:	910-276-2311
	Fax #:	910-276-3815
State & National Agencies		
Technical Assistance Water Regulatory Agency	Facility:	**Public Water Supply Section**
	Address:	1634 Mail Service Center Raleigh, NC 27699-1634
	Contact #:	919-715-2853
Regional Water Quality, SSO's, UST Section, Aquifer Protection Section, Hazardous Waste Section Spills	Facility:	**DEQ - Fayetteville Regional Office**
	Address:	225 Green Street, Suite 714 Fayetteville, NC 28301-5095
	Contact #:	910-433-3300 Fax #: 910-486-0707
NC Department of Transportation	Facility:	**NC DOT, Highway Division 8**
	Contact:	Charles F. Vick, Hwy. Maint. Engineer
	Address:	23161 Airbase Rd. Wagram, NC 28396
	Contact #:	910-369-2645
NC Army National Guard	Facility:	**Laurinburg National Guard Armory**
	Address:	1520 S. Main St. Laurinburg, NC 28352
	Contact #:	910-276-0578
Technical Assistance Education	Facility:	**NCRWA**
	Address:	PO Box 590 Welcome, NC 27374
	Contact #:	336-731-6963
Educational Brochures Publications	Facility:	**NC Coop. Ext. Services - NCSU**
	Address:	Campus Box 7602 Raleigh NC 27695-7602
	Contact #:	919-515-2811
	Website:	www.bae.ncsu.edu
AST Information	Facility:	**US EPA Regional Office**
	Address:	61 Forsyth St SW Atlanta, GA 30303
	Contact #:	404-562-8761
	Website:	www.epa.gov/oilspill
Educational Brochures Publications (GW & UIC Section)	Facility:	**US EPA Regional Office**
	Address:	61 Forsyth St SW Atlanta, GA 30303
	Contact #:	404-562-8761
	Website:	www.epa.gov

NC Emergency Management	Facility: Contact: Work #: Mobile #:	**Central Branch** **Stephen Powers** 919-575-4122 919-724-7321
EPA Spill Reporting	Facility: Contact #:	**US EPA Regional Office** 1-800-241-1754
Technical & Non-regulatory Waste Reduction Assistance	Facility: Address: Contact #: Website:	**NC DEACS** 1639 Mail Service Center Raleigh, NC 27699-1639 919-707-8100 http://ncenvironmentalassistance.org/
Source Water Protection Educational Materials	Facility: Address: Contact #: Website:	**National Small Flows Clearinghouse** **West Virginia University** PO Box 6064 Morganton, WV 26506-6064 1-800-624-8301 http://www.nesc.wvu.edu/smart/products/education.cfm

Description of Regulatory Databases Researched for PCSs

Animal Operations

This database contains permitted facilities for animal operations consisting of swine, cattle, poultry and horse farms that are required to have Certified Animal Waste Management Plans (CAWMP). Animal operations are defined by General Statute 143-215.10B as feedlots involving more than 250 swine, 100 confined cattle, 75 horses, 1,000 sheep, or 30,000 poultry with a liquid waste management system.

Division of Water Resources (DWR) rules mandate that all facilities in operation prior to January 1, 1994 register with the division. Since January 1, 1994 any new facilities were required to obtain a CAWMP before starting their animal operation. In addition, any facilities in operation prior to January 1, 1994 were required to obtain a CAWMP by December 31, 1997. As of January 1, 1997 all new facilities were required to obtain a permit from DWR prior to construction and be certified prior to startup, and all existing facilities were to be permitted by DWR over the next 5 years.

Data was obtained from the Division of Water Resources, Regional Operations Section, Animal Feeding Operations Branch in January of 2015. For additional information about this data, contact the Animal Feeding Operations staff by phone at 919-807-6464 or click here: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/animal-feeding-operation-permits/afo-program-summary to visit their web site.

CERCLIS Sites

The Superfund program was created by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and amended by the Superfund Amendments and Reauthorization Act. The acts established authority for the government to respond to the release/threat of release of hazardous wastes, including cleanup and enforcement actions. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is a database used by the U.S. Environmental Protection Agency to track activities conducted under its Superfund program. CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA. Sites investigated because of a potential for releasing hazardous substances into the environment are added to the CERCLIS inventory. EPA learns of these sites through notification by the owner, citizen complaints, state and local government identification, and investigations by EPA programs other than Superfund.

For additional information about this data, contact the Superfund Section by phone at 919-707-8329 or click here to visit their web site:

https://deq.nc.gov/about/divisions/waste-management/superfund-section/federal-remediation-branch

National Priority List Sites

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), amended by the Superfund Amendments and Reauthorization Act, created the Superfund program. The acts established authority for the government to respond to the release/threat of release of hazardous wastes, including cleanup and enforcement actions. Long-term cleanups at National Priority List (NPL) sites last more than a year while short term /emergency cleanups are usually completed in less than a year. Sites are listed on the NPL upon completion of a Hazard Ranking System (HRS) screening, public solicitation of comments about the proposed site, and after all comments have been addressed. Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. This list, which is Appendix B of the National Contingency Plan, is the NPL.

The identification of a site for the NPL is intended to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with a site, identifying what CERCLA-financed remedial actions may be appropriate, notifying the public of sites EPA believes warrant further investigation; and serving notice to potentially responsible parties that EPA may initiate CERCLA-financed remedial action. Inclusion of a site on the NPL does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. The NPL serves primarily informational purposes, identifying for the States and the public those sites or other releases that appear to warrant remedial actions.

For additional information about this data, contact the program by phone at 404-562-9634 or click here https://www.epa.gov/superfund/search-superfund-sites-where-you-live to visit their web site.

Non-Discharge Permits

The non-discharge database identifies industrial and municipal facilities that are permitted to operate any sewer system, treatment works, disposal system, petroleum contaminated soil treatment system, animal waste management system, storm water management system or residual disposal/utilization system which does not discharge to surface waters of the state, including systems which discharge waste onto or below land surface.

For additional information about this data, contact the unit staff by phone at 919-807-6453 or click here http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/non-discharge-permitting to visit their web site.

NPDES Permits

The National Pollutant Discharge Elimination System (NPDES) database identifies facilities permitted for the operation of point source discharges to surface waters in accordance with the requirements of Section 402 of the Federal Water Pollution Control Act. Point sources are discrete conveyances such as pipes or man-made ditches. Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into public waters.

For additional information about this data, contact the program staff by phone at 919-807-6300 or click here to visit their web site:

http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/npdes-wastewater-permits

Old Landfill Sites

Locations of non-permitted landfills that closed prior to January 1, 1983, when waste disposal permitting regulations commenced. These sites are not currently in operation.

For additional information about this data, contact the Division of Waste Management staff by phone at 919-707-8200 or click here http://portal.ncdenr.org/web/wm/sf/ihs/ihsoldlf to visit their web site. Since 2000 the IHSB has conducted a geographic inventory of the old landfills in 46 counties throughout North Carolina. Although they are working to inventory the old landfill sites statewide, the geographic locations of these sites in the remaining counties are much less reliable. You may contact the IHSB for a list of the 46 counties.

PCB Sites

This database identifies generators, transporters, commercial storers and/or brokers and disposers of Polychlorinated Biphenyls (PCBs). Concern over the toxicity and persistence in the environment of PCBs resulted in the Toxic Substances Control Act (TSCA) that prohibited the manufacture, processing, and distribution in commerce of PCBs. Thus, TSCA legislated true "cradle to grave" (i.e., from manufacture to disposal) management of PCBs in the United States. PCBs are mixtures of synthetic organic chemicals with the same basic chemical structure and similar physical properties ranging from oily liquids to waxy solids. Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment, plastics and rubber and many other applications.

For additional information about this data, contact the PCB staff at 404-562-8512 or click here: https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs to visit their web site.

Pollution Incidents

This database contains information regarding the release of pollutants into the environment that have or are likely to have, impact on the ground water resources of the State. The initial information regarding these releases is usually obtained from concerned citizens or responsible parties, who report a release to the Department of Environmental Quality. After an incident is reported, regional office staff investigate the reported incident and enter the results of their investigation into a statewide database. This database contains an inventory of reported incidents from leaking underground storage tanks and sites contaminated with dry cleaning solvents. Substances released into the environment include gasoline and solvents used in the dry cleaning process.

There are two main sources for this data. The Division of Waste Management, Underground Storage Tank Section provided information on the pollution incidents that resulted from a leaking underground storage tank. The Division of Waste Management, Dry-cleaning Solvent Cleanup Act Program provided information on their sites. For additional information about this data, contact the UST section staff by phone at 919-707-8171 or click here http://portal.ncdenr.org/web/wm/ust to visit their web site. For Additional information from the Division of Waste Management, Dry-cleaning Solvent Cleanup Act, contact the staff by phone at 919-707-8369 or visit their web site at: http://portal.ncdenr.org/web/wm/dsca

RCRA Hazardous Waste Generators/Transporters

This database has records for all hazardous waste generators and transporters as defined by the Resource Conservation Recovery Act (RCRA). Hazardous waste as defined by RCRA is waste material that exhibits ignitability, corrosivity, reactivity, or toxicity. Chemical, metal, and furniture manufacturing are some examples of processes that create hazardous waste. RCRA tightly regulates all hazardous waste from "cradle to grave" (i.e., from manufacture to disposal).

For additional information about this data, contact the Hazardous Waste Section staff by phone at 919-707-8200 or click here to visit the web site:

http://deq.nc.gov/about/divisions/waste-management/waste-management-rules/hazardous-waste-rules

RCRA TSD Sites

Treatment/Storage/Disposal (TSD) sites are facilities that are engaged in the activities of the treatment, storage, or disposal of hazardous waste. Under the RCRA, TSD activity can occur only at facilities that received or stored hazardous waste after November 19, 1980, the effective date of the RCRA regulations.

For additional information about this data, contact Hazardous Waste Section staff by phone at 919-707-8202 or click here to visit their web site:

http://deq.nc.gov/about/divisions/waste-management/waste-management-permits/hazardous-waste-section-permits

Septage Disposal Sites

This database contains information on permitted, dedicated sites where septage is land applied. The Septage Management Program assures that septage (a fluid mixture of untreated and partially treated sewage solids, liquids and sludge of human or domestic origin that is removed from a septic tank system) is managed in a responsible, safe and consistent manner across the state.

For additional information about this data, contact the Septage Management Program staff by phone at 919-707-8280 or click here https://deq.nc.gov/about/divisions/waste-management/waste-management-rules/septage to visit their website.

Soil Remediation Sites

This database contains information on permitted, dedicated sites where soil contaminated by leaking petroleum or chemical storage tanks can be taken for bioremediation. Bioremediation is a treatment process that uses naturally occurring microorganisms (yeast, fungi, or bacteria) to break down, or degrade, hazardous substances. These microorganisms break down organic compounds such as petroleum products that are hazardous to humans into harmless products, mainly carbon dioxide and water.

For additional information about this data, contact the Corrective Action Branch staff by phone at 919-707-8171 or click here http://deq.nc.gov/about/divisions/waste-management/underground-storage-tanks-section/corrective-action-branch to visit their web site.

Solid Waste Facilities

Solid waste includes garbage, construction debris, commercial refuse, sludge from water supply or waste treatment plants, or air pollution control facilities, and other discarded materials. The database contains an inventory of closed, unlined landfills that were primarily operated by municipalities.

How to manage solid waste has been a problem for decades. In the early 1960s, cities and towns across the country practiced open air burning of trash. In response, Congress passed the Solid Waste Disposal Act in 1965 as part of the amendments to the Clean Air Act. This was the first federal law that required environmentally sound methods for disposal of household, municipal, commercial, and industrial waste. However, the initial design of the "sanitary" landfill fouled ground water, soil, surface water, and air because of improper disposal methods. Engineers have since designed new liners and leachate treatment systems to prevent environmental degradation.

For additional information about this data, contact the Solid Waste Section staff by phone at 919-707-8200 or click here http://deq.nc.gov/about/divisions/waste-management/solid-waste-section to visit their website.

Tier II Sites

This database contains an inventory of facilities that store types and amounts of hazardous materials and are subject to the reporting requirements of SARA Title III Section 312, Emergency Planning and Community Right to Know Act. Tier II forms require basic facility identification information, employee contact information for both emergencies and non-emergencies, and information about chemicals stored or used at the facility including:

- The chemical name or the common name as indicated on the MSDS;
- An estimate of the maximum amount of the chemical present at any time during the preceding calendar year and the average daily amount;
- A brief description of the manner of storage of the chemical;
- The location of the chemical at the facility; and
- An indication of whether the owner of the facility elects to withhold location information from disclosure to the public.

For additional information about this data contact the Division of Emergency Management staff at 919-436-2746 or click here http://www.ncdps.gov/Emergency-Management/Hazardous-Materials/EPCRA-Tier-2 to visit their website.

UIC Permits

The Underground Injection Control (UIC) Program protects groundwater quality by preventing illegal waste disposal and by regulating the construction and operation of wells used for injecting approved substances, aquifer recharge, and other activities. The most common types of injection wells in North Carolina are used for:

- Aquifer Storage and Recovery (ASR)
- Geothermal Heating and Cooling
- In-Situ Groundwater Remediation
- Stormwater infiltration - effective May 1, 2012

For additional information about this data, contact the UIC Program staff by phone at 919-807-6496 or click here https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/ground-water-protection/injection-wells to visit their web site.

UST Permits

An underground storage tank system (UST) is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. The federal UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances. These facilities are regulated under Subtitle I of RCRA and must be registered with the

state and receive an operating permit annually. Until the mid-1980s, most USTs were made of bare steel, which is likely to corrode over time and allow UST contents to leak into the environment. Faulty installation or inadequate operating and maintenance procedures also can cause USTs to release their contents into the environment. The greatest potential hazard from a leaking UST is that the petroleum or other hazardous substance can seep into the soil and contaminate ground water. A leaking UST can also present other health and environmental risks, including the potential for fire and explosion. The facilities shown in this database have tanks registered with the UST Section.

For additional information about this data, contact the Underground Storage Tank Section staff by phone at 919-707-8171 or click here http://deq.nc.gov/about/divisions/waste-management/underground-storage-tanks-section to visit their web site.

Potential Contamination Sources by Risk Category

Higher Risk Potential Contamination Sources for Ground Water PWS Systems

COMMERCIAL/INDUSTRIAL

° Automobile Body shops
Gas stations
Repair shops

° Chemical /petroleum processing/storage
° *Sewer lines
° Utility right-of-way/pesticide use
° Chemical/petroleum pipelines
° Wood/pulp/paper processing and mills
° Dry cleaners
° Electrical/electronic manufacturing
° Fleet/trucking/bus terminals
° Furniture repair/manufacturing
° Home manufacturing
° Junk/scrap/salvage yards
° Machine shops
° Metal plating/finishing/fabricating
° Mines/sand or gravel excavations
° Parking lots/malls (>50 spaces)
° Photo processing/printing
° Plastics/synthetics producers
° Research laboratories

OTHER

° Road salt storage areas
° Military installations (for classified risks not otherwise listed)

AGRICULTURAL/RURAL

° Farm machinery repair
° Rural machine shops
° *Intensive livestock operations; Lagoons, spray fields
° Fertilizer, pesticide, and petroleum storage, distribution, handling, mixing, and cleaning areas
°*Sewage sludge (biosolids) storage, handling, mixing and cleaning areas
° *Sewage sludge (biosolids) land application
° Unauthorized/illegal disposal of wastes/chemicals

RESIDENTIAL/MUNICIPAL

° Airports - maintenance/fueling areas
° Railroad yards/maintenance/fueling areas
° Landfills/dumps
° Utility stations - maintenance areas
° *Septic systems - high density (>1/acre)
° *Sewer lines
° *Stormwater drains/discharges
° Fertilizer, pesticide, sewage sludge

Notes: 1. This is a list of potential sources of contamination not a list of known databases of contaminants.
2. Higher risk potential contaminant sources are considered to have a higher potential for drinking water contamination than those designated moderate risk or lower risk Facility-specific management practices are not taken into account in estimating risks and assigning these categories.
3. An asterisk [*] indicates activities that may be associated with microbiological contamination.

Potential Contamination Sources by Risk Category (Con't)

Moderate Risk PCSs

COMMERCIAL/INDUSTRIAL
- Car washes
- Cement/concrete plants
- Food processing
- Hardware/lumber/parts stores

AGRICULTURAL/RURAL
- *Auction lots
- *Boarding stables
- Crops, irrigated (berries, Christmas trees, hops, mint, orchards, vineyards, nurseries, greenhouses, vegetables, sod)
  NOTE: Drip-irrigated crops are considered lower risks.
- Drinking water treatment plant residuals/sludge application

RESIDENTIAL/MUNICIPAL
- Drinking water treatment plants
- Golf courses
- Housing - high density (>1 house/.5 acres)
- Motor pools
- Parks
- Waste transfer/recycling stations
  Wastewater treatment plants
  collection stations

OTHER
- Above ground storage tanks
- Construction/demolition areas
- Hospitals
- Transportation corridors
  Freeways/state highways
  Railroads
  Right-of-way maintenance
  (herbicide use areas)
- Irrigation, water supply, or monitoring wells

Lower Risk PCSs

COMMERCIAL/INDUSTRIAL
- Office buildings/complexes
- RV/mini storage

AGRICULTURAL/RURAL
- Crops, non-irrigated (grains, grass seeds, hay)
- *Rangeland
- Managed forests/silviculture

RESIDENTIAL/MUNICIPAL
- Apartments and condominiums
- Campgrounds/RV parks
- Fire stations
- Schools
- Housing – low density (< 1 house/.5 acres)

OTHER
- Medical/dental offices/clinics
- Veterinary offices/clinics

SOURCE: Adapted from EPA (1993), and from the Oregon Wellhead Protection Program

Potential Contaminant Source Data Charts

Well Site: 02 - 401 Willow Dr. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
2	AST	Q-9	South Fire Station - Station 6	1547 Hickory St. Laurinburg, NC 28352	M	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite, Flame Retardants	Unknown	34.756389	-79.472214
2	AST	Q-10	Moe's Chicken	1600 S. Main St. Laurinburg, NC 28352	M	Clarence Coughenour 1312 S. Main St. Laurinburg, NC 28352	Abandoned Oil Tank	250 gal. capacity	34.756768	-79.472936
2	Automobile Repairs/Sales	P-1	Scotland Motors	1609 S. Main St. Laurinburg, NC 28352	H	Howell Family Holdings, LLC PO Box 1151 Laurinburg, NC 28353	Waste oils, Solvents, Motor Oils	Low Quantity	34.757340	-79.474098
2	Automobile Repairs/Sales	P-2	Doug's Tire Shop	1411 S. Main St. Laurinburg, NC 28352	H	Howell Lee Inc. PO Box 1151 Laurinburg, NC 28353	Waste oils, Solvents, Motor Oils, Old Tires	Low Quantity	34.759672	-79.470927
2	Automobile Repairs/Sales	P-3	Safeway Motors Sales & Rental	1134 S. Main St. Laurinburg, NC 28352	H	Annette McCormick Aubrey McCormick 5543 Old Wire Rd. PO Box 1165 Laurinburg, NC 28353	Waste oils, Solvents, Motor Oils	Low Quantity	34.762883	-79.468153
2	Automobile Repairs/Sales	P-4	Allstate Glass	1411 Atkinson St. Laurinburg, NC 28352	H	Palmer Gehring 14 Pilot Place Winter Haven, FL 33881	Waste oils, Solvents, Motor Oils	Low Quantity	34.759395	-79.472258
2	Automobile Repairs/Sales	P-7	Haney's Tire & Recapping Services	1663 S. Main St. Laurinburg, NC 28352	H	Haney's Tire C/O LACTM LLC PO Box 1126 Laurinburg, NC 28353	Waste oils, Solvents, Motor Oils, Tires	Low Quantity	34.755173	-79.476793
2	Carwash	J-1	Taylor's Detailing	1407 S. Main St. Laurinburg, NC 28352	M	James F. Harris Margaret G. Harris PO Box 781 Laurinburg, NC 28353	Solvents	Low Quantity	34.759885	-79.470474
2	Carwash	J-2	Exxon Car Wash (Manual)	1200 S. Main St. Laurinburg, NC 28352	M	Robert Cooper 3483 Seven Lakes West West End, NC 27376	Solvents	Low Quantity	34.762231	-79.468013
2	Chemical Storage	EE-1	Byrd's Pool Services	1545 Atkinson St. Laurinburg, NC 28352	L	Laurinburg Joint Venture Suite 102 1175 NC 125 St. N. Miami, FL 33161	Calcium Hypochlorite Sodium Hydrogen Carbonate Granular Chlorine Calcium	(12) 100 lb. drums (25) 100 lb. bags (25) 25 lb. buckets (12) 12 lb. buckets	34.759954	-79.474586
2	Communications Tower, AST	H-2 Q-5	American Tower Corporation Site Name: Legion Park NC Site #: NC 021292 FCC Tower Reg No. - 1056789	111 Plaza Rd. Laurinburg, NC 28352	M	Howell Family Holdings, LLC PO Box 1151 Laurinburg, NC 28353	Generator Fuel, Electrical Substation	119 gallon fuel	34.757275	-79.475547
2	Dry Cleaner, RCRA, PIRF	W-1 B-1 A-1	One Hour Cleaners PIRF Inc.: 830001	1514 S. Main St. Laurinburg, NC 28352	H	Thomas-Lemmond LLC 1514 S. Main St. Laurinburg, NC 28352	Hazardous chemicals, Pollution Incident	Contaminated Soil	34.758103	-79.471508
2	Dry Cleaner, RCRA, PIRF	W-2 B-2 A-2	Village Cleaners PIRF Inc.: 830002	1691 S. Main St. Laurinburg, NC 28352	H	Bill Basil Agapion 625 S. Elm St. Greensboro, NC 27406	Tetrachloroethene, TMW-3, Pollution Incident	Contaminated Soil	34.753623	-79.480160
2	Hardware/Lumber/ Parts Stores	O-1	Advance Auto Parts	1216 S. Main St. Laurinburg, NC 28352	M	Advances Stores Company, Inc. C/O IBM Procurement Services PO Box 9024 Endicott, NY 13761	Oils, Paints, Solvents	Low Quantity	34.761506	-79.468728
2	Hardware/Lumber/ Parts Stores	O-2	AutoZone	1203 S. Main St. Laurinburg, NC 28352	M	Essey Realty PO Box 725 Laurinburg, NC 28353	Oils, Paints, Solvents	Low Quantity	34.762157	-79.469505

Well Site: 02 - 401 Willow Dr. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
2, 6	Hospital, AST, UST	K-2 Q-2 F-11	Scotland Memorial Hospital	500 Lauchwood Dr. Laurinburg, NC 28352	H	Scotland Memorial Hospital, Inc. 500 Lauchwood Dr. Laurinburg, NC 28352	(4) Generator Fuel, UST, Pharmaceuticals, Sterilants, Disinfectants	(3) 2,500 gal. diesel (1) 3,000 gal diesel (1) 30,000 gal. fuel oil	34.753367	-79.469426
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352	M	Scotland Memorial Hospital, Inc. 500 Lauchwood Dr. Laurinburg, NC 28352	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.751579	-79.467946
2, 6, 5, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352	M	Hospice of Scotland County PO Box 1033 Laurinburg, NC 28353	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.752336	-79.464669
2	Motor Pool, NPDES	GG-1 G-2	National Guard Armory	1520 S. Main St. Laurinburg, NC 28352	H	National Guard 1520 S. Main St. Laurinburg, NC 28352	Point source discharge, Vehicle/Equipment Storage	-	34.756670	-79.471675
2	PIRF	A-8	City Limits Grocery PIRF Inc.: 11621	Main St. Laurinburg, NC 28352	H	Clayton Brooks, Jr 1304 Shepherd Ave. Laurinburg, NC 28352	Petroleum release	See context for details	34.759435	-79.470426
2	PIRF	A-5	South Main Exxon PIRF Inc.: 15449	1659 S. Main St. Laurinburg, NC 28352	H	Scotland Leasing & Rental Inc. PO Box 1151 Laurinburg, NC 28353	Petroleum release	See context for details	34.755199	-79.476147
2	Print/Sign Shop	X-2	Eastcoast Signs & Graphics	1659 S. Main St. Laurinburg, NC 28352	H	Scotland Leasing & Rental Inc. PO Box 1151 Laurinburg, NC 28353	Solvents, Inks, Dyes, Oils, Photographic Chemicals	Low Quantity	34.755199	-79.476147
2	Storage	T-1	Storage Solution Self Storage	1620 S. Main St. Laurinburg, NC 28352	L	GM&T Inc. 22481 Breakwater Way Santa Clarita, CA 91350	Unknown	-	34.755589	-79.473344
2	UST Gas Station	F-1 AA-1	Scotland Stop & Shop Fac. ID: 0-009151 Cert #: 20120478201	1612 S. Main St. Laurinburg, NC 28352	H	Pate Z V Inc. PO Box 159 Laurel Hill, NC 28351	Gasoline, Gas Mix Kerosene, Kero Mix	(5) 4,000 gal tanks (1) 1,000 gal tank	34.756547	-79.473465
2	UST Gas Station	F-3 AA-3	Community Stop One/Exxon Fac. ID: 0-008341 Cert #: 20120193701	1200 S. Main St. Laurinburg, NC 28352	H	Robert Cooper 3483 Seven Lakes West West End, NC 27376	Gasoline, Gas Mix - - Kerosene, Kero Mix Diesel (Temp. Closed)	(1) 12,000 gal tank (1) 10,000 gal tank (1) 8,000 gal tank (1) 10,000 gal tank (1) 4,000 gal tank	34.762163	-79.468660
2	UST Gas Station	F-4 AA-4	Circle K Stores Inc. Fac. ID: 0-023253 Cert. #: 20150700501	1135 S. Main St. Laurinburg, NC 28352	H	Lennon Family Ltd. PO Box 52557 Fayetteville, NC 28305	Gasoline, Gas Mix - - Kerosene, Kero Mix	(1) 12,000 gal tank (1) 10,000 gal tank (1) 6,000 gal tank (1) 4,000 gal tank	34.762907	-79.468853
2	UST Gas Station Tier II Site	F-2 AA-2 D-2	WilcoHess Tier II: 4054984 Fac. ID: 0-009289 Cert #: 20140088101	1425 S. Main St. Laurinburg, NC 28352	H	Trade Land Company LLC PO Box 3435 Greenville, NC 27836	Gasoline, Gas Mix Kerosene, Kero Mix Diesel	(3) 12,000 gal tanks (1) 10,000 gal tank (1) 10,000 gal tank	34.758787	-79.471719

Well Site: 02 - 401 Willow Dr. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.749786	-79.467139
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Caustic Soda Hydrofluorosilic Acid Sodium Hypochlorite Sulfur Dioxide Generator fuel	30,000 gal. 20,000 gal. 9,999 gal. 999 gal. 1,000 gal.	34.750517	-79.466234

Well Site: 05 - 523 Baker Ct.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
6, 5, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352	M	Elizabeth Turner 3523 Barron Burkley Way Raleigh, NC 27612	Generator Fuel, Electrical Substation	Unknown Quantity	34.748983	-79.462814
5	Maintenance Shop	M-1	Laurinburg Housing Authority	1351 Woodlawn St. Laurinburg, NC 28352	L	Housing Authority PO Box 1437 Laurinburg, NC 28353	Cleaners, Oils, Paints, Solvents	Low Quantity	34.757246	-79.466877
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352	M	Hospice of Scotland County PO Box 1033 Laurinburg, NC 28353	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.752336	-79.464669
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.751219	-79.457520
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Caustic Soda Hydrofluorosilic Acid Sodium Hypochlorite Sulfur Dioxide Generator fuel	30,000 gal. 20,000 gal. 9,999 gal. 999 gal. 1,000 gal.	34.750517	-79.466234

Well Site: 06 - 605 Lauchwood Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
6, 5, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352	M	Elizabeth Turner 3523 Barron Burkley Way Raleigh, NC 27612	Generator Fuel, Electrical Substation	Unknown Quantity	34.748983	-79.462814
2, 6	Hospital, AST, UST	K-2 Q-2 F-11	Scotland Memorial Hospital	500 Lauchwood Dr. Laurinburg, NC 28352	H	Scotland Memorial Hospital, Inc. 500 Lauchwood Dr. Laurinburg, NC 28352	(4) Generator Fuel, UST, Pharmaceuticals, Sterilants, Disinfectants	(3) 2,500 gal. diesel (1) 3,000 gal diesel (1) 30,000 gal. fuel oil	34.753367	-79.469426
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352	M	Scotland Memorial Hospital, Inc. 500 Lauchwood Dr. Laurinburg, NC 28352	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.751579	-79.467946
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352	M	Hospice of Scotland County PO Box 1033 Laurinburg, NC 28353	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.752336	-79.464669

Well Site: 06 - 605 Lauchwood Dr. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.749786	-79.467139
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Caustic Soda Hydrofluorosilic Acid Sodium Hypochlorite Sulfur Dioxide Generator fuel	30,000 gal. 20,000 gal. 9,999 gal. 999 gal. 1,000 gal.	34.750517	-79.466234

Well Site: 08 - 1767 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352	H	Scotland Development Corp. 606 Atkinson St. Laurinburg, NC 28352	Machinery/vehicle serving wastes; gasoline and heating oil from storage tanks; general building wastes; pesticides	(1) 10,000 gal tank	34.746413	-79.476257
8, 9	Water Supply	N-5	Well Site 8	1767 Berwick Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.742618	-79.475477

Well Site: 09 - 1801 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
9	Pump Station	S-4	Pump Station #28	1721 Berwick Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease, Generator Fuel	Avg. = 1,400 gpm60	34.736768	-79.474101
8, 9	Water Supply	N-5	Well Site 8	1767 Berwick Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.742618	-79.475477

Well Site: 10 - 2218 Elm Ave.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
10, 12	Pump Station	S-1	Pump Station #17	11400 Hasty Rd. Laurinburg, NC 28352	M	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 100 gpm	34.730840	-79.492394
10	Pump Station	S-2	Pump Station #19	2212 Elm Ave. Laurinburg, NC 28352	M	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease, Generator Fuel	Avg. = 1,500 gpm 250 gal. diesel	34.735882	-79.487485
10	Water Supply	N-2	Well Site 10	2218 Elm Avenue Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.735693	-79.486371
10, 12	Water Supply	N-3	Well Site 12	11159 Hasty Rd., Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.728798	-79.487872

Well Site: 11 - 281 Magnolia Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352	H	Scotland Development Corp. 606 Atkinson St. Laurinburg, NC 28352	Machinery/vehicle serving wastes; gasoline and heating oil from storage tanks; general building wastes; pesticides	(1) 10,000 gal tank	34.746413	-79.476257
11	Recreational Facility	I-1	St. Andrews University Baseball Field	1700 Dogwood Mile St. Laurinburg, NC 28352	L	Scotland Development Corp. 606 Atkinson St. Laurinburg, NC 28352	Fertilizers, Herbicides, Pesticides	Seasonal Application	34.747724	-79.480271

Well Site: 12 - 11159 Hasty Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
10, 12	Pump Station	S-1	Pump Station #17	11400 Hasty Rd. Laurinburg, NC 28352	M	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 100 gpm	34.730840	-79.492394
10, 12	Water Supply	N-3	Well Site 12	11159 Hasty Rd., Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.728798	-79.487872

Well Site: 13 - Eastover Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
5, 6, 13	Communications Tower, AST	H-1 Q-4	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	11961 Johns Rd. Laurinburg, NC 28352	M	Elizabeth Turner 3523 Barron Burkley Way Raleigh, NC 27612	Generator Fuel, Electrical Substation	Unknown Quantity	34.748983	-79.462814
2, 5, 6, 13	Medical Facility, AST	K-3 Q-3	Hospice of Scotland County	610 Lauchwood Dr. Laurinburg, NC 28352	M	Hospice of Scotland County PO Box 1033 Laurinburg, NC 28353	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.752336	-79.464669
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.751219	-79.457520

Well Site: 14 - 455 Sugar Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
5, 13, 14	Water Supply	N-6	Well Site 13	Eastover Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.751219	-79.45752
14	WWTP, Tier II Site	L-1 D-3	Laurinburg WWTP Fac. ID: 5818693	620 Hall St. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Municipal wastewater, treatment chemicals, Sodium Hypochlorite, Sulfur Dioxide	Permitted Capacity of 4.0 MGD 10,000 gallons 1,000 gallons	34.763004	-79.448045

Well Site: 15 - 649 Hall St.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
15	Animal Operation/Poultry	V-1	Carmichael Farm	18668 Old Lumberton Rd. Laurinburg, NC 28352	L	William P. Carmichael Jr. 110 Sterling Ln. Laurinburg, NC 28352	Nitrates, phosphates, potassium, dissolved solids	Nonpermitted quan	34.762319	-79.410207
15	Cemetery	DD-1	Covington Cemetary	Off of Hwy 74 Laurinburg, NC 28352	L	William P. Carmichael Jr. 110 Sterling Ln. Laurinburg, NC 28352	Leachate, herbicides	Unknown	34.762250	-79.416052
15	Recreational Facility	I-2	Cypress Creek Golf Link	19400 Andrew Jackson Hwy. Laurinburg, NC 28352	M	Cypress Creek Golf Links Inc. 19400 Andrew Jackson Hwy. Laurinburg, NC 28352	Fertilizers, Herbicides, Pesticides	Seasonal Application	34.757292	-79.412966
15	Wood Processing	FF-1	Edwards Wood Products	19500 Old Lumberton Rd. Laurinburg, NC 28352	H	Edwards Wood PO Box 219 Marshville, NC 28103	Petroleum products and other chemicals stored, treated wood	Unknown	34.759774	-79.404841

Well Site: 16 - 14029 Dixie Guano Rd.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
16, 17	Chemical Storage, NPDES	EE-3 G-3	Ready Mix Concrete Company	13842 Dixie Guano Rd. Laurinburg, NC 28352	H	Southern Equipment Company, Inc. PO Box 27326 Raleigh, NC 27611	Permit NCG140276	Unknown	34.759662	-79.436288
16, 17	Communications Tower, AST	H-3 Q-6	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352	M	Duke Energy Progress Inc. Attn: David Wright 550 South Tryon St. (Dec 41B) Charlotte, NC 28202	Generator Fuel, Electrical Substation	Low Quantity	34.758559	-79.439236
16, 17	Electrical Substation	Z-2	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352	H	Duke Energy Progress Inc. Attn: David Wright 550 South Tryon St. (Dec 41B) Charlotte, NC 28202	PCBs from transformers, Oils, Solvents, Herbicides	Unknown	34.760172	-79.438600
16, 17	PIRF	A-7	Royster Co. PIRF Inc.: 6362	14001 Dixie Guana Rd. Laurinburg, NC 28352	H	Kevin D. Smith Supp Needs Trust 14001 Dixie Guano Rd. Laurinburg, NC 28352	Petroleum release	See context for details	34.764045	-79.437120
16, 17	Salvage Yard	BB-1	Scotland Salvage & Recycling	13820 Dixie Guano Rd. Laurinburg, NC 28352	H	Cheraw Iron and Metal Co. Inc. PO Box 1421 Cheraw, SC 29520	Automotive wastes, PCB contaminated wastes, oils, lead	Various	34.761106	-79.436491

Well Site: 17 - 639 Hall St.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
17	Automobile Repairs/Sales	P-6	Caulder's Service Center	104 Sanford Rd. Laurinburg, NC 28352	H	Charles Caulder Edith Caulder 10461 Bobbies Ln. Laurel Hill, NC 28351	Waste oils, Solvents, Motor Oils	Low Quantity	34.771784	-79.44396
16, 17	Chemical Storage, NPDES	EE-3 G-3	Ready Mix Concrete Company	13842 Dixie Guano Rd. Laurinburg, NC 28352	H	Southern Equipment Company, Inc. PO Box 27326 Raleigh, NC 27611	Permit NCG140276	Unknown	34.759662	-79.436288
16, 17	Communications Tower, AST	H-3 Q-6	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352	M	Duke Energy Progress Inc. Attn: David Wright 550 South Tryon St. (Dec 41B) Charlotte, NC 28202	Generator Fuel, Electrical Substation	Low Quantity	34.758559	-79.439236

Well Site: 17 - 639 Hall St. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
17	Demolition Site	CC-1	Prince Plant #3	23 Commonwealth St. Laurinburg, NC 28352	M	Huzefa Amiji 210 Collingwood Ln. Spartanburg, SC 29301	Solvents, asbestos, waste insulation, tars, misc. chemical waste	Various	34.768640	-79.438682
17	Demolition Site, RCRA, AST	CC-2, B-3 Q-7	Waverly Mills Plant #3	50 5th St. Laurinburg, NC 28352	H	Huzefa Amiji 210 Collingwood Ln. Spartanburg, SC 29301	Solvents, asbestos, waste insulation, tars, misc. chemical waste	(3) 250 gal tanks	34.770205	-79.443891
16, 17	Electrical Substation	Z-2	Duke Energy Progress Inc.	Dixie Guano Rd. Laurinburg, NC 28352	H	Duke Energy Progress Inc. Attn: David Wright 550 South Tryon St. (Dec 41B) Charlotte, NC 28202	PCBs from transformers, Oils, Solvents, Herbicides	Unknown	34.760172	-79.438600
17	Motor Pool	GG-3	Mikki Caulders Towing	102 Sanford Rd. Laurinburg, NC 28352	M	Charles Caulder Edith Caulder 10461 Bobbies Ln. Laurel Hill, NC 28351	Automotive wastes, solvents, waste oils, hydrocarbons from storage tanks	Approx. 50 Vehicles	34.771986	-79.443311
17	Motor Pool Chemical Storage Electrical Storage Automobile Repair	GG-2 EE-2 Z-1 P-5	Sanitation Dept. Public Works Facility	501 Hall St. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Equipment Storage, Transformers (PCB and Non-PCB), Oil Barrels, Hydraulic Oil, Small Generators, Tires	Various (8) 50 gal. hydrolic oil	34.767904	-79.451241
16, 17	PIRF	A-7	Royster Co. PIRF Inc.: 6362	14001 Dixie Guana Rd. Laurinburg, NC 28352	H	Kevin D. Smith Supp Needs Trust 14001 Dixie Guano Rd. Laurinburg, NC 28352	Petroleum release	See context for details	34.764045	-79.437120
17	PIRF	A-9	Servco 02611	16700 Andrew Jackson Hwy. Laurinburg, NC 28352	H	Kenneth Helderman PO Box 310 Albemarle, NC 28001	Petroleum release	See context for details	34.767818	-79.442627
17	Pre-Sanitary Landfill	E-1	Laurinburg Dump UDS321 - Old Landfill	600 Hall St. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Active Recycling Center, Limb/Debris Storage	-	34.766739	-79.450701
17	Print/Sign Shop	X-1	Speedy Sign Shop	16800 Andrew Jackson Hwy. Laurinburg, NC 28352	H	Kenneth Helderman PO Box 310 Albemarle, NC 28001	Solvents, Inks, Dyes, Oils, Photographic Chemicals	Low Quantity	34.767575	-79.442131
17	Pump Station	S-3	Pump Station #24	16401 Andrew Jackson Hwy. Laurinburg, NC 28352	M	Rockingham District Partners in Ministry (RDPIM) PO Box 422 Gibson, NC 28343	Sewage, Oils, Grease Generator Fuel	Avg. = 100 gpm 105 gal. diesel	34.769511	-79.448512
17	Pump Station	S-5	Leith Creek Pump Station PS(LC#1)	605 Hall St. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease, Generator Fuel	Avg. = 1,800 gpm 2,500 gal. diesel	34.765512	-79.446802
17	Pump Station	S-6	Leith Creek Pump Station PS(LC#2)	605 Hall St. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease, Generator Fuel	Avg. = 2,500 gpm 1,000 gal. diesel	34.765376	-79.446863
17	Pump Station	S-7	Pump Station #23	17980 Andrew Jackson Hwy. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 250 gpm	34.768092	-79.439806

Well Site: 17 - 639 Hall St. continued

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
16, 17	Salvage Yard	BB-1	Scotland Salvage & Recycling	13820 Dixie Guano Rd. Laurinburg, NC 28352	H	Cheraw Iron and Metal Co. Inc. PO Box 1421 Cheraw, SC 29520	Automotive wastes, PCB contaminated wastes, oils, lead	Various	34.761106	-79.436491
17	UST Gas Station PIRF	F-6 AA-5 A-4	Community Mart/Citgo Gibson Oil & Gas Co. Inc. PIRF Inc.: 29996 Fac. ID: 0-023417	16440 Andrew Jackson Hwy. Laurinburg, NC 28352	H	Ralph Spivey 1902 Rice Rd. Sanford, NC 27330	Gasoline, Gas Mix Kerosene, Kero Mix	(3) 8,000 gal tanks (1) 2,000 gal tank	34.768996	-79.448603
17	UST, PIRF	F-5 A-3	City of Laurinburg Fleet Fuel Station PIRF Inc.: 29681 Fac. ID: 0-008045	503 Hall St. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Gasoline, Gas Mix Diesel	(1) 12,000 gal tank (1) 12,000 gal tank (3) 1,000 gal tanks	34.768774	-79.451241
17	WWTP (Drying Beds, Lined Sewage Basin)	L-2	Laurinburg WWTP, Drying Beds	620 Hall St. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Municipal wastewater, treatment chemicals, sludge	Permitted Capacity of 4.0 MGD	34.764569	-79.446775

Well Site: 20 - 1731 Berwick Dr.

WHPA	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
2, 6, 20	Medical Facility, AST	K-1 Q-1	Scotland County Rehab Center and Urgent Care	500 Lauchwood Dr. Laurinburg, NC 28352	M	Scotland Memorial Hospital, Inc. 500 Lauchwood Dr. Laurinburg, NC 28352	Generator Fuel, Pharmaceuticals, Sterilants, Disinfectants	2,500 gal. diesel	34.751579	-79.467946
8, 11, 20	PIRF, Tier II Site, AST, Electrical Substation	A-6 D-4 Q-8 Z-3	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	1700 Dogwood Mile St. Laurinburg, NC 28352	H	Scotland Development Corp. 606 Atkinson St. Laurinburg, NC 28352	Machinery/vehicle serving wastes; gasoline and heating oil from storage tanks; general building wastes; pesticides	(1) 10,000 gal tank fuel oil	34.746413	-79.476257
2, 6, 20	Water Supply	N-4	Well Site 6	605 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg P.O. Box 249 Laurinburg, NC 28353	Generator Onsite	250 gal. diesel	34.749786	-79.467139
2, 5, 6, 20	Water Treatment, NPDES, Tier II Site	N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	603 Lauchwood Dr. Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Caustic Soda Hydrofluorosilic Acid Sodium Hypochlorite Sulfur Dioxide Generator fuel	30,000 gal. 20,000 gal. 9,999 gal. 999 gal. 1,000 gal.	34.750517	-79.466234

Indirect Potential Contaminant Sources of Wellhead Protection Areas continued

Nearest Contributing Well Area	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
18	Agriculture/Ag. Operations	Y-2	Sinclair Lumber Co	17401 Harry Malloy Rd. Laurinburg, NC 28352	H	Edward T. Carmichael PO Box 1547 Laurinburg, NC 28353	Equipment Storage, Farm Operations, Oils	Varies	34.746208	-79.432457
17	Agriculture/Ag. Operations, AST	Q-15 Y-1	Allan Baucom	17840 Old Lumberton Rd. Laurinburg, NC 28352	M	Patten Seed Company PO Box 217 Lakeland, GA 31635	Fertilizers, Herbicides, Pesticides, Fuel Oil	500 gal. off road diesel	34.773917	-79.426076
18	AST, Chemical Storage	Q-13 EE-5	Pate Z V Incorporated	17401 Harry Malloy Rd. Laurinburg, NC 28352	M	Pate Z V Incorporated PO Box 159 Laurel Hill, NC 28351	Unleaded Gasoline Off Road Diesel Hwy Diesel	4,000 gal. tank 10,000 gal. tank 4,000 gal. tank	34.747936	-79.432817
18	AST, Chemical Storage, CERCLIS	Q-12 EE-4 C-1	Helena Chemical	17321 Harry Malloy Rd. Laurinburg, NC 28352	H	Helena Chemical Co. C/O Duff & Phelps PO Box 2629 Addison, TX 75001	For a full listing of chemicals, see the apendix	For a full list of quantities, see the appendix	34.747756	-79.434742
16, 17	AST, PIRF	Q-11 A-14	Service Oil - Bulk Storage Fac. PIRF Inc.: 14737	17600 U.S. 74 Business Laurinburg, NC 28352	H	Quality Oil PO Box 949 Laurinburg, NC 28353	(6) Large Abandoned ASTs	Previously held large quantities of petroleum products	34.765572	-79.430883
10	Automobile Repairs/Sales	P-8	C&R Automotive & Towing	1171 McColl Rd. Laurinburg, NC 28352	H	Edmond Badour James Baddour PO Box 1595 Pinehurst, NC 28370	Waste oils, Solvents, Motor Oils	Low Quantity	34.731481	-79.501769
17	Automobile Repairs/Sales AST	P-9 Q-16	Martin Transport	14201 Highland Rd. Laurinburg, NC 28352	H	Joseph Martin 14201 Highland Rd. Laurinburg, NC 28352	Waste oils, Solvents, Motor Oils Fuel Oil	Low Quantity (1) 1,000 gal tank	34.766892	-79.427312
10	Carwash	J-3	Nic's Pic Kwik 9 Carwash	11761 McColl Rd. Laurinburg, NC 28352	M	Charles Nichols 908 W. Covington St. Laurinburg, NC 28352	Solvents	Low Quantity	34.732439	-79.501182
10	Carwash	J-4	Nic's 8 Carwash	12001 McColl Rd. Laurinburg, NC 28352	M	James Harris PO Box 781 Laurinburg, NC 28353	Solvents	Low Quantity	34.739574	-79.495744
10	Carwash	J-5	Ron's Precision Car Wash	12200 McColl Rd. Laurinburg, NC 28352	M	Cargib 1 LLC 9340 Morgan St. Laurel Hill, NC 28351	Solvents	Low Quantity	34.741537	-79.495545
2	Electrical Substation	Z-4	City of Laurinburg	728 Midland Way Laurinburg, NC 28352	H	City of Laurinburg PO Box 249 Laurinburg, NC 28353	PCBs from transformers, Oils, Solvents, Herbicides	Unknown	34.765697	-79.474153
2	Hardware/Lumber/Parts Stores	O-4	O'Reilly Auto Parts	1123 S. Main St. Laurinburg, NC 28352	M	Shillelagh LLC C/O Ryan LLC 1992 PO Box 06116 Chicago, IL 60606	Oils, Paints, Solvents	Low Quantity	34.763366	-79.469045
2	Hardware/Lumber/Parts Stores	O-5	Napa Auto Parts Barnes Motor & Parts Company	104 Johns Rd. Laurinburg, NC 28352	M	Kirkland Family Holdings LLC PO Box 1207 Wilson, NC 27894	Oils, Paints, Solvents	Low Quantity	34.764309	-79.467185
2	Hardware/Lumber/Parts Stores, AST	O-3	Lowes Home Improvement Center	910 US 15-401 By-Pass Laurinburg, NC 28352	M	Lowe's Home Centers Inc PO Box 1111 North Wilkesboro, NC 28656	Generator Fuel	1,500 gal. diesel	34.761604	-79.479025
17	Machine Shop/Repair	R-1	Averitt's Electric Motor Repair	14121 Highland Rd. Laurinburg, NC 28352	H	Lavinia Averitt 13500 Oakwood Dr. Laurinburg, NC 28352	Solvents, Metals, Oils, Lubricants, Degreasers	Unknown	34.765959	-79.427542

Indirect Potential Contaminant Sources of Wellhead Protection Areas continued

Nearest Contributing Well Area	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
16, 17	Manufacturing	U-1	Rostra Precision Controls	2519 Dana Dr. Laurinburg, NC 28352	H	M Bonta C/O Rostra Precision Controls 2519 Dana Dr. Laurinburg, NC 28352	Hydrolic Oil, Metals	200 gals. Hydraulic oil (2) 150 gal. used hydraulic oil drums	34.759120	-79.427140
5	PIRF	A-15	John Cartrette Property PIRF Inc.: 23945	1017 S. Pine St. Laurinburg, NC 28352	H	Doris Morrison 1017 S. Pine St. Laurinburg, NC 28352	Petroleum release	See context for details	34.764957	-79.464322
2	PIRF	A-16	Pat's Kitchen PIRF Inc.: 7222	1019 S. Main St. Laurinburg, NC 28352	H	Jeffrey M Pusser 4341 Birkshire Heights Fort Mill, SC 29708	Petroleum release	See context for details	34.764532	-79.468120
17	PIRF	A-10	Wallace Trucking	Hwy 74 East Laurinburg, NC 28352	H	NCDOT Right-of-Way	Diesel Fuel	50 Gallons	34.755897	-79.437148
10	PIRF	A-12	Quick Stop Store 50 PIRF Inc.: 2857	11761 McColl Rd. Laurinburg, NC 28352	H	Charles Nichols 908 W. Covington St. Laurinburg, NC 28352	Petroleum release	See context for details	34.732189	-79.501360
2	PIRF	A-16	Pat's Kitchen PIRF Inc.: 7222	1019 S. Main St. Laurinburb, NC 28352	H	Jeffrey M Pusser 4341 Birkshire Heights Fort Mill, SC 29708	Petroleum release	See context for details	34.764532	-79.468120
2	Print/Sign Shop	X-3	Woody's Printing & Copy Shop	200 John's Rd. Laurinburg, NC 28352	H	Douglas Morton Gilbert 35 Towhee Run Pinehurst, NC 28374	Solvents, Inks, Dyes, Oils, Photographic Chemicals	Low Quantity	34.762959	-79.466696
16, 17	Pump Station	S-8	Pump Station #22	13971 Highland Rd. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 350 gpm	34.762552	-79.429533
10	Pump Station	S-9	Pump Station #15	11758 McColl Rd. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 65 gpm	34.731624	-79.502794
11	Pump Station	S-10	Pump Station #29	1811 S. Main St. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 580 gpm	34.748654	-79.485709
17	Pump Station	S-11	Pump Station #4	17900 Old Lumberton Rd. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 110 gpm	34.775527	-79.433248
17	Pump Station	S-12	Pump Station #3	17231 Morgan Cir. Laurinburg, NC 28352	M	City of Laurinburg PO Box 249 Laurinburg, NC 28353	Sewage, Oils, Grease	Avg. = 50 gpm	34.768276	-79.430203
2	Recreational Facility	I-3	Scotland Post #50	311 Yadkin Ave. Laurinburg, NC 28352	L	Scotland Post #50 C/O Parks & Rec PO Box 1668 Laurinburg, NC 28353	Fertilizers, Herbicides, Pesticides	Seasonal Application	34.764838	-79.470777
10	UST Gas Station	F-9 AA-8	Corner Pantry Gibson Oil & Gas Co. Inc. Fac. ID: 0-009381 Cert. #: 20150286701	12200 McColl Rd. Laurinburg, NC 28352	H	Cargib 1 LLC 9340 Morgan St. Laurel Hill, NC 28351	Gasoline, Gas Mix Kerosene, Kero Mix	(4) 4,000 gal tanks (1) 1,000 gal tank	34.741487	-79.495261
10	UST Gas Station	F-10 AA-9	Community Stop 3 Fac. ID: 0-008342 Cert. #: 20160125301	12500 Hwy. 401 S. Laurinburg, NC 28352	H	Cooper Petroleum 12780 Hwy 501 South Laurinburg, NC 28352	Gasoline, Gas Mix	(1) 12,000 gal tank (1) 8,000 gal tank	34.745108	-79.490753

Indirect Potential Contaminant Sources of Wellhead Protection Areas continued

Nearest Contributing Well Area	PCS Category	Map Code	PCS Site	Physical Location	Rick Category	Property Owner Contact	Contaminant	Quantity	Latitude	Longitude
10	UST Gas Station PIRF	F-7 AA-6 A-11	Nic's Pic Kwik 9 PIRF: 29930 Fac. ID: 0-008086 Cert. #: 20150531201	11761 McColl Rd. Laurinburg, NC 28352	H	Charles Nichols 908 W. Covington St. Laurinburg, NC 28352	Gasoline, Gas Mix - - Kerosene, Kero Mix	(1) 10,000 gal tank (1) 6,000 gal tank (1) 4,000 gal tank (1) 2,000 gal tank	34.732057	-79.501503
10	UST Gas Station PIRF	F-8 AA-7 A-13	Nic's 8 PIRF: 2856 Fac. ID: 0-009250 Cert. #: 20150532201	12001 McColl Rd. Laurinburg, NC 28352	H	James Harris PO Box 781 Laurinburg, NC 28353	Gasoline, Gas Mix - Kerosene, Kero Mix Diesel	(2) 8,000 gal tank (1) 4,000 gal tank (1) 1,000 gal tank (1) 4,000 gal tank	34.739720	-79.495550
18	Wood Processing Pre-Sanitary Landfill	FF-2 E-2	Carter Lumber UDS538 - Old Landfill	13402 Highland Rd. Laurinburg, NC 28352	H	Carter Lumber 601 Talmadge Rd. Kent, OH 44240	Petroleum products and other chemicals stored, treated wood residue	Unknown	34.754824	-79.430583

Individual Well Site Risk Assessment Results

* Adapted from EPA (1993), and the Oregon Wellhead Protection Program

Well Site: 02 - 401 Willow Dr. continued

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
K-2 Q-2 F-11	Scotland Memorial Hospital	H	690	3,000	0.77	3	2.31
GG-1 G-2	National Guard Armory	H	695	3,000	0.77	3	2.31
Q-10	Moe's Chicken	M	980	3,000	0.67	3	2.02
F-1 AA-1	Scotland Stop & Shop Fac. ID: 0-009151 Cert #: 20120478201	H	1,055	3,000	0.65	3	1.95
W-1 B-1 A-1	One Hour Cleaners PIRF Inc.: 830001	H	1,150	3,000	0.62	3	1.85
F-2 AA-2 D-2	WilcoHess Tier II: 4054984 Fac. ID: 0-009289 Cert #: 20140088101	H	1,400	3,000	0.53	3	1.60
Q-9	South Fire Station - Station 6	M	720	3,000	0.76	2	1.52
A-8	City Limits Grocery PIRF Inc.: 11621	H	1,565	3,000	0.48	3	1.44
P-4	Allstate Glass	H	1,665	3,000	0.45	3	1.34
P-2	Doug's Tire Shop	H	1,670	3,000	0.44	3	1.33
X-2	Eastcoast Signs & Graphics	H	1,715	3,000	0.43	3	1.29
A-5	South Main Exxon PIRF Inc.: 15449	H	1,740	3,000	0.42	3	1.26
P-1	Scotland Motors	H	1,390	3,000	0.54	2	1.07
K-1 Q-1	Scotland County Rehab Center and Urgent Care	M	1,460	3,000	0.51	2	1.03
N-1 G-1 D-1	Laurinburg Water Treatment Plant Tier II: 4015944	H	2,085	3,000	0.31	3	0.92
H-2 Q-5	American Tower Corporation Site Name: Legion Park NC Site #: NC 021292 FCC Tower Reg No. - 1056789	M	1,725	3,000	0.43	2	0.85
N-4	Well Site 6	H	2,160	3,000	0.28	3	0.84
J-1	Taylor's Detailing	M	1,750	3,000	0.42	2	0.83
EE-1	Byrd's Pool Services	L	2,175	3,000	0.28	3	0.83
P-7	Haney's Tire & Recapping Services	H	1,925	3,000	0.36	2	0.72
T-1	Storage Solution Self Storage	L	910	3,000	0.70	1	0.70
K-3 Q-3	Hospice of Scotland County	M	1,990	3,000	0.34	2	0.67
O-1	Advance Auto Parts	M	2,380	3,000	0.21	2	0.41

Well Site: 02 - 401 Willow Dr. continued

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
F-3 **AA-3**	Community Stop One/Exxon Fac. ID: 0-008341 Cert #: 20120193701	H	2,610	3,000	0.13	3	0.39
J-2	Exxon Car Wash (Manual)	M	2,700	3,000	0.10	3	0.30
O-2	AutoZone	M	2,580	3,000	0.14	2	0.28
F-4 **AA-4**	Circle K Stores Inc. Fac. ID: 0-023253 Cert. #: 20150700501	H	2,875	3,000	0.04	3	0.13
P-3	Safeway Motors Sales & Rental	H	2,910	3,000	0.03	2	0.06
W-2 **B-2** **A-2**	Village Cleaners PIRF Inc.: 830002	H	2,970	3,000	0.01	2	0.02

Total Risk Score **30.23**

Well Site: 05 - 523 Baker Ct.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-6	Well Site 13	H	1,875	2,805	0.33	3	0.99
K-3 **Q-3**	Hospice of Scotland County	M	1,935	2,805	0.31	2	0.62
M-1	Laurinburg Housing Authority	L	2,125	2,805	0.24	1	0.24
H-1 **Q-4**	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	M	2,670	2,805	0.05	2	0.10
N-1 **G-1** **D-1**	Laurinburg Water Treatment PlantT	H	2,730	2,805	0.03	3	0.08

Total Risk Score **2.03**

Well Site: 06 - 605 Lauchwood Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-4	Well Site 6	H	35	1,802	0.98	3	2.94
N-1 **G-1** **D-1**	Laurinburg Water Treatment Plant Tier II: 4015944	H	415	1,802	0.77	3	2.31
K-1 **Q-1**	Scotland County Rehab Center and Urgent Care	M	680	1,802	0.62	2	1.25
K-3 **Q-3**	Hospice of Scotland County	M	1,190	1,802	0.34	2	0.68
K-2 **Q-2** **F-11**	Scotland Memorial Hospital	H	1,470	1,802	0.18	3	0.55
H-1 **Q-4**	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	M	1,340	1,802	0.26	2	0.51

Total Risk Score **8.24**

Well Site: 08 - 1767 Berwick Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-5	Well Site 8	H	25	1,816	0.99	3	2.96
A-6 **D-4** **Q-8** **Z-3**	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	H	1,390	1,816	0.23	3	0.70

Total Risk Score **3.66**

Well Site: 09 - 1801 Berwick Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-5	Well Site 8	H	1,720	1,950	0.12	3	0.35
S-4	Pump Station #28	H	1,935	1,950	0.01	3	0.02

Total Risk Score **0.38**

Well Site: 10 - 2218 Elm Ave.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-2	Well Site 10	H	25	2,943	0.99	3	2.97
S-2	Pump Station #19	M	345	2,943	0.88	2	1.77
N-3	Well Site 12	H	2,545	2,943	0.14	3	0.41
S-1	Pump Station #17	M	2,525	2,943	0.14	2	0.28

Total Risk Score **5.43**

Well Site: 11 - 281 Magnolia Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
A-6 **D-4** **Q-8** **Z-3**	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	H	500	1,601	0.69	3	2.06
I-1	St. Andrews University Baseball Field	L	920	1,601	0.43	1	0.43

Total Risk Score **2.49**

Well Site: 12 - 11159 Hasty Rd.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-3	Well Site 12	H	25	1,696	0.99	3	2.96
S-1	Pump Station #17	M	1,550	1,696	0.09	2	0.17

Total Risk Score **3.13**

Well Site: 13 - Eastover Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-6	Well Site 13	H	25	2,436	0.99	3	2.97
H-1 **Q-4**	Crown Castle Tower Site Name: ANS 014 930334 Laurinburg So. FCC Tower Reg No. - 1278829	M	1,785	2,436	0.27	2	0.53
K-3 **Q-3**	Hospice of Scotland County	M	2,180	2,436	0.11	2	0.21

Total Risk Score **3.71**

Well Site: 14 - 455 Sugar Rd.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-6	Well Site 13	H	2,365	3,000	0.21	3	0.64
L-1 **D-3**	Laurinburg WWTP Fac. ID: 5818693	M	2,885	3,000	0.04	2	0.08

Total Risk Score **0.71**

Well Site: 15 - 649 Hall St.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
I-2	Cypress Creek Golf Link	M	945	3,000	0.69	2	1.37
FF-1	Edwards Wood Products	H	2,030	3,000	0.32	3	0.97
V-1	Carmichael Farm	L	1,065	3,000	0.65	1	0.65
DD-1	Covington Cemetary	L	1,630	3,000	0.46	1	0.46

Total Risk Score **3.44**

Well Site: 16 - 14029 Dixie Guano Rd.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
Z-2	Duke Energy Progress Inc.	H	685	1,575	0.57	3	1.70
BB-1	Scotland Salvage & Recycling	H	810	1,575	0.49	3	1.46
A-7	Royster Co.PIRF Inc.: 6362	H	915	1,575	0.42	3	1.26
EE-3 **G-3**	Ready Mix Concrete Company	H	1,175	1,575	0.25	3	0.76
H-3 **Q-6**	Duke Energy Progress Inc.	M	1,270	1,575	0.19	2	0.39

Total Risk Score **5.56**

Well Site: 17 - 639 Hall St.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
X-1	Speedy Sign Shop	H	1,435	3,000	0.52	3	1.57
A-9	Servco 02611	H	1,480	3,000	0.51	3	1.52
L-2	Laurinburg WWTP, Drying Beds	M	955	3,000	0.68	2	1.36
S-6	Leith Creek Pump Station PS(LC#2)	M	1,090	3,000	0.64	2	1.27
S-5	Leith Creek Pump Station PS(LC#1)	M	1,100	3,000	0.63	2	1.27

Well Site: 17 - 639 Hall St. continued

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
A-7	Royster Co. PIRF Inc.: 6362	H	1,975	3,000	0.34	3	1.03
Z-2	Duke Energy Progress Inc.	H	2,015	3,000	0.33	3	0.99
S-7	Pump Station #23	M	1,935	3,000	0.36	2	0.71
CC-2 **B-3** **Q-7**	Waverly Mills Plant #3	H	2,320	3,000	0.23	3	0.68
E-1	Laurinburg Dump UDS321 - Old Landfill	H	2,360	3,000	0.21	3	0.64
BB-1	Scotland Salvage & Recycling	H	2,375	3,000	0.21	3	0.63
F-6 **AA-5** **A-4**	Community Mart/Citgo Gibson Oil & Gas Co. Inc. PIRF Inc.: 29996 Fac. ID: 0-023417 Cert. #: 20150286901	H	2,385	3,000	0.21	3	0.62
CC-1	Prince Plant #3	M	2,315	3,000	0.23	2	0.46
H-3 **Q-6**	Duke Energy Progress Inc.	M	2,335	3,000	0.22	2	0.44
S-3	Pump Station #24	M	2,525	3,000	0.16	2	0.32
EE-3 **G-3**	Ready Mix Concrete Company	H	2,695	3,000	0.10	3	0.31
GG-2 **EE-2** **Z-1** **P-5**	Sanitation Dept. Public Works Facility	H	2,715	3,000	0.10	3	0.29
P-6	Caulder's Service Center	H	2,890	3,000	0.04	3	0.11
F-5 **A-3**	City of Laurinburg Fleet Fuel Station PIRF Inc.: 29681 Fac. ID: 0-008045 Cert. #: 20150557501	H	2,895	3,000	0.04	3	0.11
GG-3	Mikki Caulders Towing	M	2,965	3,000	0.01	2	0.02

Total Risk Score **14.31**

Well Site: 18 - 13308 Old Johns Rd.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
				2,143			0.00

Total Risk Score **0.00**

Note: There are no individual potential contaminant sites within this wellhead protection area. Any contamination would likely be cause by agricultural/farming operations in the area.

Well Site: 19 - 13198 Eastover Ln.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
				2,591			0.00

Total Risk Score **0.00**

Note: There are no individual potential contaminant sites within this wellhead protection area. Any contamination would likely be cause by agricultural/farming operations in the area.

Well Site: 20 - 1731 Berwick Dr.

Map Code	PCS Site	Risk	Distance from Well (ft.)	WHPA Radius (ft.)	Proximity Score	Category Score*	Final Score
N-4	Well Site 6	H	1,460	1,996	0.27	3	0.81
A-6 **D-4** **Q-8** **Z-3**	St. Andrews University St. Andrews Physical Plant PIRF Inc.: 29582 Tier II: 4089089 Fac. ID: 5829247	H	1,660	1,996	0.17	3	0.51
N-1 **G-1** **D-1**	Laurinburg Water Treatment Plant Tier II: 4015944	H	1,840	1,996	0.08	3	0.23
K-1 **Q-1**	Scotland County Rehab Center and Urgent Care	M	1,830	1,996	0.08	2	0.17

Total Risk Score **1.71**

Scotland County Solid Waste Site Locations

Stewartsville South	
7981 McColl Road Laurinburg, NC 28352 Phone: (910) 277-3104	Monday, Wednesday, and Saturday 7 a.m. - 6 p.m.
Williamson/Livingston Quarters	
16600 St. John's Church Road Gibson, NC 28343 Phone: (910) 462-4387	Monday, Wednesday, and Saturday 7 a.m. - 6 p.m.
Sneads Grove	
20640 Sneads Grove Road Laurinburg, NC 28352 Phone: (910) 277-3106	Monday, Wednesday, and Saturday 7 a.m. - 6 p.m.
Wagram	
20461 Wagram Road Laurinburg, NC 28352 Phone: (910) 277-3106	Monday, Wednesday, and Saturday 7 a.m. - 6 p.m.
Palmer Road	
17020 Palmer Road Marston, NC 28363 Phone: (910) 277-0350	Wednesday and Saturday 7 a.m. - 6 p.m.
Patterson Road Landfill	
10681 Patterson Road Laurinburg, NC 28352 Phone: (910) 844-9206	Monday - Friday 8:00 a.m. - 4:30 p.m.
Regulations: ~ Full Service Solid Waste Collection Site ~ The only recycling items accepted at this site are electronics	

Glossary of Acronyms and Abbreviations

IWC-Iredell Water Corporation
EPA-Environmental Protection Agency
DEQ-Division of Environmental Quality
UST-Underground Storage Tank
AST-Above ground Storage Tank
VOC-Volatile Organic Compound
SOC-Semi-volatile Organic Compound
PWS-Public Water Supply
PWSS-Public Water Supply Section
WPC-Wellhead Protection Committee
WHPP-Wellhead Protection Program or Plan
WHPA-Wellhead Protection Area
Gpm-gallons per minute
PCS-Potential Contamination Source
NPDES-National Pollutant Discharge Elimination System
SPCC-Spill Prevention Control and Countermeasures
UIC-Underground Injection Control
DEACS-Division of Environmental Assistance and Customer Service
ORC-Operator Responsible in Charge
WQCS-Water Quality Collection System
SWAP-Source Water Assessment and Protection
SWDA-Solid Waste Disposal Act
DWR-Division of Water Resources
EPCRA-Emergency Planning and Community Right to Know Act
PIRF-Pollution Incident Reporting Form
CWA-Clean Water Act
ECHO-Enforcement and Compliance History Online
CERCLA-Comprehensive Environmental Response, Compensation, and Liability Act
OERR-Office of Emergency and Remedial Response
NCP-National Contingency Plan
RCRA-Resource Conservation and Recovery Act
TRI-Toxic Release Inventory
NCDA-North Carolina Department of Agriculture
FRO – Fayetteville Regional Office

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City of Laurinburg 2015 Consumer Confidence Report:
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Scotland County Emergency Services, Laurinburg, NC, SARA Title III Tier II Files

NC Division of Environment Assistance and Customer Service (DEACS) Brochure

N.C. DIVISION OF ENVIRONMENTAL ASSISTANCE AND CUSTOMER SERVICE

Customer service through technical, compliance and financial assistance

NCDENR

N.C. DIVISION OF ENVIRONMENTAL ASSISTANCE AND CUSTOMER SERVICE

The **N.C. Division of Environmental Assistance and Customer Service (DEACS)** assists citizens, businesses, local governments and communities statewide on a diverse range of environmental issues.

DEACS technical services:

- **Toll-free hotline** with experienced staff to answer your environmental questions
- **On-site assessments** and training for waste, water and energy management
- **Compliance** information and tips
- Environmental **recognition** programs
- **Grants** for recycling businesses and local governments
- **Recycling** infrastructure support
- Statewide points of contact for **permit information** and **environmental assistance**

Within the N.C.Department of Environment and Natural Resources, DEACS works to protect and improve North Carolina's environment while supporting a strong economy.

Environmental Assistance Hotline
1-877-623-6748 (toll-free)
eac@ncdenr.gov
ncenvironmentalassistance.org

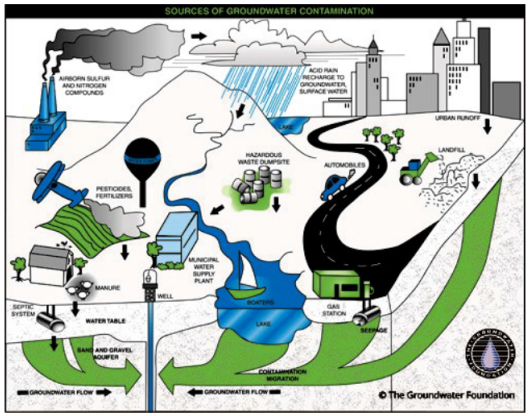
2000 copies of this public document were printed on 100% recycled content and FSC certified paper at a cost of $713.79 or $0.24 each.

MAINTAIN YOUR SEPTIC SYSTEM

Groundwater contaminated by poorly or untreated household wastewater poses dangers to drinking water and to the environment. Septic system maintenance comes down to four key elements:

- Inspect and Pump Frequently
- Use Water Efficiently
- Properly Dispose of Waste
- Maintain Your Drainfield

For more information on septic systems and system care, please visit www.epa.gov/septic.



BE AWARE OF THE DANGERS OF GREASE

Grease sticks to the insides of drain pipes and sewer pipes, restricting water flow. As more and more fats, oils and grease accumulate, the greater the chances of a back-up. Sewage can back-up into your tubs or toilets; even worse, it can overflow into streams and groundwater. Please be proactive in fighting grease., don't pour it down the drain!!!

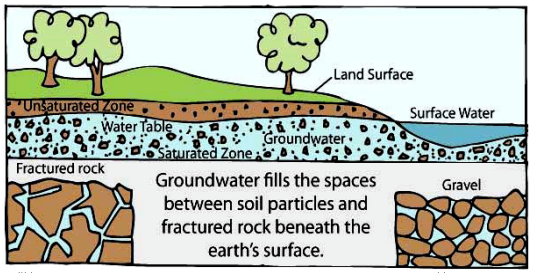
City of Laurinburg
PO Box 249
Laurinburg, NC 28353
(910) 277-8324

City of Laurinburg
North Carolina

WELLHEAD PROTECTION PROGRAM

WHAT IS GROUNDWATER?

Groundwater is the water found underground in the cracks and spaces in soil, sand and rock. It is stored in and moves slowly through geologic formations of soil, sand and rocks called aquifers. The City of Laurinburg uses groundwater it pumps from the ground using sixteen (16) wells located in our service area.



THE WELLHEAD PROTECTION PROGRAM

The City of Laurinburg is implementing a Wellhead Protection Program to protect its water supply from contamination. As a part of the program, we have identified the vulnerable areas around our well sites called the "Wellhead Protection Areas". Chemicals and other pollutants spilled or dumped in these areas can be drawn into the well, possibly contaminating our community's drinking water supply. Residents and businesses in these areas must be very careful with chemicals and other pollutants. Help us to preserve our water quality for our current and future needs.

POLLUTION SOURCES

Many of our daily activities can pollute our surface water and groundwater. Sources of groundwater pollution include:

- **Used oil, paint thinner, gasoline and other chemicals poured on the ground.**
- **Leaking fuel storage tanks (aboveground and underground).**
- **Overuse of pesticides and fertilizers on lawns, golf courses and agriculture fields.**
- **Chemical spills at businesses, farms and along highways.**
- **Illegal dumps and poorly managed landfills.**
- **Failing septic tanks.**
- **Leaking sewer lines.**
- **Improperly abandoned wells.**
- **Unlined waste pits, ponds and lagoons.**
- **Farm machinery repair shops/ Automobile repair shops**
- **Cemeteries/Funeral Homes**
- **Golf Courses**
- **Animal Feedlot/Animal Waste Storage**

HOW CAN YOU HELP?

Water is our most valuable natural resource and we are responsible for protecting it! You can help by doing your part to protect our supply by supporting this program. Here are some tips:

- Never pour used oil, paint thinner or other hazardous chemicals on the ground or down the drain. Take them to a recycling center or to a Household Hazardous Waste Collections Day.
- Check for and fix leaks in storage tanks (i.e. home heating oil/kerosene) at your home or business.
- Inspect and pump your septic tank as needed.
- Have any unused wells on your property properly abandoned.
- Minimize your use of pesticides and fertilizers, storing them properly.
- Clean up junk and debris on your property.
- Report all chemical spills immediately.
- Encourage community leaders and businesses to do everything possible to protect our drinking water supply.

NC RWA TRAINING SUPPORT

City of Laurinburg
North Carolina

Managing Agricultural Fertilizer Application

WELLHEAD PROTECTION PROGRAM

MANAGING FERTILIZER USE NEAR DRINKING WATER SUPPLIES

If improperly managed, elements of fertilizer can move into surface water through field runoff or leach into ground water. The two main components of fertilizer that are of greatest concern to public drinking water supplies are nitrogen (N) and phosphorus (P). Crop producers need to match nitrogen applications to crop uptake to minimize nitrate leaching and maximize efficiency. Due to health risk, the EPA set a drinking water maximum contaminant level (MCL) of 10 milligrams per liter (mg/l) for nitrate measured as nitrogen. The goal of the prevention measures, as described below, are to minimize nutrient losses from agricultural land occurring by edge-of-field runoff and by leaching from the root zone. This can be achieved by developing a comprehensive nutrient management plan and using only the types and amounts of nutrients necessary to produce the crop, applying nutrients at the proper times and with proper methods, implementing additional farming practices to reduce nutrient losses, and following proper procedures for fertilizer storage and handling.

APPLICATION RATES AND FERTILIZER TYPES

- Limit fertilizer to an amount necessary to achieve a realistic goal
- Perform yearly soil sampling to determine nutrient needs
- When calculating rate of application, credit other sources to include nitrogen and phosphorous contributions from previous legume crops, irrigation water, manure, and organic matter
- Understand and follow fertilizer yield goals based on soil properties, available moisture, yield history, and management level
- Apply the appropriate form of nitrogen fertilizer based on soil and weather conditions.

APPLICATION PRACTICES

Apply product during maximum crop uptake periods

Inspect and calibrate equipment annually to ensure accurate application amounts

Correctly place fertilizer in the root zone to enhance plant nutrient uptake which minimalizes loss

Manage irrigation water due to the large amount of water applied. Sprinklers, precision applicators, surges and drips can apply water uniformly.

STORAGE

- Follow label directions
- Mix, handle and store away from wellhead area
- Recover and reuse or dispose of spills

EPA

NC RWA TRAINING SUPPORT

Managing Agricultural Fertilizer Application Flyer

City of Laurinburg
North Carolina

Gas/Service Station Best Management Practices

WELLHEAD PROTECTION PROGRAM

Gas Stations Can Be the Source of Several Contaminants

- Oil and gas spilled onto paved areas are easily washed away by water, either from hoses or rainfall.
- Engine and brake residues contain antifreeze, grease, oil, copper, and even asbestos.
- Engine degreasers contain copper and brass.
- Lead, oil, and grease are residues of radiator flushing.
- Oil, grease, and detergents drain from car washing.
- Engine washing releases aluminum and iron.
- Brakes are a source of asbestos and cadmium washes from tires.

WHAT CAN YOU DO?

Fuel Dispensing Areas

- ☑ Maintain fuel dispensing areas using dry methods such as sweeping or use rags and absorbents for leaks and spills. Never wash down fueling areas unless the water is collected and disposed of properly. An adequate supply of absorbent materials should be kept on hand.
- ☑ Fit fuel dispensing nozzles with automatic shutoffs.
- ☑ Post signs at the fuel dispenser or fuel island discouraging vehicle owners/operators against "topping off" fuel tanks.
- ☑ Emergency shutoff switches should be plainly labeled.
- ☑ Underground storage tanks should be fitted with spill containment and overfill prevention systems.

General Facility

- ☑ Clean leaks and drips on a routine basis, and dispose of cleaning materials properly.
- ☑ Manage materials and waste to reduce adverse impacts on storm water quality.
- ☑ Prepare and maintain a spill response plan. The plan should include an estimate of the maximum quantity of fuel that could be spilled in the event of an equipment failure, along with a plan to prevent it from reaching groundwater. The plan should describe containment and/or diversionary structures or equipment needed. Steps should be taken to ensure the necessary equipment, personnel and other resource availability.
- ☑ All employees should be trained (upon hiring and annually thereafter) on the spill response plan and proper disposal of waste.
- ☑ The facility should post a notification list including the names and contact information for local management, remote management, fire and police, local and state agencies that need to be notified and spill response contractors.
- ☑ Dispose of waste oil properly and recycle used oil filters (NC House Bill 1465 prohibits the disposal of oil filters in landfills).

Helena Chemical Inventory

Helena Chemical Inventory
17321 Harry Malloy Rd., Laurinburg
Inventory of Maximum Chemical On Hand

Chemical Type	Max Quantity (gallons)
Pesticides:	
(Warrant) 2-chloro-n-ethoxymethyl-n-2 ethly-6 methyphenyl	2,650
Aluminum Phosphide Phosfume Tables	5
Counter 20G (Terbufos)	50
Mepiquat, Mepex, Mepstar, Mep 42	2,750
Phorate (Thimet)	40
Reflex-sodium salt of fomesafen	25
Herbicides:	
Altrazine 4F Atrazine 4L	2,600
Barrage HF 2-Ethylhexyl Ester of 2.4-D Acetic Acid	2,650
Diuron 4L - Direx 4L	25
Flexstar GT (Formsafen Sodime Salt)	2,500
Gramoxone SL 2.0 Helm-Quat. Solera Paraquat, Parazone	25,853
Halex GT	33,390
Liberty 280 SL (Glufosinate Ammonium)	2,700
Prefix	40
Roundup - Powermax, Glystar Plus, Credit Extra	75,742
Touchdown Total (Glyphosate)	300
Insecticides:	
Dicrotophos (Bidrin 8) (Dicromax 8)	50
Lannate (Methomyl)	50
Mocap (Ethoprophos)	30
Harvest Aid for Cotton:	
Ethephon.6. Finish 6 Pro	2,500
Soil Fumigant:	
Telone II 1.3 Dichloropropene	110

Well Records

TOWN OF LAURINBURG, NC

INFORMATION FOR WELLS NO. 1-20

TABLE OF CONTENTS

WELL NO. 1

ABANDONED

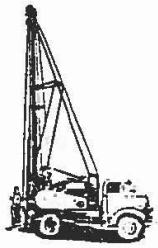
CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085 TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.



Laurinburg, North Carolina
Drillers Log - Well # 1
Driller: Worth F. Pickard
February 17, 1978

0 - 1	Topsoil
1 - 12	Clay
12 - 18	Sand
18 - 41	Sand
41 - 56	Sand
56 - 68	Clay
68 - 96	Sand
96 - 101	Clay
101 - 119	Sand
119 - 132	Clay
132 - 141	Sand
141 - 156	Clay
156 - 170	Sand
170 - 184	Clay
184 - 196	Sand and Clay
196 - 215	Clay
215 - 224	Sand
224 - 256	Clay
256 - 262	Clay hard
262 - 264	Rock

WELL NO. 2

CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085

TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.

City of Laurinburg, North Carolina
Water Improvements
Drillers Log - Well # 2
Driller: Thurman F. Pickard
Date: February 24, 1978

0	- 1	Topsoil
1	- 8	Clay
8	- 37	Sand
37	- 44	Clay
44	- 50	Sand
50	- 58	Clay
58	- 108	Sand
108	- 118	Clay
118	- 126	Sand
126	- 142	Clay
142	- 164	Sand
164	- 190	Sand and Clay
190	- 196	Clay
196	- 200	Sand
200	- 214	Clay
214	- 221	Sand
221	- 230	Clay
230	- 242	Sand
242	- 255	Clay
255	- 300	Sand and Clay
300	- 312	Clay
312	- 326	Clay with Sand

48 Hour Continuous Pump Test

Permanent Well # 2 - City of Laurinburg, N. C.

June 5,6, and 7, 1963 - 6" x 5" orifice

TIME	WATER LEVEL	INCHES IN PIEZOMETER	GPM	TIME	WATER LEVEL	INCHES IN PIEZOMETER	GPM
7:00 AM started	13'			1:30	74' 2"	20.5	554
7:01	47'	20.5	554	2:00	73' 10"	20.5	554
7:02	49'	20.5	554	2:30	74' 1"	20.5	554
7:03	52' 2"	20.5	554	3:00	74' 5"	20.5	554
7:04	53' 6"	20.5	554	3:30	73' 8"	20.5	554
7:05	54' 9"	20.5	554	4:00	73' 9"	20.5	554
7:06	55' 1"	20.5	554	4:30	74' 6"	20.5	554
7:07	55' 4"	20.5	554	5:00	74'	20.5	554
7:08	56' 6"	21	560	5:30	74' 1"	20.5	554
7:09	57'	21	560	6:00	74' 3"	20.5	554
7:10	58'	21	560	6:30	74' 10"	20.5	554
7:12	59' 10"	21	560	7:00	74' 2"	20.5	554
7:14	60' 9"	21	560	8:00	74' 8"	20.5	554
7:16	61' 2"	20.5	554	9:00	74' 3.5"	20.5	554
7:18	61' 9"	20.5	554	10:00	75'	20.5	554
7:20	62' 2"	20.5	554	11:00	74' 9"	20.5	554
7:22	62' 8"	20.5	554	12:00 Midnight	74' 10.5"	20.5	554
7:24	63' 3"	20.5	554	1:00 AM June 6	74' 11"	20.5	554
7:26	63' 1"	20.5	554	2:00	75'	20.5	554
7:28	63' 6"	20.5	554	3:00	75' 1"	20.5	554
7:30	63' 8"	20.5	554	4:00	75' 2"	20.5	554
7:35	64' 8"	20.5	554	5:00	75' 3"	20.5	554
7:40	65' 6"	20.5	554	6:00	75' 4"	20.5	554
7:45	66' 4"	20.5	554	7:00	75' 3.5"	20.5	554
7:50	67' 9"	20.5	554	8:00	75' 10"	21.0	560
7:55	67' 2"	20.5	554	9:00	76' 3"	21	560
8:00	67' 5"	20.5	554	10:00	76' 2"	21	560
8:10	68'	20.5	554	11:00	75' 9.5"	20.5	554
8:20	68' 7"	20.5	554	12:00 Noon	75' 6"	20.5	554
8:30	69' 1"	20.5	554	1:00	74' 11"	20.5	554
8:40	69' 9"	20.5	554	2:00	75' 7"	20.5	554
8:50	70' .5"	20.5	554	3:00	75' 10"	20.5	554
9:00	70' 3"	20.5	554	4:00	76' 1"	20.5	554
9:15	70' 6.5"	20.5	554	5:00	76' 1"	20.5	554
9:30	70' 10"	20.5	554	6:00	75' 9.5"	20.5	554
9:45	71' 2.5"	20.5	554	7:00	76' 2"	20.5	554
10:00	71' 4"	20.5	554	8:00	76' 5.5"	20.5	554
10:30	72' 1"	20.5	554	9:00	76' 6"	20.5	554
11:00	72' 8"	20.5	554	10:00	76' 7.5"	20.5	554
11:30	[illegible]	20.5	554	11:00	76' 7.5"	20.5	554
12:00 Noon	73' 5.5"	20.5	554	12:00 Midnight	76' 9"	20.5	554
12:30 PM June 5	73' 5.5"	20.5	554	1:00 AM June 7	76' 2"	20.5	554
1:00	74'	20.5	554	2:00	76' 2"	20.5	554

Pumping Test

TIME	WATER LEVEL	INCHES IN ORIFICE METER	GPM	TIME	WATER LEVEL	INCHES IN ORIFICE METER	GPM
1:00 AM June 7	76' 1"	20.5	554				
4:00	75' 10"	20.5	554				
5:00	76' 6"	20.5	554				
6:00	75' 9"	20.5	554				
6:30	75' 9.5"	20.5	554				
Reduced pumping rate to 400 GPM at the request of Mr. W. R. Matthews							
6:40	64' 11"	12.	430				
6:45	64' 9"	12	430				
6:50	64' 8"	12	430				
6:55	64' 1"	12	430				
7:00	63' 11"	12	430				
7:05	63' 9.5"	12	430				
7:10	63' 8.5"	12	430				
7:15	63' 6"	12	430				
7:20	63' 5"	12	430				
7:25	63' 5"	12	430				
7:30	63' 4.5"	12	430				
Discontinued pumping							

WELL NO. 3

ABANDONED

Lawrence

XXXXXXX Box 28

EEEXXXX 776-3415

PERMANENT WELL #3 at WATER PLANT

Log of pipe and screen

23'	10"	Blank
23' 6"		Blank
20'		Blank
17'		Blank
18' 4"		Blank
15' 8"		Blank
10' 7"		Blank
10' 4"	10"	Screen
2'		Blank
5' 4"	10"	Screen
5'		Blank
10' 4"	10"	Screen
22'		Blank
3' 4"	10"	Screen
20' 5"	8"	Blank
20'	8"	Blank
9' 4"	8"	Screen
19'10"	8"	Blank
21'10"	8"	Blank
10' 2"	8"	Blank
4' 4"	8"	Screen
19' 9"	8"	Blank
10' 4"	8"	Screen
21' 1"	8"	Blank
4' 4"		Screen
6'		Blank

120' 20" pit casing cemented in place

WELL NO. 4

NOT IN USE, USGS MONITOR

NORTH CAROLINA DEPARTMENT OF WATER AND AIR RESOURCES
DIVISION OF GROUND WATER
BOX 9392 - RALEIGH, N. C.

APPLICATION FOR PERMIT TO CONSTRUCT A WELL

Applicant City of Laurinburg Date 6-5-69

Address Laurinburg, North Carolina

Property Owner (if other than applicant) _____

Drilling Contractor Carolina Well & Pump Company, Inc.

Location:

74 Highway Bypass	Laurinburg	Scotland
Street or Road	Town	County

Proposed Well:

Estimated depth 240, Estimated Yield _____, Purpose of Well city use

Type of Construction: gravel pack

Attach or show on reverse side of form a diagram of construction specifications.

Is this well to be a part of an existing system?: Yes x No ___

No. of existing wells in system 3 Total capacity of system 2 MPD

Attach, or show on reverse side of this form, a sketch showing location of well in relation to nearby reference points and all existing wells within a radius of 1,000 feet of the proposed well. Give distance from at least two nearby reference points, (roads, streams, etc.).

Remarks: This is for a permanent well

✓ Applicant is herewith granted a permit to construct a well as described in this application.

___ Applicant is hereby granted a permit to construct a well as described in this application under conditions given below.

___ Application is not approved for the reasons given below: _____

Permit No. 190 Date Issued 6/6/69

By James M. Pate
(Signature) (Title)

Division of Ground Water
North Carolina Department of Water & Air Resources

This permit is granted under the provisions of the N. C. Well Construction Act of 1967 and is for construction only. This permit does not waive any provisions or requirements of the Water Use Act of 1967 or any other applicable laws or regulations.

See over for instructions

Form GW 22

WELL RECORD

NORTH CAROLINA DEPARTMENT OF WATER AND AIR RESOURCES
DIVISION OF GROUND WATER
BOX 9392 - RALEIGH, N. C.

Drilling Contractor Carolina Well & Pump Co., Inc. Reg. No. 136 Well Permit No. 190

1. Town Laurinburg County Scotland
2. Location 74 Highway Bypass Quadrangle No.
   Show a sketch of location on back of form
3. Owner City of Laurinburg
   Address Laurinburg, North Carolina
4. Topography: draw, slope, hilltop, valley, flat
5. Use of Well town use Date Completed 7/8/69
6. Rig type or method rotary Total Depth 240
7. Casing: Depth Diam. Type
   From 0 to 50 ft. 20 in. Steel
8. Grout: Depth Material Method
   From 0 to 50 ft. Cement Pump
9. Screen: Depth Diam. Type and opening
   From 70- to 104 ft. 10 in. gravel pack
   116 124
10. Water Zones (depth) 150-165 (185-195 8") (200-205 8") (217-224 8")
11. Static Water Level: 9 ft. ~~above~~ below top of casing which is 2 ft. above land surface.
    Date 7/7/69
12. Yield (gpm) 715 Method of testing pump
13. Pumping Water Level: 58 ft. after 48 hrs. at 715 gpm.
14. Water Quality good Temperature (°F) —
15. Well sterilization method H. T. H.
16. Permanent Pump: Type turbine Make Peerless
    Installed- Date 9/22/69 By W. F. P.
    Capacity 700 (gpm) Hp. 30
    Intake depth 100 Airline depth 100
17. Remarks:

I do hereby certify that this well record is true and exact.

SIGNATURE OF CONTRACTOR OR AGENT

DRILLING LOG

Depth From	Depth To	Formation
0	1	Top Soil
1	12	Clay, Yellow
12	22	Sand & Clay
22	49	Sand
49	68	Clay
68	106	Sand (Clean Course)
106	115	Clay
115	124	Sand
124	141	Clay
141	147	Sand & Clay
147	170	Sand
170	176	Clay
176	185	Sand & Clay
185	210	Sand
210	216	Clay
216	227	Sand
227	261	Clay
261	263	Rock
263	302	Clay (Hard)
302	305	Rock

White copy - Department of Water & Air Resources; Blue-Drillers copy; Green-Owner's copy.

Form GW-1

CAROLINA WELL AND PUMP COMPANY, INC.
Complete Well and Pump Service

W.W.A.
N.C.W.W.A.

P.O. BOX 28
SANFORD, N. C.
TELEPHONE 776-3415

LOG OF WELL # 4

74 Highway Bypass 1,000 feet East Well # 2

LAURINBURG, NORTH CAROLINA

0-1	Top Soil
1-12	Clay, Yellow
12-22	Sand & Clay
22-49	Sand
49-68	Clay
68-106	Sand (Clean Course)
106-115	Clay
115-121	Sand
121-141	Clay
141-147	Sand & Clay
147-170	Sand
170-176	Clay
176-185	Sand & Clay
185-210	Sand
210-216	Clay
216-227	Sand
227-261	Clay
261-263	Rock
263-302	Clay (Hard)
302-305	Rock

PUMPING TEST DATA

Test conducted by: Worth Pickard Carolina Well & Pump Company, Inc.
Well Owner: City of Laurinburg Address: Laurinburg, N.C.
Pumped Well No.: 4 Location: 74 Bypass County: Scotland
Observation Well Locations: 1000 feet west
Airline Lengths: Pumped Well _____ Observation Wells _____
Remarks: _____

Pumping rate measured with: 5 X 6 Orifice Water levels measured with: E Tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Ft. to Water	Remarks
7/7/69							
9:45							
10:25	Started					11.6	
11:25	60	44	820		55.3		Water Clear
12:25	120	44	820		54.11		
1:30	185	44	820		55.4		
2:20	235	44	820		56.0		
3:20	295	44	820		56.10		
4:20	355	44	820		57.7		
5:20	415	44	820		62.9		
6:20	475	44	820		63.10		
7:20	535	44	820		64.4		
8:20	595	44	820		64.11		
9:20	655	44	820		65.7		
10:20	715	44	820		65.6		
11:20	775	44	820		65.11		
12:20	835	44	820		66.4		
1:20	895	44	820		66.10		
2:20	955	44	820		67		
3:20	1015	44	820		67.2		
4:20	1075	44	820		67.6		
5:20	1135	44	820		68.1		
6:20	1195	44	820		68		
7:15	1250	45	828		63		
8:20	1315	45	828		63		
9:20	1375	45	828		63		
10:20	1435	45	820		63.2		
10:50	1465	33	703		63.2		
11:30	1505	33	703		58		
12:30	1565	33	703		57.7		
1:30	1625	33	703		57.2		
2:30	1685	34	715		57.8		
3:30	1745	34	715		58		
4:30	1805	34	715		58		
5:30	1865	34	715		57.11		
6:30	1925	34	715		58		
7:30	1985	34	715		58.1		
8:30	2045	34	715		58		
9:30	2105	34	715		58.2		
10:30	2165	34	715		58.5		
11:30	2225	34	715		58.5		
12:30	2285	34	715		56.7		
1:30	2340	34	715		56.7		
2:30	2405	34	715		56.6		

PUMPING TEST DATA

Test conducted by: _____

Well Owner: _____ Address: _____

Pumped Well No.: _____ Location: _____ County: _____

Observation Well Locations: _____

Airline Lengths: Pumped Well _____ Observation Wells _____

Remarks: _____

Pumping rate measured with: _____ Water levels measured with: _____

Cont. Page 2

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Ft to Water	Remarks
3:30	2465	34	715			58.8	
4:30	2525	34	715			58.8	
5:30	2585	34	715			55.8	
6:30	2645	34	715			58.8	
7:30	2705	34	715			58.8	
8:30	2765	34	715			58.8	
9:30	2825	34	715			58.8	
10:30	2885	34	715			58.8	
			RECOVERY				
~~10:31~~						37.3	
~~10:32~~						22.3	
~~10:33~~						31.9	
~~10:34~~						32.6	
~~10:35~~						32.4	
~~10:36~~						31.9	
~~10:37~~						31.7	
~~10:38~~						31.5	
~~10:39~~						30.10	
~~10:40~~						30.6	
~~10:41~~						30.6	
~~10:42~~						30.3	
~~10:43~~						30.2	
~~10:44~~						30.0	
~~10:45~~						29.10	
~~10:46~~						29.6	
~~10:47~~						29.2	
~~10:48~~						29.1	
~~10:49~~						29.1	
~~10:50~~						29.1	
~~11:00~~						29	

WELL NO. 5

AWAITING INFORMATION FROM SYDNOR
WELL RICHMOND, VA

SCOTLAND Co.

NORTH CAROLINA DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES

OFFICE OF WATER AND AIR RESOURCES

GROUND WATER DIVISION

P. O. BOX 27687 – RALEIGH, N. C. 27611

WELL RECORD

DRILLING CONTRACTOR SYDNOR HYDRODYNAMICS, INC. REG. NO. 144 WELL CONSTRUCTION PERMIT NO. 2048

1. WELL LOCATION: (Show a sketch of the location on back of form). Nearest Town: Laurinburg, North Carolina (Road, Community or Subdivision and Lot No.) County: SCOTLAND Quadrangle No.
2. OWNER: City of Laurinburg WELL #5
3. ADDRESS: Laurinburg, N. C.
4. TOPOGRAPHY: draw, valley, slope, hilltop/ flat /
5. USE OF WELL: Municipal DATE: 11/12/75
6. DOES THIS WELL REPLACE AN EXISTING WELL? NO
7. TOTAL DEPTH: 392' RIG TYPE OR METHOD: ROTARY
8. FORMATION SAMPLES COLLECTED: [XX] YES No. of Bags 39
9. CASING:

From	Depth to	ft.	Inside Diam.	Wall thick. or weight / ft.	Type
0	55		29¼	.375	Steel
+2	80		12	.375	Steel
130	140		12	.375	Steel

10. GROUT:

From	to	ft	Material	Method
0	55		Cement	Pumped

11. SCREEN:

From	to	ft.	Diam.	Type and Opening
80	130	ft.	12	St. Steel #30

12. GRAVEL:

From	to	ft	Size	Material
0	140	ft	#2	Morie Sand

13. WATER ZONES(depth): 80-130
14. STATIC WATER LEVEL: 11'1" ft. above / below / top of casing. Casing is 2'6" ft. above land surface. ELEV. DATE MEASURED: 11/04/75
15. YIELD(gpm): 703 METHOD OF TESTING: Turbine
16. PUMPING WATER LEVEL: 59'5¼" ft. after 48 hours at 703 gpm.
17. CHLORINATION: Type HTH Amount 10 lbs.
18. WATER QUALITY: Analysis Attached TEMPERATURE(°F)
19. PERMANENT PUMP:(Show a sketch of well head on back of form)
    Date Installed Type Make
    Capacity (gpm) HP
    Intake Depth Airline Depth
20. HAVE YOU INFORMED THE WELL OWNER OF THE DEPARTMENTS REQUIREMENTS AND RECOMMENDATIONS?
21. REMARKS:

I do hereby certify that this well record is true and exact.

C.C. Morris 11/17/75

SIGNATURE OF CONTRACTOR OR AGENT DATE

By D.M.

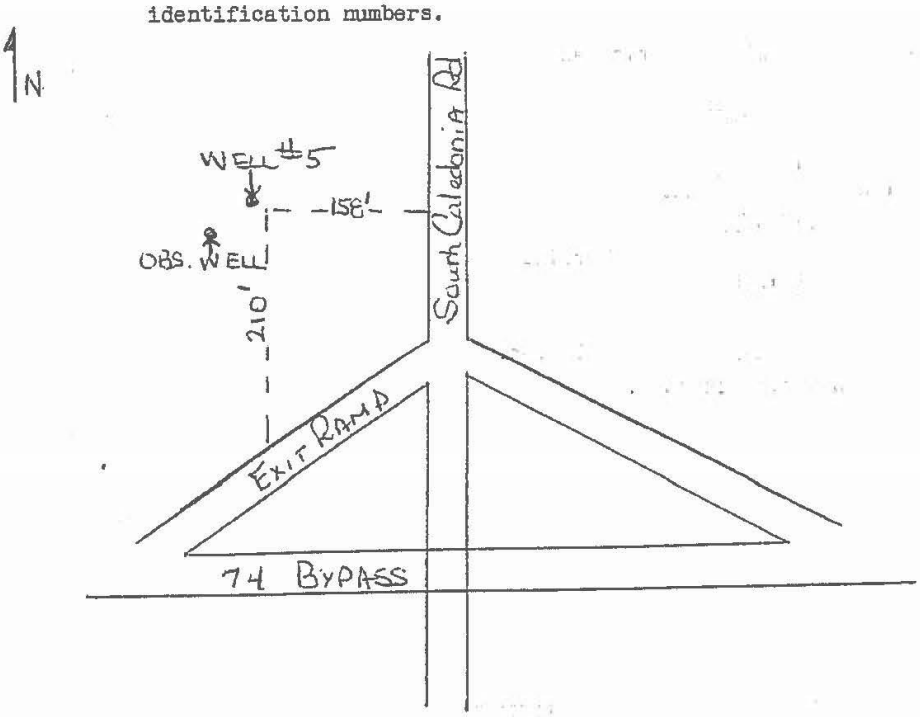
DRILLING LOG

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
	ATTACHED	

White Copy: Office of Water and Air Resources; Blue - Drillers Copy; Green - Owners Copy

WELL HEAD COMPLETION: Draw [illegible] seals, vents, access port, grout, and enclosure.

WELL LOCATION: Draw a location sketch showing the direction and distance of the well to at least two (2) nearby reference points such as roads, intersections and streams. Identify roads with State Highway road identification numbers.



WELL RECORD
Continuation Sheet

DIVISION OF GROUND WATER
BOX 9392 - RALEIGH, N. C.

Driller Sydnor Hydrodynamics, Inc. Reg. No. 144 Well Permit No. 2048

Town Laurinburg, North Carolina County Scotland County

Location South Laurinburg, North Carolina

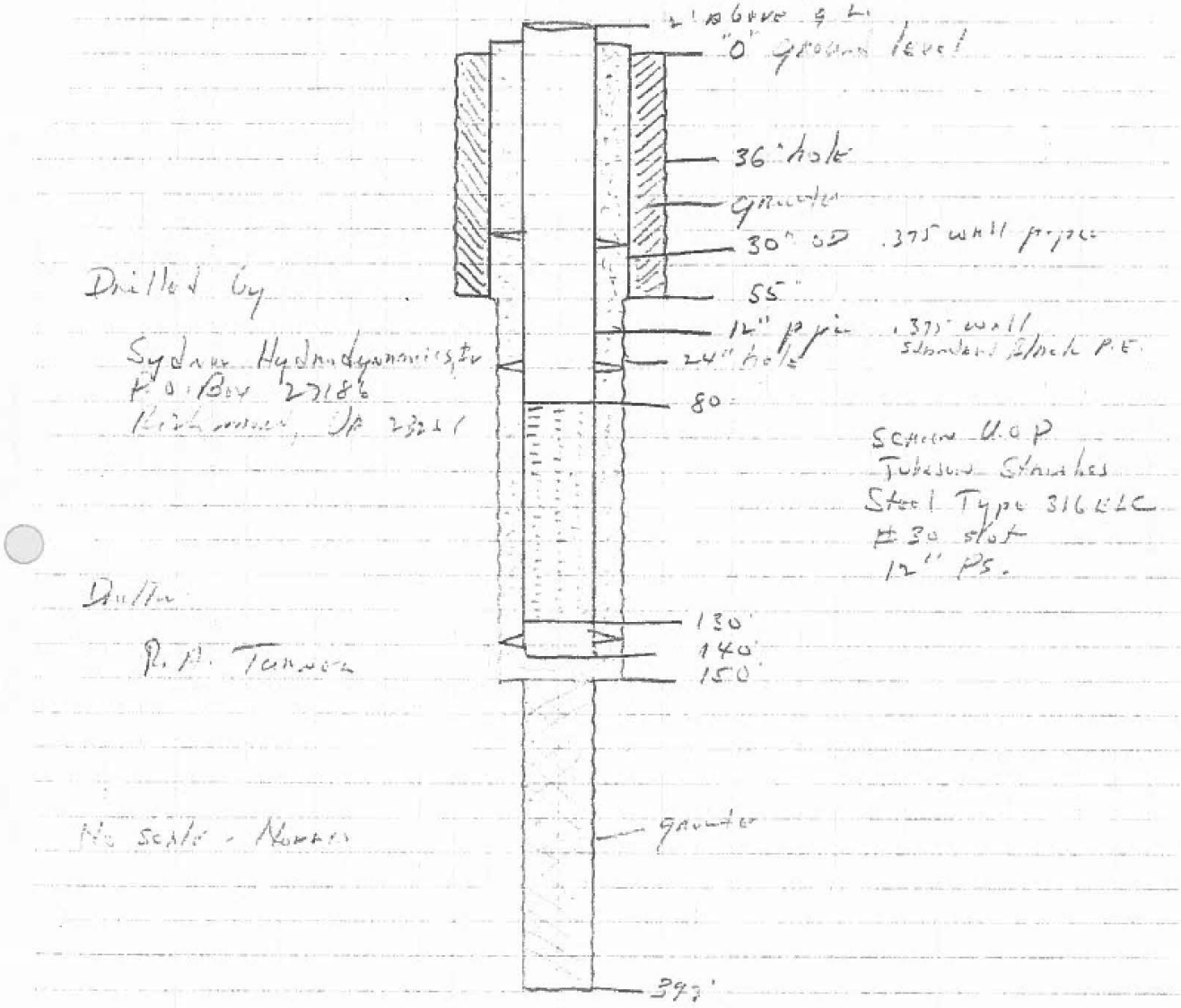
Owner City of Laurinburg, North Carolina Date September 23, 1975

DRILLING LOG

Depth From	Depth To	Formation	Depth From	Depth To	Formation
0'	5'	Brown & Yellow Sand Clay			
5'	20'	White Sand Clay			
20'	40'	Coarse White Sand Clay			
40'	90'	Coarse Sand with Some White Clay			
90'	118'	Coarse Sand with Grey & Pink Clay			
118'	125'	Coarse Sand with Grey & Pink Clay			
125'	130'	Tough Grey Clay & Sand			
130'	145'	Tough White & Grey Sand Clay			
145'	160'	Grey Soft Sand Clay			
160'	175'	White & Grey Clay with Soft Coarse Sand			
175'	220'	Tough Pink Sand Clay with Some Fine Sand			
220'	250'	Soft Sand with Pink & Grey Clay			
250'	300'	Sand with Hard Pink Clay			
300'	318'	Soft Sand with Some Pink Clay			
318'	330'	Soft Sand and Pink Clay			
330'	345'	Hard Grey Sand Clay			
345'	353'	Soft Corase Sand Rough			
353'	355'	Hard Rough Rock Streak			
355'	392'	Weathered Green Schist			

White Copy - Department of Water & Air Resources; Blue - Drillers Copy; Green - Owner's Copy.

Form GW-1a


2' above g.l.
"0" ground level
36" hole
gravel
30" OD .375 wall pipe
55'
12" pipe .375 wall
24" hole
80'
130'
140'
150'
gravel
397'

SYDNOR HYDRODYNAMICS, INC.

WELL TEST INFORMATION SHEET

CUSTOMER: city of Laurinburg — DATE STARTED: 11/04/75

Laurinburg, N C — DATE COMPLETED: 11/07/75

LOCATION: — WELL TEST NO.: 1

Well #5 — JOB NUMBER: 41317-7

WELL DESCRIPTION: Sand or Screened Well (XX) Rock Well ( )

Total Depth 140 Ft. Size 12" to 140 ' and " to '

Casing Depth 140 Ft. Screens 80-130

Construction: Domestic ( ) Class 11-B ( ) 11-A ( ) 1 ( )

Static Water Level 11'1" Ft. Measured 11-04-75 Date

Description of Formations: Sand and Clay

TEST PUMP: Turbine (XX) Sumo ( ) Piston ( ) Air ( ) Bailer ( )

Pump Intake 78 Ft. Below Ground; Air Line MScope Ft. Below Ground

Size Pump Discharge ____ Ft. Metering Device 6" x 5" orifice

Description of Pump 12 Turbine 8" drop pipe

GMC 453 Diesel Unit

TEST DATA: Static Level Before Installing Pump 11'1" Ft. 2'6" Above G. L.

Air Line ____ PSI Before Starting Pump; Time of Measurement ____

Time Test Pump Started 9:30 ; Time Test Pump Stopped 9:30

Total Hours Pumped 48 Final Capacity 703 GPM @ 59-5½" Ft.

Static Level Ft., 12'9" Ft., 16 Hr. ____ Min. After Pump Stopped.

INSTRUCTIONS: For the first hour of pumping, take readings at least every 5 minutes and thereafter at least every 15 minutes. Obtain two 1-gallon representative samples of water near the end of the test. If possible, measure recovery for time equal to 1/3 length of the test.

Samples to Froehling and Robertson 11/10/75.

WELL NO. 6

CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085 TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.

Laurinburg, North Carolina
Drillers Log - Well #4
Driller: North F. Pickard
February 17, 1978

0 - 1	Topsoil
1 - 12	Clay
12 - 18	Sand
18 - 41	Sand
41 - 56	Sand
56 - 68	Clay
68 - 96	Sand
96 - 101	Clay
101 - 119	Sand
119 - 132	Clay
132 - 141	Sand
141 - 156	Clay
156 - 170	Sand
170 - 184	Clay
184 - 196	Sand and Clay
196 - 215	Clay
215 - 224	Sand
224 - 256	Clay
256 - 262	Clay hard
262 - 264	Rock

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address: Laurinburg, N. C.
Pumped Well No.: _____ Location: near new water plant County: Scotland
Observation Well Location: at well site #6
Airline Lengths: Pumped Well _____ Observation Wells 1
Remarks: _____

Pumping rate measured with: _____ Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
4-18-79							
10:00 AM	start					12' 3"	static
10:30 "	30 min.					20' 0"	
10:45 "	45 "	(15 min.)				20' 7"	
11:00 "	60 "					21' 4"	
11:15 "	75 "					21' 8"	
11:30 "	90 "					22' 0"	
11:45 "	105 "					22' 3"	
12:00 PM	120 "					22' 7"	
12:30 "	150 "	(30 min.)				23' 0"	
1:00 "	180 "					23' 4"	
2:00 "	240 "	(60 min.)				23'11"	
3:00 "	300 "					24' 0"	
[illegible]:00 "	360 "					24' 3"	
5:00 "	420 "					24' 6"	
6:00 "	480 "					24'11"	
7:00 "	540 "					25' 0"	
8:00 "	600 "					25' 2"	
9:00 "	660 "					25' 3"	
10:00 "	720 "					25' 4"	
11:00 "	780 "					25' 4"	
12:00 AM	840 "					25' 5"	4-19-79
1:00 "	900 "					25' 5"	
2:00 "	960 "					25' 5"	
3:00 "	1020 "					25' 6"	
4:00 "	1080 "					25' 6"	
5:00 "	1140 "					25' 6"	
6:00 "	1200 "					25' 7"	
7:00 "	1260 "					25' 7"	
8:00 "	1320 "					25' 7"	
9:00 "	1380 "					25' 7"	
10:00 "	1440 "					25' 8"	
11:00 "	1500 "					25'10"	
12:00 PM	1560 "					26' 0"	
1:00 "	1620 "					26' 1"	
2:00 "	1680 "					26' 2"	
3:00 "	1740 "					26' 3"	
4:00 "	1800 "					26' 3"	
[illegible]:00 "	1860 "					26' 3"	
[illegible]:00 "	1920 "					26' 3"	
7:00 "	1980 "					26' 4"	
8:00 "	2040 "					26' 5"	
9:00 "	2100 "					26' 6"	
10:00 "	2160 "					26' 7"	

cont.

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address: Laurinburg, N. C.
Pumped Well No.: _____ Location: near new water plant County: Scotland
Observation Well Location: site of well #6
Airline Lengths: Pumped Well _____ Observation Wells _____
Remarks: _____

Pumping rate measured with: _____ Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
4-19-79							
11:00 PM	60 min.						
12:00 AM	2280 "					26' 7"	4-20-79
1:00 "	2340 "					26' 7"	
2:00 "	2400 "					26' 7"	
3:00 "	2460 "					26' 7"	
4:00 "	2520 "					26' 7"	
5:00 "	2580 "					26' 7"	
6:00 "	2640 "					26' 8"	
7:00 "	2700 "					26' 8"	
8:00 "	2760 "					26' 8"	
9:00 "	2820 "					26' 9"	
10:00 "	2880 "					26' 9"	
		Recovery Data					
10:00 AM	5 min.					26' 9"	
10:05 "	5 "					23' 2"	
10:10 "	10 "					21' 9"	
10:15 "	15 "					21' 0"	
10:20 "	20 "					20' 5"	
10:25 "	25 "					20' 0"	
10:30 "	30 "					19' 8"	
10:35 "	35 "					19' 4"	
10:40 "	40 "					19' 0"	
10:45 "	45 "					18'10"	
10:50 "	50 "					18' 7"	
10:55 "	55 "					18' 4"	
11:00 "	60 "					18' 3"	
11:15 "	75 "	(15 min.)				17' 9"	
11:30 "	90 "					17' 6"	
11:45 "	105 "					17' 2"	
12:00 PM	120 "					16' 8"	

WELL NO. 7

ABANDONED, REPLACED BY WELL NO. 20 BUT ORIGINAL DRAWDOWN INCLUDED

CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085 TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.

City of Laurinburg, North Carolina
Water Improvements
Drillers Log - Well # 7
Driller: Thurman F. Pickard
Date: February 24, 1978

0	- 1	Topsoil
1	- 8	Clay
8	- 37	Sand
37	- 44	Clay
44	- 50	Sand
50	- 58	Clay
58	- 108	Sand
108	- 118	Clay
118	- 126	Sand
126	- 142	Clay
142	- 164	Sand
164	- 190	Sand and Clay
190	- 196	Clay
196	- 200	Sand
200	- 214	Clay
214	- 221	Sand
221	- 230	Clay
230	- 242	Sand
242	- 255	Clay
255	- 300	Sand and Clay
300	- 312	Clay
312	- 326	Clay with Sand

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Caddy
Well Owner: City of Laurinburg Address:
Pumped Well No.: 7 Location: County: Scotland
Observation Well Location:
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: 6" x 5" orifice Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
12-19-79							
12:30 PM	start	13"	450			11" 0"	static
12:35	5 min.		"				
12:40	10 "		"			61' 7"	
12:45	15 "		"			65' 9"	
12:50	20 "		"			67' 3"	
12:55	25 "		"			68' 5"	
1:00	30 "		"			69' 4"	
1:05	35 "		"			70'10"	
1:10	40 "		"			71' 8"	
1:15	45 "		"			72' 0"	
1:20	50 "		"			72' 3"	
1:25	55 "		"			72' 6"	
1:30	60 "		435			72' 8"	
1:35	65 "		"			72'10"	
1:40	70 "		"			72'11"	
1:45	75 "		"			73' 1"	
1:50	80 "		"			73' 3"	
1:55	85 "		"			73' 5"	
2:00	90 "		450			73' 6"	
2:05	95 "		"			74' 2"	
2:10	100 "		"			74' 9"	
2:15	105 "		"			75' 3"	
2:20	110 "		"			75' 7"	
2:25	115 "		"			75'11"	
2:30	120 "		"			76' 2"	
3:30	60 minutes		"			78' 2"	
4:30	240 "		"			79' 5"	
5:30	300 "		"			80' 2"	
6:30	360 "		"			80' 7"	
7:30	420 "		"			81' 0"	
8:30	480 "		"			81' 5"	
9:30	540 "		"			81' 9"	
10:30	600 "		"			82' 1"	
11:30	660 "		"			82' 5"	
12:30 AM	720 "		"			82' 9"	
1:30	780 "		"			83' 0"	
2:30	840 "		"			83' 4"	
3:30	900 "		"			83' 7"	
4:30	960 "		"			83'11"	
5:30	1020 "		"			84' 2"	
6:30	1080 "		"			84' 2"	
7:30	1140 "		"			84' 1"	
8:30	1200 "		"			84' 3"	
9:30	1260 "		520			84' 3"	

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: _____ Address: _____
Pumped Well No.: 7 Location: _____ County: Scotland
Observation Well Location: _____
Airline Lengths: Pumped Well _____ Observation Wells _____
Remarks: _____

Pumping rate measured with: 6" x 5" orifice Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
9:35 AM	5 min.		520			94' 5"	
9:40	10 "		"			94'10"	
9:45	15 "		"			95' 2"	
9:50	20 "		"			95' 7"	
9:55	25 "		"			95'10"	
10:00	30 "		"			96' 2"	
10:15	15 minutes		"			97' 3"	
10:30	60 "		"			97' 6"	
10:45	75 "		"			97' 9"	
11:00	90 "		"			98' 0"	
12:00	60 minutes		"			98' 8"	
12:30	30 "		"			98' 2"	

Recovery Data

12:30 PM	5 min.					98' 2"	
12:35	10 "					31' 9"	
12:40	15 "					28' 1"	
12:45	20 "					26' 7"	
12:50	25 "					25' 3"	
12:55	30 "					24' 4"	
1:00	35 "					23' 5"	
1:05	40 "					22' 6"	
1:10	45 "					22' 3"	
1:15	50 "					21' 9"	
1:20	55 "					21' 5"	
1:25	60 "					21' 1"	
1:30	65 "					20'10"	
1:35	70 "					20' 5"	
1:40	75 "					20' 2"	
1:45	80 "					20' 0"	
1:50	85 "					19'10"	
1:55	90 "					19' 8"	
2:00	95 "					19' 7"	
2:05	100 "					19' 6"	
2:10	105 "					19' 5"	
2:15	110 "					19' 4"	
[illegible]	115 "					19' 4"	
2:25	120 "					19' 3"	
2:30	125 "					19' 3"	

WELL NO. 8

PUMPING TEST DATA

Test conducted by: Caroline Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address:
Pumped Well No.: 8 Location: Behind college County: Scotland
Observation Well Location: on site
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: 6"x3" orifice Water levels measured with: Electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
6/20/79							
3:30 PM	start		625			20' 0"	static
3:35 "	5 "		"			70' 7"	
3:40 "	10 "		"			74' 0"	
3:45 "	15 "		"			76' 0"	
3:50 "	20 "		"			77' 0"	
3:55 "	25 "		"			77' 5"	
4:00 "	30 "		"			78' 2"	
4:05 "	35 "		"			78' 9"	
4:10 "	40 "		"			79' 1"	
4:15 "	45 "		"			79' 5"	
4:20 "	50 "		"			79' 9"	
4:25 "	55 "		"			80' 0"	
[illegible]0 "	60 "		"			80' 3"	
4:35 "	65 "		"			80' 6"	
4:40 "	70 "		"			80' 8"	
4:45 "	75 "		"			80' 8"	
4:50 "	80 "		"			80' 9"	
4:55 "	85 "		"			80' 9"	
5:00 "	90 "		"			80' 10"	
5:05 "	95 "		"			81' 0"	
5:10 "	100 "		"			81' 2"	
5:15 "	105 "		"			81' 4"	
5:20 "	110 "		"			81' 6"	
5:25 "	115 "		"			81' 7"	
5:30 "	120 "		"			81' 8"	
6:30 "	60 min.		"			82' 5"	
7:30 "	240 "		"			82' 10"	
8:30 "	300 "		"			83' 4"	
9:30 "	360 "		"			83' 9"	
10:30 "	420 "		"			84' 0"	
11:30 "	480 "		"			84' 4"	
12:30 AM	540 "		"			84' 6"	6/21/79
1:30 "	600 "		"			84' 7"	
2:30 "	660 "		"			84' 8"	
3:30 "	720 "		"			84' 9"	
4:30 "	780 "		"			84' 10"	
5:30 "	840 "		"			85' 0"	
6[illegible] "	900 "		"			85' 0"	
7:[illegible]0 "	960 "		"			84' 11"	
8:30 "	1020 "		"			85' 0"	
9:30 "	1080 "		"			85' 0"	
0:30 "	1140 "		"			85' 0"	
1:30 "	1200 "		"			85' 1"	

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co.
Well Owner: City of Laurinburg Address:
Pumped Well No.: 8 Location: County:
Observation Well Location: on site
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: Water levels measured with:

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
6/21/79							
12:30 PM	1260 min.		650			85' 0"	Adjust GPM
1:30 "	1320 "		"			90' 0"	
2:30 "	1380 "		"			90' 4"	
3:30 "	1440 "		"			90' 4"	
		Recovery Data					
3:30 PM						90' 4"	
3:35 "						33' 1"	
3:40 "						29' 2"	
3:45 "						27' 10"	
3:50 "						27' 0"	
3:55 "						26' 4"	
4:00 "						25' 11"	
4:05 "						25' 5"	
4:10 "						25' 0"	
4:15 "						24' 8"	
4:20 "						24' 4"	
4:25 "						24' 0"	
4:30 "						23' 11"	
4:35 "						23' 8"	
4:40 "						23' 6"	
4:45 "						23' 4"	
4:50 "						23' 1"	
4:55 "						23' 0"	
5:00 "						22' 11"	
5:05 "						22' 10"	
5:10 "						22' 9"	
5:15 "						22' 9"	
5:20 "						22' 8"	
5:25 "						22' 7"	
5:30 "						22' 6"	

WELL NO. 9

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address:
Pumped Well No.: 9 Location: Behind college County: Scotland
Observation Well Location: #9 well site
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: 6"x5" orifice Water levels measured with: Electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
7/5/79							
10:00 AM	start		725			17' 7"	static
10:05 "	5 min.		"			78' 6"	
10:10 "	10 "		"			85' 7"	
10:15 "	15 "		"			89' 8"	
10:20 "	20 "		"			91' 9"	
10:25 "	25 "		"			93' 4"	
10:30 "	30 "		"			94' 11"	
10:35 "	35 "		"			95' 6"	
10:40 "	40 "		"			96" 1"	
10:45 "	45 "		"			96' 10"	
10:50 "	50 "		"			97' 6"	
10:55 "	55 "		"			98' 0"	
11:00 "	60 "		700			98' 8"	
11:05 "	65 "		"			99' 2"	
11:10 "	70 "		"			99' 9"	
11:15 "	75 "		"			100' 2"	
11:20 "	80 "		"			100' 6"	
11:25 "	85 "		"			100' 10"	
11:30 "	90 "		"			101' 2"	
11:35 "	95 "		"			101' 6"	
11:40 "	100 "		"			101' 9"	
11:45 "	105 "		"			102' 0"	
11:50 "	110 "		"			102' 2"	
11:55 "	115 "		"			102' 5"	
12:00 PM	120 "		"			102' 6"	7/6/79
1:00 "	180 "		675			105' 6"	adjust GMP
2:00 "	240 "		"			100' 0"	
3:00 "	300 "		"			101' 0"	
4:00 "	360 "		"			101' 3"	
5:00 "	420 "		"			101' 9"	
6:00 "	480 "		650			101' 11"	
7:00 "	540 "		"			102' 0"	
8:00 "	600 "		"			102' 1"	
9:00 "	660 "		"			102' 2"	
10:00 "	720 "		"			102' 4"	
11:00 "	780 "		"			102' 6"	
12:00 AM	840 "		"			102' 9"	
1:00 "	900 "		"			103' 0"	
2:00 "	960 "		"			103' 2"	
3:00 "	1020 "		"			103' 3"	
4:00 "	1080 "		"			103' 4"	
5:00 "	1140 "		"			103' 4"	
6:00 "	1200 "		"			103' 5"	
7:00 "	1260 "		"			103' 5"	

2

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co.
Well Owner: City of Laurinburg Address:
Pumped Well No.: 9 Location: County:
Observation Well Location: #9 well site
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: Water levels measured with:

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
7/6/79							
8:00 AM	1320 min.		650			103' 5"	
9:00 "	1380 "		"			103' 5"	
10:00 "	1440 "		"			103' 5"	
11:00 "	1500 "		"			103' 6"	
12:00 PM	1560 "		"			103' 6"	
1:00 "	1620 "		"			103' 7"	
2:00 "	1680 "		"			103' 6"	
3:00 "	1740 "		"			103' 6"	
4:00 "	1800 "		"			103' 7"	
5:00 "	1860 "		"			103' 6"	
6:00 "	1920 "		"			103' 5"	
[illegible]:00 "	1980 "		"			103' 6"	
[illegible]:00 "	2040 "		"			103' 6"	
9:00 "	2100 "		"			103' 6"	
10:00 "	2160 "		"			103' 7"	
11:00 "	2220 "		"			103' 7"	
12:00 AM	2280 "		"			103' 7"	
1:00 "	2340 "		"			103' 6"	
2:00 "	2400 "		"			103' 5"	
3:00 "	2460 "		"			103' 6"	
4:00 "	2520 "		"			103' 6"	
5:00 "	2580 "		"			103' 7"	
6:00 "	2640 "		"			103' 7"	
7:00 "	2700 "		"			103' 6"	
8:00 "	2760 "		"			103' 7"	
9:00 "	2820 "		"			103' 7"	
10:00 "	2880 "		"			103' 7"	

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co.
Well Owner: City of Laurinburg Address:
Pumped Well No.: 9 Location: County:
Observation Well Location: #9 well site
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: Water levels measured with:

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
7/7/79							
		Recovery Data					
10:00 AM	5 min.					103' 7"	
10:05 "	10 "					44' 10"	
10:10 "	15 "					40' 6"	
10:15 "	20 "					37' 7"	
10:20 "	25 "					36' 2"	
10:25 "	30 "					35' 0"	
10:30 "	35 "					33" 11"	
10:35 "	40 "					32' 3"	
10:40 "	45 "					31' 9"	
10:45 "	50 "					31' 2"	
[illegible]:50 "	55 "					30' 9"	
[illegible]:55 "	60 "					30' 3"	
11:00 "	65 "					30' 0"	
11:05 "	70 "					29' 7"	
11:10 "	75 "					29' 3"	
11:15 "	80 "					29' 0"	
11:20 "	85 "					28' 9"	
11:25 "	90 "					28' 7"	
11:30 "	95 "					28' 5"	
11:35 "	100 "					28' 4"	
11:40 "	105 "					28' 0"	
11:45 "	110 "					27' 9"	
11:50 "	115 "					27' 6"	
11:55 "	120 "					27' 3"	
12:00 "	125 "					27' 0"	

WELL NO. 10

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address:
Pumped Well No.: 10 Location: County: Scotland
Observation Well Location: 48 ft. from main well
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: 5 x 6" orifice Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
Oct. 16, 1970							
3:00 PM	start		700			12' 3"	static
3:05 "	5 min		"			70' 0"	
3:10 "	10 "		"			72' 1"	
3:15 "	15 "		"			74' 2"	
3:20 "	20 "		"			75'10"	
3:25 "	25 "		"			77' 2"	
3:30 "	30 "		"			78'10"	
3:35 "	35 "		"			80' 0"	
3:40 "	40 "		"			81' 5"	
3:45 "	45 "		"			82' 7"	
3:50 "	50 "		"			83'11"	
3:55 "	55 "		"			85' 1"	
4:00 "	60 "		"			86' 6"	
4:05 "	65 "		"			87'10"	
4:10 "	70 "		"			88' 2"	
4:15 "	75 "		"			88' 6"	
4:20 "	80 "		"			88' 0"	
4:25 "	85 "		"			89' 0"	
4:30 "	90 "		"			89' 5"	
4:35 "	95 "		"			89' 0"	
4:40 "	100 "		"			90' 0"	
4:45 "	105 "		"			90' 2"	
4:50 "	110 "		"			90' 4"	
4:55 "	115 "		"			90' 5"	
5:00 "	120 "		"			90' 6"	
6:00 "	60 minutes		"			93' 5"	
7:00 "	240 "		"			95' 5"	
8:00 "	300 "		"			96'10"	
9:00 "	360 "		"			98' 8"	
10:00 "	420 "		"			99' 6"	
11:00 "	480 "		"			100' 3"	
12:00 AM	540 "		"			100' 5"	
1:00 "	600 "		650			100' 6"	
2:00 "	660 "		"			100' 7"	
3:00 "	720 "		"			100' 8"	
4:00 "	780 "		"			100'10"	
5:00 "	840 "		"			100'11"	
6:00 "	900 "		"			101' 0"	
7:00 "	960 "		"			101' 1"	
8:00 "	1020 "		"			101' 2"	
9:00 "	1080 "		"			101' 4"	
10:00 "	1140 "		"			101' 5"	
11:00 "	1200 "		"			101' 6"	
12:00 PM	1260 "		"			101' 7"	

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. John Gaddy
Well Owner: City of Laurinburg Address:
Pumped Well No.: 10 Location: County:
Observation Well Location:
Airline Lengths: Pumped Well Observation Wells 48 ft. from main well
Remarks:

Pumping rate measured with: 5 x 6: orifice Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
1:00 PM	1320 min.		650			101' 8"	
2:00 "	1380 "		"			101' 8"	
3:00 "	1440 "		"			101' 9"	
4:00 "	1500 "		"			101' 9"	
5:00 "	1560 "		"			101' 9"	
6:00 "	1620 "		"			101'10"	
7:00 "	1680 "		"			101'10"	
8:00 "	1740 "		"			101'10"	
9:00 "	1800 "		"			101'11"	
10:00 "	1860 "		"			101'11"	
11:00 "	1920 "		"			101'11"	
12:00 AM	1980 "		"			101'11"	
1:00 "	2040 "		"			101'11"	
[illegible]00 "	2100 "		"			102' 0"	
[illegible]:00 "	2160 "		"			102' 0"	
4:00 "	2220 "		"			102' 0"	
5:00 "	2280 "		"			102' 0"	
6:00 "	2340 "		"			102' 0"	
7:00 "	2400 "		"			102' 1"	
8:00 "	2460 "		"			102' 1"	
9:00 "	2520 "		"			102' 2"	
10:00 "	2580 "		"			102' 2"	
11:00 "	2640 "		"			102' 4"	
12:00 "	2700 "		"			102' 4"	
1:00 "	2760 "		"			102' 3"	
2:00 "	2820 "		"			102' 4"	
3:00 "	2880 "		"			102' 4"	

Recovery Data

	Feet to water	Time	Feet to water
3:00 PM	102' 4"	4:05 PM	30' 1"
3:05 "	46' 1"	4:10 "	29' 9"
3:10 "	40' 6"	4:15 "	29' 5"
3:15 "	38' 4"	4:20 "	29' 0"
3:20 "	36' 5"	4:25 "	28' 7"
3:25 "	35' 0"	4:30 "	28' 3"
3:30 "	34' 6"	4:35 "	27'11"
3:35 "	33' 3"	4:40 "	27' 8"
[illegible]0 "	32'10"	4:45 "	27' 6"
[illegible]5 "	32' 7"	4:50 "	27' 4"
3:50 "	31' 3"	4:55 "	27' 3"
3:55 "	30'10"	5:00 "	27' 1"
4:00 "	30' 6"		

WELL NO. 11

BILLSWELL DRILLING FAYETTEVILLE, NC
HAVE INCLUDED GW-1 FORM

...MENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
...VIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
...OX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-3083

WELL CONSTRUCTION RECORD

FOR OFFICE USE ONLY	
Quad. No.	Serial No.
Lat.	Long. / Pc
Minor Basin	
Basin Code	
Header Ent.	GW-1 Ent.

DRILLING CONTRACTOR Bill's Well Drilling Co.

DRILLER REGISTRATION NUMBER 106

STATE WELL CONSTRUCTION PERMIT NUMBER: 82-0083-WS-0054

WELL LOCATION. (Show sketch of the location below)

Nearest Town Laurinburg, N. C.

Physical Plant at St. Andrews College
(Road, Community, or Subdivision and Lot No.)

County Scotland

OWNER City of Laurinburg

ADDRESS P. O. Box 249
(Street or Route No.)

Laurinburg, N. C. 28352
City or Town State Zip Code

DATE DRILLED 8-19-88 USE OF WELL community

TOTAL DEPTH 178' CUTTINGS COLLECTED ☒ Yes ☐ No

DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

STATIC WATER LEVEL: 21 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.

YIELD (gpm) 525 METHOD OF TEST pumping

AQUIFER ZONES (depth): 66 - 71, 76 - 81, 96 - 101, 121 - 166

CHLORINATION Type HTH Amount 10 lbs

CASING

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
	0	60 Ft.	20	std	steel
	+2	66 Ft.	12	std	steel
	71	76 Ft.	12	std	steel
ROUT:	81	96	12	std	steel
	101	121	12	std	steel
	166	Depth 176	12 Material	std	Method steel
	From	To Ft.			
	0	60 Ft.	cement		pouring

CREEN

	Depth From	Depth To	Diameter	Slot Size	Material
	66	71 Ft.	12 in.	30 in.	SS
	76	81 Ft.	12 in.	30 in.	SS
	96	101 Ft.	12 in.	30 in.	SS
RAVEL PACK	121	166	12	30	SS

	Depth From	Depth To	Size	Material
	0	176 Ft.	buckshot	gravel
	From	To Ft.		

REMARKS

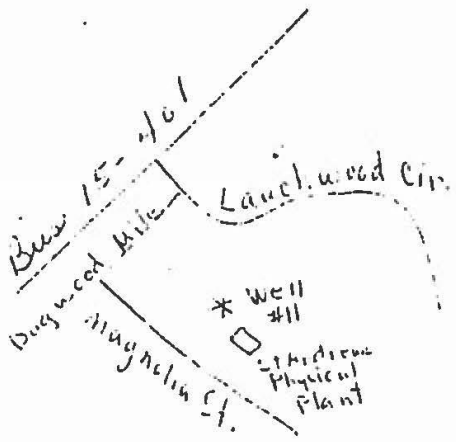
DRILLING LOG

From	To	Formation Description
0	1	Topsoil
1	5	White & red clay
5	12	Pink sand & white clay
12	20	Yellow sand & clay
20	45	Yellow & white sand
45	47	White clay
47	55	Yellow sand
55	63	White clay
63	76	White coarse sand & charcoal
76	77	White clay
77	85	White coarse sand & charcoal
85	94	Gray clay
94	103	White coarse sand
103	115	White clay
115	165	White coarse sand & gravel
165	215	Gray & red clay
215	250	Gray & red clay

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Charles R. Underwood, Inc.
Municipal Pump Sales & Service

2189 Everett Dowdy Road
Sanford, North Carolina 27330

Phone (919) 775-2463
Fax (919) 708-7232

City of Laurinburg

Well # 11

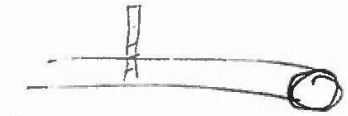
New Casing Log

0 – 69	Steel Casing
69-74	SS Screen
74-79	Steel Casing
79-84	SS Screen
84-99	Steel Pipe
99-104	SS Screen
104-124.5'	Steel Pipe
124.5' - 154.5'	SS Screen
154.5' – 156'	Steel Pipe

8" Sch. 40 Steel Pipe
8" 30 Slot SS Screen

WELL NO. 12

PUMPING TEST DATA



Test conducted by: Charles R. Underwood, Inc.
Well Owner: City of Laurinburg Address: Laurinburg, N.C.
Pumped Well No.: 12 Location: Hasty Road County: Scotland
Observation Well Locations:
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: orifice 6x8 Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
2-30-93			Static	water level		25' 11"	
12:30 pm							
1:00		11.5	545				started test
1:02	2	"	"			51' 3"	
1:03	3	"	"			55' 4"	
1:04	4	"	"			57' 8"	
1:05	5	"	"			59' 1"	
1:06	6	"	"			59' 9"	
1:07	7	"	"			60' 2"	
1:08	8	"	"			60' 4"	
1:10	10	"	"			60' 5"	
1:15	15	"	"			61' 3"	
1:20	20	"	"			61' 8"	
1:25	25	"	"			62' 1"	
1:30	30	"	"			62' 6"	
1:45	45	"	"			63' 7"	
2:00	60	"	"			64' 1"	
2:30	90	"	"			64' 8"	
3:00	120	"	"			65' 2"	
3:30	150	"	"			65' 7"	
4:00	180	"	"			66' 0"	
5:00	240	"	"			66' 11"	
6:00	300	"	"			67' 4"	
7:00	360	"	"			67' 6"	
8:00	420	"	"			67' 9"	
9:00	480	"	"			67' 11"	
10:00	540	"	"			68' 4"	
11:00	600	"	"			68' 7"	
12:00	660	"	"			69' 1"	
1:00 AM	720	"	"			68' 4	
2:00	780	"	"			68' 9"	
3:00	840	"	"			69' 1"	
4:00	900	"	"			69' 5"	
5:00	960	"	"			69' 7"	
6:00	1020	"	"			70' 1"	
7:00	1080	"	"			70' 6"	
8:00	1140	"	"			70' 9"	
9:00	1200	"	"			70' 11"	
10:00	1260	"	"			71' 1"	
11:00	1320	"	"			71' 2"	
12:00	1380	"	"			71' 3"	
1:00	1440	"	"			71' 2"	~~End of test~~ Stopped pump
						—	

Page 2

PUMPING TEST DATA

Test conducted by: Charles R U

Well Owner: City of Lawrenburg Address:

Pumped Well No.: 12 Location: County: Scotland

Observation Well Locations:

Discharge Lengths: Pumped Well Observation Wells

Remarks:

Pumping rate measured with: Water levels measured with:

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
12-31-93			Recovery				
1:00 pm						71' 2"	stopped pump
1:02	2					61' 8"	
1:03	3					57' 4"	
1:04	4					53' 8"	
1:05	5					50' 1"	
1:06	6					47' 11"	
1:07	7					46' 5"	
1:08	8					45' 2"	
1:09	9					44' 3"	
1:10	10					43' 5"	
1:15	15					42'	
1:20	20					41' 2"	
1:25	25					40' 6"	
1:30	30					39' 11"	
2:00	60					36' 5"	
3:00	120					34' 8"	
4:00	180					32' 9"	
5:00	240					31' 7"	
6:00	300					30' 9"	
7:00	360					30' 1"	
8:00	420	add				29' 4"	
9:00	480					28' 11"	
10:00	540					28' 6"	
11:00	600					28' 1"	
12:00	660					27' 8"	
1:00 Am	720					27' 4"	

WELL NO. 13

PUMPING TEST DATA

Test conducted by: Charles R. Underwood
Well Owner: City of Laurinburg Address: Laurinburg
Pumped Well No.: # 13 Location: County: Scotland
Observation Well Locations:
Pipe Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: 8 x 6 orifice Water levels measured with: electric tape

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
April 18, 1995							
9:45 AM		Static water level				12' 3"	
10:00			609				Started test
10:02	2	14.5	609			38' 4"	
10:04	4	14.5	609			41' 2"	
10:06	6	14.5	609			42' 8"	
10:08	8	14.5	609			43' 7"	
10:10	10	14.5	609			43' 11"	
10:12	12	14.5	609			44' 3"	
10:14	14	14.5	609			44' 6"	
10:16	16	14.5	609			44' 9"	
10:18	18	14.5	609			44' 10"	
10:20	20	14.5	609			44' 11"	
10:25	25	14.5	609			45' 1"	
10:30	30	14.5	609			45' 5"	
10:35	35	14.5	609			45' 8"	
10:40	40	14.5	609			45' 9"	
10:45	45	14.5	609			45' 10"	
10:50	50	14.5	609			45' 11"	
10:55	55	14.5	609			46' 1"	
11:00	60	14.5	609			46' 5"	
11:10	70	14.5	609			46' 8"	
11:20	80	14.5	609			46' 10"	
11:30	90	14.5	609			47' 3"	
11:45	105	14.5	609			47' 9"	
12:00	120	14.5	609			48' 2"	
12:30	150	14.5	609			48' 6"	
1:00	180	14.5	609			48' 9"	
1:30	210	14.5	609			49'	
2:00	240	14.5	609			49' 2"	
3:00	300	14.5	609			49' 5"	
4:00	360	14.5	609			49' 9"	
5:00	420	14.5	609			50' 1"	
6:00	480	14.5	609			50' 2"	
7:00	540	14.5	609			50' 4"	
8:00	600	14.5	609			50' 5"	
9:00	660	14.5	609			50' 7"	
10:00	720	14.5	609			50' 10"	
11:00	780	14.5	609			51' 2"	
12:00	840	14.5	609			51' 3"	
1:00	900	14.5	609			51' 5"	
2:00	960	14.5	609			51' 8"	
3:00	1020	14.5	609			51' 9"	
4:00	1080	14.5	609			51' 11"	
5:00	1140	14.5	609			52' 4"	

PUMPING TEST DATA

Test conducted by: Charles R. Underwood
Well Owner: City of Laurinburg Address: Laurinburg, NC
Pumped Well No.: 13 Location: County: Scotland
Observation Well Locations:
Pipe Lengths: Pumped Well Observation Wells
Remarks:

Pumping rate measured with: Water levels measured with:

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
6:00	1200	14.5	609			52' 6"	
7:00	1260	14.5	609			52' 10"	
8:00	1320	14.5	609			52' 11"	
9:00	1380	14.5	609			52' 11"	
10:00	1440	14.5	609			52' 10"	
11:00	1500	14.5	609			52' 11"	
12:00	1560	14.5	609			52' 11"	stopped pump
2:02	2					40' 1"	
2:04	4					36' 5"	
2:06	6					33' 2"	
2:08	8					31' 4"	
2:10	10					29' 8"	
2:15	15					28' 2"	
2:20	20					27' 5"	
2:25	25					26' 8"	
2:30	30					25' 1"	
2:40	40					24' 3"	
2:50	50					23' 10"	
1:00	60					23' 4"	
1:30	90					22' 2"	
2:00	120					21' 9"	
3:00	180					20'	
4:00	240					19' 8"	
5:00	300					19' 1"	
6:00	360					18' 7"	
7:00	420					18' 1"	
10:00 AM	1320					12' 7"	

WELL NO. 14

Russell Underwood
#2264

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

PUMPING TEST RECORD

Test Conducted by: Charles R. Underwood, Inc. Well Construction Permit, No. WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
   Honey Street (Well # 14) Quadrangel No. _____
   (Road No., Community, or Subdivision and Lot No.)
2. OWNER: City of Laurinburg (Name) P.O. Box 249, Laurinburg, NC 28352 (Address)
3. USE OF WELL: ( ) Domestic (X) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 188 ft. Casing Diameter 10 in. Casing type: Black steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc. Was casing grouted? yes
6. STATIC WATER LEVEL: 11' 2" ft. above (below) top of casing.
   Date Measured: Jan. 6, 2000 Casing is 3 ft. above land surface.
7. WELL YIELD: 602 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 60' 1" ft. after 24 hours at 602 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 11:00 AM, Jan. 6, 2000 PUMP STOPPED: 11:00 AM Jan. 7, 200
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: Orifice
12. TEST PUMP: Type vertical turbine Make Goulds Horse Power 100 Hp engine
    Capacity 700 gpm gpm at 120 T D H. Intake Depth 125' ft.

Time	Water Level	Pumping Rate			Remarks
10:45 AM	11' 2"				static water level
11:00					Started test
11:02	42' 5"	602			
11:04	43' 6"	602			
11:06	45' 2"	602			
11:08	45' 10"	602			
11:10	46' 3"	602			
11:12	46' 8"	602			
11:14	46'10"	602			
11:16	47' 2"	602			
11:18	47' 7"	602			
11:20	47' 9"	602			
11:25	48' 5"	602			

GW-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
11:30	49' 7"	602			
11:35	50' 3"	602			
11:40	50' 4"	602			
11:50	50' 6"	602			
11:55	50' 7"	602			
12:00	50' 8"	602			
12:30pm	53' 3"	602			
1:00	55'	602			
1:30	55' 5"	602			
2:00	55' 6"	602			
3:00	56' 1"	602			
4:00	56' 8"	602			
5:00	57' 9"	602			
6:00	58' 1"	602			
7:00	57' 8"	602			
8:00	58' 1"	602			
9:00	58' 7"	602			
10.00	58' 11"	602			
11:00	59' 1"	602			
12:00	59' 4"	602			
1:00	59' 5"	602			
2:00	59' 7"	602			
3:00	59' 8"	602			
4:00	59' 8"	602			
5:00	59' 11"	602			
6:00	60' 1"	602			

OWL 49 Revised 1/90

Submit one copy to the Groundwater Section and one to the

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
7:00	60' 1"	602			
8:00	60' 2"	602			
9:00	59' 7"	602			
10:00	59' 9"	602			
11:00	60' 1"	602			stopped pump
11:02	37' 1"				
11:04	34' 3"				
1:06	32' 8"				
1:08	30' 11"				
1:10	29' 6"				
1:15	27' 5"				
1:20	25' 8"				
1:25	24' 1"				
1:30	22' 10"				
2:00	18' 4"				
1:00	16' 6"				
2:00	15' 1"				
:00	14' 7"				
:00	13' 4"				
5:00	13' 4"				
5:00	13'				
0:00 AM	11' 7"				Jan. 8, 2000

-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

WELL NO. 15

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

Russell Underwood
2264

PUMPING TEST RECORD

Test Conducted by: Charles R. Underwood, Inc Well Construction Permit. No. WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
   Well # 15 Quadrangel No. _____
   (Road No., Community, or Subdivision and Lot No.)
2. OWNER: City of Laurinburg P.O. Box 249, Laurinburg, NC
   Name Address
3. USE OF WELL: ( ) Domestic (X) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 178 ft. Casing Diameter 10 in. Casing type: Black steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc. Was casing grouted? yes
6. STATIC WATER LEVEL: 19' 7" ft. above (below) top of casing.
   Date Measured: 11-22-99 Casing is 1 ft. above land surface.
7. WELL YIELD: 627 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 73' 5" ft. after 24 hours at 627 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 11/22/99 - 4:00 PM PUMP STOPPED: 11/23/99- 4:00 PM
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: 8 x 6 orifice and piezometer
12. TEST PUMP: Type vertical turbine Make Goulds Horse Power 100 Hp engine
    Capacity 700 gpm gpm at 120 T D H. Intake Depth 125 ft.

Time	Water Level	Pumping Rate			Remarks
3:50 PM	19' 7"				Static level
4:00		627			Started Test
4:02	51' 5"	627			
4:04	59' 4"	627			
4:06	60' 5"	627			
4:08	60' 7"	627			
4:10	61' 6"	627			
4:12	61' 10"	627			
4:14	61' 11"	627			
4:16	52' 1"	627			
~~4:18~~	~~62' 3"~~	~~627~~			
4:20	62' 5"	627			
4:22	62' 8"	627			

GW-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
4:24	62' 10"	627			
4:26	63' 2"	627			
4:28	63' 6"	627			
4:30	63' 9"	627			
4:35	64' 2"	627			
4:40	64' 5"	627			
4:45	64' 7"	627			
4:50	64' 8"	627			
4:55	64' 11"	627			
5:00	65' 1"	627			
5:10	65' 7"	627			
5[illegible]0	65' 11"	627			
5:30	66' 1"	627			
6:00	67' 2"	627			
6:30	67' 8"	627			
7:00	68' 2"	627			
7:30	69' 3"	627			
8:00	70'	627			
8:30	70' 3"	627			
9:00	70' 6"	627			
0:00	70' 10"	627			
1:00	71' 2"	627			
2:00	71' 3"	627			
1[illegible]0	71' 7"	627			
2:00	71' 9"	627			
3:00	72'	627			

[illegible] Submit one copy to the Groundwater Section and one to the C.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
4:00	72' 1"	627			
5:00	72' 5"	627			
6:00	72' 5"	627			
7:00	72' 8"	627			
8:00	72' 9"	627			
9:00	72' 9"	627			
0:00	72' 11"	627			
1:00	73' 1"	627			
2:00	73' 3"	627			
1:00	73' 4"	627			
2:00	72' 3"	627			
3:00	73' 4"	627			
4:00	73' 5"	627			stopped pump
4:02	47'				
4:04	44' 4"				
4:06	42' 5"				
4:08	40' 0"				
4:10	39' 2"				
4:12	38' 6"				
4:14	37' 5"				
4:16	36' 8"				
4:18	35' 11"				
4:20	34' 4"				
4:22	33' 10"				
4:24	33' 5"				
4:26	33' 1"				

-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
4:28	32' 11"				
4:30	32' 9"				
4:45	30' 11"				
5:00	30' 1"				
6:00	27' 6"				
7:00	26' 3"				
8:00	25' 8"				
9:00	24' 4"				
0:00	24' 2"				
1:00	23' 9"				
2:00	22' 8"				stopped test

iW-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

WELL NO. 16

Russell Underwood #2264

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

PUMPING TEST RECORD

Test Conducted by: Charles R. Underwood, Inc. Well Construction Permit, No. WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
Well # 16 Quadrangel No. _____
(Road No., Community, or Subdivision and Lot No.)
2. OWNER: City of Laurinburg, P.O. Box 249, Laurinburg, NC 28352
Name Address
3. USE OF WELL: ( ) Domestic (x) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 148' ft. Casing Diameter 10" in. Casing type: Black steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc. Was casing grouted? yes
6. STATIC WATER LEVEL: 18' 2" ft above (below) top of casing.
Date Measured: April 5, 2000 Casing is 1 ft. above land surface.
7. WELL YIELD: 350 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 59' 9" ft. after 24 hours at 350 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 11:00 AM, April 5, 2000 PUMP STOPPED: 11:00 AM, April 6, 20(
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: 6 x 4 orifice
12. TEST PUMP: Type vertical Make Goulds Horse Power 100 Hp engine
Capacity 700 gpm gpm at 120 T D H. Intake Depth 125 ft.

Time	Water Level	Pumping Rate			Remarks
~~10: 45 AM~~			Static water level		18' 2"
11:00 AM		350			Started test
11:01	36'6"	350			
11:02	39' 1"	350			
11:03	40' 10"	350			
11:04	42' 2"	350			
11:05	43' 8"	350			
11:06	44' 4"	350			
11:07	45' 1"	350			
11:08	45' 9"	350			
11:09	46' 2"	350			
~~11:10~~	~~46' 6"~~	~~350~~			

W-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
11:15	47' 4"	350			
11:20	47' 11"	350			
11:25	48' 3"	350			
11:30	48' 7"	350			
11:45	49' 2"	350			
12:00	49'6"	350			
12:30	49' 8"	350			
1:00	49' 10"	350			
1:30	50' 7"	350			
2:00	51' 3"	350			
2:30	51' 10"	350			
:00	52' 6"	350			
3:30	53' 1"	350			
4:00	53' 5"	350			
5:00	54'	350			
6:00	54' 6"	350			
7:00	54' 11"	350			
8:00	55' 6"	350			
9:00	55' 9"	350			
10:00	56' 2"	350			
11:00	56' 7"	350			
12:00	57' 2"	350			
1:00	57' 5"	350			
2:00	57' 11"	350			
3:00	58' 4"	350			
4:00	58' 6"	350			

Submit one copy to the Groundwater Section and one to the o

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
5:00	58' 8"	350			
6:00	58' 9"	350			
7:00	59' 1"	350			
8:00	59' 3"	350			
9:00	59' 4"	350			
0:00	59' 7"	350			
1:00	59' 8"	350			Stopped pump
1:02	44' 5"				
1:04	41' 3"				
1:06	39' 7"				
1:08	37' 10"				
1:[illegible]0	36' 9"				
1:12	35' 11"				
1:14	35' 2"				
1:16	34' 6"				
1:18	33' 11"				
1:20	33' 6"				
1:25	32' 10"				
1:30	32' 5"				
2:00	29' 8"				
1:00	28' 1"				
2:00	27' 5"				
3:00	26' 9"				
4:00	26' 3"				
5:00	25' 00				
1:00	24' 4"				

V-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

ime	Water Level	Pumping Rate			Remarks
)0	58' 8"	350			
)0	58' 9"	350			
)0	59' 1"	350			
)0	59' 3"	350			
)0	59' 4"	350			
)0	59' 7"	350			
)0	59' 8"	350			Stopped pump
)2	44' 5"				
4	41' 3"				
6	39' 7"				
8	37' 10"				
0	36' 9"				
2	35' 11"				
4	35' 2"				
6	34' 6"				
8	33' 11"				
0	33' 6"				
5	32' 10"				
0	32' 5"				
0	29' 8"				
0	28' 1"				
0	27' 5"				
0	26' 9"				
0	26' 3"				
0	25' 00				
0	24' 4"				

Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record
Continued

Time	Water Level	Pumping Rate			Remarks
7:00	23' 11"				
8:00	23' 7"				
9:00	23' 4"				
0:00	23'				
1:00	22' 10"				
:00 AM	21' 4"				next day, April 7, 2000
:00 AM	20' 10"				April 7, 2000

-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

WELL NO. 17

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

Russell Underwood #2264

PUMPING TEST RECORD

Conducted by: Charles R. Underwood, Inc Well Construction Permit. No WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
Well # 17 Quadrangel No. _____
(Road No., Community, or Subdivision and Lot No.)
2. OWNER: City of Laurinburg, P.O. Box 249, Laurinburg, NC
Name Address
3. USE OF WELL: ( ) Domestic (x) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 170 ft. Casing Diameter 10 in. Casing type: steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc Was casing grouted? yes
6. STATIC WATER LEVEL: 12' 2" ft. above/below top of casing.
Date Measured: Jan. 11, 2000 Casing is 1 ft. above land surface.
7. WELL YIELD: 556 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 52' 8" ft. after 24 hours at 556 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 1:00PM-1-11-00 PUMP STOPPED: 1-12-00, 1:00 PM
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: 8 x 6 orifice and piezometer
12. TEST PUMP: Type vertical turbine Make Goulds Horse Power 100 Hp engine
Capacity 700 gpm gpm at 120 T D H. Intake Depth 125 ft.

Time	Water Level	Pumping Rate			Remarks
12:50	12' 2"				static water level
1:00PM		556			Started test
1:02	34'	556			
1:04	37' 1"	556			
1:06	38' 2"	556			
1:08	39' 4"	556			
1:10	39' 8"	556			
1:12	40' 1"	556			
1:14	40' 6"	556			
1:16	40' 8"	556			
1:18	40' 11"	556			
1:20	41' 4"	556			
1:25	41' 9"	556			

W-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
1:30	42'	556			
2:00	43' 8"	556			
2:30	44' 4"	556			
3:00	45' 1"	556			
4:00	47' 2"	556			
5:00	48' 3"	556			
6:00	48' 5"	556			
7:00	49' 2"	556			
8:00	50' 4"	556			
9:00	51'	556			
0:00	51' 2"	556			
1:00	51' 4"	556			
2:00	51' 5"	556			
1:00	51' 6"	556			
2:00	51' 6"	556			
3:00	51' 8"	556			
4:00	51' 10"	556			
5:00	52' 2"	556			
6:00	52' 2"	556			
7:00	52' 3"	556			
8:00	52' 5"	556			
9:00	52' 4"	556			
10:00	52' 6"	556			
11:00	52' 8"	556			
12:00	52' 7"	556			
1:00	52' 8"	556			stopped pump

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Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
1:02	36'				
1:04	33' 4"				
1:06	31' 2"				
1:08	29' 8"				
1:10	28' 2"				
1:12	27' 5"				
1:14	26' 10"				
1:16	26' 4"				
1:18	25' 9"				
1:20	25' 1"				
1:25	23' 8"				
1:30	21' 3"				
2:00	18' 3"				
3:00	16' 4"				
4:00	15' 8"				
5:00	14' 9"				
6:00	14' 1"				
10:00AM	12' 5"				end test , Jan. 13, 2000

-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

WELL NO. 18

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

Russell Underwood #2264

PUMPING TEST RECORD

Test Conducted by: Charles R. Underwood, Inc Well Construction Permit. No WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
   Well # 18 Quadrangel No. _____
   (Road No., Community, or Subdivision and Lot No.)
2. OWNER: City of Laurinburg, P.O. Box 249, Laurinburg, NC
   Name Address
3. USE OF WELL: ( ) Domestic (x) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 169 ft. Casing Diameter 10 in. Casing type: Std. wt. black steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc. Was casing grouted? yes
6. STATIC WATER LEVEL: 23' 8" ft. above / below top of casing.
   Date Measured: Jan. 13, 2000 Casing is 1 ft. above land surface.
7. WELL YIELD: 550 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 60' 10" ft. after 24 hours at 550 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 1/13/00 -11:00 AM PUMP STOPPED: 1/14/00- 11:00 AM
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: 6 x 5 orifice and piezometer
12. TEST PUMP: Type vertical turbine Make Goulds Horse Power 100 Hp engine
    Capacity 700 gpm gpm at 120 T D H. Intake Depth 125 ft.

Time	Water Level	Pumping Rate			Remarks
10:50 AM	23' 8"				Static water level
11:00		550			Started TEst
11:01	32' 1"	550			
11:02	37' 9"	550			
11:03	39' 10"	550			
11:04	41' 8"	550			
11:06	43' 5"	550			
11:08	44' 8"	550			
11:10	45' 7"	550			
11:15	47' 3"	550			
11:20	48' 9"	550			
11:25	49' 11"	550			
11:30	50' 8"	550			

GW-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
11:40	52' 1"	550			
11:50	53' 6"	550			
12:00	54' 3"	550			
12:30	55' 7"	550			
1:00	56' 1"	550			
1:30	56' 9"	550			
2:00	57' 2"	550			
2:30	57' 6"	550			
3:00	57' 11"	550			
3:30	58' 2"	550			
4:00	58' 5"	550			
:00	58' 8"	550			
6:00	58' 10"	550			
7:00	58' 11"	550			
8:00	59' 1"	550			
9:00	59' 3"	550			
10:00	59' 4"	550			
11:00	59' 6"	550			
12:00	59' 7"	550			
1:00	59' 8"	550			
2:00	59' 11"	550			
3:00	60' 2"	550			
4:00	60' 4"	550			
5:00	60' 6"	550			
6:00	60' 7"	550			
7:00	60' 7"	550			

GW-40 Revised 1/90

Submit one copy to the Groundwater Section and one to th

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
8:00	60' 9"	550			
9:00	60' 9½"	550			
10:00	60' 10"	550			
11:00	60' 10"	550			stopped pump
11:01	51' 3"				
11:02	47' 6"				
11:03	46' 3"				
11:04	45' 7"				
11:05	44' 6"				
11:10	42' 8"				
11:25	41' 1"				
30	40' 3"				
11:45	38' 7"				
12:00	36' 9"				
12:30	34' 2"				
1:00	31' 5"				
2:00	29' 4"				
3:00	27' 6"				
4:00	26' 11"				
5:00 pm	25' 8"				
9:00 AM	23' 10"				end test Jan. 15, 2000

W-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

WELL NO. 19

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611
(919)733-3221

Russell Underwood #2264

PUMPING TEST RECORD

Test Conducted by: Charles R. Underwood, Inc. Well Construction Permit. No. WS0600923

1. WELL LOCATION: Nearest Town: Laurinburg County: Scotland
   Well # 19
   (Road No., Community, or Subdivision and Lot No.) Quadrangel No. _____
2. OWNER: City of Laurinburg, P.O. Box 249, Laurinburg, NC 28352
   Name Address
3. USE OF WELL: ( ) Domestic (X) Public ( ) Industrial ( ) Irrigation ( ) _____ Other
4. WELL DEPTH: 118 ft. Casing Diameter 10 in. Casing type: Black steel
5. DRILLING CONTRACTOR: Charles R. Underwood, Inc. Was casing grouted? yes
6. STATIC WATER LEVEL: 5'5" ft (above) (below) top of casing.
   Date Measured: 3-1-00 Casing is 3 ft. above land surface.
7. WELL YIELD: 600 gpm. Specific Capacity: _____ gpm/ft.-dd.
8. PUMPING WATER LEVEL: 61' 4" ft. after 24 hours at 600 gpm.
9. CHLORINATION: Type HTH Amount 10#
10. TIME AND DATE: PUMP STARTED: 10:00 AM, Mar. 1, 2000 PUMP STOPPED: 10:00 AM. 3-2-2000
11. WATER LEVEL MEASURING DEVICE: electric tape FLOW MEASURING DEVICE: 6 x 8 orifice
12. TEST PUMP: Type vertical Make Goulds Horse Power 100 Hp engine
    Capacity 700 gpm gpm at 120 T D H. Intake Depth 125' ft.

Time	Water Level	Pumping Rate			Remarks
9:50 AM			Static water level		5'5"
10:00		600			Started Test
10:01	46' 1"	600			
10:02	46' 4"	600			
10:03	47' 1"	600			
10:04	47' 8"	600			
10:05	48'	600			
10:06	48' 3"	600			
10:07	48' 7"	600			
10:08	48' 11"	600			
10:09	49' 2"	600			
10:10	49' 6"	600			
10:15	50' 1"	600			

GW-40 Revised 1/90 Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
0:20	50' 6"	600			
0:25	50' 10"	600			
0:30	51' 2"	600			
0:40	51' 9"	600			
0:50	52' 1"	600			
1:00	52' 5"	600			
1:15	53'	600			
1:30	53' 6"	600			
1:45	53' 11"	600			
2:00	54' 2"	600			
2:30	54' 10"	600			
[illegible]0	55' 3"	600			
1:30	55' 8"	600			
2:00	56' 1"	600			
3:00	56' 8"	600			
4:00	57' 2"	600			
5:00	57' 6"	600			
6:00	57' 11"	600			
7:00	58' 1"	600			
8:00	58' 3"	600			
9:00	58' 5"	600			
10:00	58' 7"	600			
11:00	58' 10"	600			
12:00	59' 4"	600			
1:00	59' 6"	600			
2:00	59' 8"	600			

TW-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
3:00	59' 11"	600			
4:00	60' 2"	600			
5:00	60' 5"	600			
6:00	60' 9"	600			
7:00	61'	600			
8:00	61' 1"	600			
9:00	61' 2"	600			
10:00	61' 4"				Stopped pump
10:01	48' 4"				
10:02	43' 6"				
10:03	42' 1"				
10:04	40'				
10:05	39' 4"				
10:10	36' 10"				
10:15	34' 6"				
10:20	32' 8"				
10:25	31' 2"				
10:30	29' 10"				
11:00	25' 11"				
11:30	22' 9"				
12:00	20' 8"				
1:00	19' 3"				
2:00	18' 2"				
3:00	17. 5"				
4:00	16' 4"				
5:00	15' 6"				

;W-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the owner.

Pumping Test Record

Continued

Time	Water Level	Pumping Rate			Remarks
6:00	14' 7"				
7:00	13' 9"				
8:00	12' 10"				
9:00	11'				
10:00	10' 2"				Stopped test

3W-40 Revised 1/90

Submit one copy to the Groundwater Section and one to the

WELL NO. 20

WELL NO. 20 REPLACED WELL NO. 7

Phone (910) 775-2463
Fax (919) 708-7232

Charles R. Underwood, Inc
Municipal Pump Sales Service

2000 Boone Trail Rd
Sanford, NC 27330

NC 2769A

Aquifer Pumping Test - Discharge (Pumping Well)

Client	City of Laurinburg	**Location**	Berwick Dr.
Well ID	Well No. 20	**Pump**	Line Shft Turbine
Static	16.6 ft.	**Flow Rate**	627 gpm
PL measurement	Sonic Meter	**Flow Measurement**	6x5 Orifice Tube
Personnel	Nicholas Ammons		

Date & Time	t (min.)	PL (ft)	s (ft)	Date & Time	t (min.)	PL (ft)	s (ft)
7/16/12 12:40 PM	Start	*16.6*	0	7/16/12 8:40 PM	480	82	65.4
7/16/12 12:41 PM	1	48.3	31.7	7/16/12 9:40 PM	540	82	65.4
7/16/12 12:42 PM	2	50.4	33.8	7/16/12 10:40 PM	600	82.6	66
7/16/12 12:43 PM	3	52.7	36.1	7/16/12 11:40 PM	660	82.9	66.3
7/16/12 12:44 PM	4	54.2	37.6	7/17/12 12:40 AM	720	83.5	66.9
7/16/12 12:45 PM	5	56.8	40.2	7/17/12 1:40 AM	780	83.9	67.3
7/16/12 12:46 PM	6	58.5	41.9	7/17/12 2:40 AM	840	84.4	67.8
7/16/12 12:47 PM	7	59.3	42.7	7/17/12 3:40 AM	900	85	68.4
7/16/12 12:49 PM	9	60.9	44.3	7/17/12 4:40 AM	960	85.1	68.5
7/16/12 12:51 PM	11	62.6	46	7/17/12 5:40 AM	1020	85.1	68.5
7/16/12 12:53 PM	13	63.5	46.9	7/17/12 6:40 AM	1080	85.4	68.8
7/16/12 12:55 PM	15	64.4	47.8	7/17/12 7:40 AM	1140	85.5	68.9
7/16/12 1:00 PM	20	66.2	49.6	7/17/12 8:40 AM	1200	85.5	68.9
7/16/12 1:05 PM	25	67	50.4	7/17/12 9:40 AM	1260	85.7	69.1
7/16/12 1:10 PM	30	69.4	52.8	7/17/12 10:40 AM	1320	86.2	69.6
7/16/12 1:15 PM	35	70.4	53.8	7/17/12 11:40 AM	1380	86.3	69.7
7/16/12 1:20 PM	40	71.1	54.5	7/17/12 12:40 PM	1440	86.7	70.1
7/16/12 1:30 PM	50	72.2	55.6				
7/16/12 1:40 PM	60	73.1	56.5				
7/16/12 1:55 PM	75	74.3	57.7				
7/16/12 2:10 PM	90	75	58.4				
7/16/12 2:25 PM	105	75.7	59.1				
7/16/12 2:40 PM	120	76.3	59.7				
7/16/12 3:10 PM	150	77.3	60.7				
7/16/12 3:40 PM	180	77.8	61.2				
7/16/12 4:40 PM	240	79	62.4				
7/16/12 5:40 PM	300	80.2	63.6				
7/16/12 6:40 PM	360	81	64.4				
7/16/12 7:40 PM	420	81.5	64.9				

Phone (910) 775-2463
Fax (919) 708-7232

Charles R. Underwood, Inc
Municipal Pump Sales Service

2000 Boone Trail Rd
Sanford, NC 27330

NC2769H

Aquifer Pumping Test - Recovery (Pumping Well)

Client	City of Laurinburg	**Location**	Berwick Dr.
Well ID	Well No. 20	**Pump**	Line Shft Turbine
Static	16.6 ft.	**Flow Rate**	627 gpm
PL measurement	Sonic Meter	**Flow Measurement**	6x5 Orifice Tube
Personnel	Nicholas Ammons		

Date & Time	t (min.)	WL (ft)	s' (ft)	Date & Time	t (min.)	WL (ft)	s' (ft)
7/17/12 12:40 PM	Stop	86.7	70.1				
7/17/12 12:41 PM	1	56	39.4				
7/17/12 12:42 PM	2	52.3	35.7				
7/17/12 12:43 PM	3	49.4	32.8				
7/17/12 12:44 PM	4	47.6	31				
7/17/12 12:45 PM	5	46	29.4				
7/17/12 12:46 PM	6	44.8	28.2				
7/17/12 12:47 PM	7	43.7	27.1				
7/17/12 12:49 PM	9	42	25.4				
7/17/12 12:50 PM	10	NM	#VALUE!				
7/17/12 12:51 PM	11	40.7	24.1				
7/17/12 12:53 PM	13	39.5	22.9				
7/17/12 12:55 PM	15	38.6	22				
7/17/12 1:00 PM	20	36.8	20.2				
7/17/12 1:05 PM	25	35.5	18.9				
7/17/12 1:10 PM	30	34.4	17.8				
7/17/12 1:15 PM	35	33.6	17				
7/17/12 1:20 PM	40	32.8	16.2				
7/17/12 1:30 PM	50	31.7	15.1				
7/17/12 1:40 PM	60	30.7	14.1				
7/17/12 1:55 PM	75	29.6	13				
7/17/12 2:10 PM	90	28.8	12.2				
7/17/12 2:40 PM	120	27.6	11				