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December 5, 2017

Ms. Liz Price
North Carolina Department of Environmental Quality
Wilmington Regional Office
Division of Waste Management - UST Section
127 Cardinal Drive Extension
Wilmington, North Carolina 28405

Re: Phase II Limited Site Assessment Report
Pantry # 3125
116 Piney Green Road
Jacksonville, North Carolina
NCDEQ Incident Number NA

Dear Ms. Price:

ATC Associates of North Carolina, P.C. (ATC), on behalf of Circle K Stores, Inc. (Circle K), is submitting the enclosed Phase II Limited Site Assessment Report for the referenced site.

If you have any questions, please contact me at (919) 561-3893.

Sincerely,

ATC Associates of North Carolina, P.C.

A handwritten signature in blue ink that reads 'Maureen Jackson'.

Maureen Jackson, P.G.
Senior Project Manager

cc: Mr. Brent Puzak – Circle K Stores, Inc.

PHASE II LIMITED SITE ASSESSMENT REPORT

For

PANTRY #3125

116 PINEY GREEN ROAD

JACKSONVILLE, NORTH CAROLINA

Prepared By:

ATC ASSOCIATES OF NORTH CAROLINA, LLC

609A PINER ROAD, SUITE 115

WILMINGTON, NORTH CAROLINA 28409

TELEPHONE (919) 871-0999

Prepared For:

CIRCLE K STORES, INC.

1100 SITUS COURT, SUITE 100

RALEIGH, NORTH CAROLINA 27606

PHASE II LIMITED SITE ASSESSMENT REPORT

December 5, 2017

Site Name: Pantry #3125
Site Address: 116 Piney Green Road
Jacksonville, Onslow County, North Carolina

Facility I.D.: 0-0000021309
Latitude: 35°47'11.06" North
Source: GIS Address Matching
UST Incident Number: NA
Longitude: 77°22'42.47" West

UST Owner: Circle K Stores, Inc.
Address: 1100 Situs Court, Suite 100
Raleigh, North Carolina 27606
Telephone (919) 774-6700
UST Operator: Circle K Stores, Inc.
Address: 1100 Situs Court, Suite 100
Raleigh, North Carolina 27606
Telephone (919) 774-6700

Property Owner: AG Lee Oil Company, Inc.
Address: P.O. Box 237
Smithfield, North Carolina 27577
Telephone: Unknown
Property Occupant: Vacant
Address: 116 Piney Green Road
Jacksonville, North Carolina
Not applicable

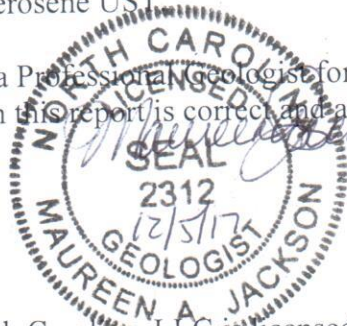
Consultant: ATC Associates of North Carolina, LLC
Address: 609A Piner Road, Suite 115, Wilmington, North Carolina 28409
Telephone (919) 871-0999

Analytical Laboratory: Contest Analytical Laboratory
Address: 39 Spruce Street, East Longmeadow, Massachusetts 28078
Telephone (413) 525-2332
State Certification No. 652

Release Information

Date Discovered: May 15, 2017
Estimated Quantity Of Release: Unknown
Cause of Release: UST system operations
UST Information: Three 10,000-gallon gasoline USTs, one 6,000-gallon diesel UST, and one 4,000-gallon kerosene UST.

I, Maureen A. Jackson, a Professional Geologist for ATC Associates of North Carolina, LLC, do certify that the information contained in this report is correct and accurate to the best of my knowledge.



ATC Associates of North Carolina, LLC is licensed to practice engineering in North Carolina. The certification number of the company is C-1598.

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PHASE II LIMITED SITE ASSESSMENT REPORT
FOR
PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, NORTH CAROLINA

ATC Associates of North Carolina, LLC (ATC) has prepared the following report for Circle K Stores, Inc. (Circle K) on limited site assessment (LSA) activities performed at the Pantry #3125 in Jacksonville, North Carolina. This report has been prepared pursuant to applicable sections of Title 15A of the North Carolina Administrative Code (NCAC), Chapter 2, Subchapter 2L and in accordance with the State of North Carolina Department of Environmental Quality (NCDEQ), Division of Waste Management (DWM), Underground Storage Tank (UST) Section *Guidelines for Assessment and Corrective Action for UST Releases*, effective July 15, 2008.

1.0 SITE HISTORY AND CHARACTERIZATION

1.1 UST OWNER AND OPERATOR INFORMATION

Three 8,000-gallon gasoline USTs, one 6,000-gallon diesel UST, and one 4,000-gallon kerosene UST were removed from the referenced facility on May 15, 2017. The USTs and their appurtenances were owned by Circle K Stores, Inc. (formerly The Pantry) of Raleigh, North Carolina. Information regarding each of the tanks is provided below.

1.2 UST INFORMATION

UST ID	PRODUCT	CAPACITY (gals.)	MATERIALS	INSTALL DATE	UST STATUS	RELEASE ASSOCIATED (Yes/No)
1	Gasoline	8,000	UST: Fiberglass; Piping: Fiberglass	10/30/1989	Removed	Yes
2	Gasoline	8,000	UST: Fiberglass; Piping: Fiberglass	10/30/1989	Removed	Yes
3	Gasoline	8,000	UST: Fiberglass; Piping: Fiberglass	10/30/1989	Removed	Yes
4	Diesel	6,000	UST: Fiberglass; Piping: Fiberglass	10/30/1989	Removed	Yes
5	Kerosene	4,000	UST: Fiberglass; Piping: Fiberglass	10/30/1989	Removed	Yes

Figure 1 is a topographical map of the site and surrounding area. **Figure 2** is a site map which depicts the site and pertinent structures, including the location of the USTs and appurtenances.

1.3 AST INFORMATION

No ASTs were observed on the site.

1.4 SITE CHARACTERISTICS

Presently, the site is vacant. The USTs and their appurtenances were removed from the referenced facility on May 15, 2017. Surface cover at the site consists of asphalt and concrete.

1.5 RELEASE INFORMATION

During closure activities, soil samples were collected from the sidewalls of the UST basin, along the product lines, and at the dispenser islands. Laboratory analytical results indicated soil impacted above State Action Level for Total Petroleum Hydrocarbons (TPH)-Gasoline Range Organics (GRO) and/or TPH-Diesel Range Organics (DRO). A 24-Hour Release and UST Leak Reporting Form was submitted to NCDEQ on May 15, 2017.

As part of the Initial Abatement Action (IAA) report, ATC personnel installed and collected a groundwater sample from MW-1 on June 15, 2017. Laboratory analytical results indicated benzene, total xylenes, naphthalene, 1,2,4-trimethylbenzene, lead, bis(2-ethylhexyl)phthalate, 2-methylnaphthalene, C₅-C₈ aliphatics, C₉-C₁₈ aliphatics, and C₉-C₂₂ aromatics above the North Carolina Groundwater Quality Standard (2L Standard) in the sample collected from MW-1. The IAA Report was submitted to the NCDEQ on June 30, 2017.

2.0 LIMITED SITE ASSESSMENT RISK CLASSIFICATION AND LAND USE

In order to evaluate the following, a review of available site-specific, local and regional data was performed to include:

- A well survey within a 1,000-foot radius of the subject facility, including a record inquiry.
- Identification of wellhead protection areas.
- Researching geology and hydrogeology of the region, including topography, soil types, and surface water drainage patterns.
- Identification of surface waters within a 1,500-foot radius of the subject facility.
- Land use observations (site reconnaissance) and zoning classifications.
- A visual survey for subsurface structures and potential impacts from the source area.
- Gathering information on adjacent property owners and occupants.

Part I – Groundwater/Surface Water/Vapor Impacts

High Risk:

1. *Has the discharge or release contaminated any water supply well including any used for non-drinking purposes?*
NO

2. *Is a water supply well used for drinking water located within 1,000 feet of the source area of the discharge or release?* **YES**

According to the City of Jacksonville Utilities Department and the Onslow Water and Sewer Authority (ONWASA), public water is supplied to the site and adjacent properties. The Jacksonville Utilities Department and ONWASA indicated that 145 Piney Green Road, located within 1,000 feet of the site, is not connected to the municipal water supply. Additional potential well houses were observed during the site reconnaissance activities; however these properties are connected to the municipal water supply. The locations of the observed water supply wells are shown on **Figure 3**.

3. *Is a water supply well used for any purpose (e.g. irrigation, washing cars, industrial cooling water, filling swimming pools) located within 250 feet of the source area of the release or discharge?* **NO**
4. *Does groundwater within 500 feet of the source area of the discharge or release have the potential for future use in that there is no other source of water supply other than the groundwater?* **NO**
5. *Do vapors from the discharge or release pose a threat of explosion because of accumulation of the vapors in a confined space or pose any other serious threat to public health, public safety, or the environment?* **NO**
6. *Are there any other factors that would cause the discharge or release to pose an imminent danger to public health, public safety, or the environment?* **NO**

At the time of this report, factors have not been identified that would appear to pose an imminent danger to public health, public safety, or the environment.

Intermediate Risk:

7. *Is a surface water body located within 500 feet of the source area of the discharge or release?* **YES**
A tributary of Northeast Creek is located on the western property boundary of the site.

*If yes, does the maximum groundwater contaminant concentration exceed the surface water quality standards and criteria found in 15A NCAC 2B .0200 by a factor of 10? **YES***

8. *Is the source area of the discharge or release located within a designated wellhead protection area as defined in 42 USC 300h-7(e)? **NO***

9. *Is the discharge or release located in the Coastal Plain Physiographic Region as designated on a map entitled "Geology of North Carolina" published by the Department in 1985? **YES***

*If yes, is the source area of the discharge or release located in an area in which there is recharge to an unconfirmed or semi-confined aquifer that is being used or may be used as a source of drinking water? **NO***

10. *Do the levels of groundwater contamination for any contaminant exceed the gross contamination levels (GCLs) established by the Department? **NO***

Part II – Land Use

Property Containing Source Area of Discharge or Release:

The questions below pertain to the property containing the source area of the release.

1. *Does the property contain one or more primary or secondary (permanent or temporary) residences? **NO***

2. *Does the property contain a school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly? **NO***

The property is currently vacant.

3. *Does the property contain a commercial (e.g., retail, warehouse, office/business space, etc.) or industrial (e.g., manufacturing, utilities, industrial research and development, chemical/petroleum bulk storage, etc.) enterprise, and inactive commercial or industrial enterprise, or is the land undeveloped? **YES***

The property is currently vacant.

4. *Do children visit the property? **NO***

5. *Is access to the property reliably restricted consistent with its use (e.g., by fences, security personnel or both)? **NO***

The site is not restricted.

6. *Do pavement, building, or other structures cap the contaminated soil? **YES***

The area is covered by the current convenient store building. The UST basin, driveways, and parking areas are covered by asphalt and concrete.

If yes, what mechanisms are in place or can be put into place to ensure that the contaminated soil will remain capped in the foreseeable future?

The intended commercial use of the property is not likely to change in the foreseeable future.

7. *What is the zoning status of the property?*

The site is zoned for commercial use (Conditional Commercial – CC).

8. *Is the use of the property likely to change in the next 20 years? NO*

ATC personnel are not aware of any plans to change the property use by the current property owner.

Property Surrounding Source Area of Discharge or Release:

The questions below pertain to the area within 1,500 feet of the source area of the discharge or release (excludes property containing source area of the release):

9. *What is the distance from the source area of the release to the nearest primary or secondary residence (permanent or temporary)?*

The nearest residence was identified approximately 320 feet southeast of the source area.

10. *What is the distance from the source area of the release to the nearest school, daycare center, hospital, playground, park, recreation area, church, nursing home, or other place of public assembly?*

The United Pentecostal Church of Jacksonville is located adjacent to the south of the site.

11. *What is the zoning status of properties in the surrounding area?*

Properties surrounding the subject facility are zoned either B-1 (General Business), IND (Industrial – commercial usage observed), OI (office and institutional), and RMF-HD and RMF-LD (residential areas). The zoning status of the subject facility is B-1. Commercial businesses and residential areas characterize the surrounding area.

12. *Briefly characterize the use and activities of the land in the surrounding area.*

The site and adjacent areas are mainly commercial, institutional, and residential (car dealerships, church, and apartments). Properties beyond the site are mainly commercial and residential. Adjacent property owner information is summarized in **Table 1**.

3.0 RECEPTOR PATHWAY INFORMATION

As defined by NCDEQ, a receptor is “any human, plant, or animal that is or has the potential to be adversely affected by the release or migration of contaminants”. With respect to the subject facility, the following sections present information regarding potential receptor pathways for the migration of contaminants and pathway relationships to the facility.

In an effort to efficiently gather complete and accurate data, ATC personnel performed a receptor survey of the area. Activities included a visual reconnaissance survey within 1,500 feet radial distance of the site, mailing water supply well information surveys to properties with possible water supply wells, and obtaining utility information from the City of Jacksonville Utilities Department and ONWASA. The results of the survey, regarding the potential identification of water wells located within 1,500 feet of the site, are summarized below.

3.1 WATER SUPPLY WELLS

According to the City of Jacksonville Utilities Department, public water is supplied to the site and adjacent properties. The Jacksonville Utilities Department and ONWASA indicated that the residence located at 145 Piney Green Road, located within 1,000 feet of the site, is not connected to the municipal water supply. Additional potential well houses were observed during the site reconnaissance activities; however, based on information obtained from the Jacksonville Utilities Department and ONWASA, these properties are connected to the municipal water supply. Two water supply wells were identified within 3,000 feet of the site. Additional information regarding this water supply well is included in **Table 2**. The water supply well location map is included as **Figure 3**.

3.2 PUBLIC WATER SUPPLIES

Public water supply to the area is provided by the City of Jacksonville Utilities Department and ONWASA.

3.3 SURFACE WATER BODIES

As shown on **Figure 1**, the closest surface water body is a tributary of Northeast Creek located on the western property boundary of the site.

3.4 WELLHEAD PROTECTION AREAS

The site is located within the wellhead protection areas of the City of Jacksonville’s Piney Green #1 Well and Foxhorn Village #1 Well. The Piney Green #1 Well is located approximately 2,900 feet to the southeast of the site and the Foxhorn Village #1 Well is located approximately 3,000 feet to the west of the site. The Source Water Assessment Program Report for the City of Jacksonville is included in **Appendix A**.

3.5 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located within the River Bend Formation. According to the Geologic Map of North Carolina (Brown, et al., 1985), the site lies in an area which is characterized by limestone and calcarenite overlain by and intercalated with indurated, sandy, molluscan-mold limestone.

Aquifers in the Coastal Plain are regional in extent, consisting of porous sand and limestone aquifers. The Coastal Plain sediments have been divided by Winner and Coble (1996) into 10 aquifers separated by confining units. The shallow unconfined aquifer present in most areas is called the surficial aquifer. The confined aquifers include the Peedee, Black Creek, Upper Cape Fear, Lower Cape Fear, Castle Hayne, Beaufort, Pungo River, and Yorktown aquifers.

Aquifers in the Coastal Plain province occur in gently dipping layers of sediments and sedimentary rock. These aquifers outcrop at land surface in some updip areas, and are buried much deeper in downdip areas (generally to the east and southeast). In general, depth to groundwater in shallow unconfined aquifers follows topography, being shallower near streams and deeper on hilltops. However, in the deeper confined aquifers, such as the Black Creek and Upper Cape Fear aquifers, the water level (potentiometric head) is under pressure, and is affected by both local and regional pumping.

3.6 SUBSURFACE STRUCTURES

Subsurface structures identified at the subject facility include sanitary sewer and municipal water lines. A water meter was observed on-site. Other utilities may be present.

3.7 LAND USE

The site and adjacent areas are mainly commercial, institutional, and residential (car dealerships, church, single and multi-family residential). Properties beyond the site are mainly commercial and residential.

3.8 PROPERTY OWNERS AND OCCUPANTS

Property ownership information is summarized on **Table 1**.

4.0 LIMITED SITE ASSESSMENT ACTIVITIES

The limited site assessment activities performed to collect data for this report included researching site-specific, local and regional data, performing soil and groundwater sampling, and submitting soil and groundwater samples for analytical testing. Information was also obtained from prior reports, prepared by ATC. The following sections discuss specific methodologies used in conducting these limited site assessment activities.

4.1 MONITORING WELL INSTALLATION

Monitoring well MW-1 was installed as part of the Initial Abatement Action activities on June 8, 2017. Monitoring well MW-2 was installed by personnel with Geologic Exploration (GEX) on August 10, 2017 during LSA activities. Monitoring wells MW-3 and MW-4 were installed by GEX on November 14, 2017 as part of the Phase II LSA activities. The locations of the monitoring wells are depicted on **Figure 2**.

Monitoring wells MW-2, MW-3, and MW-4 were each installed to a depth of approximately 12 feet bgs. The wells were installed using a hollow stem auger and constructed of two-inch diameter well casing made of flush-joint, threaded schedule-40 poly vinyl chloride (PVC) pipe. The PVC well screen is 0.010-inch slot with a screened interval of 10 feet. A coarse sand pack (filter pack) was used to backfill the well annulus to a depth of approximately one half foot above the well screen. A one half foot thick bentonite seal was placed above the filter pack, and neat cement was used to fill the remainder of the well annulus to ground surface.

Monitoring wells MW-2, MW-3, and MW-4 were installed as flush-mounted and were provided with a sealing and locking cap. A protective, steel, traffic-bearing cover was placed over the wells upon completion. The boring logs and well construction records for MW-2, MW-3, and MW-4 are presented in **Appendix B**. The boring log for monitoring well MW-1 was included in the Initial Abatement Action report dated June 30, 2017.

4.2 SOIL SAMPLING

During monitoring well MW-2 installation activities, one soil sample was collected from the well boring. The approximate location of the soil sample from the monitoring well MW-2 boring is presented in **Figure 2**. The boring log is presented in **Appendix A**.

The soil sample was collected from above the saturated zone and submitted for analytical testing. The soil sample, labeled SMW-2, was collected from approximately 3.5 feet bgs. The sample was obtained using a stainless steel hand auger. Upon collection, the soil sample was placed in laboratory-supplied containers, labeled, and placed on ice and delivered under chain-of-custody to Contest Analytical Laboratories in East Longmeadow, Massachusetts for analyses. The soil sample from MW-2 was analyzed for volatile organic compounds (VOCs) via EPA Method 8260B including methyl tertiary-butyl ether (MTBE) and isopropyl ether (IPE), semi-volatile organic compounds (SVOCs) via EPA Method 8270B, Massachusetts Department of Environmental Protection (MADEP) volatile petroleum hydrocarbons (VPH), and MADEP extractable petroleum hydrocarbons (EPH).

4.3 GROUNDWATER SAMPLING

On September 15, 2017, a groundwater sample was collected from monitoring well MW-2. Prior to sample collection, the well volume was calculated, and a minimum of three well volumes was purged from the well column to ensure replacement of stagnant water with representative formation water.

On November 16, 2017, groundwater samples were collected from monitoring wells MW-3 and MW-4. The water levels were recorded from MW-1 through MW-4 and ranged from 4.25 in MW-2 and 4.92 in MW-4. Monitoring well construction details are included in **Table 3**. A groundwater elevation contour map was generated and is presented as **Figure 4**.

The samples were collected into laboratory-approved containers, packed in ice and delivered under chain-of-custody to Contest Analytical Laboratories in East Longmeadow, Massachusetts for analyses. The groundwater samples from monitoring wells MW-2, MW-3, and MW-4 were analyzed for volatile organic compounds (VOCs) via EPA Method 602 including methyl tertiary-butyl ether (MTBE), semi-volatile organic compounds (SVOCs) via EPA Method 625 plus 10 peaks, MADEP VPH and EPH.

5.0 SITE GEOLOGY AND HYDROGEOLOGY

5.1 DESCRIPTION OF SHALLOW SUBSURFACE GEOLOGY

According to the Web Soil Survey, the predominant site soil are the Goldsboro-Urban land complex and the Craven fine sandy loam. Typically, this soil is composed of fine sandy loam to 13 inches below grade. From approximately 13 to 80 inches below grade, this soil is typically sandy clay loam. The parent material of this soil is loamy marine deposits. This soil is moderately well drained and flooding is rare. Available water capacity is moderate and the seasonal high water table is about 24 to 36 inches.

Soil encountered during the installation of monitoring wells MW-2, MW-3, and MW-4 generally consisted of concrete to 0.25 feet bgs, brown fine sand to 2 feet bgs, grayish sandy clay to 5 ft bgs, and wet, grayish brown sandy clay to 12 feet bgs. The boring logs for MW-2, MW-3, and MW-4 are provided in **Appendix B**.

5.2 GROUNDWATER OCCURRENCE

During the groundwater sampling event on November 16, 2017, ATC personnel obtained groundwater measurements from monitoring wells MW-1 through MW-4. At the time of sample collection, the depth-to-groundwater measurements ranged from 4.25 in MW-2 and 4.92 in MW-4. A groundwater elevation contour map was generated and is presented as **Figure 4**. **Table 2** provides a summary of well construction and depth-to-groundwater measurements.

5.3 GROUNDWATER FLOW DIRECTION

Based on the groundwater elevations measured on November 16, 2017, groundwater flows to the southwest towards a tributary of Northeast Creek.

6.0 ANALYTICAL RESULTS

6.1 SOIL ANALYTICAL RESULTS

Laboratory analytical results of the soil sample collected from the borehole of monitoring well MW-2 did not detect target compound concentrations above the laboratory detection limits.

A summary of the soil analytical data is presented in **Table 4**. A copy of the laboratory report and chain-of-custody documents was included in the Initial Abatement Action report dated June 30, 2017.

6.2 GROUNDWATER ANALYTICAL RESULTS

Laboratory analytical results from the sample collected from monitoring well MW-1 indicated benzene, total xylenes, methyl tert-butyl ether (MTBE), 1,2,4-trimethylbenzene, C₅-C₈ aliphatics, C₉-C₁₂ aliphatics, and C₉-C₁₀ aromatics above the established 2L Standards but below GCLs. Monitoring wells MW-3 and MW-4 contained benzene above the 2L Standards. Dissolved target compound concentrations were not detected above laboratory method detection limits (MDLs) in the groundwater sample collected from monitoring well MW-2.

A summary of the groundwater analytical data is presented in **Table 5**. A dissolved benzene isoconcentration contour map is provided as **Figure 5**. Other contaminants of concern are depicted on **Figure 6**. Copies of the laboratory analytical reports for monitoring wells MW-2, MW-3, and MW-4 are included as **Appendix C**. The laboratory report and chain-of-custody documents for MW-1 was included in the Initial Abatement Action Report dated June 30, 2017.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Based on the information obtained during this LSA, it does not appear as though the site has been impacted from a petroleum release.

- The subject facility and surrounding area are connected to the public water supply provided by the City of Jacksonville Utilities Department and the Onslow Water and Sewer Authority.
- One water supply well was identified within 1,000 feet of the source area.
- The subject facility is not located within two approved Wellhead Protection Areas.
- Surface water bodies were identified within 500 feet of the source area.

-
- Petroleum-related impacts to soil, exceeding Soil-to-Groundwater MSCCs, were not identified in the soil sample collected from the borehole of monitoring well MW-2.
 - Free product was not detected in monitoring wells MW-1 through MW-4.
 - Laboratory analytical results from the sample collected from monitoring well MW-1 indicated benzene, total xylenes, MTBE, 1,2,4-trimethylbenzene, C₅-C₈ aliphatics, C₉-C₁₂ aliphatics, and C₉-C₁₀ aromatics above the established 2L Standards but below GCLs. Monitoring wells MW-3 and MW-4 contained benzene above the 2L Standard.
 - The laboratory analytical results of the groundwater sample collected from monitoring well MW-2 did not contain analytes above the laboratory detection limits.

7.2 RECOMMENDATIONS

The results of the LSA activities indicate that the subject facility meets the criteria for *High Risk* classification.

8.0 LIMITATIONS

This report has been prepared for the exclusive use of Circle K Stores, Inc. The opinions included herein are based on information obtained during the study, on our experience in accordance with currently accepted hydrogeologic and engineering practices, and relevant regulatory guidelines at this time and location. Other than this, no warranty is implied or intended.

TABLES

TABLE 1**ADJACENT PROPERTY OWNERSHIP INFORMATION**

**PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, ONSLOW COUNTY, NORTH CAROLINA**

Property Address	Property Owner	Parcel Number Parcel Use Zoning
Site: 116 Piney Green Road	A G Lee Oil Company Inc. P.O. Box 237 Smithfield, NC 27577	438819617157 Former Gas Station General Business (B-1)
North (across New Bern Highway): 2445 North Marine Boulevard	CDW Holdings LLC P.O. Box 706 Jacksonville, NC 27541-706	438819615863 Car Dealership General Business (B-1)
South: 140 Piney Green Road	United Pentecostal Church Jacksonville 140 Piney Green Road Jacksonville, NC 27540	438819608980 Church Special/Institutional (OI)
Northwest (across Marine Boulevard): 2443 US Highway 17	CDW Holdings LLC P.O. Box 706 Jacksonville, NC 27541-706	438819614442 Car Dealership General Business (B-1)
Southwest: 2430 North Marine Boulevard	2430 N Marine LLC 2445 N. Marine Boulevard Jacksonville, NC 27546	438819615062 Car Dealership General Business (B-1)

**TABLE 1
WATER SUPPLY WELL INFORMATION**

**PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, ONSLOW COUNTY, NORTH CAROLINA**

Well ID	Parcel ID	Property Owner(s)	Property Address	Owner Address	Connected to Municipal Water	Usage	Distance from Source (feet)
WSW-1	004757	Arline K. Collins	145 Piney Green Road	145 Piney Green Road Jacksonville, NC 28546	No	Drinking	320 feet southeast

Table can be cross-referenced to Figure 3. Water supply wells are Randomly placed on parcel - exact locations are not know.

**TABLE 3
MONITORING WELL CONSTRUCTION DETAILS**

**PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, ONSLOW COUNTY, NORTH CAROLINA**

Monitoring Well ID	Date Installed	Well Casing Diameter (Inches)	Screened Interval (feet)	Depth of Well (feet)	Top of Casing Elevation (feet)	Date Measured: 11/16/2017		
						Depth of Water (feet)	Depth to Product (feet)	Groundwater Elevation (feet)
MW-1	6/8/2017	2	1.5-6.5	6.5	97.16	4.81	--	92.35
MW-2	8/10/2017	2	2-12	12	97.55	4.25	--	93.30
MW-3	11/14/2017	2	2-12	12	96.94	4.80	--	92.14
MW-4	11/14/2017	2	2-12	12	97.34	4.92	--	92.42

Notes:

1. Elevation is referenced to an arbitrary on-site benchmark of 100.00 feet.
2. Total well depth measured from top of casing.

**TABLE 4
SOIL ANALYTICAL RESULTS**

**PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, ONSLOW COUNTY, NORTH CAROLINA**

ANALYTICAL METHOD			EPA 8260				
Sample ID	Date Sampled	Sample Depth (feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Napthalene
SMW-2	8/10/2017	3.5	<0.0017	<0.0017	<0.0017	<0.0051	<0.0034
Soil-to-Groundwater MSCCs (mg/kg)			0.0056	4.3	4.9	4.6	0.16
Residential MSCCs (mg/kg)			18	1,200	1,560	3,129	313
Industrial/Commercial MSCCs (mg/kg)			64	32,000	40,000	81,760	8,176

Notes:

1. MSCC = Maximum Soil Contaminant Concentration established by NCDEQ.
2. Concentrations reported in milligrams per kilogram (mg/kg).
3. "<" = not detected at or above the laboratory reporting limit.
4. J value denotes estimated concentration by the laboratory.

**TABLE 5
GROUNDWATER ANALYTICAL RESULTS**

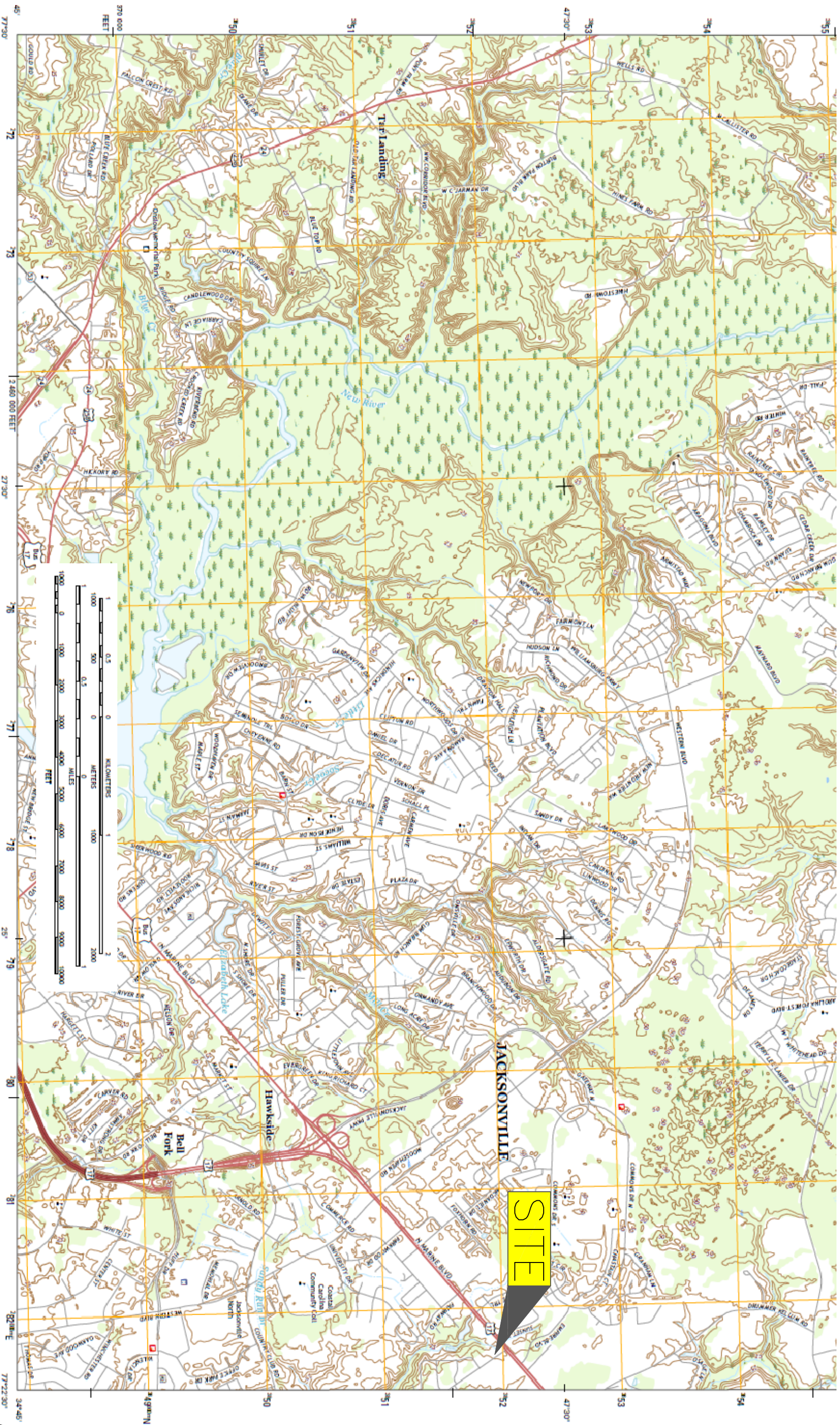
**PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, ONSLOW COUNTY, NORTH CAROLINA**

ANALYTICAL METHOD		EPA Methods 6200B and 602								MADEP Methods for VPH and EPH			
Sample ID	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Naphthalene	MTBE	1,2,4-Trimethylbenzene	C ₅ -C ₈ Aliphatics	C ₉ -C ₁₂ Aliphatics	C ₁₉ -C ₃₆ Aliphatics	C ₉ -C ₁₀ Aromatics
MW-1	6/15/2017	42	7.4	<5.0	1,240	1,289.40	5.1	140	580	2,000	3,200	510	4,010
MW-2	9/15/2017	<1.0	<1.0	<1.0	<3.0	<6.0	<5.0	<1.0	--	<100	<200	<100	<200
MW-3	11/16/2017	1.1	0.82 ^J	<1.0	0.56 ^J	2.48	<4.8	1.3	--	<100	<200	<100	<200
MW-4	11/16/2017	5.8	0.81 ^J	1.6	5.1	13.31	<5.0	2.2	--	<100	<200	<100	<200
NCAC 2L Groundwater Quality Standards (ug/L)		1	600	600	500	NE	6	20	400	400	700	10,000	200
NCAC 2B Surface Water Standards x 10 (ug/L)		11.9	110	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Gross Contaminant Level (ug/L)		5,000	260,000	84,500	85,500	NE	6,000	20,000	28,500	NE	NE	NE	NE

Notes:

1. Concentrations reported in micrograms per liter (ug/L).
2. NE = Not established.
3. **Bold** indicates concentrations above NCAC 2L Groundwater Quality Standard.
4. J value denotes concentration estimated by laboratory.

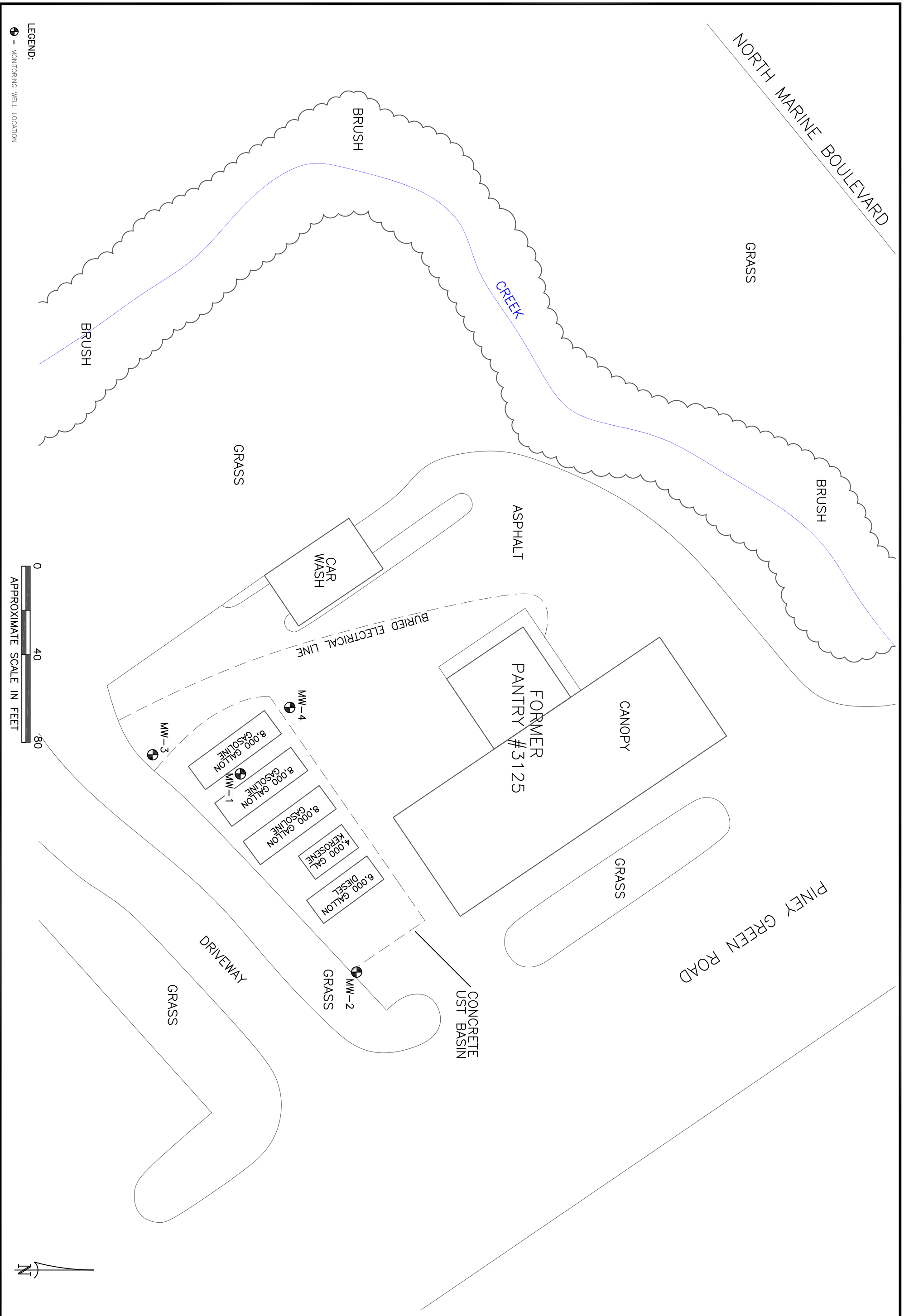
FIGURES



NOTES:

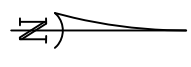
FIGURE 1
TOPOGRAPHIC MAP
PANTRY #3125
116 PINEY GREEN ROAD
JACKSONVILLE, NORTH CAROLINA

Project Number: PANT3125CL		Drn. By: LB
Drawing File:		Ckd. By:
Date: 04/28/17	Scale: AS SHOWN	App'd By: MJ
ATC		FIGURE
		1



LEGEND:
 ● = MONITORING WELL LOCATION

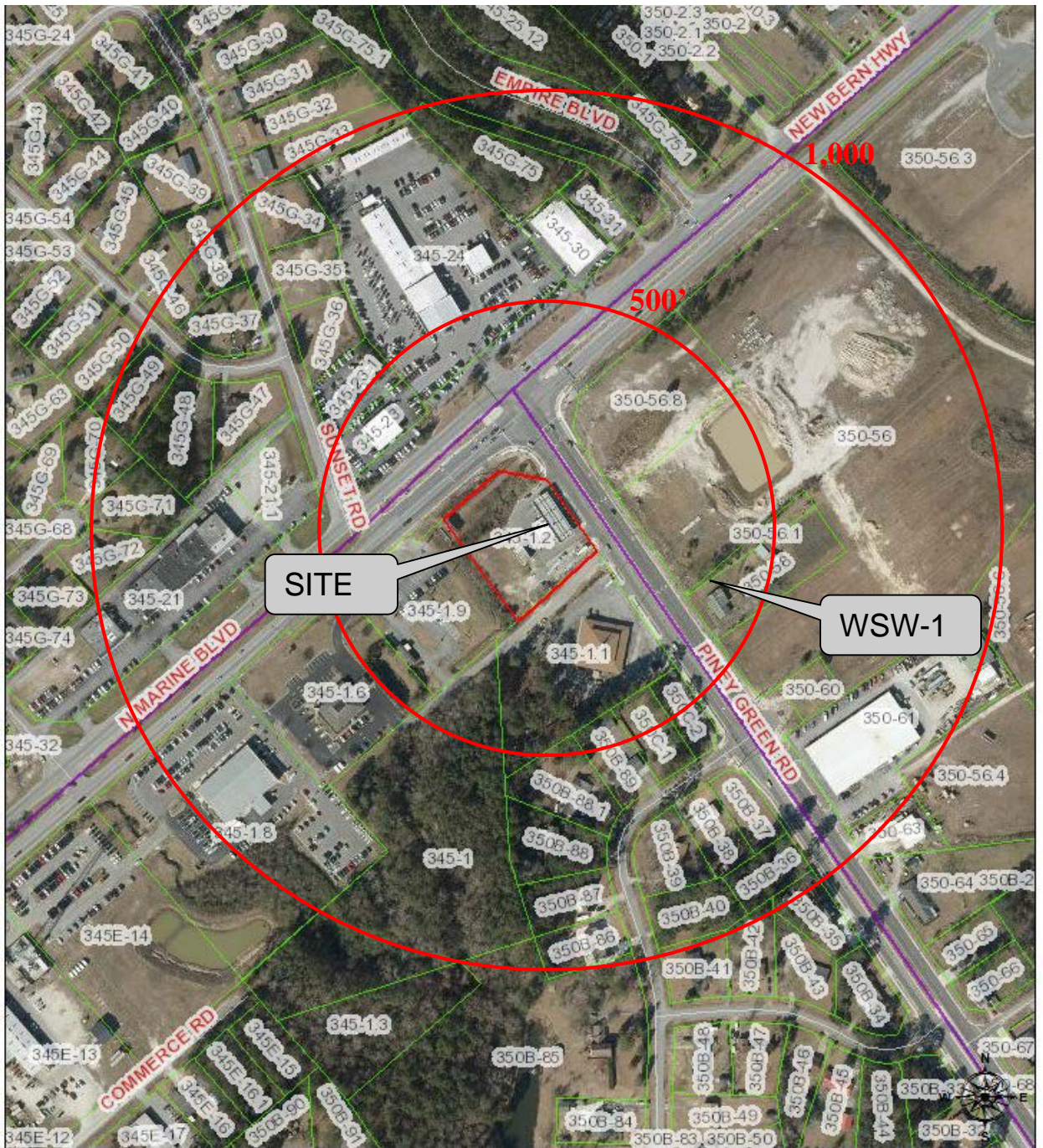
0 40 80
 APPROXIMATE SCALE IN FEET



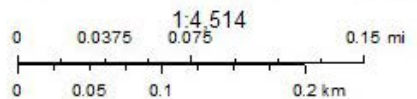
NOTES:

FIGURE 2
 SITE MAP
 PANTRY #3125
 116 PINEY GREEN ROAD
 JACKSONVILLE, NORTH CAROLINA

Project Number: PANT3125LS		Drn. By: LB
Drawing File:		Ckd. By:
Date: 11/16/17	Scale: AS SHOWN	App'd By: MJ
ATC		FIGURE 2



October 17, 2017



2725 E. Millbrook Road, Suite 121
Raleigh, NC 27604
(919) 871-0999

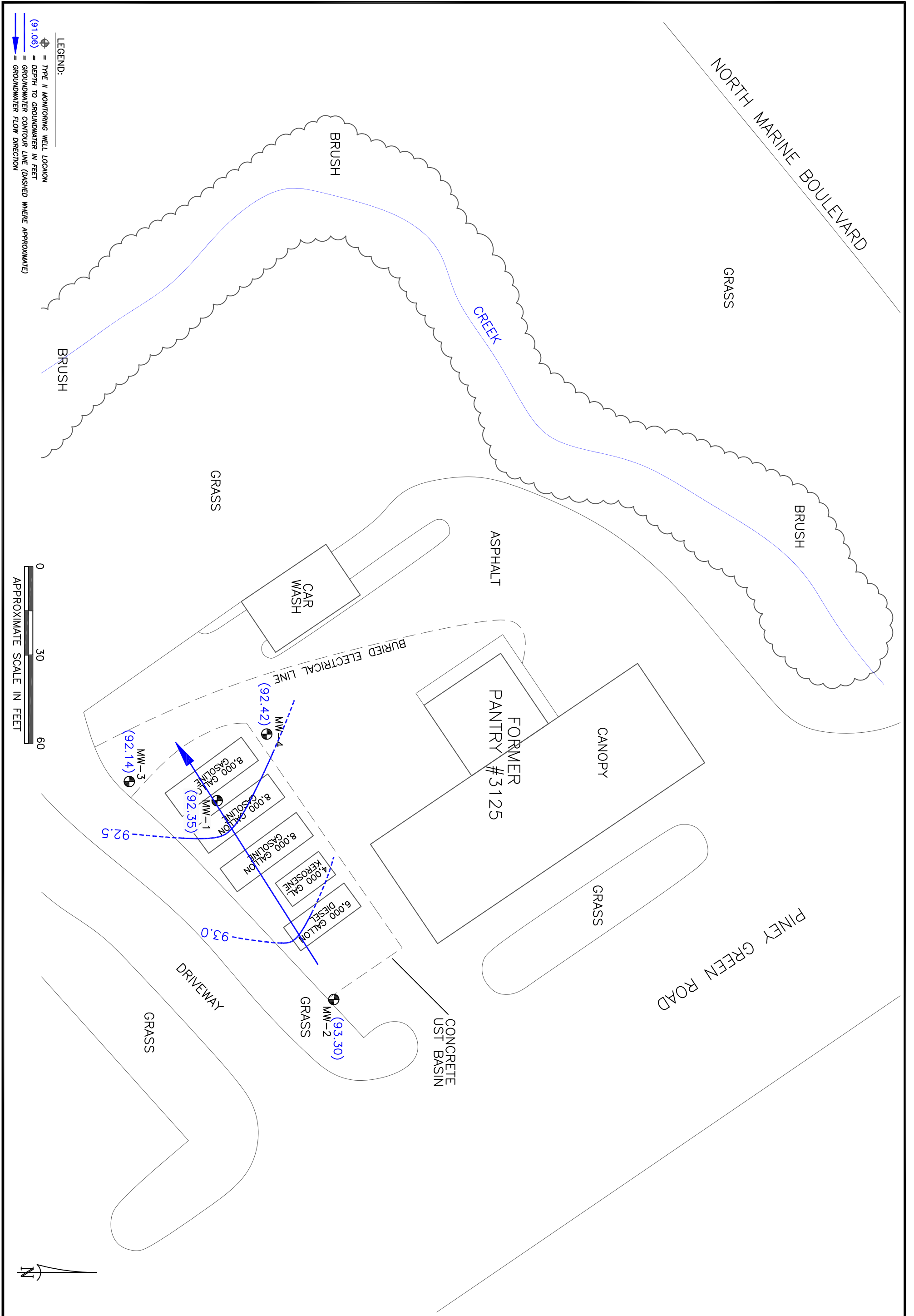
PROJECT NO: PANT3125LS

SOURCE: Onslow County
GIS

DATE: 10-17-2017

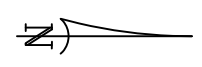
FIGURE 3 WATER SUPPLY WELL MAP

Pantry #3125
116 Piney Green Road
Jacksonville, Onslow County,
North Carolina



LEGEND:
 (91.06) = TYPE II MONITORING WELL LOCATION
 (91.06) = DEPTH TO GROUNDWATER IN FEET
 (91.06) = GROUNDWATER CONTOUR LINE (DASHED WHERE APPROXIMATE)
 = GROUNDWATER FLOW DIRECTION

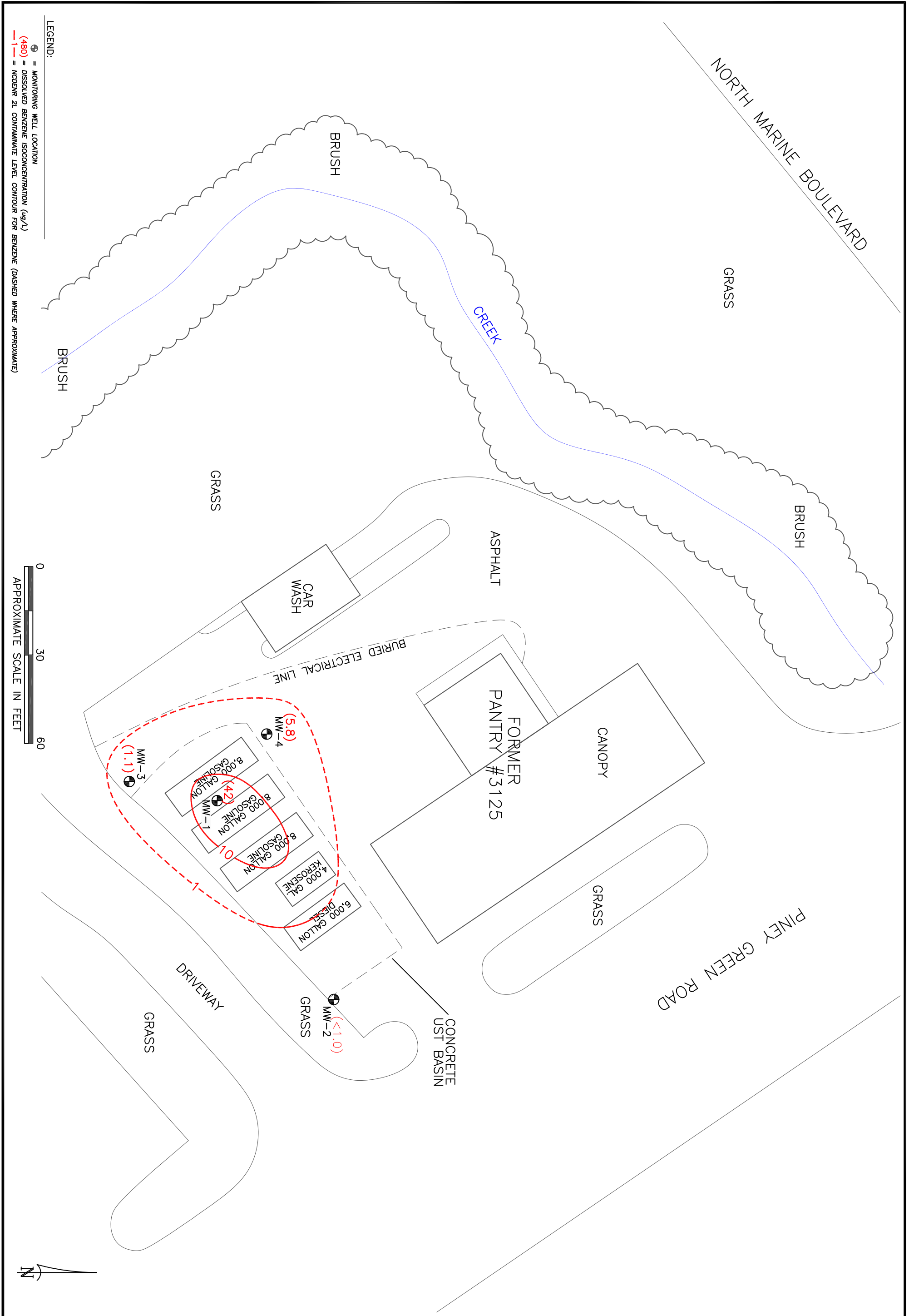
0 30 60
 APPROXIMATE SCALE IN FEET



NOTES:
 1. GROUNDWATER MEASUREMENTS COLLECTED 11/16/17

FIGURE 4
GROUNDWATER ELEVATION CONTOUR MAP
 PANTRY #3125
 116 PINEY GREEN ROAD
 JACKSONVILLE, NORTH CAROLINA

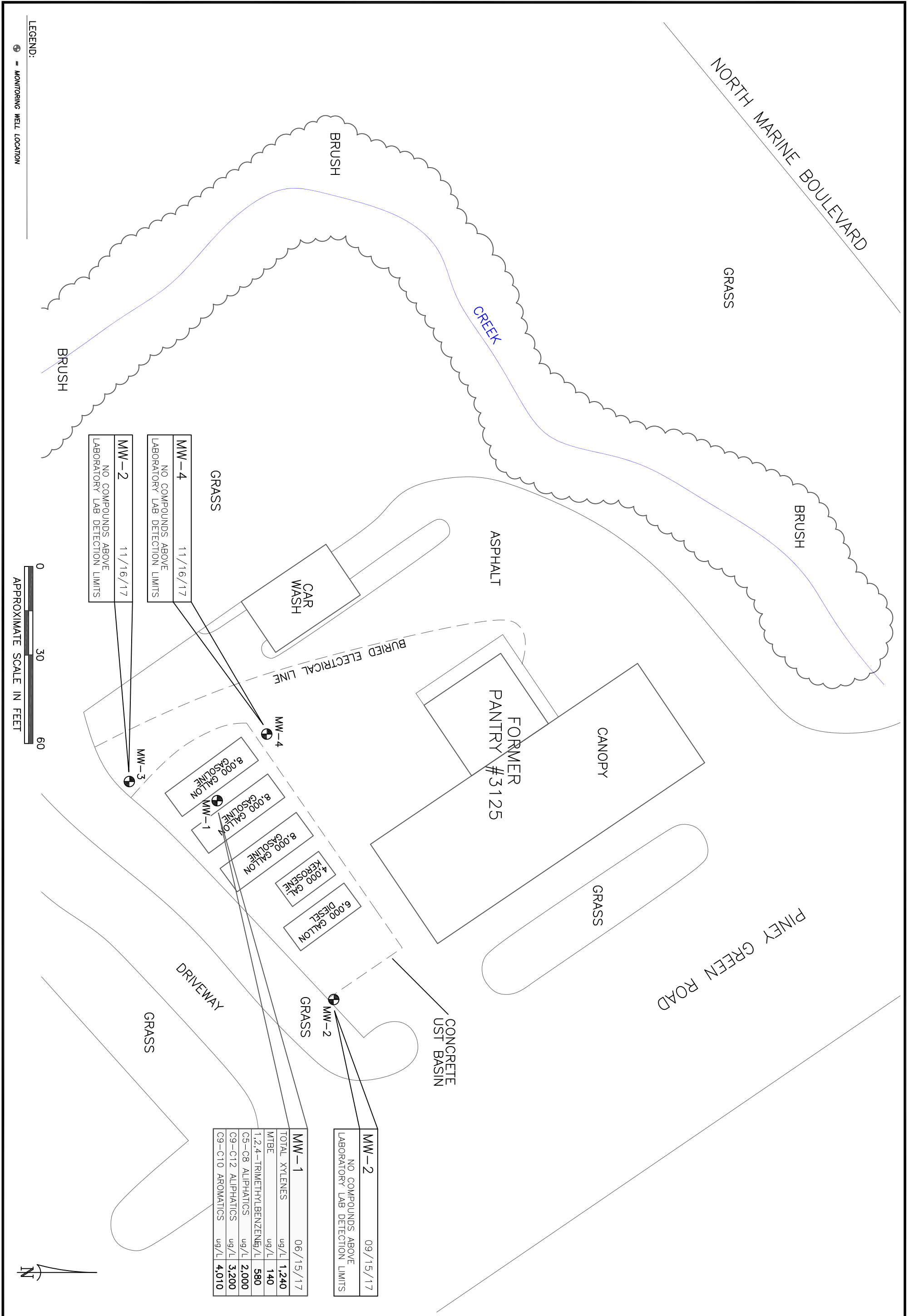
Project Number: PANT3125LS		Drn. By: LB
Drawing File:		Ckd. By:
Date: 12/01/17	Scale: AS SHOWN	App'd By: LA
ATC		FIGURE 4



NOTES:
 1. SAMPLE FROM MW-1 COLLECTED 06/15/17
 2. SAMPLE FROM MW-2 COLLECTED 09/15/17
 3. SAMPLES FROM MW-3 AND MW-4 COLLECTED 11/16/17

FIGURE 5
 DISSOLVED BENZENE ISOCONCENTRATION CONTOUR MAP
 PANTRY #3125
 116 PINEY GREEN ROAD
 JACKSONVILLE, NORTH CAROLINA

Project Number: PANT3125LS		Drn. By: LB
Drawing File:		Ckd. By:
Date: 12/01/17	Scale: AS SHOWN	App'd By: LA
ATC		FIGURE 5



MW-4 11/16/17
NO. COMPOUNDS ABOVE
LABORATORY LAB DETECTION LIMITS

MW-2 11/16/17
NO. COMPOUNDS ABOVE
LABORATORY LAB DETECTION LIMITS

MW-2 09/15/17
NO. COMPOUNDS ABOVE
LABORATORY LAB DETECTION LIMITS

MW-1	06/15/17
TOTAL XYLENES	ug/L 1,240
MTBE	ug/L 140
1,2,4-TRIMETHYLBENZENE	ug/L 580
C5-C8 ALIPHATICS	ug/L 2,000
C9-C12 ALIPHATICS	ug/L 3,200
C9-C10 AROMATICS	ug/L 4,010

NOTES:

FIGURE 6
 ADDITIONAL CONTAMINANTS OF CONCERN
 PANTRY #3125
 116 PINEY GREEN ROAD
 JACKSONVILLE, NORTH CAROLINA

Project Number: PANT3125LS		Drn. By: LB
Drawing File:		Ckd. By:
Date: 12/01/17	Scale: AS SHOWN	App'd By: LA
ATC		FIGURE 6

APPENDIX A

WELLHEAD PROTECTION AREAS

Source Water Assessment Program Report
for
JACKSONVILLE CITY OF
Community Water System

Introduction: What is a Source Water Assessment?

The North Carolina Division of Water Resources, Public Water Supply (PWS) Section is responsible for implementing the Source Water Assessment Program (SWAP) and completing assessments for all public drinking water supplies in the state. The 1996 amendments to the Safe Drinking Water Act provided federal support and required states to conduct assessments of all public water systems. A source water assessment is a qualitative evaluation of the potential of a drinking water source to become contaminated by the identified potential contaminant sources (PCS) within the delineated area. In North Carolina there are more than 10,000 public water supply sources that were assessed by the state. The PWS Section has gathered information for each water supply and developed a process for completing the assessments. This process is summarized in the next few pages and detailed in Section 6 of this report.

This report provides a summary of the results for the **Source Water Assessment** for your drinking water source(s).

What is the Source of Your Drinking Water?

Everyone wants clean, safe drinking water and we assume this natural resource will always be available to us. However, drinking water wells can be threatened by many potential contaminant sources, including underground storage tanks for gasoline, permitted waste disposal sites, storm water runoff or improper handling of hazardous materials. Your drinking water source(s) is listed in Table 1. Protecting your water from becoming contaminated is a wise investment in public health and your community's future.

Table 1. Public Water Supply System Information

System Name	JACKSONVILLE CITY OF
City	JACKSONVILLE
PWS ID	04-67-010
Source Name	WILLIAMSBURG PLANTATION *
Source Name	DRUMMER KELLUM #1
Source Name	DRUMMER KELLUM #2
Source Name	WILLIAMSBURG PLANTATION *
Source Name	RAMSEY ROAD #1
Source Name	MIRACLE MEADOWS 2
Source Name	PINEY GREEN 1
Source Name	WELL #11
Source Name	WELL #12
Source Name	WELL #13
Source Name	WELL #14
Source Name	WELL #15
Source Name	WELL #16
Source Name	WELL #17
Source Name	WELL #18
Source Name	WELL #2 258 PLANT
Source Name	WELL #3 258 PLANT
Source Name	WELL #4 258 PLANT

Source Name	WELL #5 258 PLANT
Source Name	WELL #6
Source Name	WELL #7
Source Name	BUSINESS PARK #1
Source Name	BUSINESS PARK #2
Source Name	CHANEY`S CREEK #1
Source Name	CHANEY`S CREEK# 2
Source Name	COMMONS NORTH #1
Source Name	COMMONS NORTH #2
Source Name	COMMONS SOUTH #1
Source Name	COMMONS SOUTH # 2
Source Name	BELL FORK #1
Source Name	FOXHORN VILLAGE #1
Source Name	PARKWOOD SOCCER #2
Source Name	DEERFIELD (DF-1)

In addition to the sources listed in Table 1 above, this water supply system (JACKSONVILLE CITY OF) has interconnections to allow for the purchase of water from the following water system(s) or "Seller" system(s):

- ONSLOW CO WATER SYSTEM A
- ONSLOW CO WATER SYSTEM D
- ONSLOW CO WATER SYSTEM B
- ONSLOW CO WATER SYSTEM C
- ONSLOW CO WATER SYSTEM E

Please refer to the Source Water Assessment Program Report for the "Seller" system(s) to review the assessment results for the purchased water supply sources that provide drinking water for this water system (JACKSONVILLE CITY OF).

Assessment Report Contents

This assessment report includes the following sections:

Section 1: Assessment Area Delineation

Section 2: Potential Contaminant Source Inventory and Map

Section 3: What is a Susceptibility Rating?

Section 4: Reviewing Your SWAP Results

Section 5: List of Maps, Tables and Figures for Your Well(s)

Section 6: North Carolina's SWAP Approach

Section 1: Assessment Area Delineation

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

Section 2: Potential Contaminant Source Inventory and Map

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

- 1) A table of any PCS identified within the delineated assessment area; and
- 2) A map of the delineated assessment area showing PCSs, roads, jurisdictional boundaries and other pertinent information.

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

Section 3: What is a Susceptibility Rating?

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

Susceptibility Rating

The final susceptibility rating for your well(s) is determined by combining the contaminant rating and the inherent vulnerability rating. More detailed information on the susceptibility rating process can be found in Section 6 of this report

Contaminant Rating

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

Inherent Vulnerability Rating

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

Table 2. SWAP Results Summary

Source Name	Inherent Vulnerability Rating	Contaminant Rating	Susceptibility Rating
WILLIAMSBURG PLANTATION *	Lower	Moderate	Moderate
DRUMMER KELLUM #1	Lower	Moderate	Moderate
DRUMMER KELLUM #2	Lower	Lower	Lower
WILLIAMSBURG PLANTATION *	Lower	Moderate	Moderate
RAMSEY ROAD #1	Lower	Moderate	Moderate
MIRACLE MEADOWS 2	Lower	Lower	Lower
PINEY GREEN 1	Lower	Higher	Moderate
WELL #11	Lower	Higher	Moderate
WELL #12	Lower	Lower	Lower
WELL #13	Lower	Lower	Lower
WELL #14	Lower	Higher	Moderate
WELL #15	Lower	Moderate	Moderate
WELL #16	Lower	Lower	Lower
WELL #17	Lower	Lower	Lower
WELL #18	Lower	Higher	Moderate
WELL #2 258 PLANT	Lower	Moderate	Moderate

WELL #3 258 PLANT	Lower	Lower	Lower
WELL #4 258 PLANT	Lower	Lower	Lower
WELL #5 258 PLANT	Lower	Lower	Lower
WELL #6	Lower	Moderate	Moderate
WELL #7	Lower	Higher	Moderate
BUSINESS PARK #1	Lower	Higher	Moderate
BUSINESS PARK #2	Lower	Higher	Moderate
CHANEY`S CREEK #1	Lower	Higher	Moderate
CHANEY`S CREEK# 2	Lower	Higher	Moderate
COMMONS NORTH #1	Lower	Higher	Moderate
COMMONS NORTH #2	Lower	Higher	Moderate
COMMONS SOUTH #1	Lower	Higher	Moderate
COMMONS SOUTH # 2	Lower	Higher	Moderate
BELL FORK #1	Lower	Higher	Moderate
FOXHORN VILLAGE #1	Lower	Higher	Moderate
PARKWOOD SOCCER #2	Lower	Lower	Lower

DEERFIELD (DF-1)	Lower	Higher	Moderate
------------------	-------	--------	----------

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

Table 3. Well Information

Source Name	Well Yield (Gallons/Min)	Well Depth (Feet)
WILLIAMSBURG PLANTATION *	210	178
DRUMMER KELLUM #1	600	238
DRUMMER KELLUM #2	600	245
WILLIAMSBURG PLANTATION *	240	191
RAMSEY ROAD #1	400	225
MIRACLE MEADOWS 2	600	257
PINEY GREEN 1	450	277
WELL #11	1200	601
WELL #12	85	395
WELL #13	150	395
WELL #14	750	620

WELL #15	750	624
WELL #16	450	618
WELL #17	488	590
WELL #18	473	651
WELL #2 258 PLANT	300	640
WELL #3 258 PLANT	200	620
WELL #4 258 PLANT	225	635
WELL #5 258 PLANT	300	664
WELL #6	517	650
WELL #7	568	655
BUSINESS PARK #1	600	183
BUSINESS PARK #2	600	205
CHANEY`S CREEK #1	600	202
CHANEY`S CREEK# 2	600	200
COMMONS NORTH #1	600	241
COMMONS NORTH #2	600	227
COMMONS SOUTH #1	600	230

COMMONS SOUTH # 2	600	230
BELL FORK #1	450	206
FOXHORN VILLAGE #1	600	247
PARKWOOD SOCCER #2	350	191
DEERFIELD (DF-1)	600	187

Section 4: Reviewing Your SWAP Results

Please review the information on your well(s) provided in this report. If you believe any of this information is incorrect please contact the Public Water Supply Section by e-mail at the following address: SWAP@ncdenr.gov. Or you may submit comments to us at:

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

Or you may contact the Source Water Assessment staff by phone at 919-707-9098.

Section 5: Maps, Tables and Figures for Your Well(s)

Maps, tables and figures specific to your well(s) are included in this report in the following pages and are listed below.

Map 1. Location Map

Map 2. Delineated Area and PCS Map

Table 4. Potential Contaminant Source Attributes

Table 5. Inherent Vulnerability Rating

Table 6. Unsaturated Zone Rating Calculation

Figure 1. Land Use / Land Cover Categories

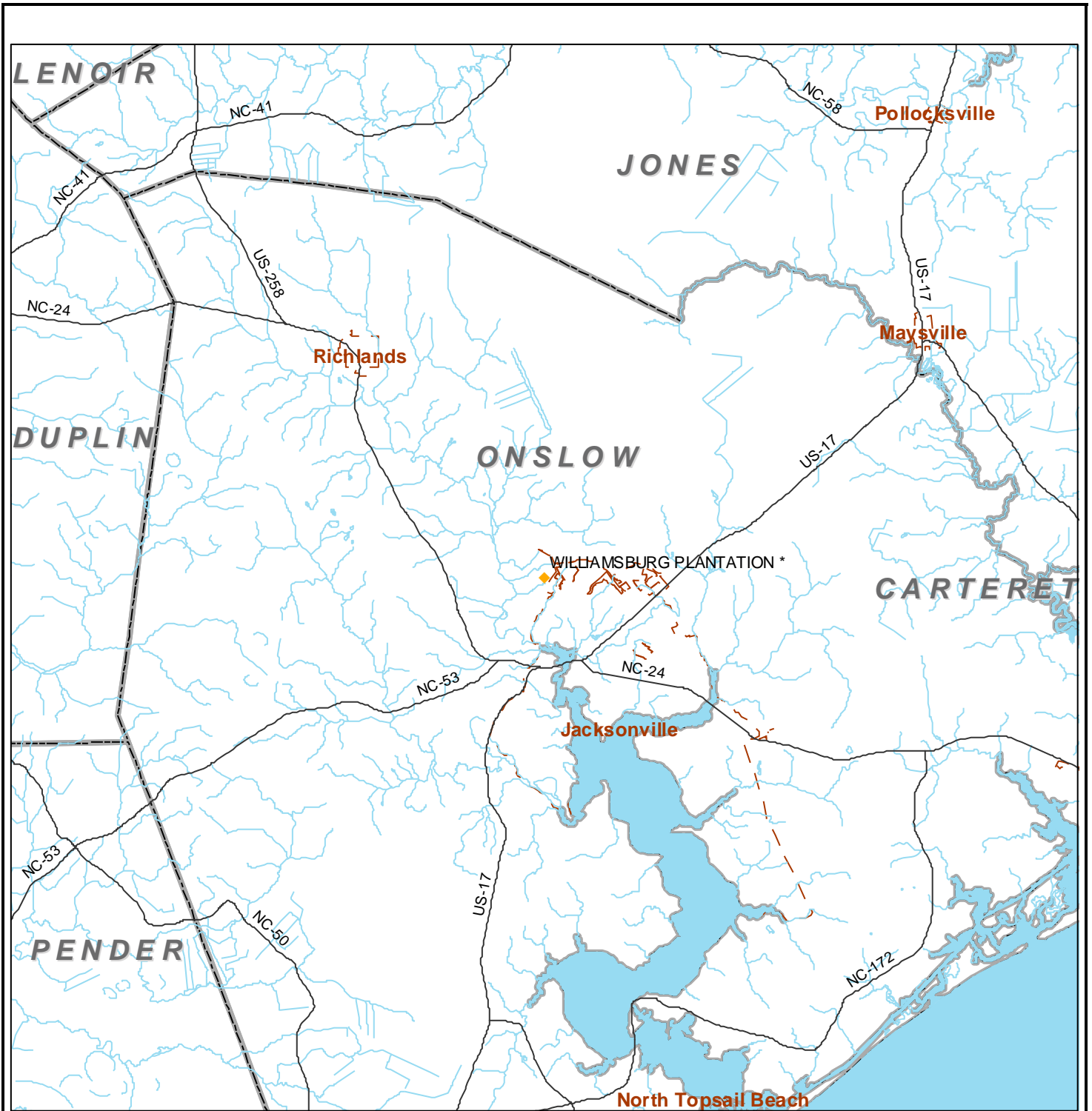
Figure 2. Unsaturated Zone Rating

Figure 3. Vertical Hydraulic Conductance Rating

Figure 4. Land Surface Slope Rating

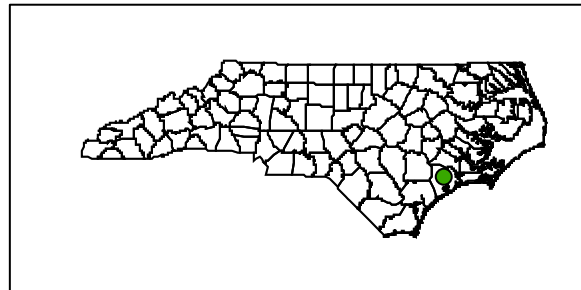
Figure 5. Land Use Rating

Figure 6. Land Cover Rating

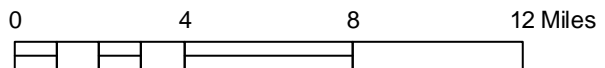


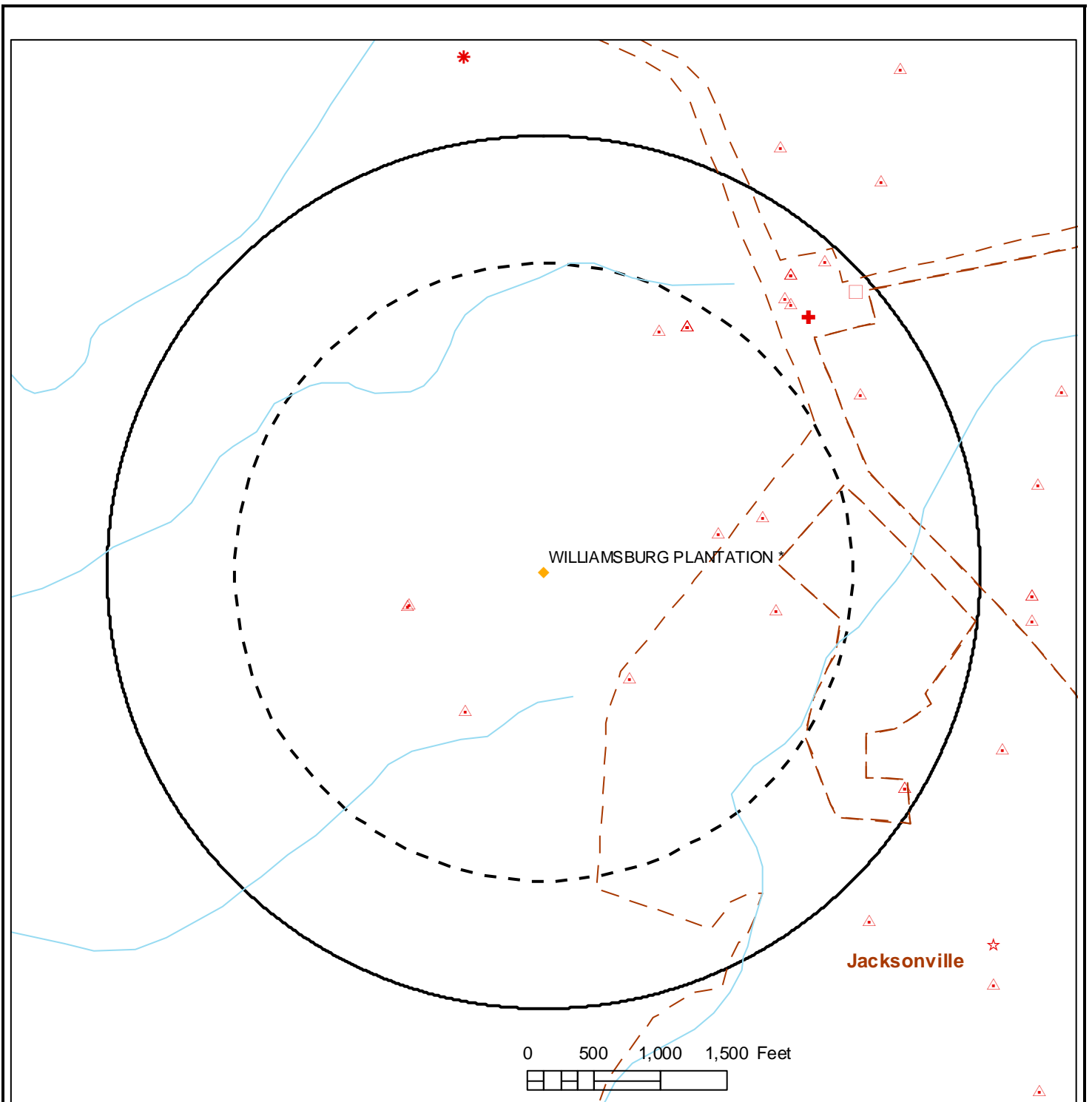
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

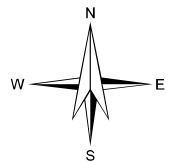




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *

PCS Types

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> □ Animal Operations △ CERCLIS Sites □ RCRA Gen. / Trans. Facilities ● Non Discharge Permits △ NPDES Permits ★ National Priority List Sites ⊕ PCB Sites ○ Pollution Incidents | <ul style="list-style-type: none"> ○ Septage Disposal Sites ○ Soil Remediation Sites * Solid Waste Facilities * Tier II Sites ○ RCRA TSD Facilities ○ Old Landfill Sites ☆ UIC Permits ⊕ UST Permits | <ul style="list-style-type: none"> — Roads — Rivers and Streams Major Hydrology — Municipal Boundaries Ground Water Assessment Area - Delineated Area Ground Water Assessment Area - Zone A |
|---|--|---|



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL CAROLINA COLLEGE	NCD982115883	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkown	ONSLOW
WILCO 389	00-0-0000035383	UST Sites	H	6995 WESTERN BLVD	JACKSONVILLE	Unkown	ONSLOW
Woodlands Phase IIIA	SW8891007	NPDES Permits	L	Plantation Blvd At Gum Branch Rd	Jacksonville	Unkown	ONSLOW
Woodlands III	SW8961101	NPDES Permits	L	Plantation Boulevard Iverleigh Ln	Jacksonville	Unkown	ONSLOW
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unkown	ONSLOW
Williamsburg Plantation Parkway	SW8960327	NPDES Permits	L	Williamsburg Plantation Pkwy	Jacksonville	Unkown	ONSLOW
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unkown	ONSLOW
Regency Park Section I at Williamsburg Plantation	SW8001114	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Regency Park Section II at Williamsburg Plantation	SW8020919	NPDES Permits	L	S Of Intersection Of Williamsburg Pky	Jacksonville	Unkno wn	ONSLOW
Kensington Park II at Williamsburg Plantation	SW8070422	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Huntington Park at Williamsburg Plantation	SW8040733	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unkno wn	ONSLOW
Williamsburg Crossing Shopping Center	SW8971031	NPDES Permits	L	2200 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	NPDES Permits	L	Western Blvd Intersection Of Gum Branch	Jacksonville	Unkno wn	ONSLOW
Western Parkway NCDOT Project U4007B	SW8100216	NPDES Permits	L	Western Pkwy	Jacksonville	Unkno wn	ONSLOW
City of Jacksonville Water System Improvements Phase II	SW8100518	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Hampton Inn Jacksonville	SW8880309	NPDES Permits	L	Western Blvd Hwy 17	Jacksonville	Unkno wn	ONSLOW
Kentucky Fried Chicken	SW8900619	NPDES Permits	L	Western Blvd Brynn Marr Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Goodwill Industries	SW8970133	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
A.T. Williams Oil Company / Wendy's	SW8961233	NPDES Permits	L	6995 Western Blvd	Jacksonville	Unknown	ONSLOW
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	NPDES Permits	L	Western Blvd At Gum Branch Rd	Jacksonville	Unknown	ONSLOW
CVS Pharmacy 5594 Gum Branch Road	SW8070804	NPDES Permits	L	2400 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
FCW&P Properties	SW8110712	NPDES Permits	L	Int Of Gum Branch Rd Western Blvd	Jacksonville	Unknown	ONSLOW
Jones Car Wash	SW8110713	NPDES Permits	L	6974 Western Blvd	Jacksonville	Unknown	ONSLOW
Coastal Equipment	SW8020206	NPDES Permits	L	Western Blvd gum branch rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL CAROLINA COLLEGE	NCD982115883	GENERATOR	SQG
COASTAL CAROLINA COLLEGE	NCD982115883	TRANSPORTER	N
Woodlands Phase IIIA	SW8891007	Permit Type	State Stormwater
Woodlands Phase IIIA	SW8891007	Permit Issued Date	3/2/1990
Woodlands III	SW8961101	Permit Type	State Stormwater
Woodlands III	SW8961101	Permit Issued Date	2/13/1997
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Type	State Stormwater
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Issued Date	11/22/2013
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Expiration Date	11/23/2021
Williamsburg Plantation Parkway	SW8960327	Permit Type	State Stormwater
Williamsburg Plantation Parkway	SW8960327	Permit Issued Date	7/19/1996
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Type	State Stormwater
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Issued Date	9/20/2012
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Expiration Date	10/21/2021
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Issued Date	3/30/2015
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Expiration Date	3/27/2023
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Type	State Stormwater
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Issued Date	9/14/2012
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Expiration Date	8/26/2017
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Type	State Stormwater
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Issued Date	10/1/2012
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Expiration Date	9/6/2021
Huntington Park at Williamsburg Plantation	SW8040733	Permit Type	State Stormwater
Huntington Park at Williamsburg Plantation	SW8040733	Permit Issued Date	10/2/2012
Huntington Park at Williamsburg Plantation	SW8040733	Permit Expiration Date	7/17/2020
Williamsburg Crossing Shopping Center	SW8971031	Permit Type	State Stormwater
Williamsburg Crossing Shopping Center	SW8971031	Permit Issued Date	7/8/2009
Williamsburg Crossing Shopping Center	SW8971031	Permit Expiration Date	4/28/2022
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Type	State Stormwater
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Issued Date	10/12/2012
Western Parkway NCDOT Project U4007B	SW8100216	Permit Type	State Stormwater
Western Parkway NCDOT Project U4007B	SW8100216	Permit Issued Date	6/10/2010

PCS Name	PCS ID	Attribute	Value
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Type	State Stormwater
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Issued Date	6/23/2010
Hampton Inn Jacksonville	SW8880309	Permit Type	State Stormwater
Hampton Inn Jacksonville	SW8880309	Permit Issued Date	5/10/1988
Kentucky Fried Chicken	SW8900619	Permit Type	State Stormwater
Kentucky Fried Chicken	SW8900619	Permit Issued Date	6/21/1990
Goodwill Industries	SW8970133	Permit Type	State Stormwater
Goodwill Industries	SW8970133	Permit Issued Date	1/24/1997
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Type	State Stormwater
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Issued Date	1/12/2009
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Expiration Date	10/5/2022
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Type	State Stormwater
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Issued Date	7/6/1998
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Type	State Stormwater
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Issued Date	9/30/2011
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Expiration Date	9/30/2025
FCW&P Properties	SW8110712	Permit Type	State Stormwater
FCW&P Properties	SW8110712	Permit Issued Date	5/29/2014
FCW&P Properties	SW8110712	Permit Expiration Date	12/30/2021
Jones Car Wash	SW8110713	Permit Type	State Stormwater
Jones Car Wash	SW8110713	Permit Issued Date	9/30/2011
Coastal Equipment	SW8020206	Permit Type	State Stormwater
Coastal Equipment	SW8020206	Permit Issued Date	8/15/2002

PCS Name	PCS ID	Attribute	Value
Coastal Equipment	SW8020206	Permit Expiration Date	8/15/2016

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating		Moderate	
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WILLIAMSBURG PLANTATION ***

Unsaturated Zone Rating	62.9
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

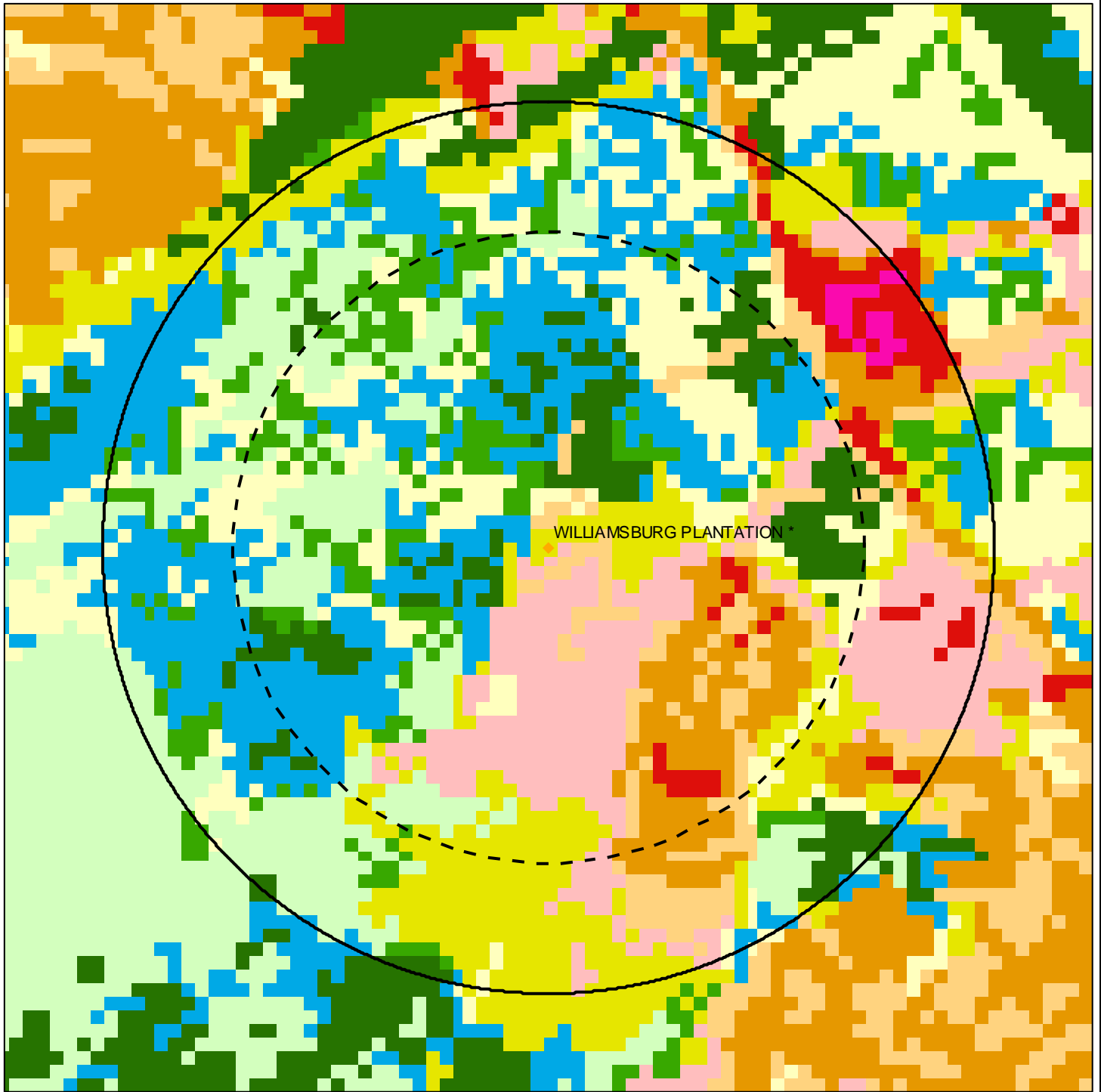
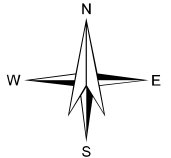
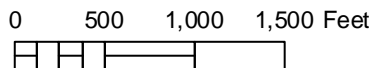


FIGURE 1. LAND USE/LAND COVER CATEGORIES
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



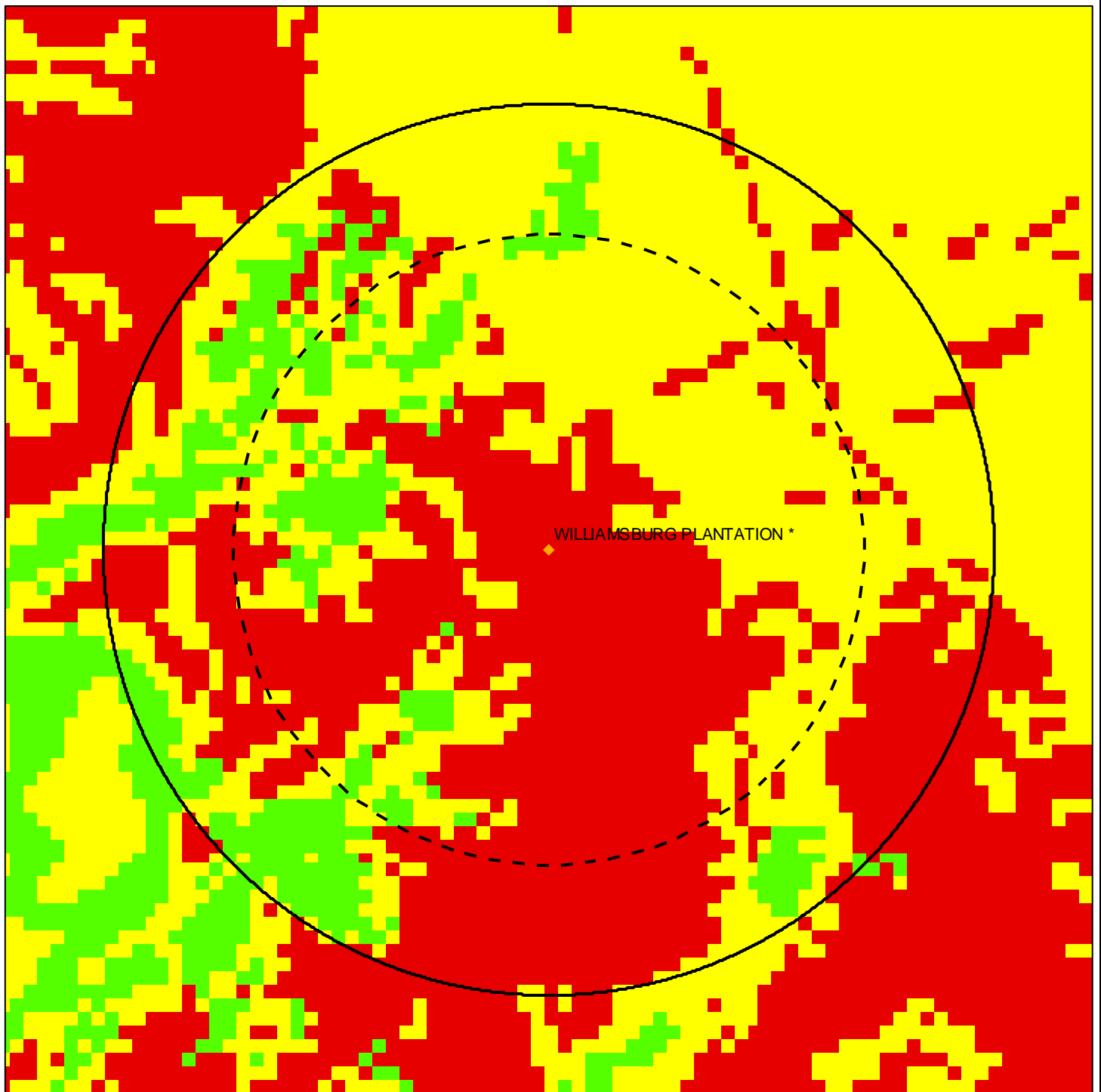
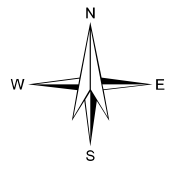
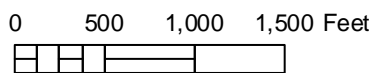


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



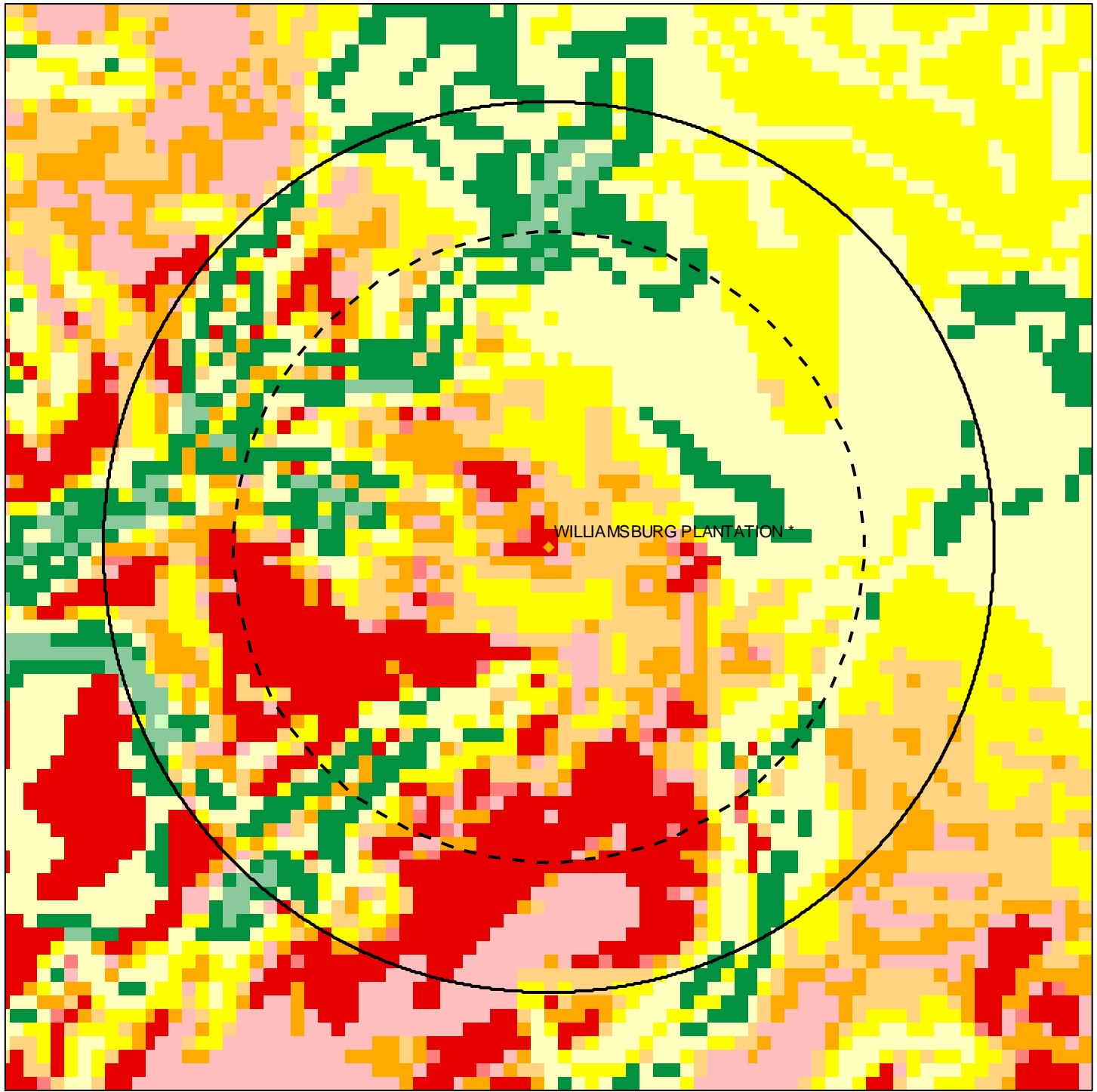
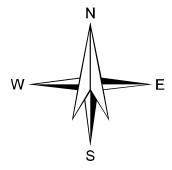
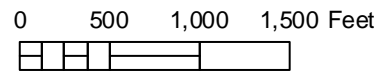


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



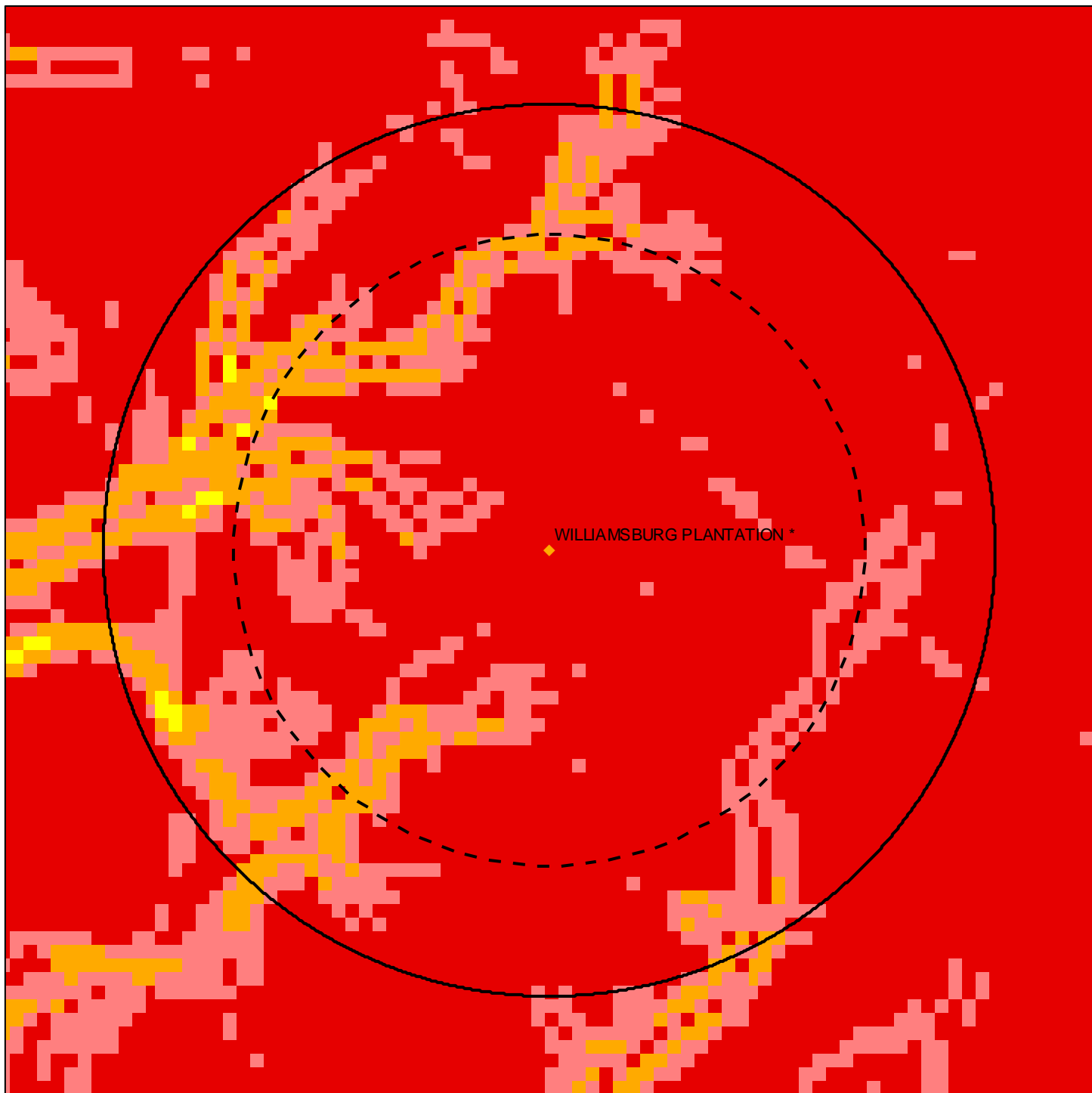
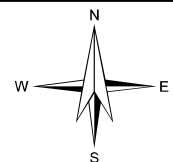








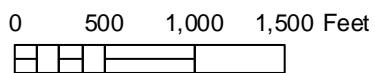


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



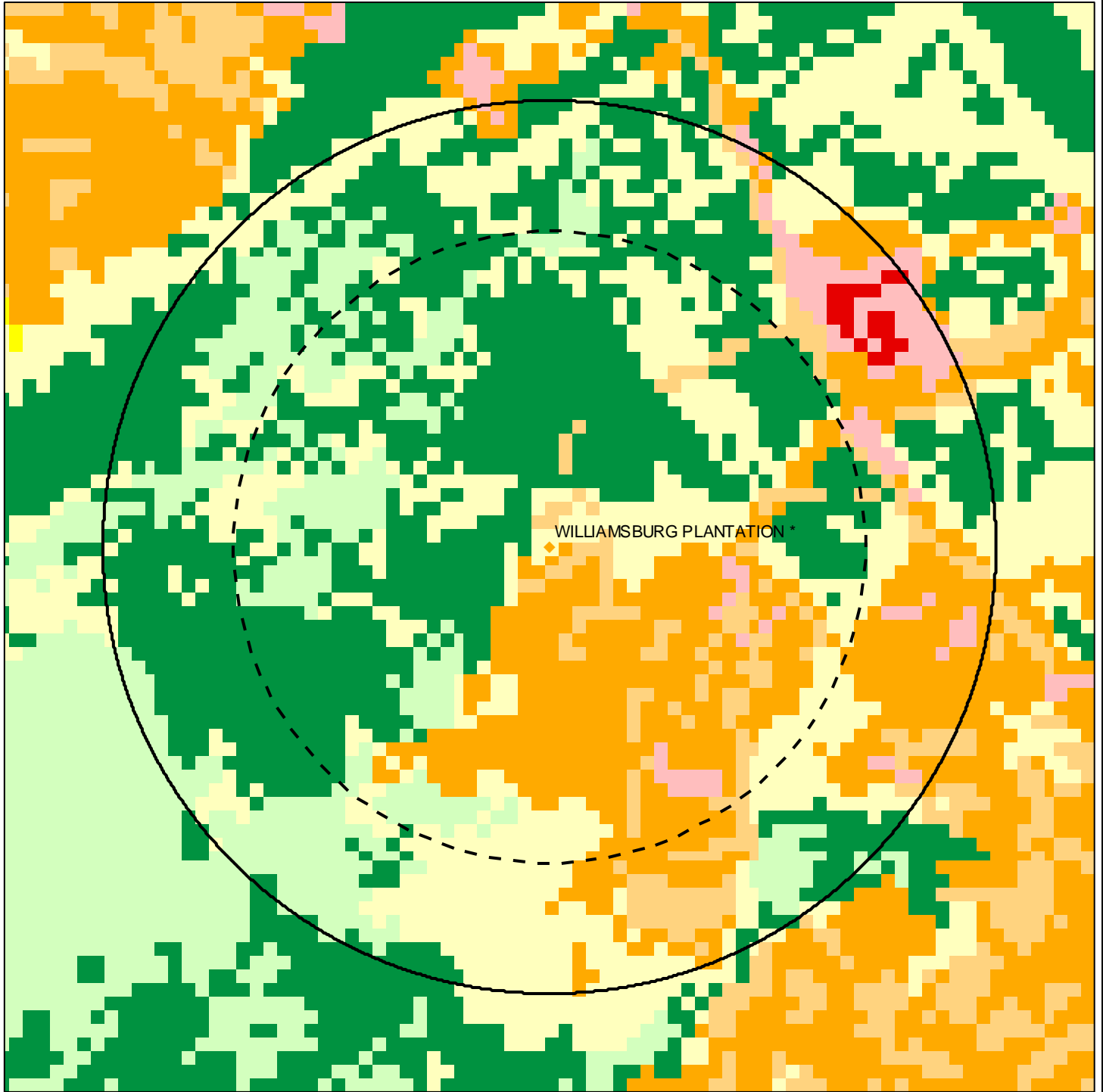
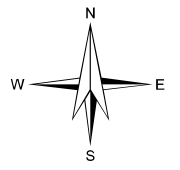







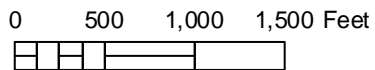
FIGURE 5. LAND USE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



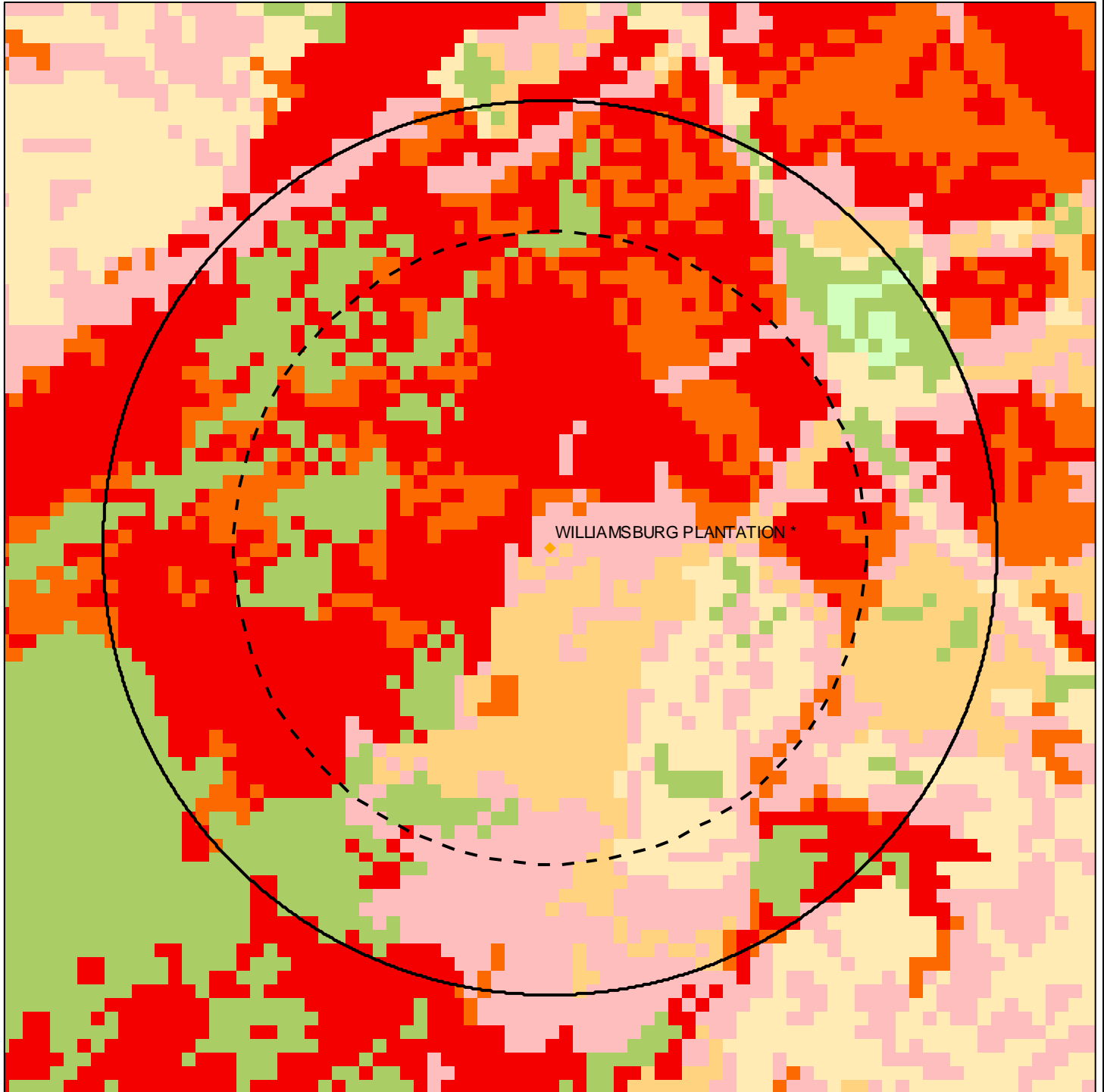
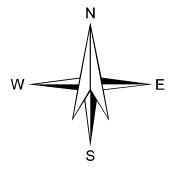
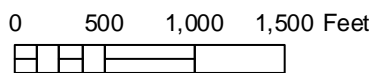


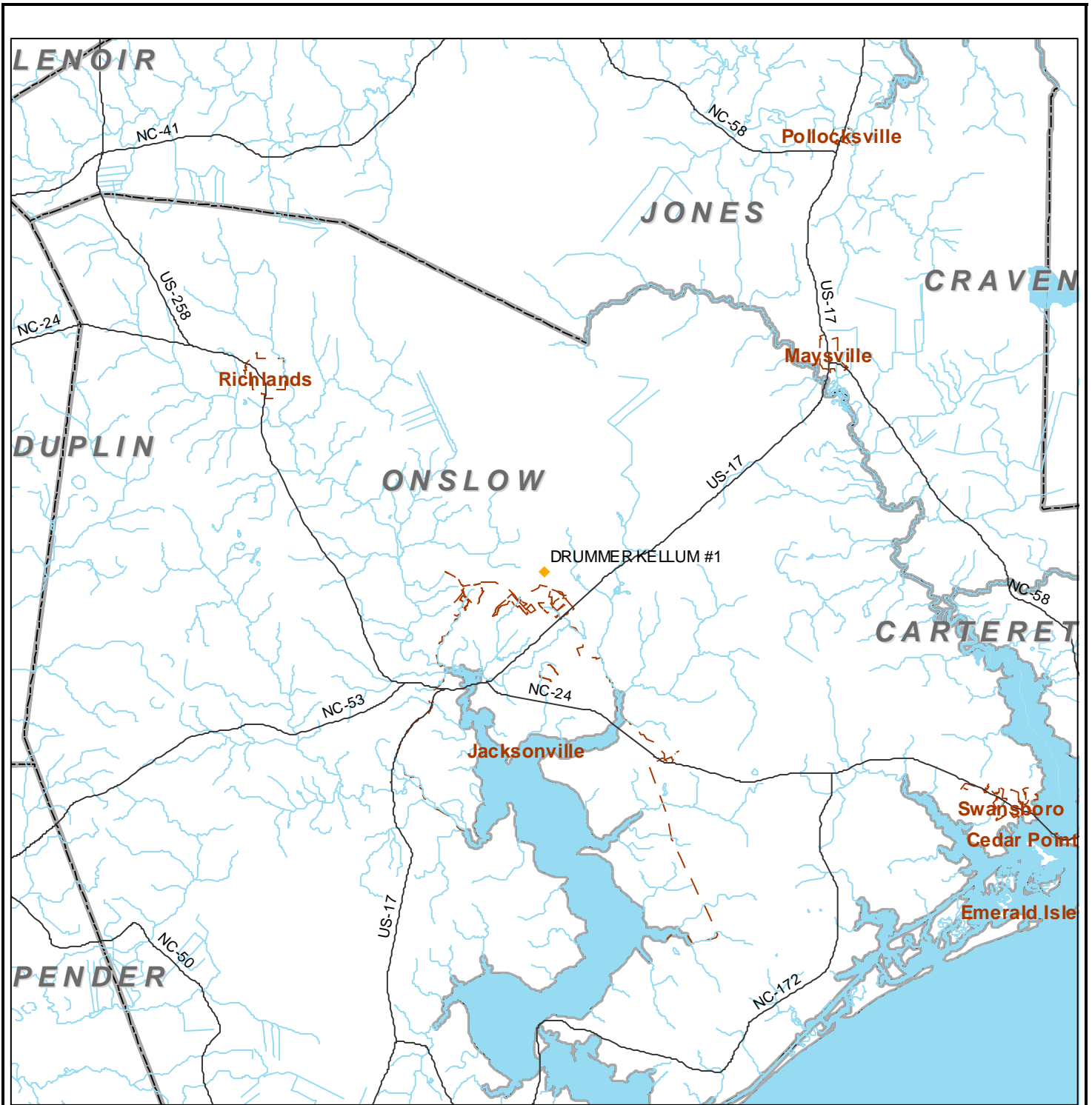
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

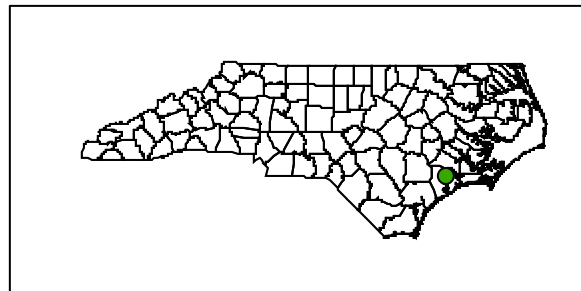
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



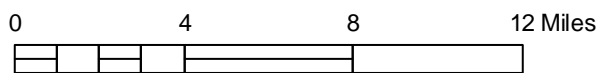
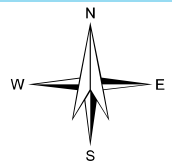


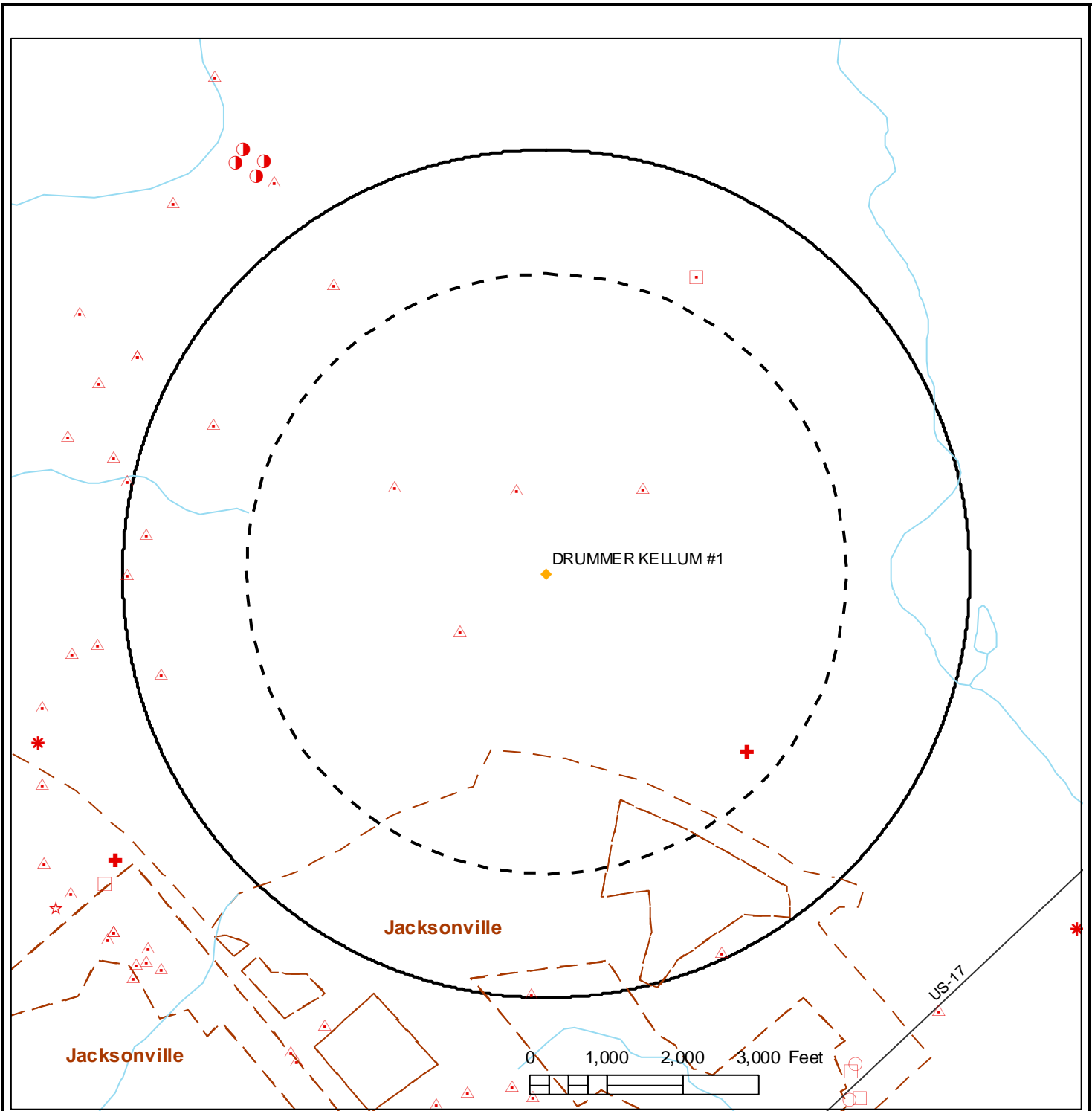
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



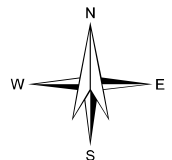


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, DRUMMER KELLUM #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Scott Farm	AWS670010	Animal Operations	H	Jim Parker Rd	Jacksonville	Unknown	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unknown	ONSLOW
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unknown	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section VIII	Jacksonville	Unknown	ONSLOW
The Legacy at Carolina Forest	SW8090104	NPDES Permits	L	339 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Carolina Place Apartments at Carolina Forest	SW8100407	NPDES Permits	L	16 Terry Lee Lanier Dr	Jacksonville	Unknown	ONSLOW
Carolina Forest Daycare	SW8100704	NPDES Permits	L	120 Terry Lanier Dr	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unknown	ONSLOW
The Village at The Glen	SW8080520	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknown	ONSLOW
Ivy Glen at Carolina Forest	SW8080227	NPDES Permits	L	Terry Lee Lanier Dr	Jacksonville	Unknown	ONSLOW
Carolina Forest Park	SW8080502	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknown	ONSLOW
The Village at Carolina Forest	SW8040514	NPDES Permits	L	Off Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, DRUMMER KELLUM #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Scott Farm	AWS670010	Operation Type	Swine State COC
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Issued Date	12/15/2005
The Legacy at Carolina Forest	SW8090104	Permit Type	State Stormwater
The Legacy at Carolina Forest	SW8090104	Permit Issued Date	4/3/2009
The Legacy at Carolina Forest	SW8090104	Permit Expiration Date	12/30/2021
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Type	State Stormwater
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Issued Date	6/4/2010
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Expiration Date	12/31/2021
Carolina Forest Daycare	SW8100704	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Carolina Forest Daycare	SW8100704	Permit Issued Date	2/28/2011
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005
The Village at The Glen	SW8080520	Permit Type	State Stormwater
The Village at The Glen	SW8080520	Permit Issued Date	11/28/2012
The Village at The Glen	SW8080520	Permit Expiration Date	9/9/2019
Ivy Glen at Carolina Forest	SW8080227	Permit Type	State Stormwater
Ivy Glen at Carolina Forest	SW8080227	Permit Issued Date	11/13/2012
Carolina Forest Park	SW8080502	Permit Type	State Stormwater
Carolina Forest Park	SW8080502	Permit Issued Date	6/25/2008
The Village at Carolina Forest	SW8040514	Permit Type	State Stormwater
The Village at Carolina Forest	SW8040514	Permit Issued Date	5/13/2009
The Village at Carolina Forest	SW8040514	Permit Expiration Date	7/29/2023

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, DRUMMER KELLUM #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , DRUMMER KELLUM #1**

Unsaturated Zone Rating	62.7
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

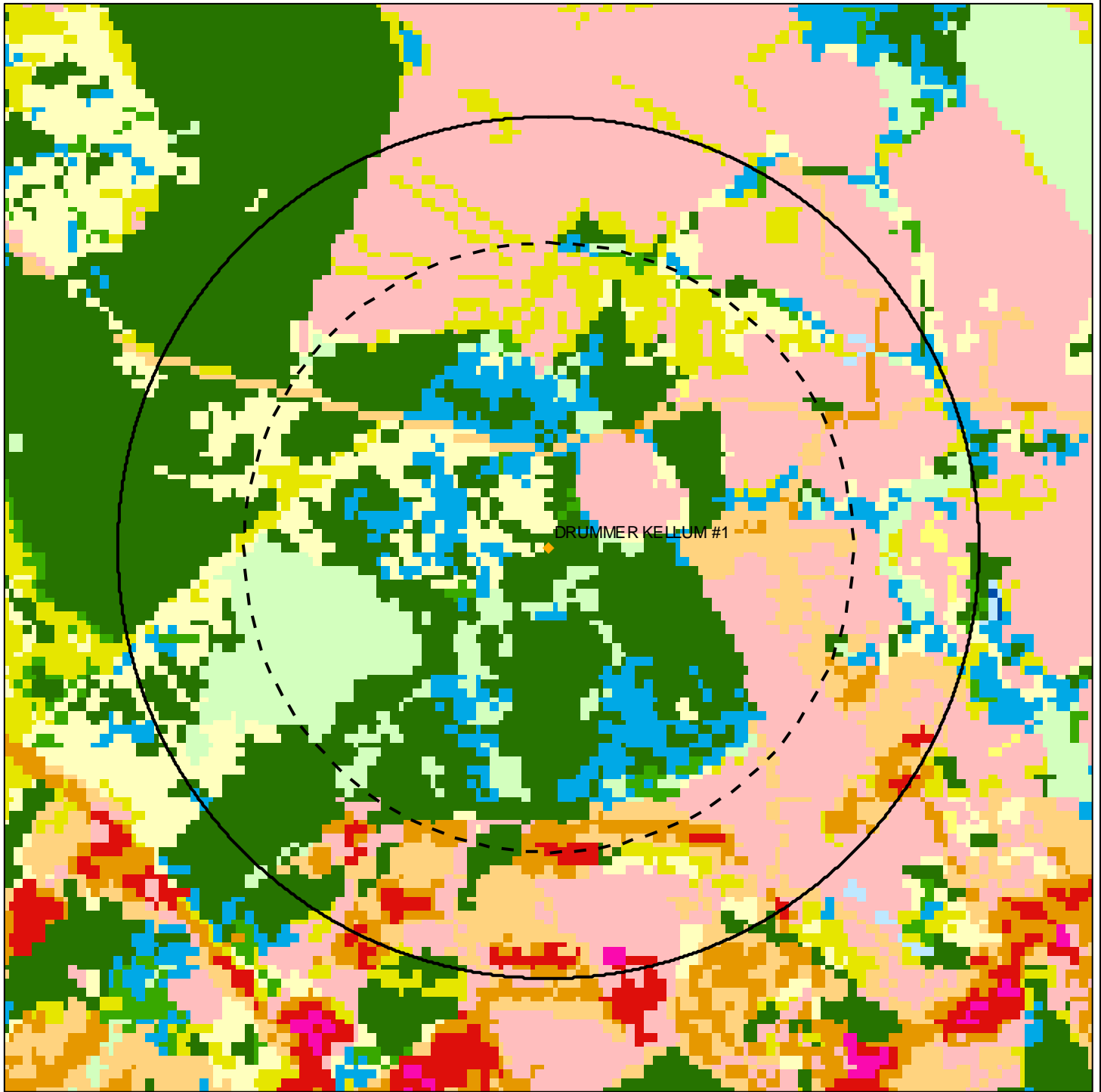
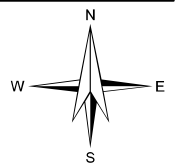


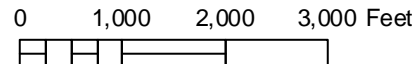
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



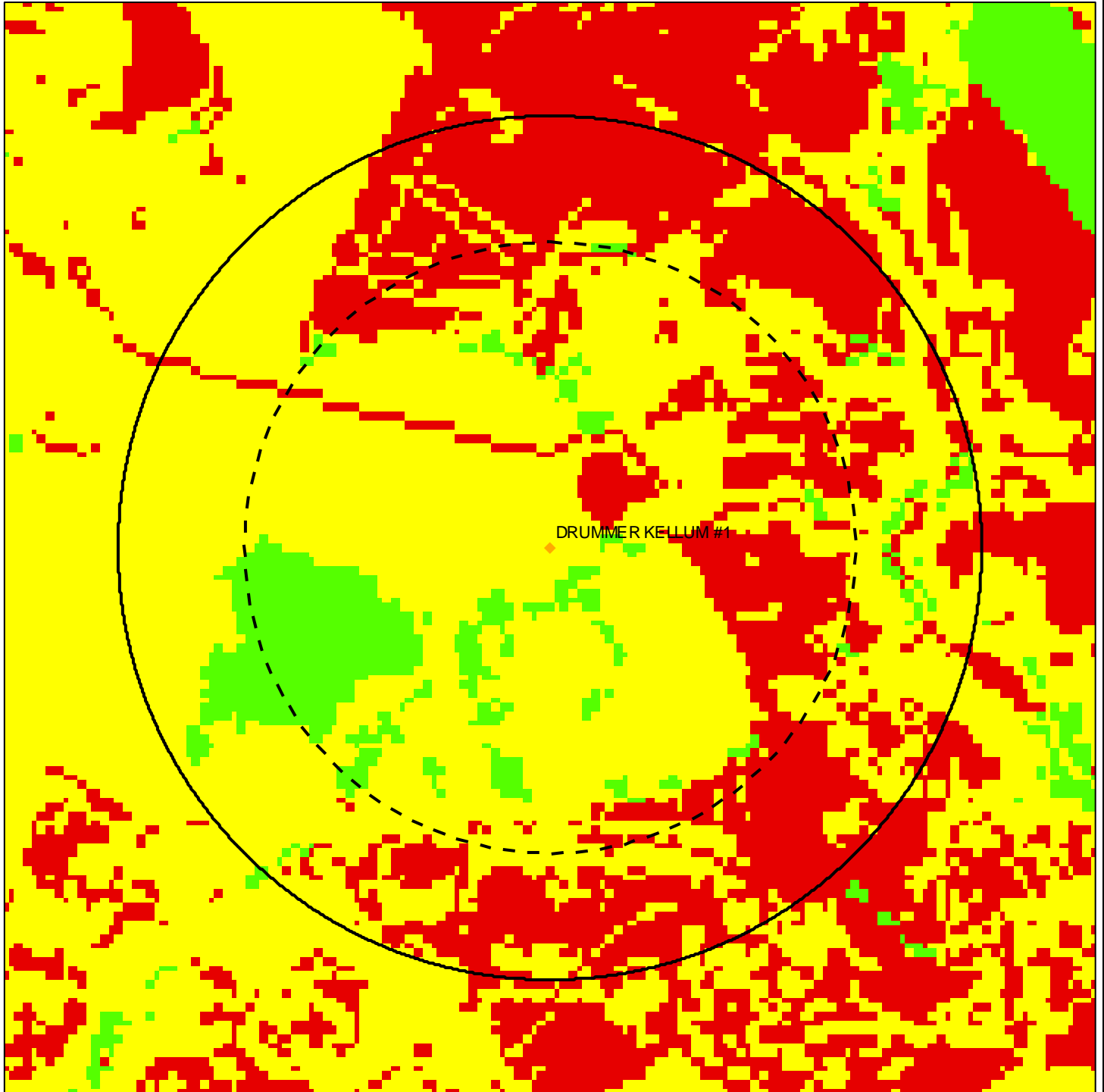
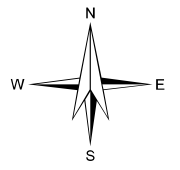
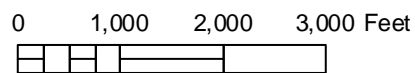


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



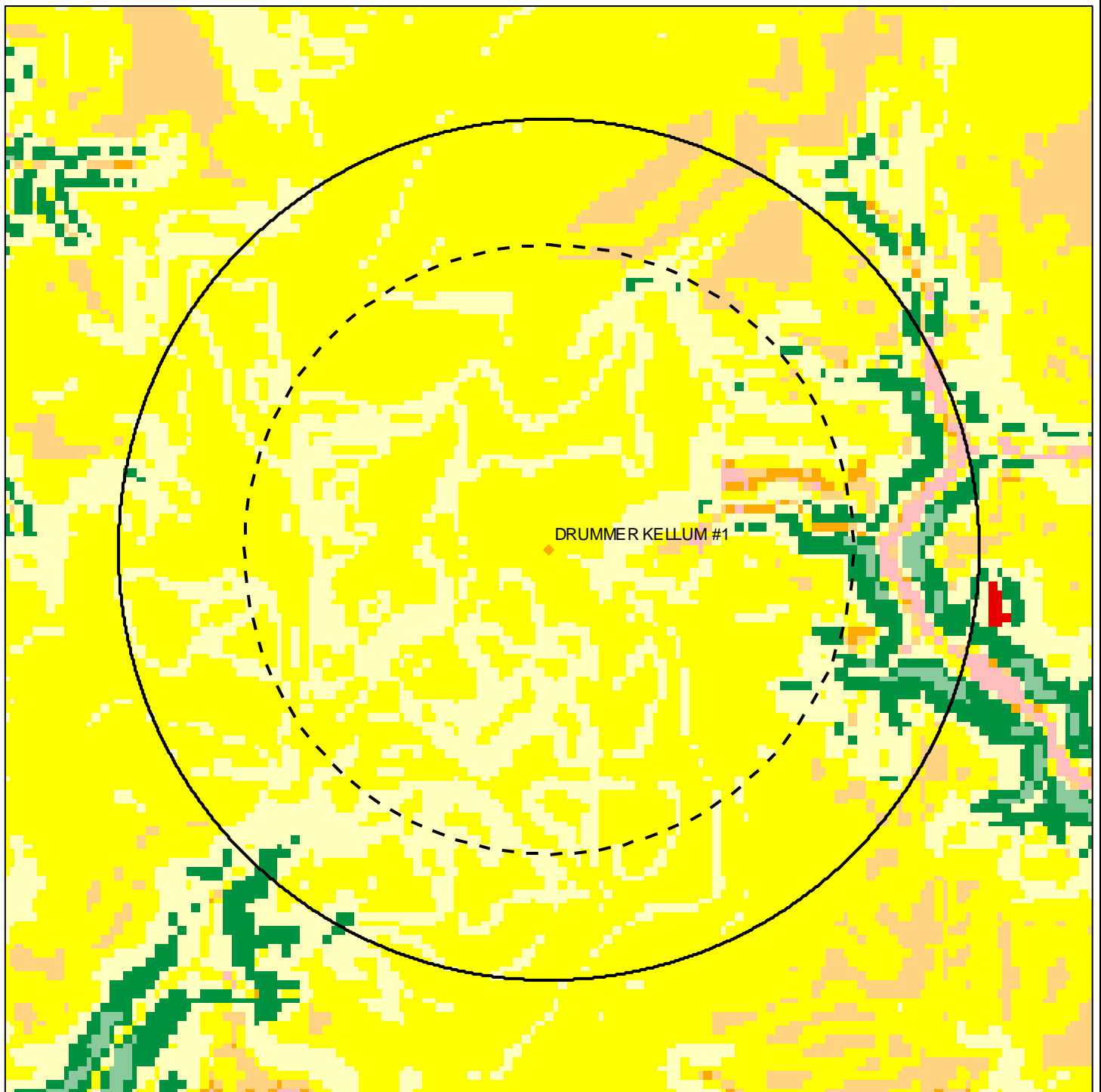
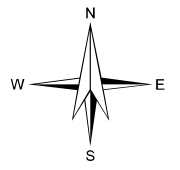












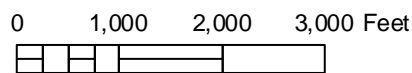


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to 1,280 sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |



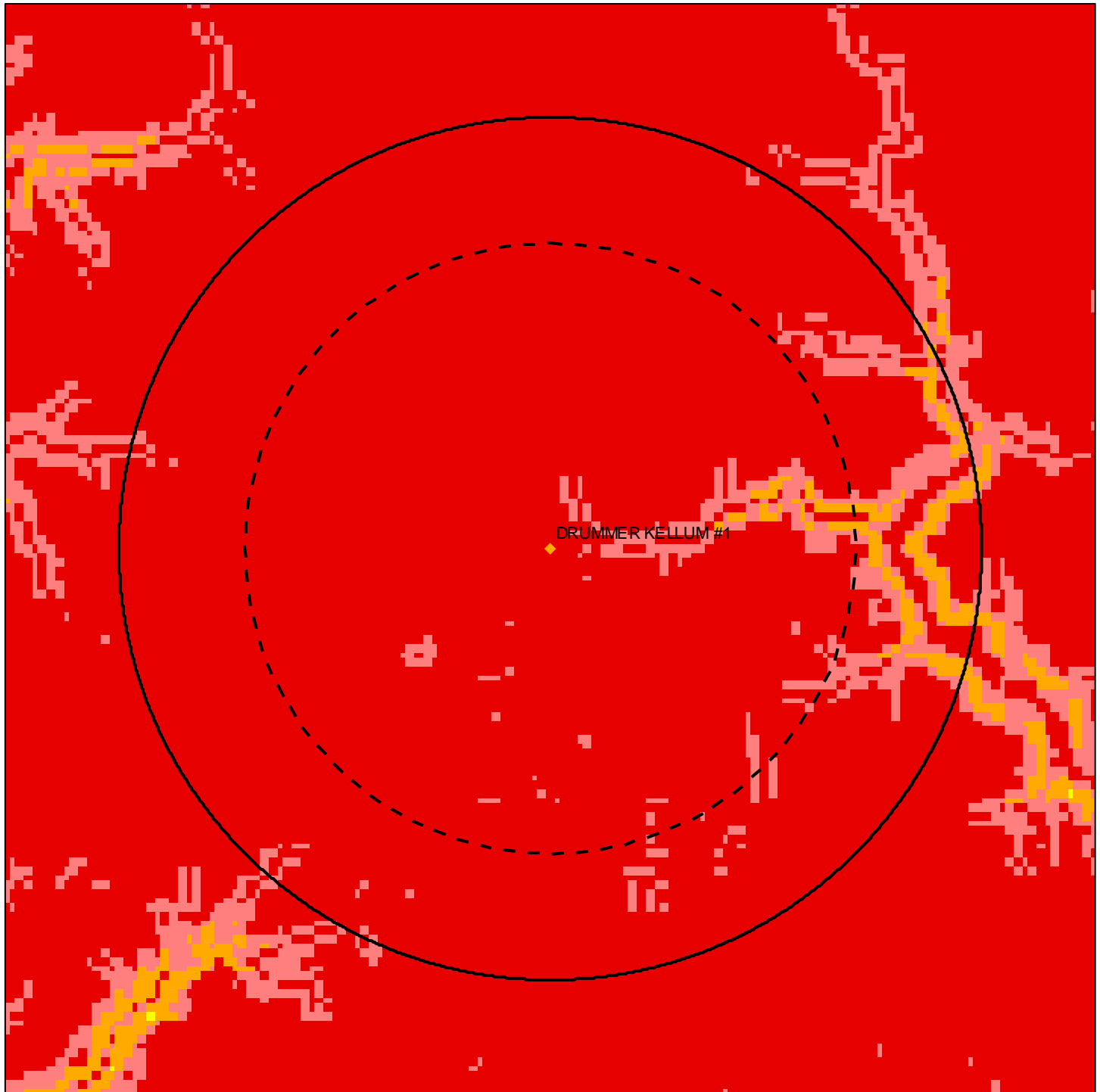
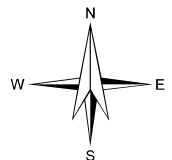








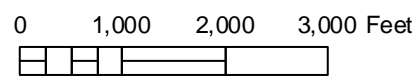


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



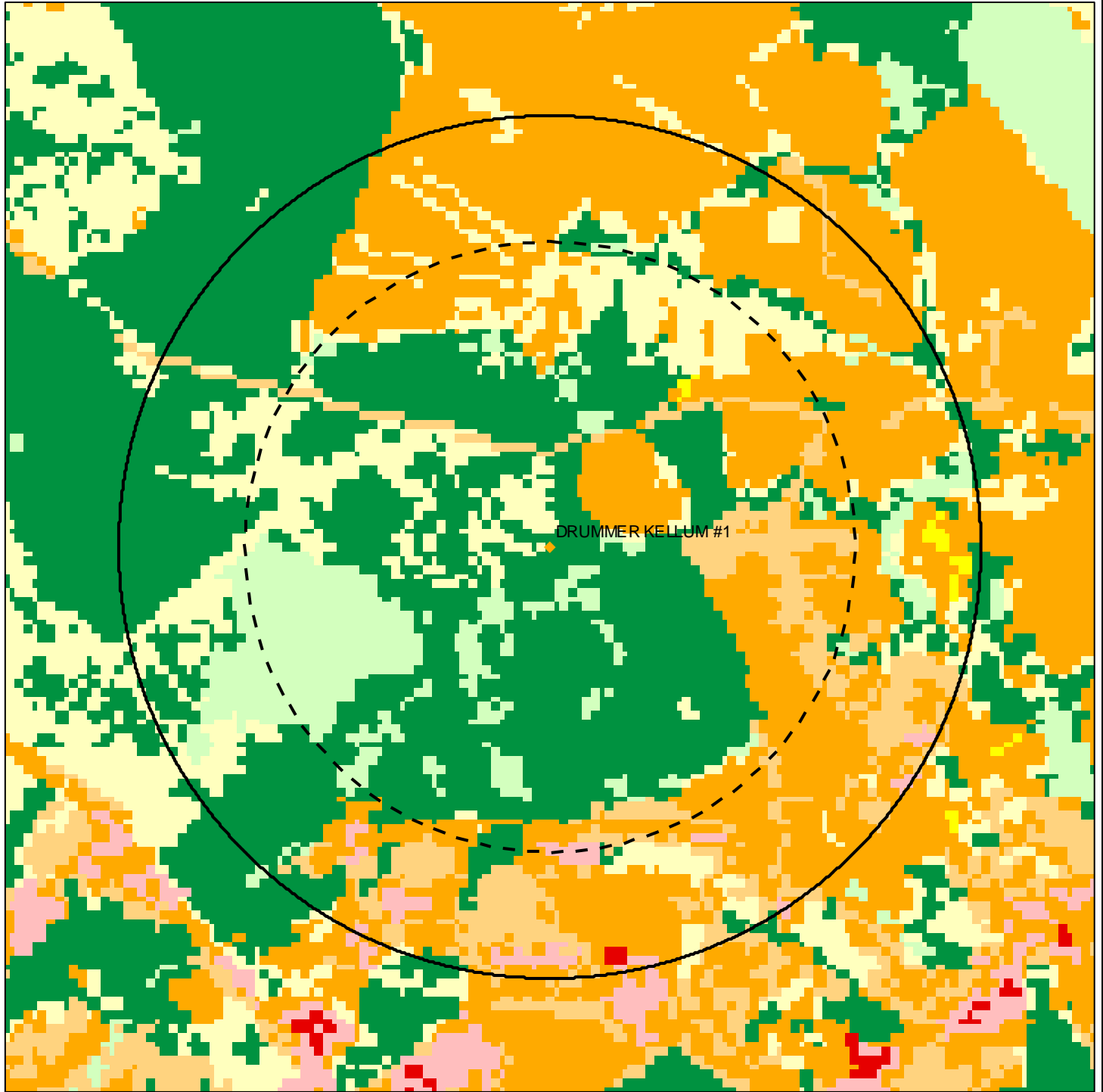
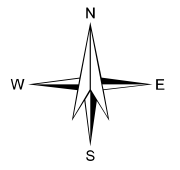











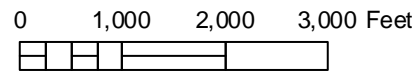


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



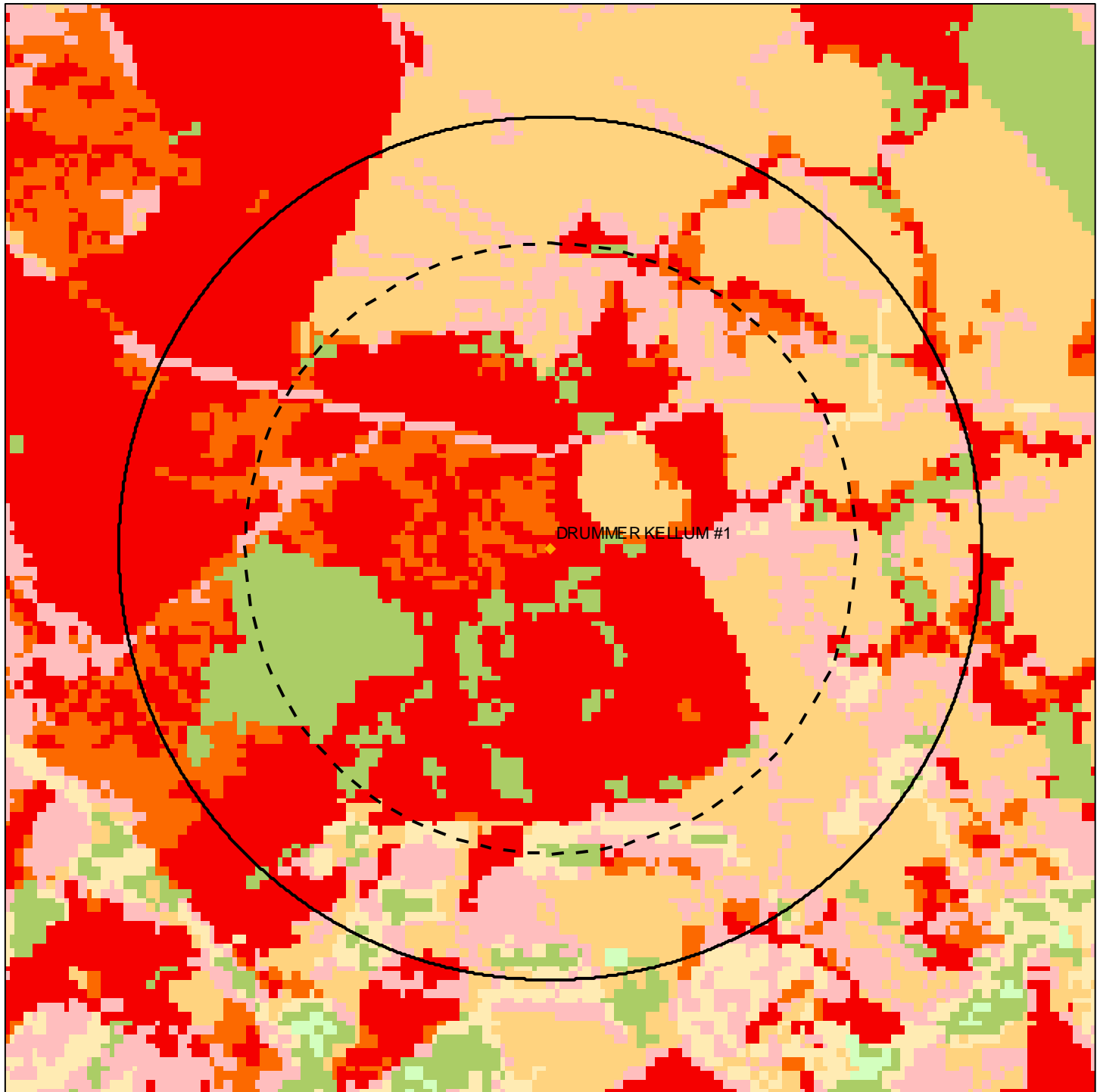
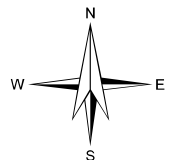
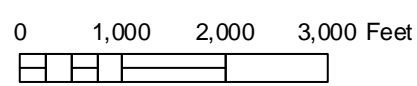


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

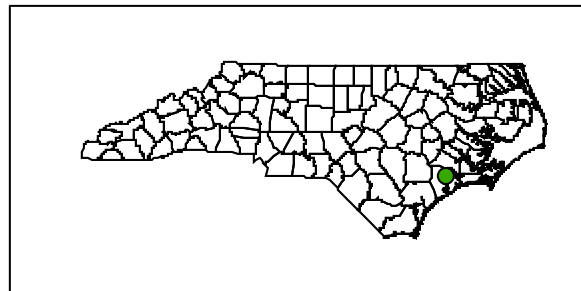
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



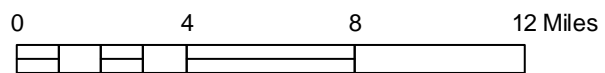
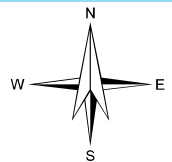


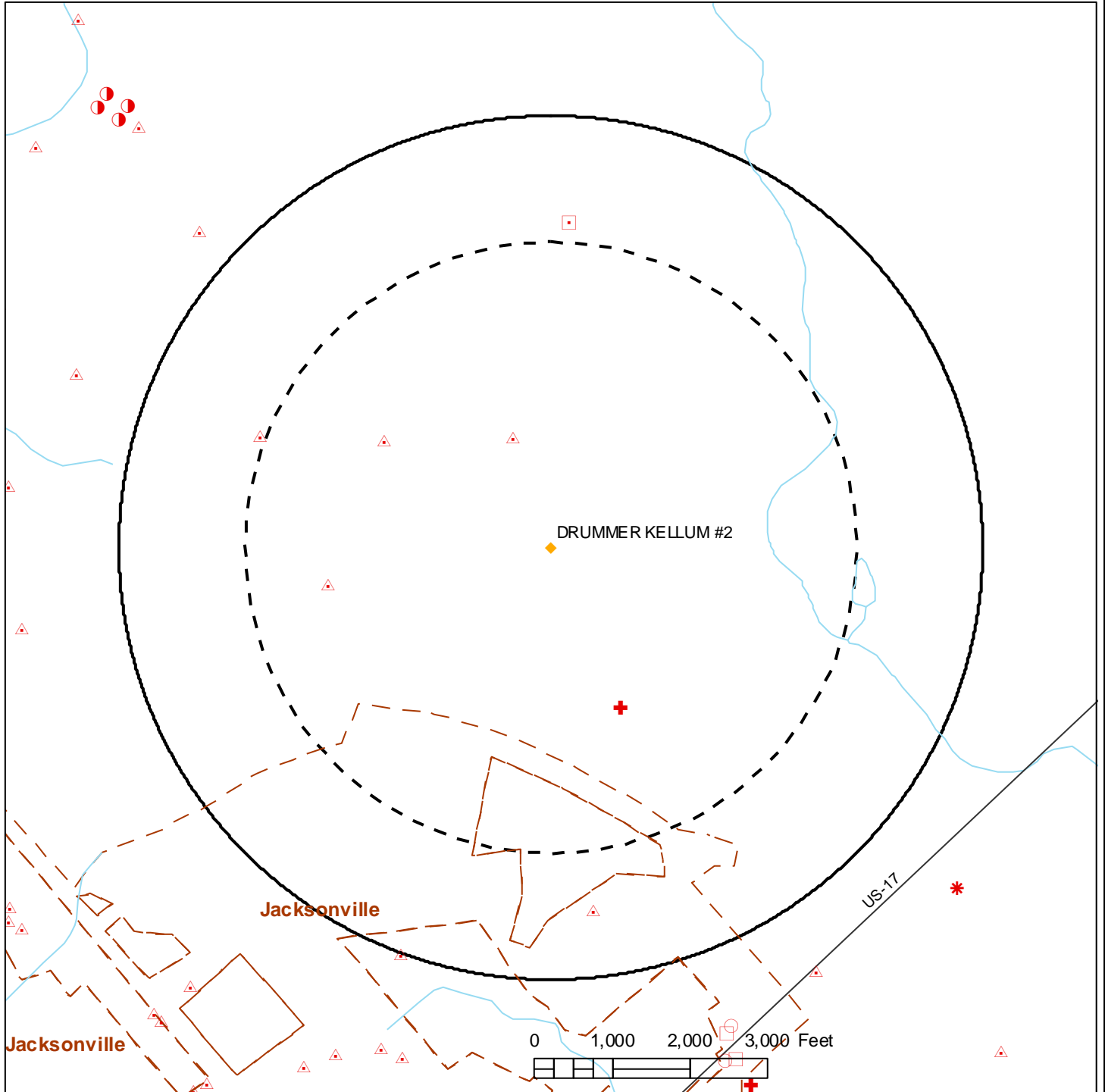
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

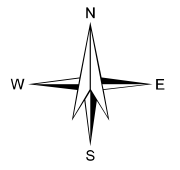




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2

PCS Types

- | | | | | | |
|---|-------------------------------|---|------------------------|---|--|
| □ | Animal Operations | ○ | Septage Disposal Sites | — | Roads |
| △ | CERCLIS Sites | ○ | Soil Remediation Sites | — | Rivers and Streams |
| □ | RCRA Gen. / Trans. Facilities | * | Solid Waste Facilities | — | Major Hydrology |
| ● | Non Discharge Permits | * | Tier II Sites | — | Municipal Boundaries |
| △ | NPDES Permits | ○ | RCRA TSD Facilities | — | Ground Water Assessment Area - Delineated Area |
| ★ | National Priority List Sites | ○ | Old Landfill Sites | — | Ground Water Assessment Area - Zone A |
| + | PCB Sites | ☆ | UIC Permits | | |
| ○ | Pollution Incidents | + | UST Permits | | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, DRUMMER KELLUM #2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Scott Farm	AWS670010	Animal Operations	H	Jim Parker Rd	Jacksonville	Unkno wn	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section Viii	Jacksonville	Unkno wn	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unkno wn	ONSLOW
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unkno wn	ONSLOW
The Village at The Glen	SW8080520	NPDES Permits	L	Ramsey Rd	Jacksonville	Unkno wn	ONSLOW
Ivy Glen at Carolina Forest	SW8080227	NPDES Permits	L	Terry Lee Lanier Dr	Jacksonville	Unkno wn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, DRUMMER KELLUM #2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Scott Farm	AWS670010	Operation Type	Swine State COC
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Issued Date	12/15/2005
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005
The Village at The Glen	SW8080520	Permit Type	State Stormwater
The Village at The Glen	SW8080520	Permit Issued Date	11/28/2012
The Village at The Glen	SW8080520	Permit Expiration Date	9/9/2019
Ivy Glen at Carolina Forest	SW8080227	Permit Type	State Stormwater
Ivy Glen at Carolina Forest	SW8080227	Permit Issued Date	11/13/2012

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, DRUMMER KELLUM #2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , DRUMMER KELLUM #2**

Unsaturated Zone Rating	63.0
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

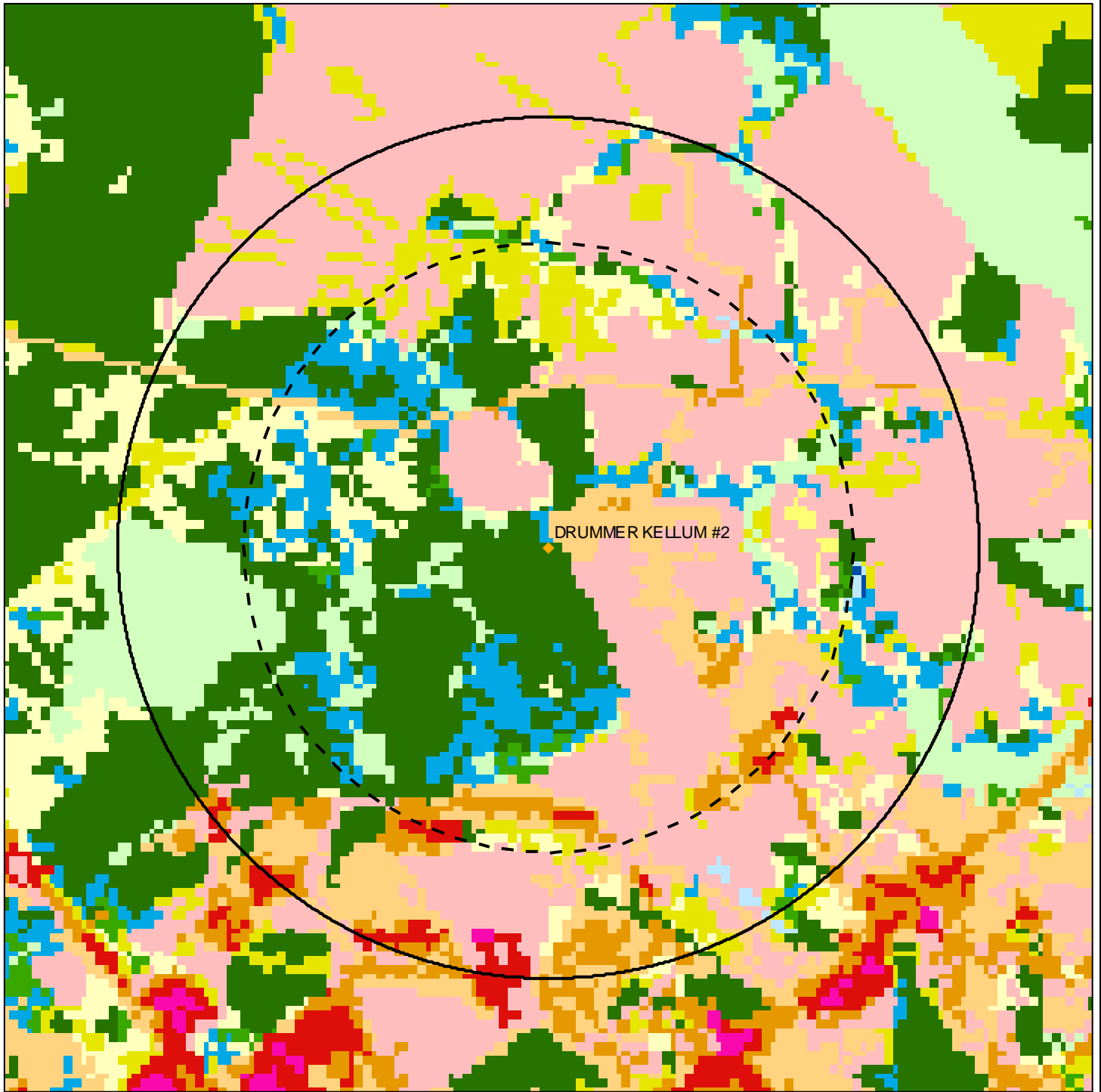
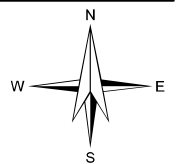


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2

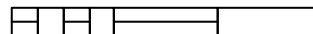


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



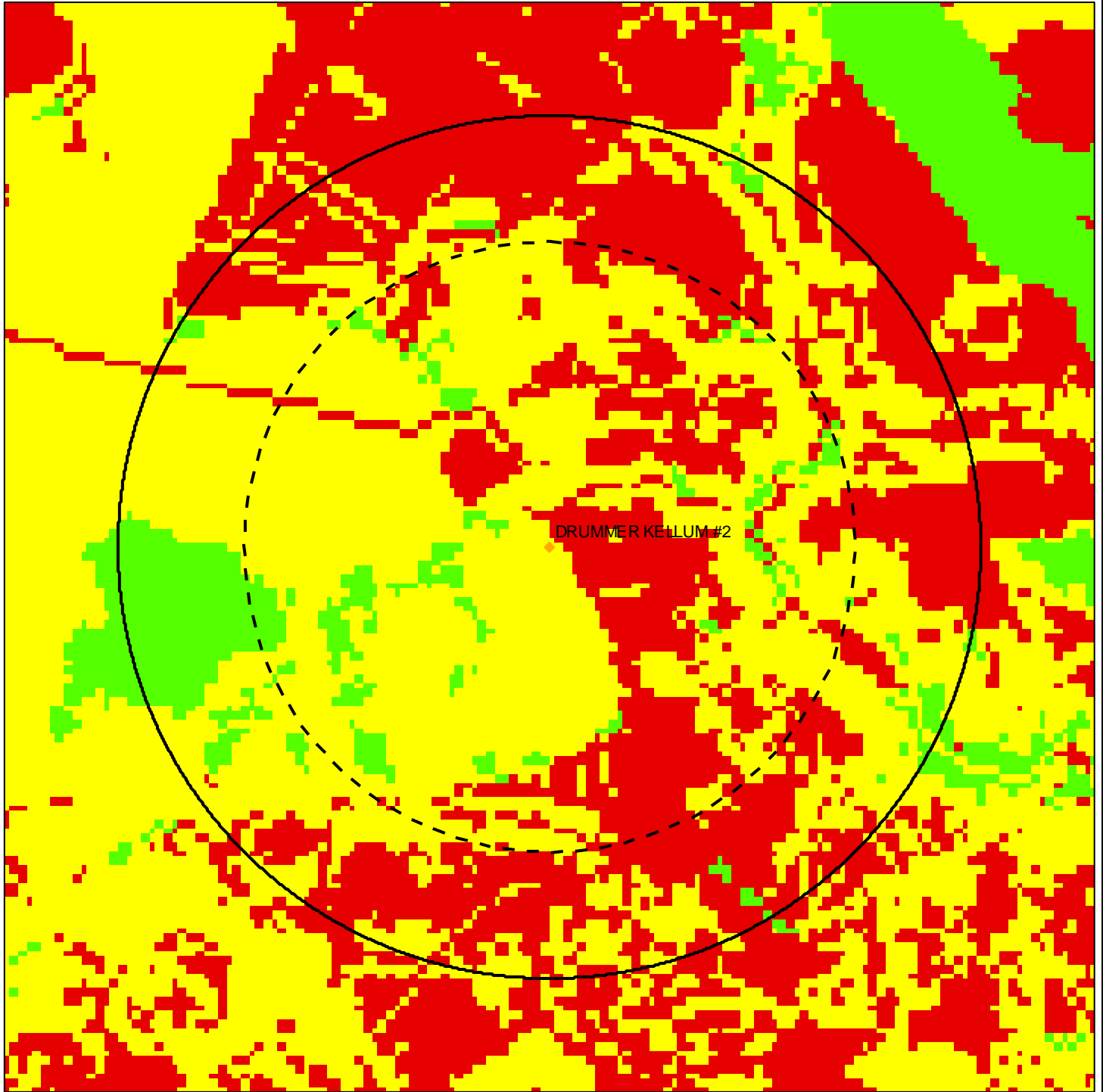
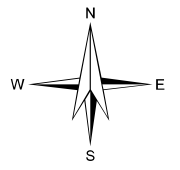
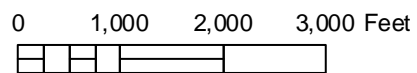


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



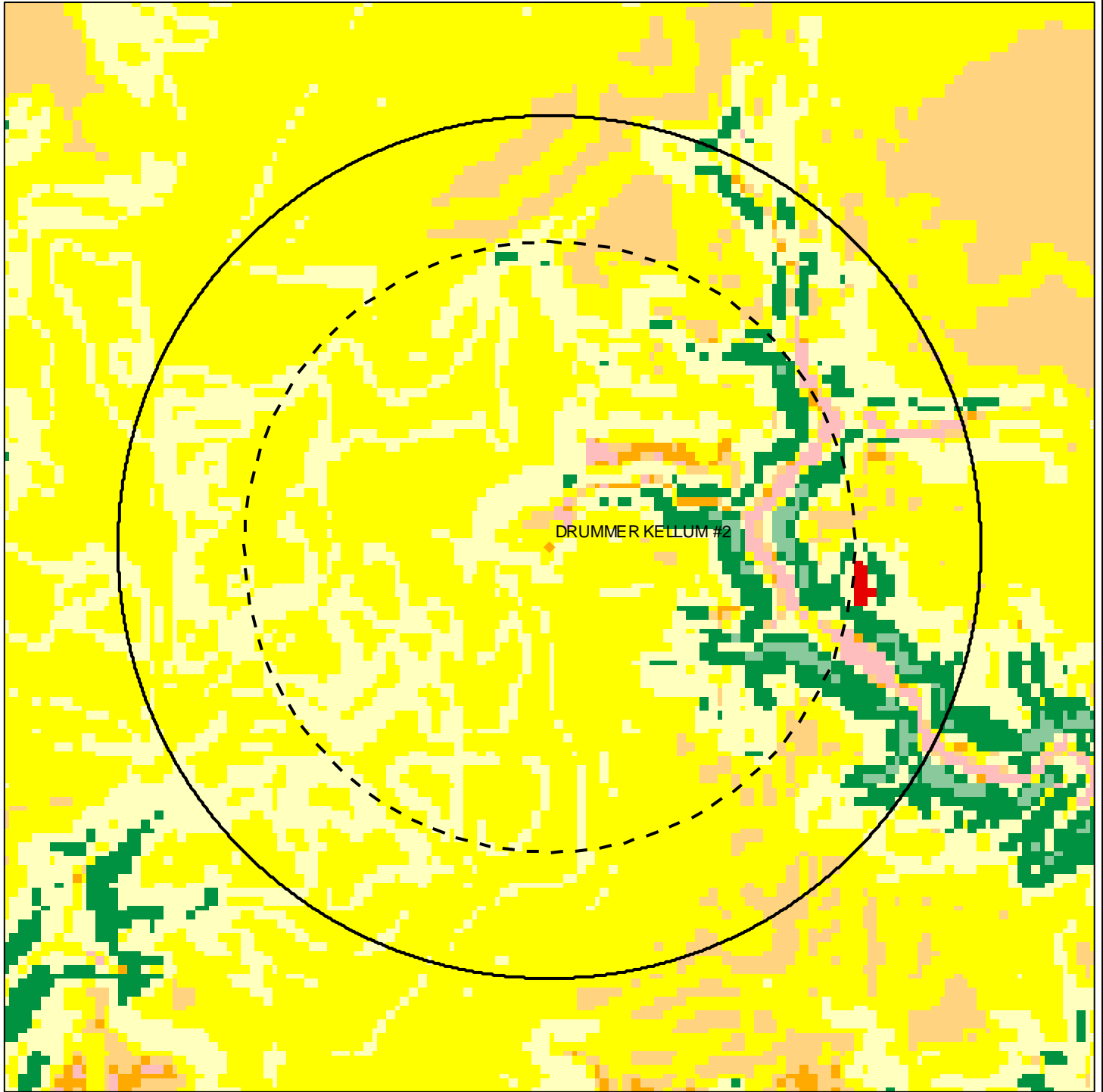
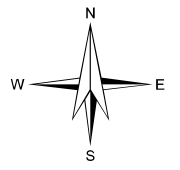
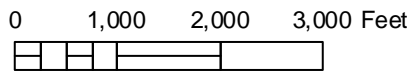


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



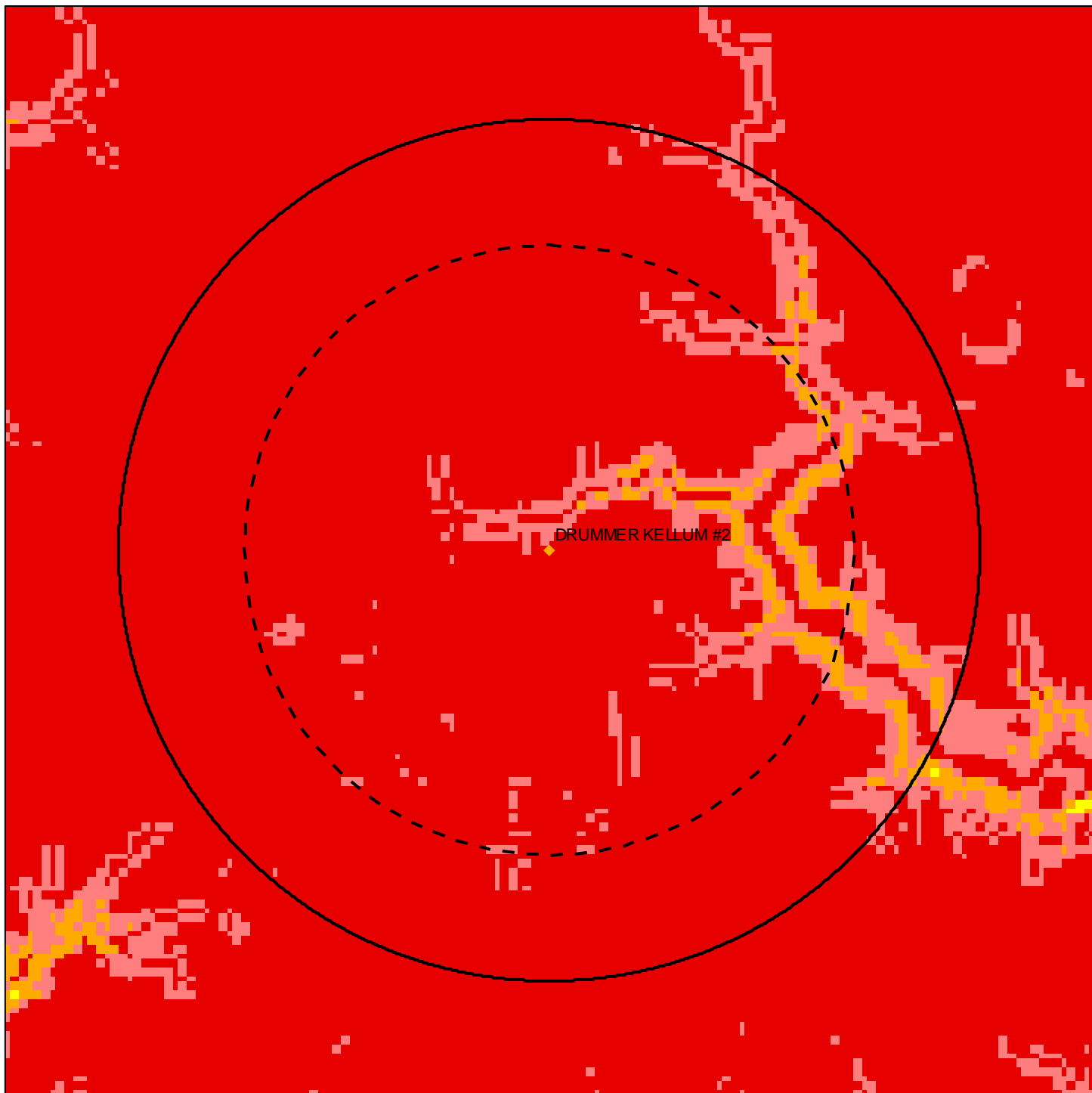
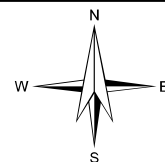








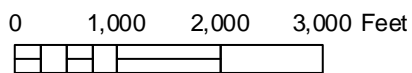


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



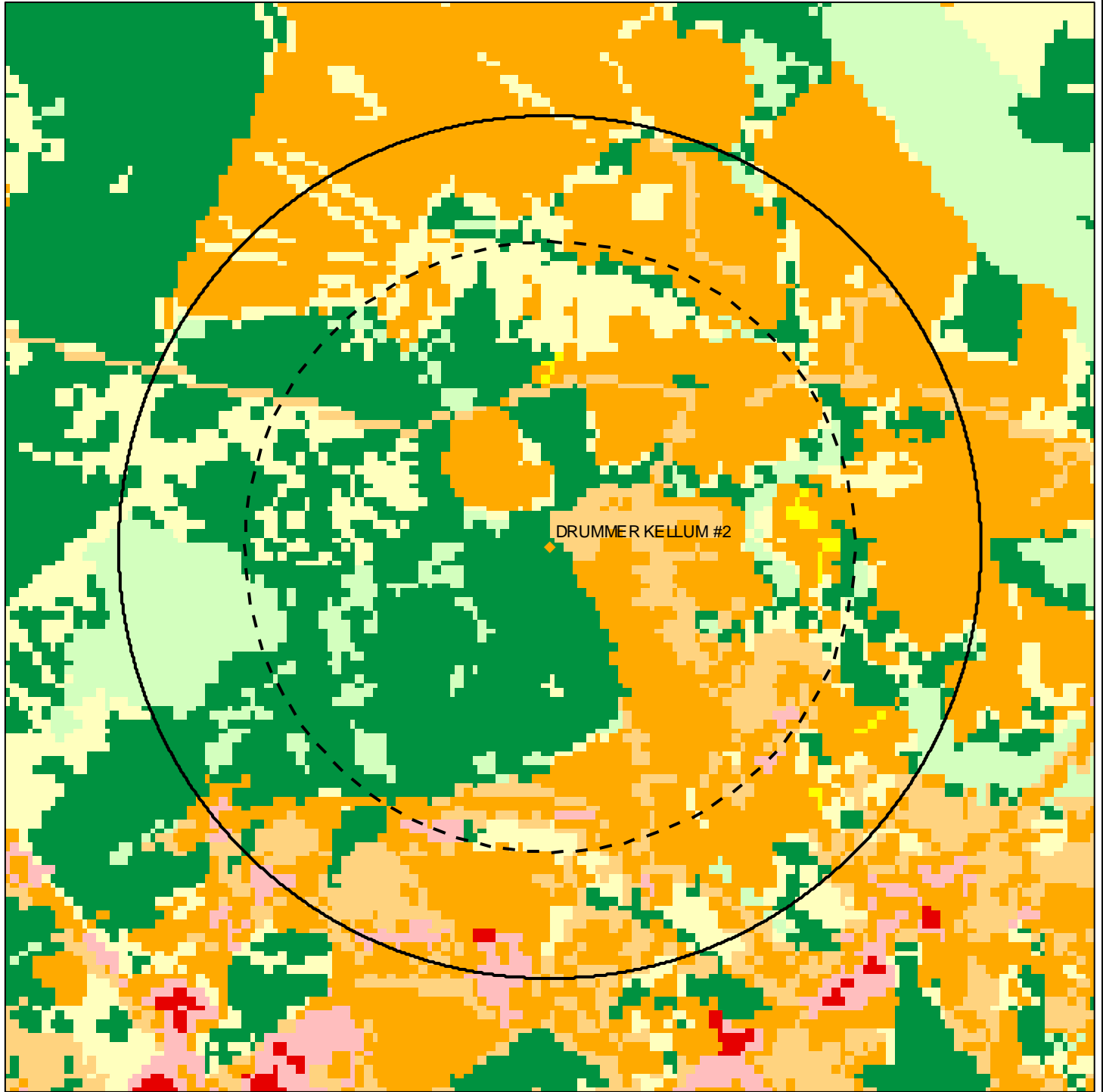
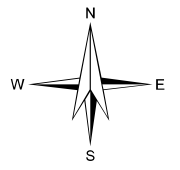




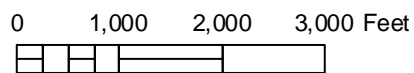
FIGURE 5. LAND USE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



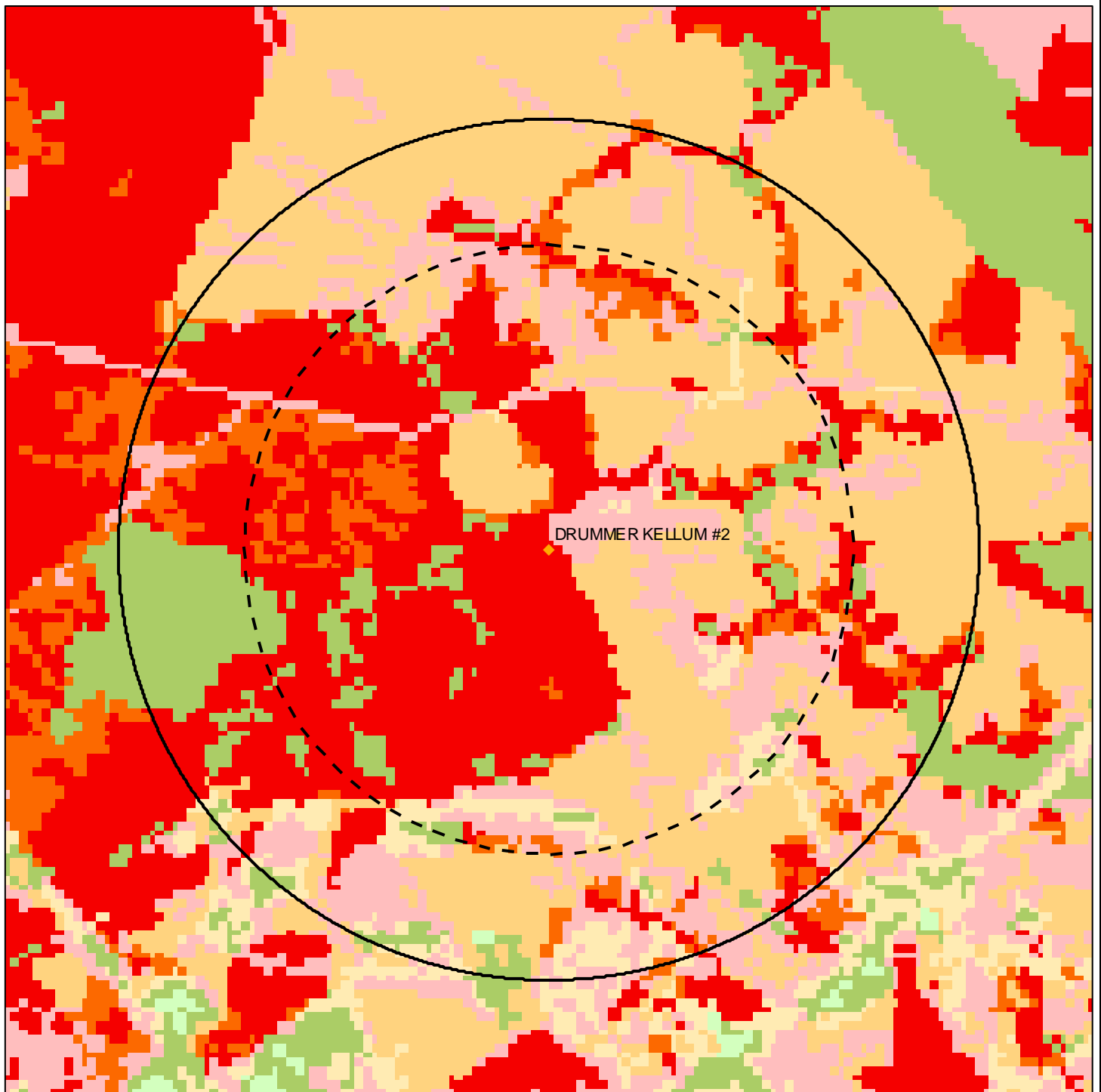
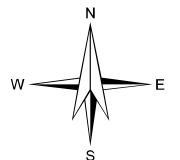
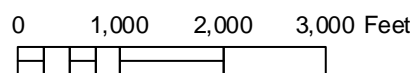


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DRUMMER KELLUM #2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

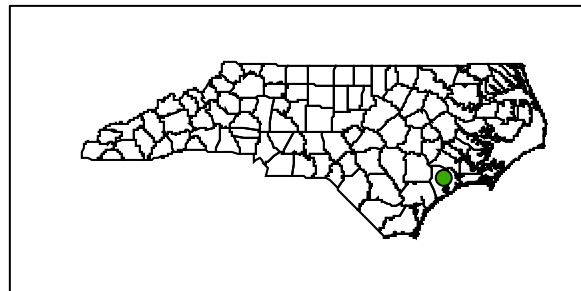
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



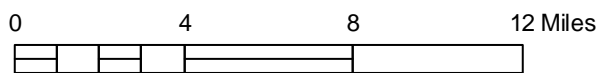
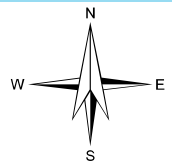


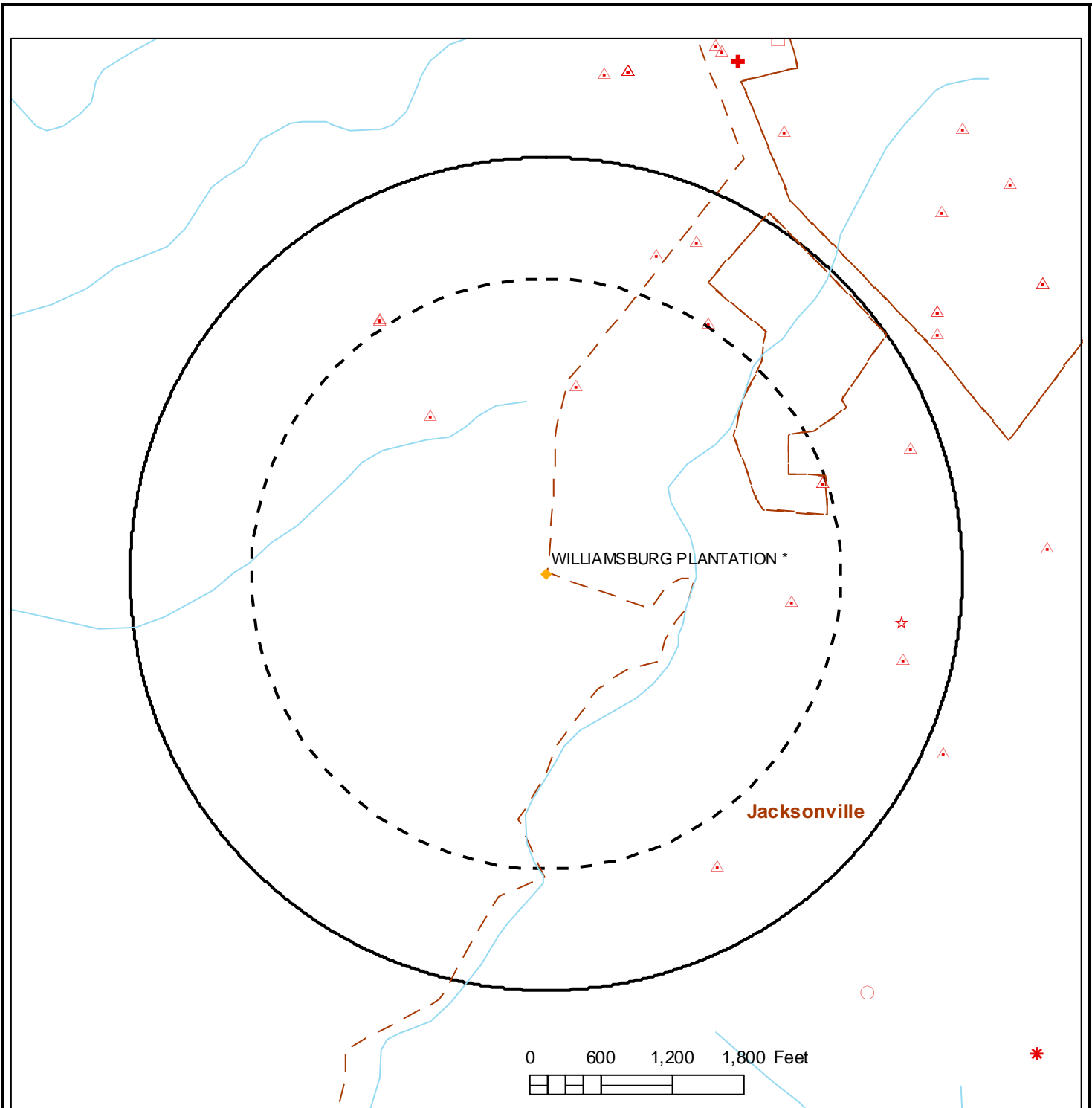
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

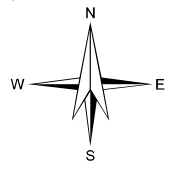




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *

PCS Types

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> □ Animal Operations △ CERCLIS Sites □ RCRA Gen. / Trans. Facilities ● Non Discharge Permits △ NPDES Permits ★ National Priority List Sites ⊕ PCB Sites ○ Pollution Incidents | <ul style="list-style-type: none"> ○ Septage Disposal Sites ○ Soil Remediation Sites * Solid Waste Facilities * Tier II Sites ○ RCRA TSD Facilities ○ Old Landfill Sites ☆ UIC Permits ⊕ UST Permits | <ul style="list-style-type: none"> — Roads — Rivers and Streams Major Hydrology Municipal Boundaries Ground Water Assessment Area - Delineated Area Ground Water Assessment Area - Zone A |
|---|--|---|



**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Parkwood Elementary Addition	SW8950808	NPDES Permits	L	2900 Northwoods Dr	Jacksonville	Unkno wn	ONSLOW
Kensington Park at Williamsburg Plantation	SW8050629	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unkno wn	ONSLOW
Evansbrook, Phase II	SW8040329	NPDES Permits	L	Iverleigh Ln	Jacksonville	Unkno wn	ONSLOW
Woodlands Phase IIIA	SW8891007	NPDES Permits	L	Plantation Blvd At Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Woodlands III	SW8961101	NPDES Permits	L	Plantation Boulevard Iverleigh Ln	Jacksonville	Unkno wn	ONSLOW
Covenant Presbyterian Church ARP	SW8071227	NPDES Permits	L	106 Plantation Blvd	Jacksonville	Unkno wn	ONSLOW
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unkno wn	ONSLOW
Williamsburg Plantation Parkway	SW8960327	NPDES Permits	L	Williamsburg Plantation Pkwy	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Regency Park Section I at Williamsburg Plantation	SW8001114	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Regency Park Section II at Williamsburg Plantation	SW8020919	NPDES Permits	L	S Of Intersection Of Williamsburg Pky	Jacksonville	Unknown	ONSLOW
Kensington Park II at Williamsburg Plantation	SW8070422	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
Huntington Park at Williamsburg Plantation	SW8040733	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Glen Spradling and Wanda Spradling SFR	WI0800192	UIC Permits	M	104 Sussex Ct	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Parkwood Elementary Addition	SW8950808	Permit Type	State Stormwater
Parkwood Elementary Addition	SW8950808	Permit Issued Date	10/17/2007
Kensington Park at Williamsburg Plantation	SW8050629	Permit Type	State Stormwater
Kensington Park at Williamsburg Plantation	SW8050629	Permit Issued Date	9/19/2012
Kensington Park at Williamsburg Plantation	SW8050629	Permit Expiration Date	7/17/2020
Evansbrook, Phase II	SW8040329	Permit Type	State Stormwater
Evansbrook, Phase II	SW8040329	Permit Issued Date	5/26/2004
Woodlands Phase IIIA	SW8891007	Permit Type	State Stormwater
Woodlands Phase IIIA	SW8891007	Permit Issued Date	3/2/1990
Woodlands III	SW8961101	Permit Type	State Stormwater
Woodlands III	SW8961101	Permit Issued Date	2/13/1997
Covenant Presbyterian Church ARP	SW8071227	Permit Type	State Stormwater
Covenant Presbyterian Church ARP	SW8071227	Permit Issued Date	5/14/2008
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Type	State Stormwater
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Issued Date	11/22/2013
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Expiration Date	11/23/2021

PCS Name	PCS ID	Attribute	Value
Williamsburg Plantation Parkway	SW8960327	Permit Type	State Stormwater
Williamsburg Plantation Parkway	SW8960327	Permit Issued Date	7/19/1996
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Type	State Stormwater
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Issued Date	9/20/2012
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Expiration Date	10/21/2021
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Type	State Stormwater
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Issued Date	3/30/2015
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Expiration Date	3/27/2023
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Type	State Stormwater
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Issued Date	9/14/2012
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Expiration Date	8/26/2017
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Type	State Stormwater
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Issued Date	10/1/2012
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Expiration Date	9/6/2021
Huntington Park at Williamsburg Plantation	SW8040733	Permit Type	State Stormwater
Huntington Park at Williamsburg Plantation	SW8040733	Permit Issued Date	10/2/2012
Huntington Park at Williamsburg Plantation	SW8040733	Permit Expiration Date	7/17/2020
Glen Spradling and Wanda Spradling SFR	WI0800192	Permit Type	Injection Water Only GSHP Well System

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WILLIAMSBURG PLANTATION ***

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010 , WILLIAMSBURG PLANTATION ***

Unsaturated Zone Rating	65.8
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$CR = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum CR) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

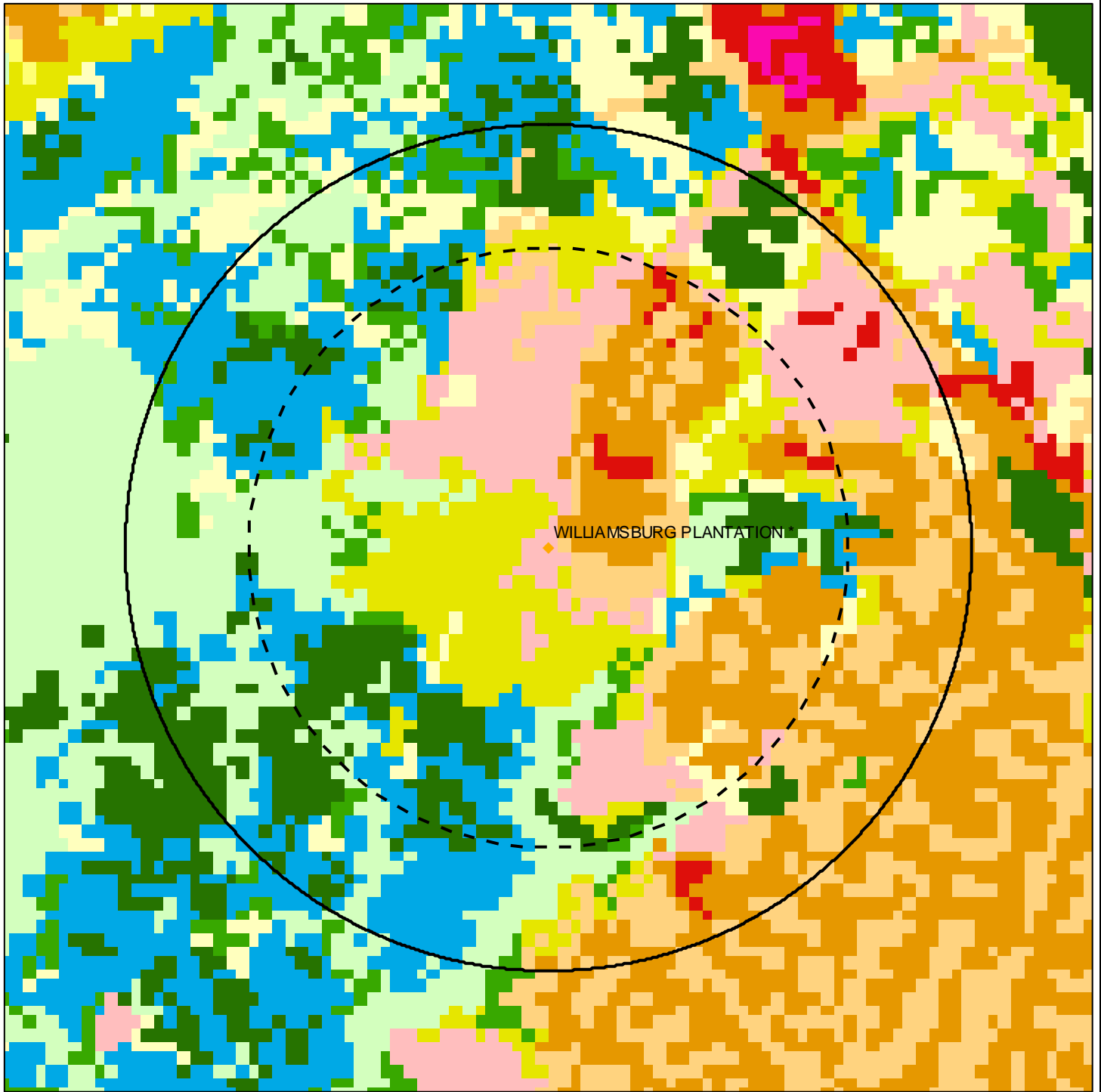
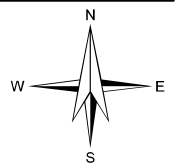
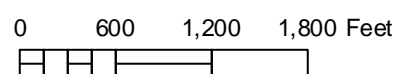


FIGURE 1. LAND USE/LAND COVER CATEGORIES
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



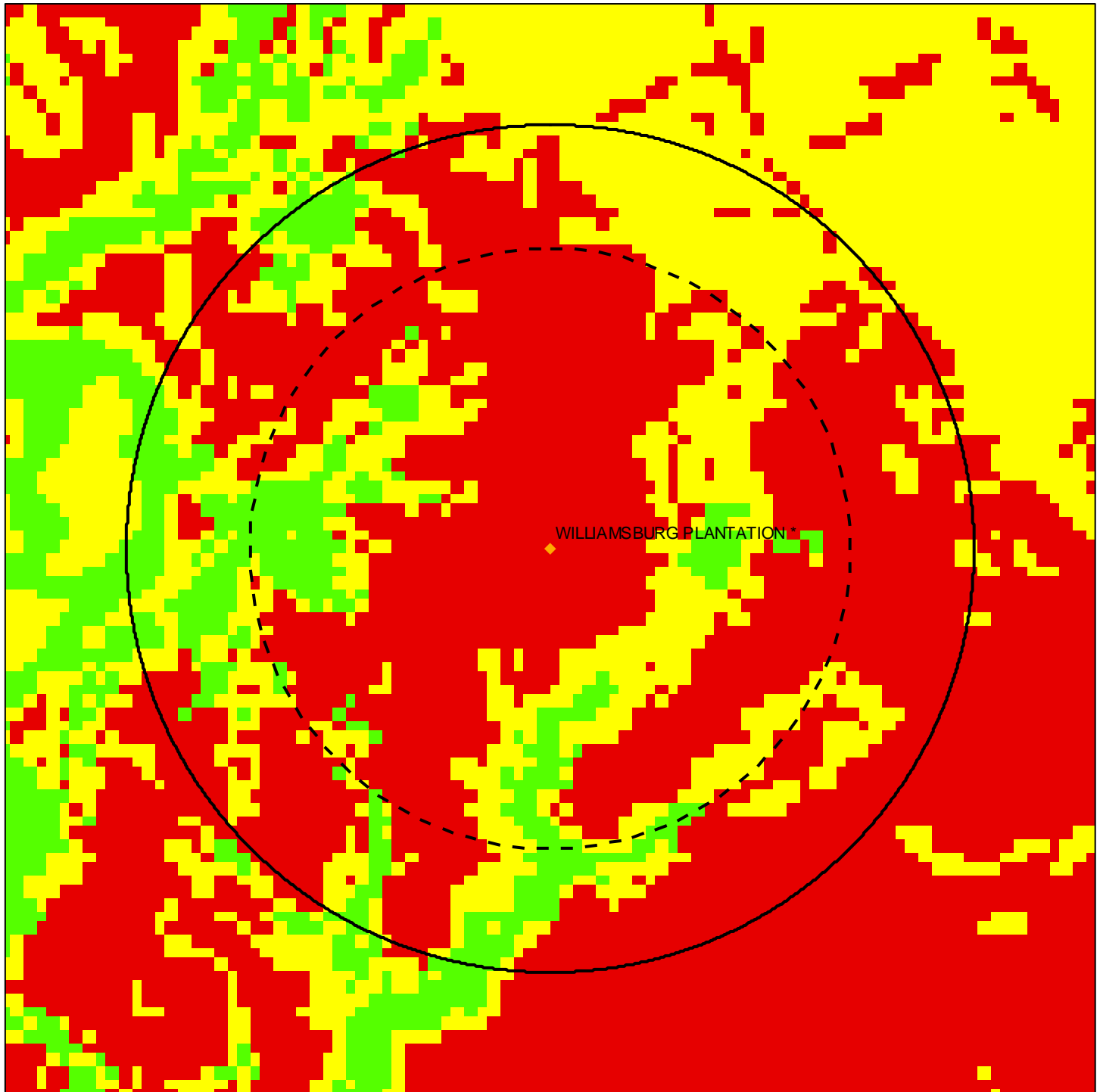
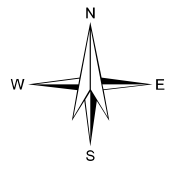
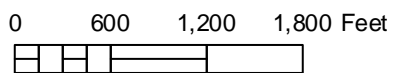


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



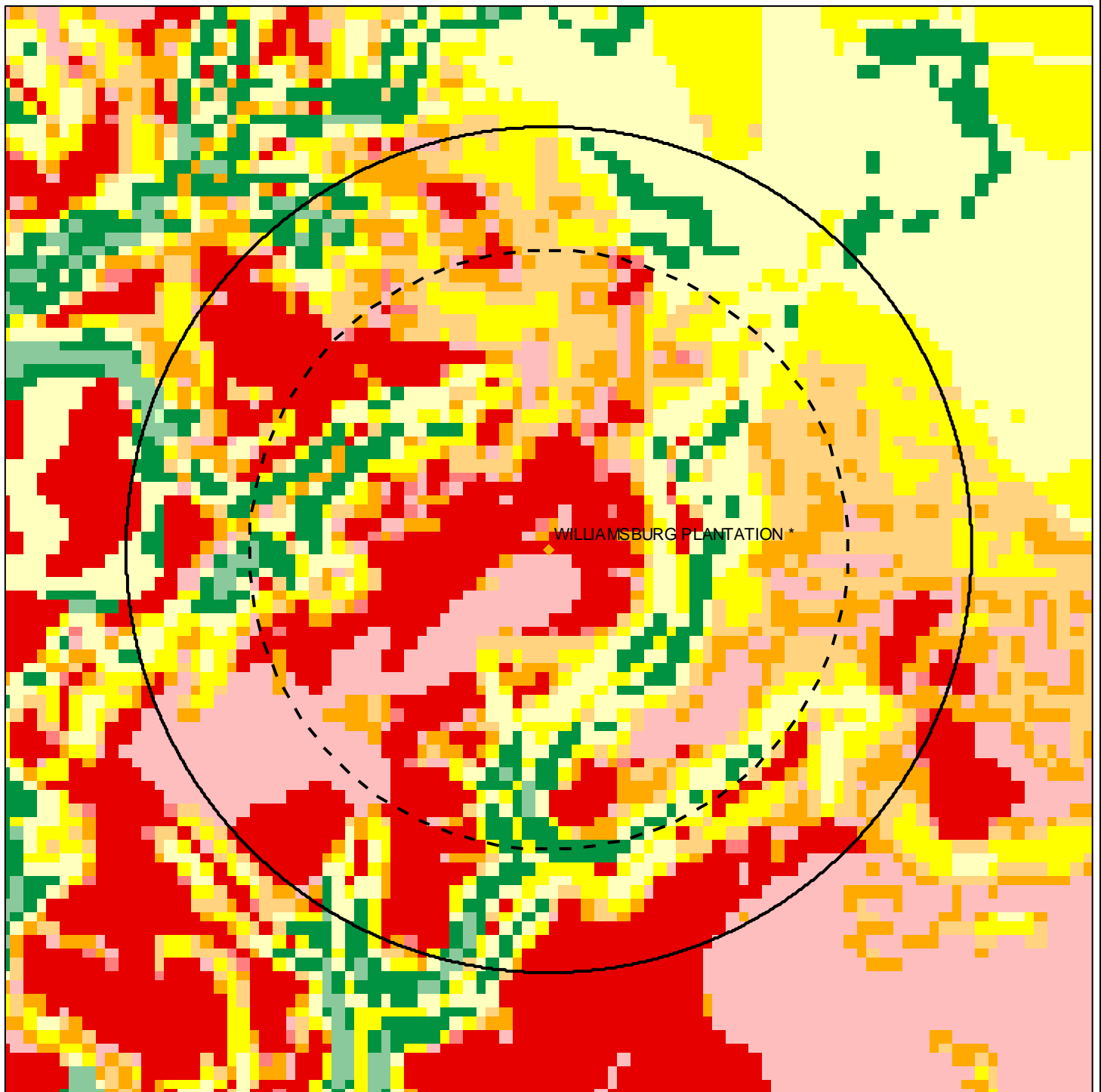
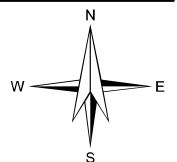
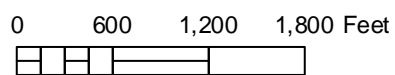


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



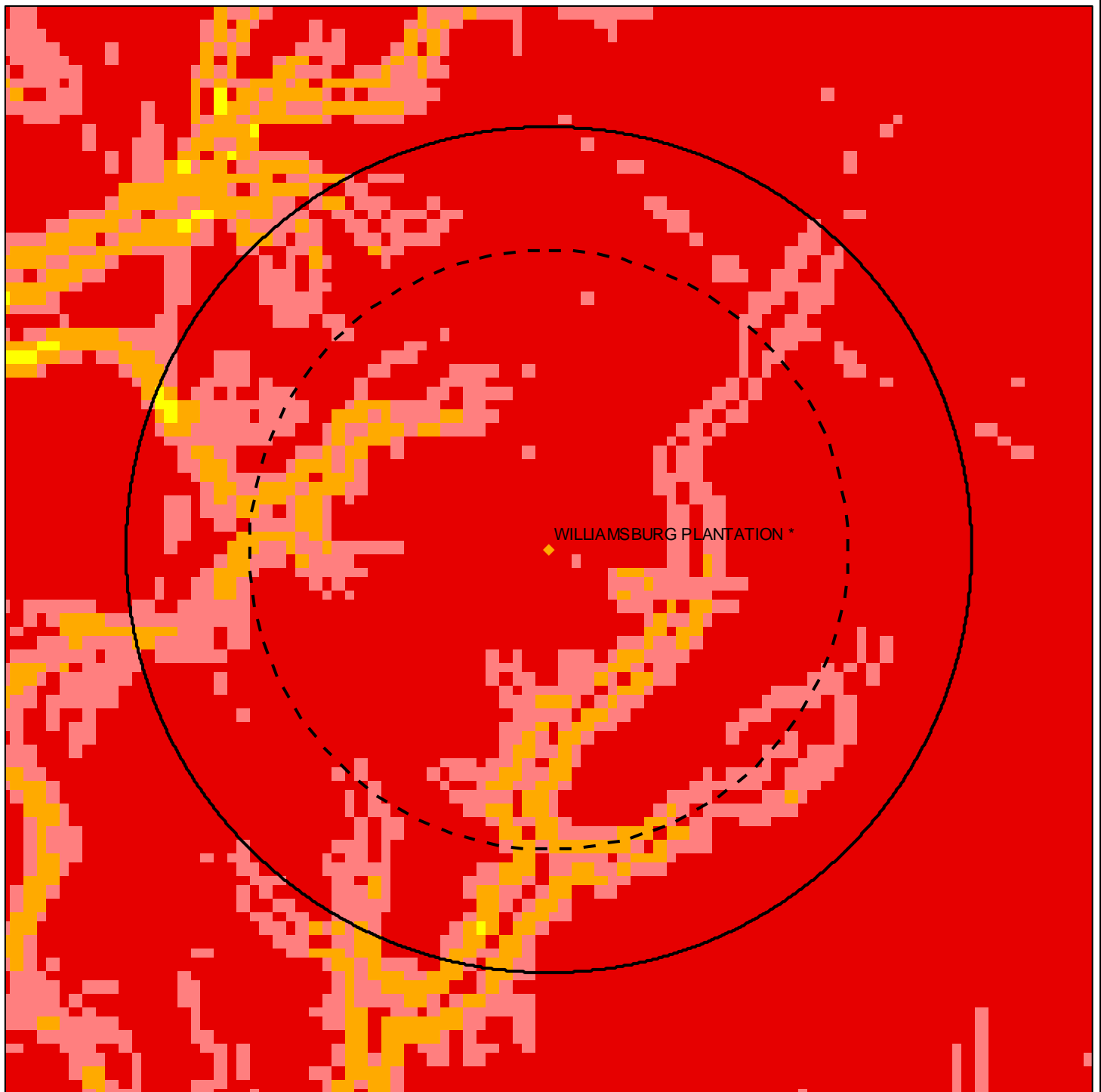
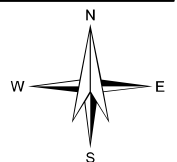








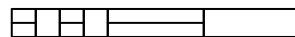


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |

0 600 1,200 1,800 Feet



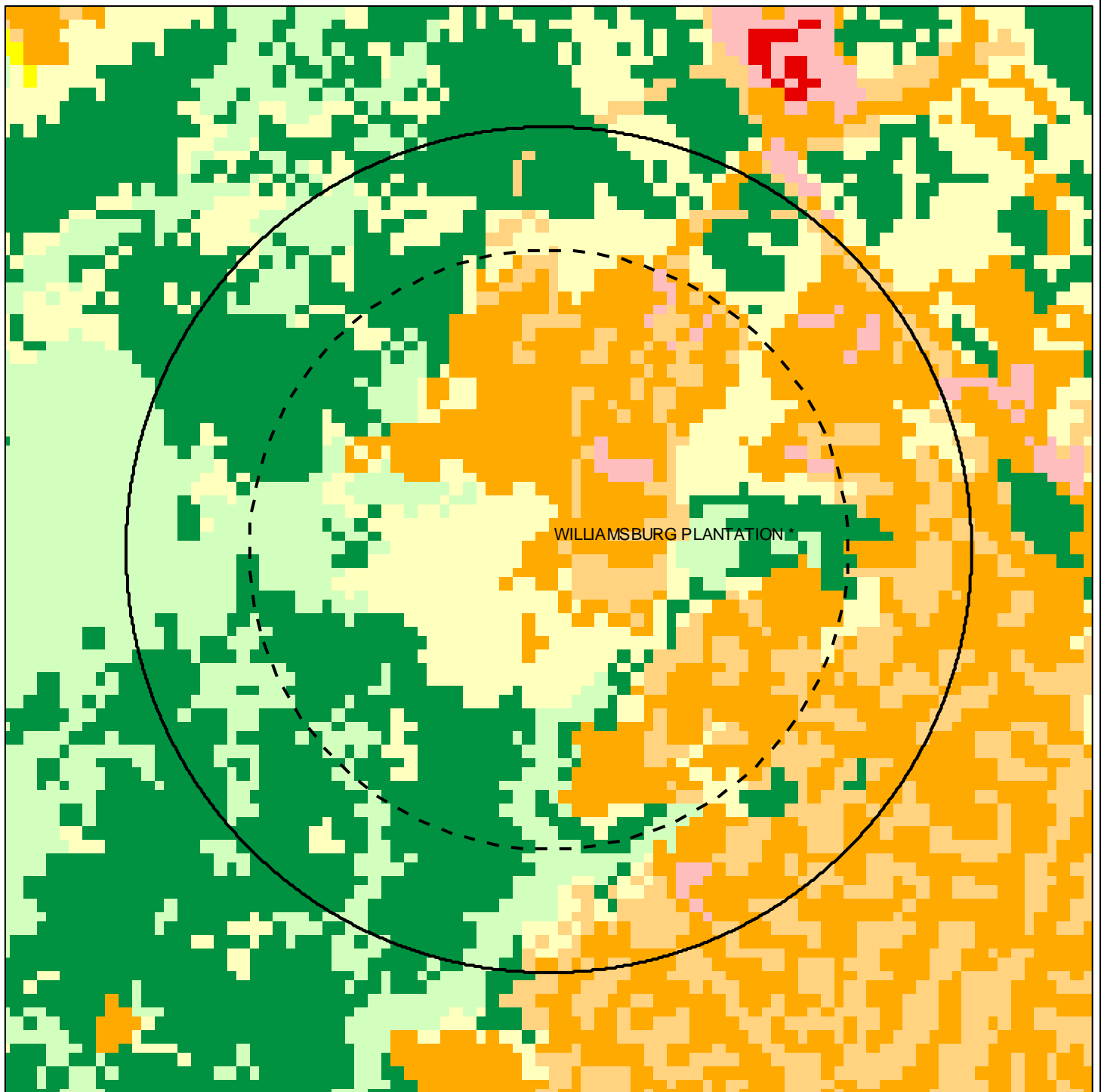


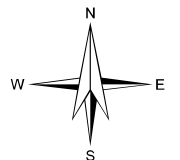


FIGURE 5. LAND USE RATING

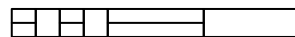
JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



0 600 1,200 1,800 Feet



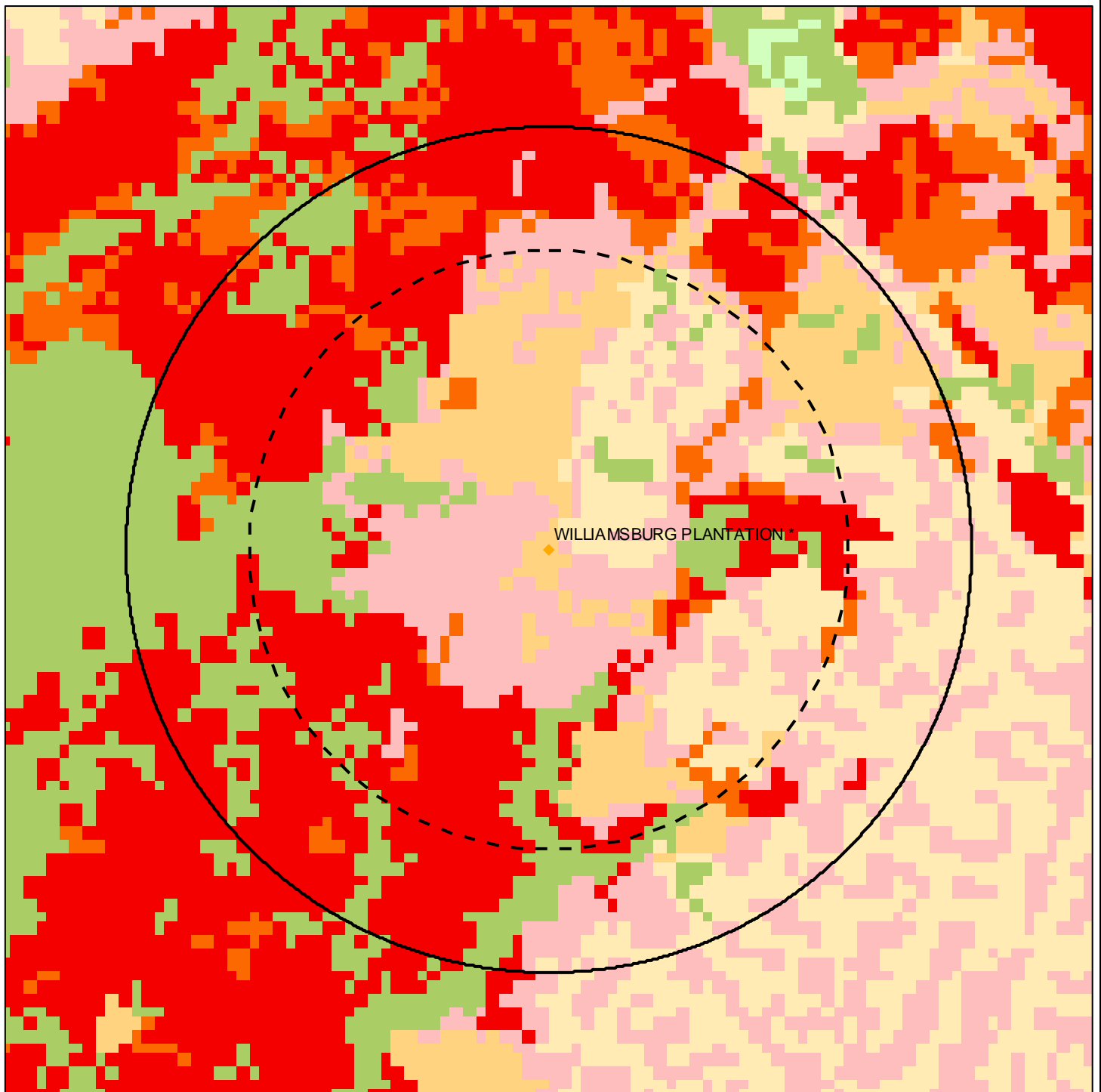
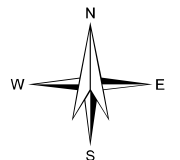


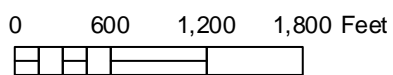
FIGURE 6. LAND COVER RATING

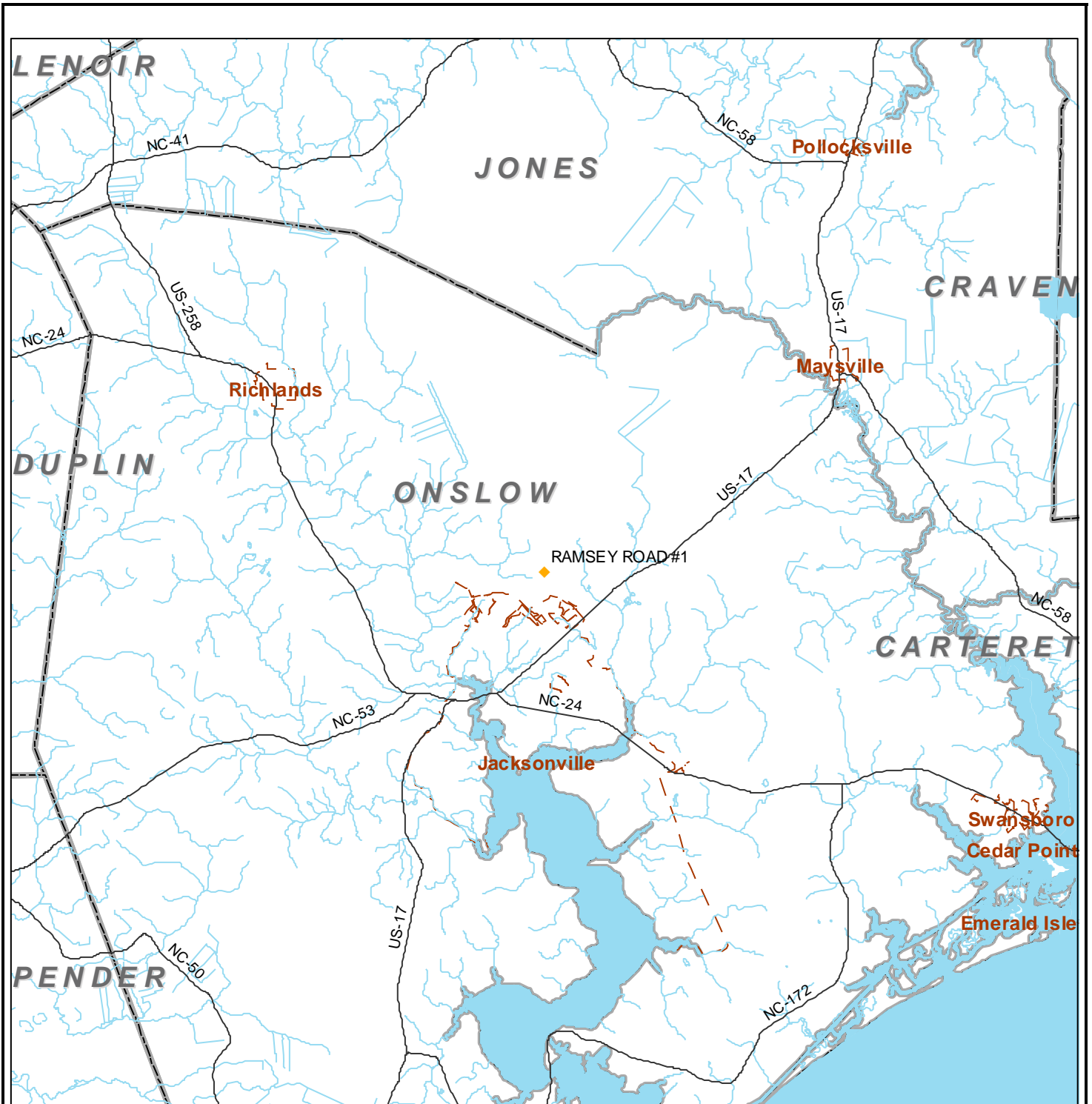
JACKSONVILLE CITY OF, PWS ID: 0467010, WILLIAMSBURG PLANTATION *



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

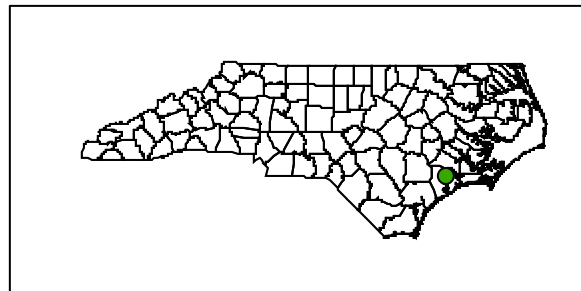
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



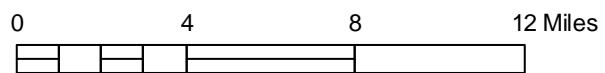
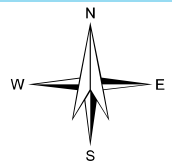


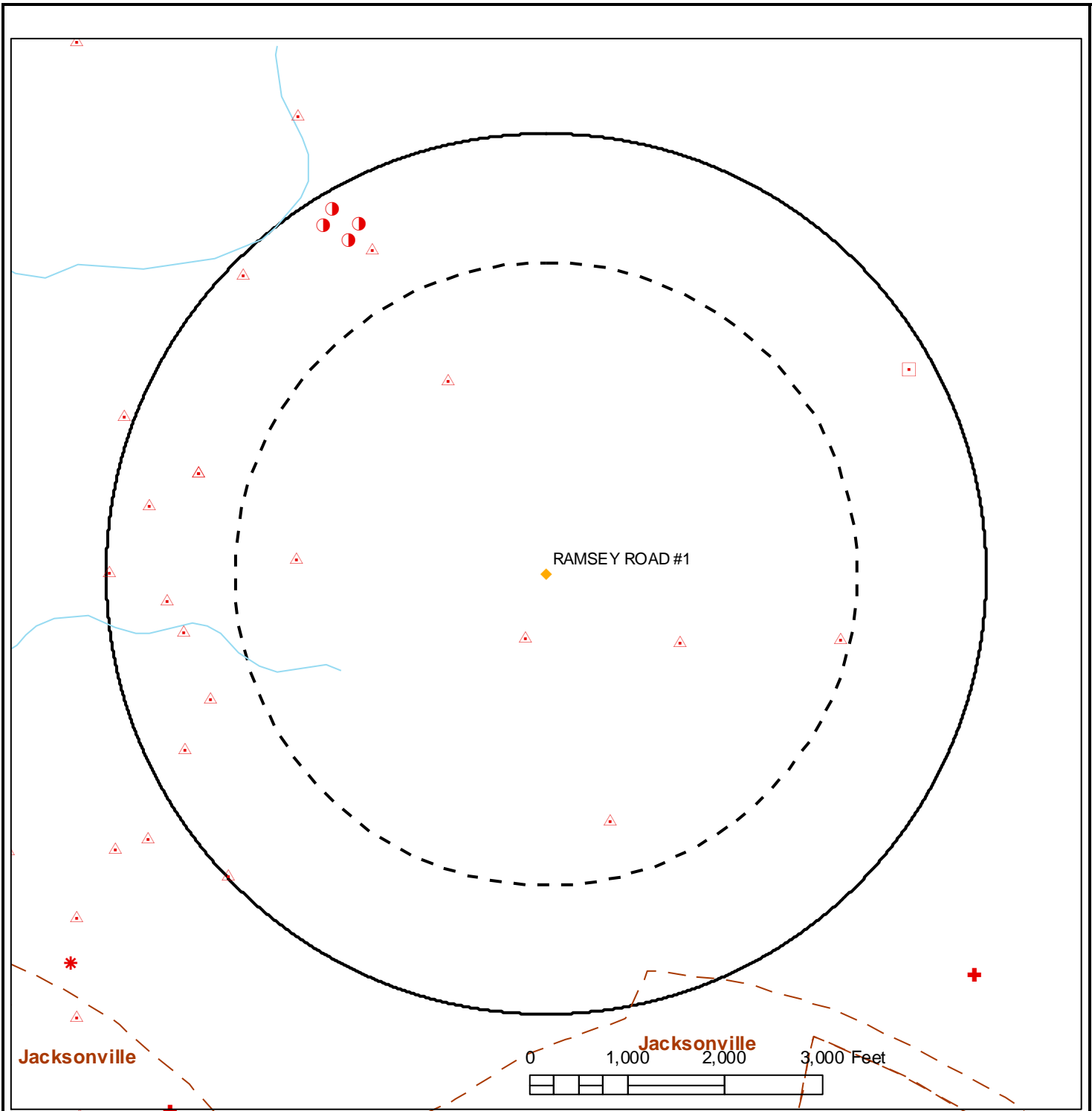
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries





MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |

**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, RAMSEY ROAD #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Scott Farm	AWS670010	Animal Operations	H	Jim Parker Rd	Jacksonville	Unknwn	ONSLOW
Carolina Plantation WWTP	WQ0033770	Non Discharge Points	M	Unknown	Unknown	Unknwn	ONSLOW
Carolina Plantation WWTP	WQ0033770	Non Discharge Points	M	Unknown	Unknown	Unknwn	ONSLOW
Carolina Plantation WWTP	WQ0033770	Non Discharge Points	M	Unknown	Unknown	Unknwn	ONSLOW
Carolina Plantation WWTP	WQ0033770	Non Discharge Points	M	Unknown	Unknown	Unknwn	ONSLOW
The Legacy at Carolina Forest	SW8090104	NPDES Permits	L	339 Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Carolina Place Apartments at Carolina Forest	SW8100407	NPDES Permits	L	16 Terry Lee Lanier Dr	Jacksonville	Unknwn	ONSLOW
Carolina Forest Daycare	SW8100704	NPDES Permits	L	120 Terry Lanier Dr	Jacksonville	Unknwn	ONSLOW
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
The Village at The Glen	SW8080520	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknwn	ONSLOW
Ivy Glen at Carolina Forest	SW8080227	NPDES Permits	L	Terry Lee Lanier Dr	Jacksonville	Unknwn	ONSLOW
Carolina Forest Boulevard	SW8030403	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Carolina Forest Amenity Site	SW8101104	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Carriage Run Section V at Carolina Forest	SW8080413	NPDES Permits	L	Walkens Woods	Jacksonville	Unknwn	ONSLOW
Carolina Forest Park	SW8080502	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknwn	ONSLOW
Southpointe Section III at Carolina Forest	SW8100107	NPDES Permits	L	Savannah Dr	Jacksonville	Unknwn	ONSLOW
Great Neck Section II Regal Hill and Tinley Estates at Carolina Plantations	SW8100714	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknwn	ONSLOW
Monarch Meadow at Carolina Plantations Stormwater	SW8101110	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknwn	ONSLOW
The Village at Carolina Forest	SW8040514	NPDES Permits	L	Off Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Sydes Road and Residence	SW8040732	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Carolina Plantation WWTP	SW8100104	NPDES Permits	L	Old Towne St	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, RAMSEY ROAD #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Scott Farm	AWS670010	Operation Type	Swine State COC
Carolina Plantation WWTP	WQ0033770	Permit Type	High Rate Infiltration
Carolina Plantation WWTP	WQ0033770	Permit Type	High Rate Infiltration
Carolina Plantation WWTP	WQ0033770	Permit Type	High Rate Infiltration
Carolina Plantation WWTP	WQ0033770	Permit Type	High Rate Infiltration
The Legacy at Carolina Forest	SW8090104	Permit Type	State Stormwater
The Legacy at Carolina Forest	SW8090104	Permit Issued Date	4/3/2009
The Legacy at Carolina Forest	SW8090104	Permit Expiration Date	12/30/2021
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Type	State Stormwater
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Issued Date	6/4/2010
Carolina Place Apartments at Carolina Forest	SW8100407	Permit Expiration Date	12/31/2021
Carolina Forest Daycare	SW8100704	Permit Type	State Stormwater
Carolina Forest Daycare	SW8100704	Permit Issued Date	2/28/2011
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005
The Village at The Glen	SW8080520	Permit Type	State Stormwater
The Village at The Glen	SW8080520	Permit Issued Date	11/28/2012
The Village at The Glen	SW8080520	Permit Expiration Date	9/9/2019
Ivy Glen at Carolina Forest	SW8080227	Permit Type	State Stormwater
Ivy Glen at Carolina Forest	SW8080227	Permit Issued Date	11/13/2012
Carolina Forest Boulevard	SW8030403	Permit Type	State Stormwater
Carolina Forest Boulevard	SW8030403	Permit Issued Date	10/30/2012
Carolina Forest Amenity Site	SW8101104	Permit Type	State Stormwater
Carolina Forest Amenity Site	SW8101104	Permit Issued Date	11/2/2012
Carriage Run Section V at Carolina Forest	SW8080413	Permit Type	State Stormwater
Carriage Run Section V at Carolina Forest	SW8080413	Permit Issued Date	11/15/2012
Carolina Forest Park	SW8080502	Permit Type	State Stormwater
Carolina Forest Park	SW8080502	Permit Issued Date	6/25/2008
Southpointe Section III at Carolina Forest	SW8100107	Permit Type	State Stormwater
Southpointe Section III at Carolina Forest	SW8100107	Permit Issued Date	11/7/2012
Great Neck Section II Regal Hill and Tinley Estates at Carolina Plantations	SW8100714	Permit Type	State Stormwater
Great Neck Section II Regal Hill and Tinley Estates at Carolina Plantations	SW8100714	Permit Issued Date	2/5/2015
Great Neck Section II Regal Hill and Tinley Estates at Carolina Plantations	SW8100714	Permit Expiration Date	12/31/2021
Monarch Meadow at Carolina Plantations Stormwater	SW8101110	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Monarch Meadow at Carolina Plantations Stormwater	SW8101110	Permit Issued Date	6/27/2011
Monarch Meadow at Carolina Plantations Stormwater	SW8101110	Permit Expiration Date	6/13/2021
The Village at Carolina Forest	SW8040514	Permit Type	State Stormwater
The Village at Carolina Forest	SW8040514	Permit Issued Date	5/13/2009
The Village at Carolina Forest	SW8040514	Permit Expiration Date	7/29/2023
Sydes Road and Residence	SW8040732	Permit Type	State Stormwater
Sydes Road and Residence	SW8040732	Permit Issued Date	1/7/2005
Carolina Plantation WWTP	SW8100104	Permit Type	State Stormwater
Carolina Plantation WWTP	SW8100104	Permit Issued Date	2/24/2010

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, RAMSEY ROAD #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , RAMSEY ROAD #1**

Unsaturated Zone Rating	61.9
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

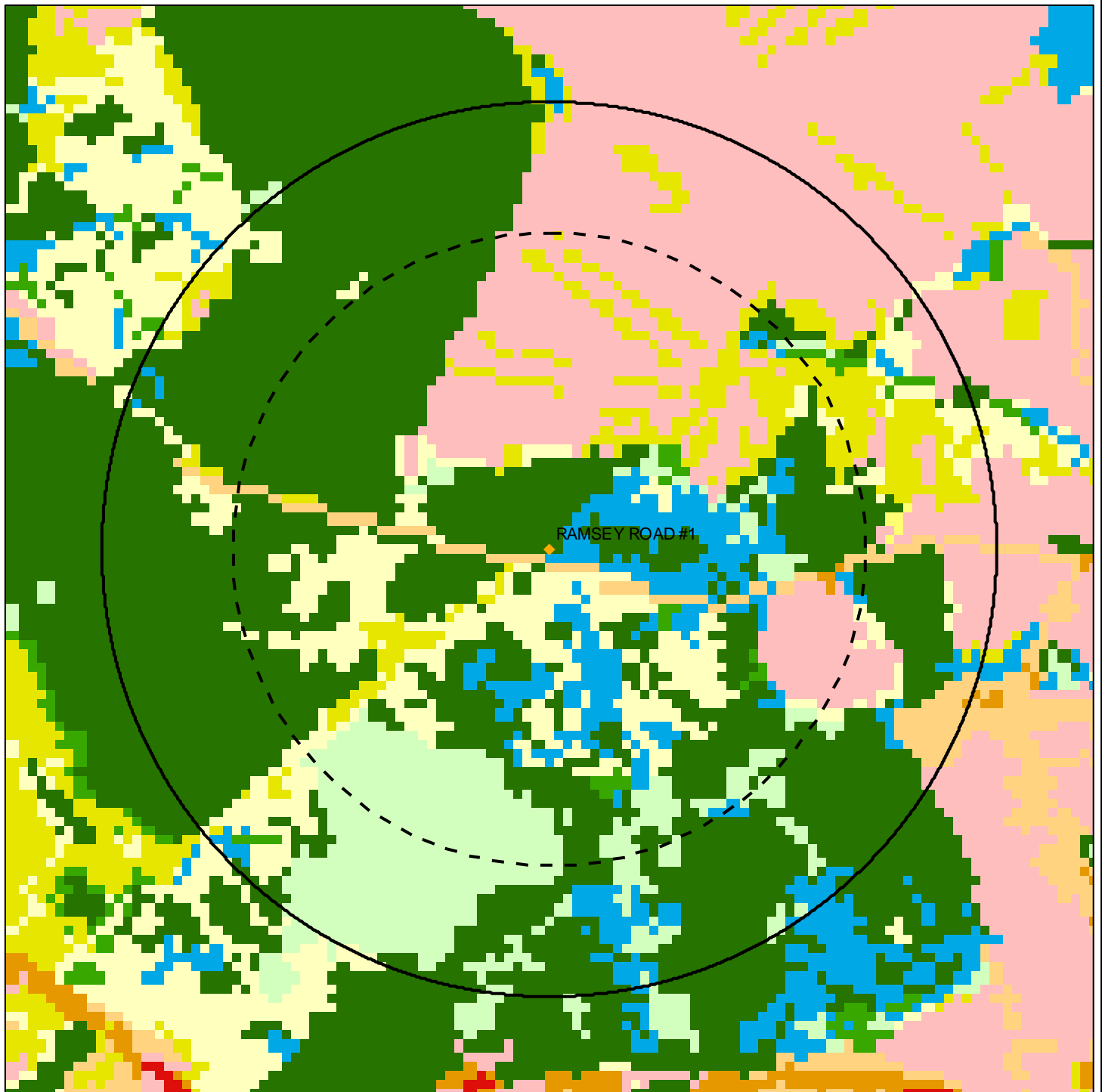
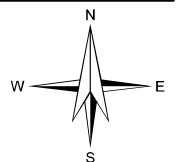


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1

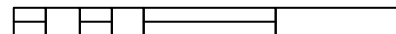


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



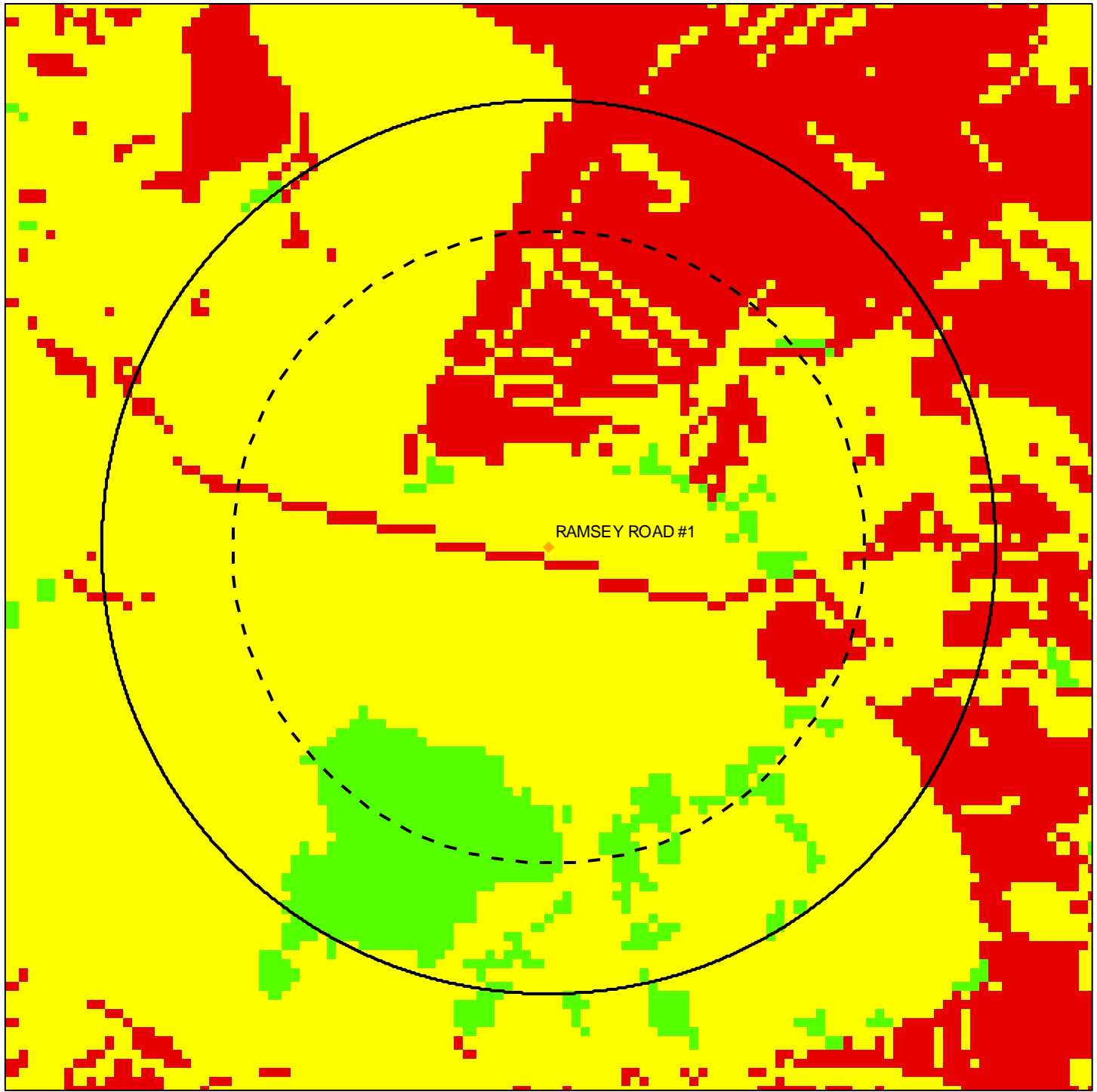
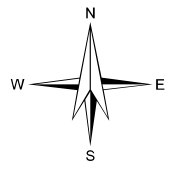
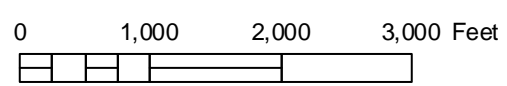


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



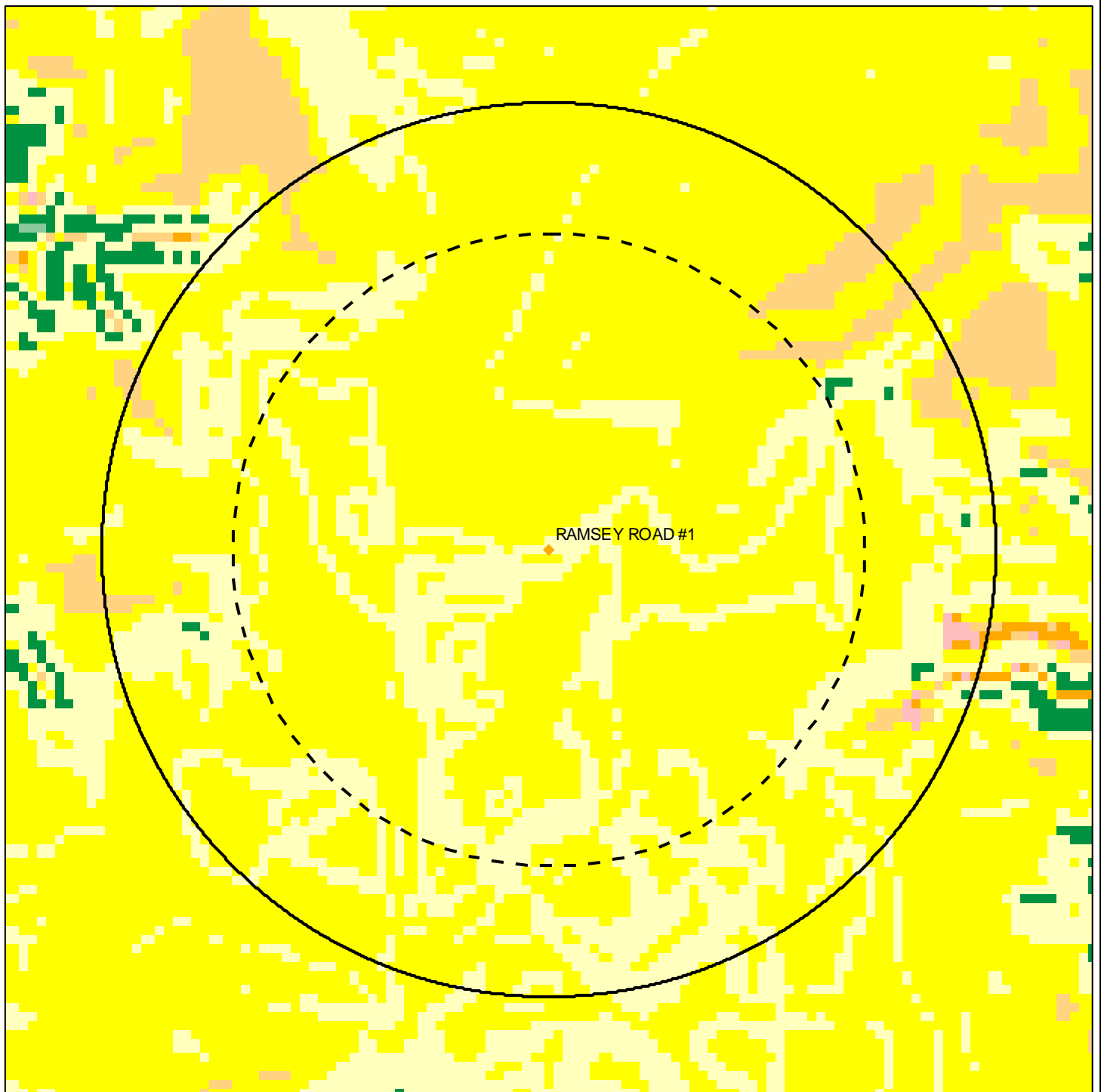
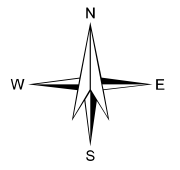
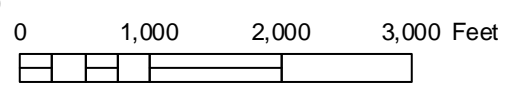


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



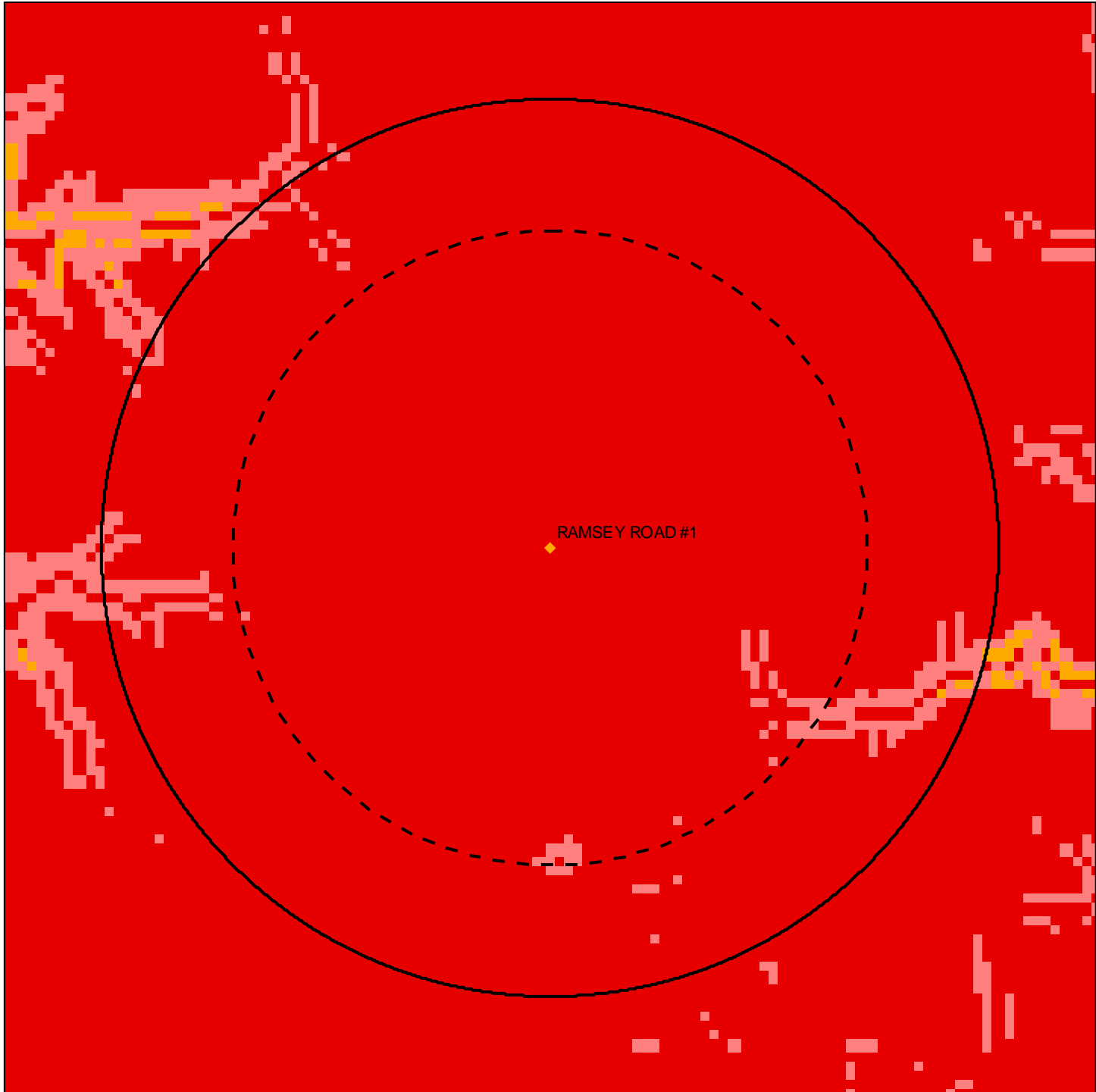
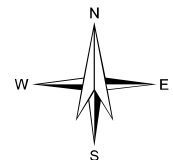








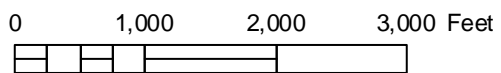


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



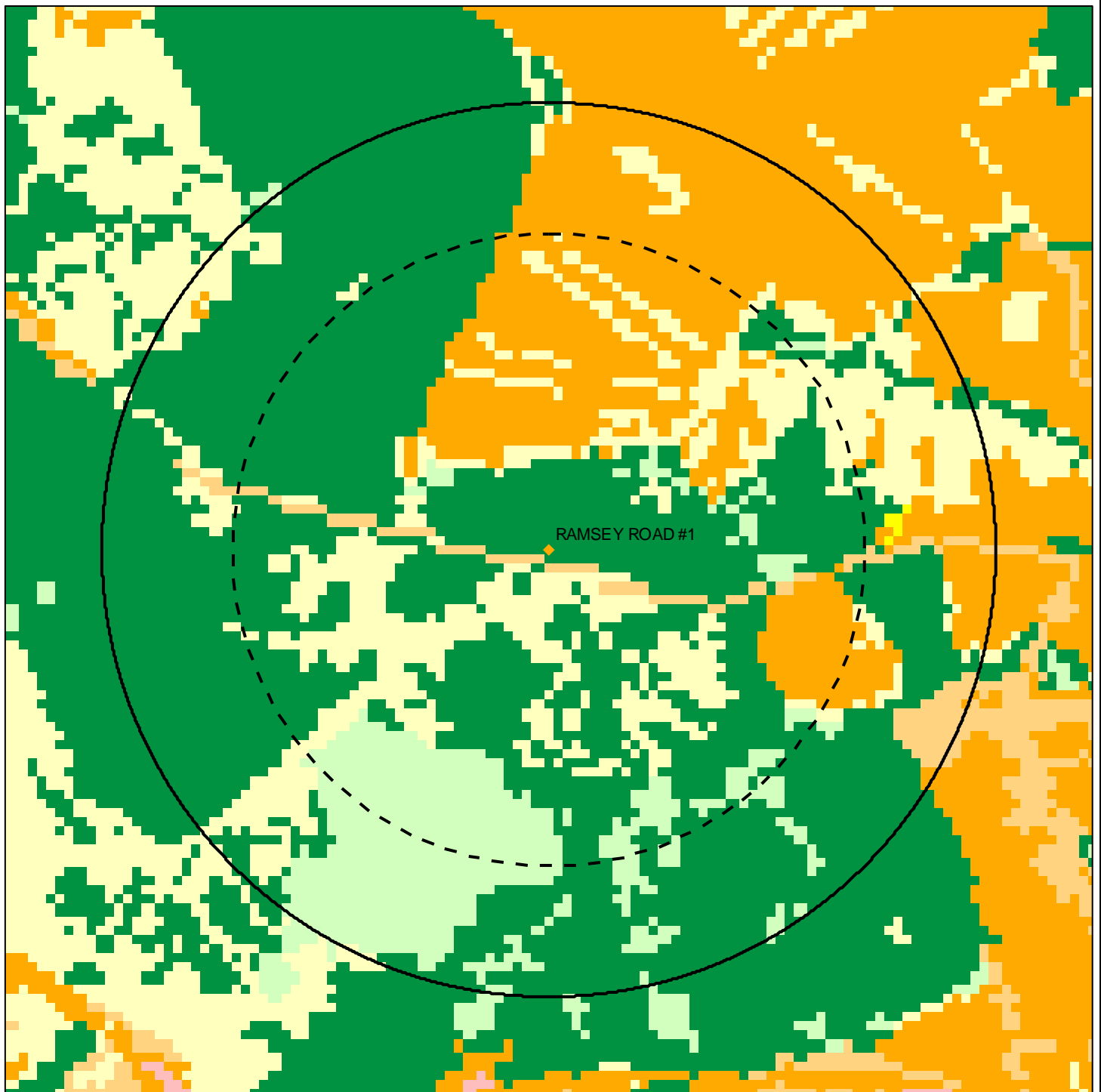
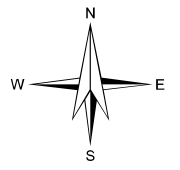


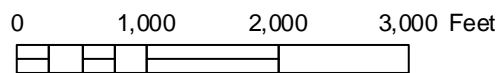


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



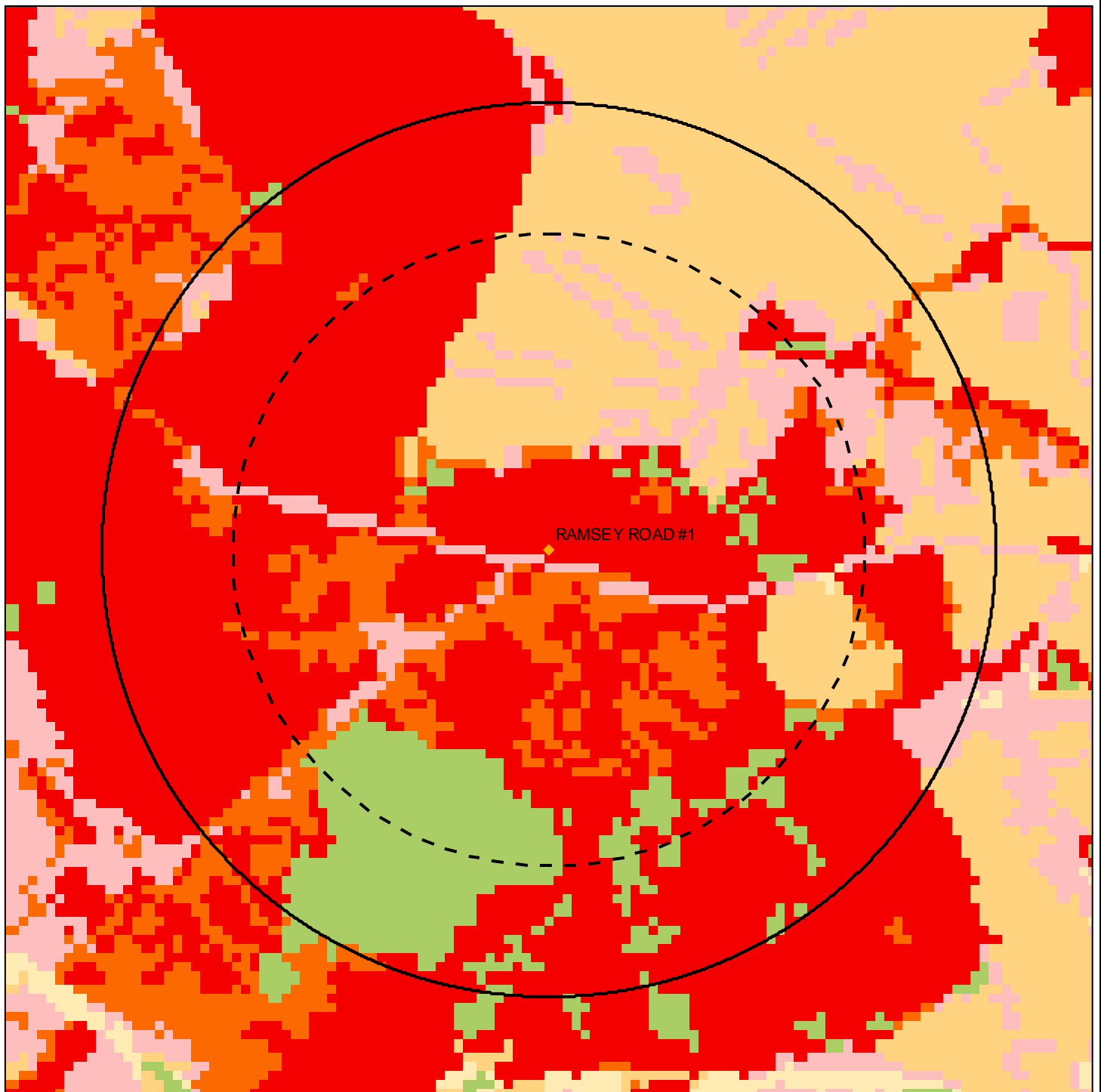
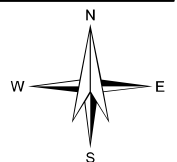
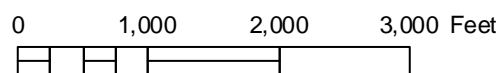


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, RAMSEY ROAD #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

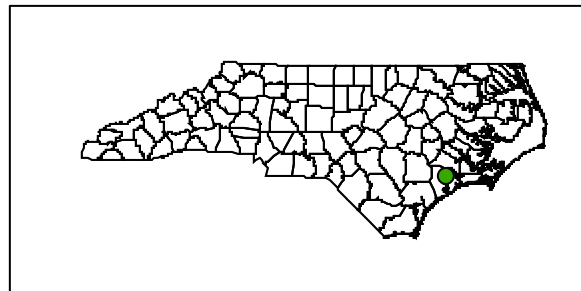
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



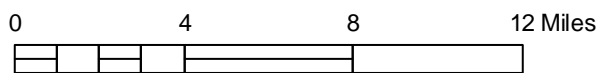
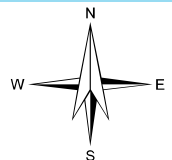


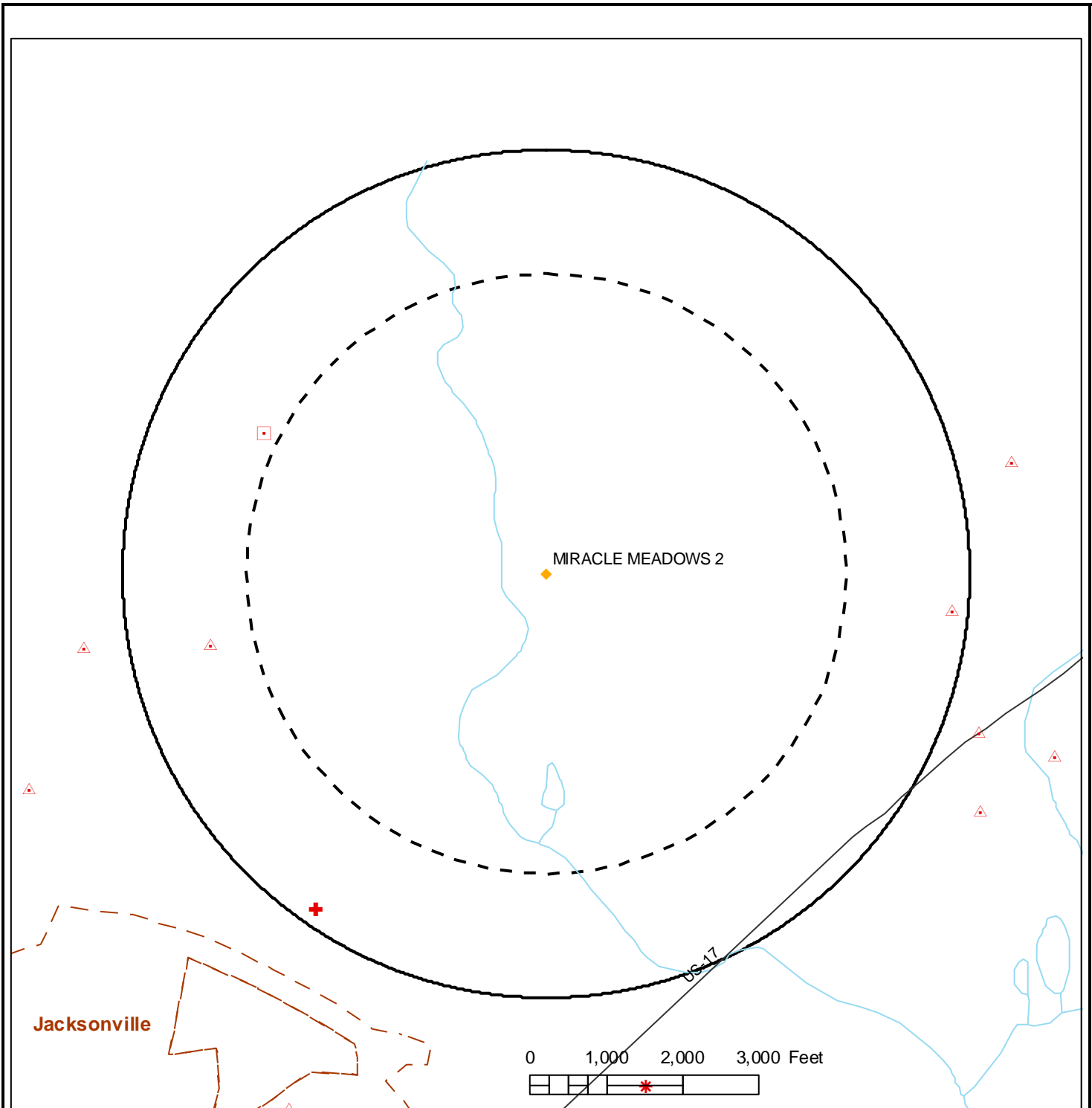
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



- Roads
- Rivers and Streams
- Major Hydrology
- Municipal Boundaries
- County Boundaries





MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2

PCS Types

- | | | |
|---------------------------------|--------------------------|--|
| □ Animal Operations | ⬡ Septage Disposal Sites | — Roads |
| △ CERCLIS Sites | ○ Soil Remediation Sites | — Rivers and Streams |
| □ RCRA Gen. / Trans. Facilities | * Solid Waste Facilities | ■ Major Hydrology |
| ● Non Discharge Permits | * Tier II Sites | - - - Municipal Boundaries |
| △ NPDES Permits | ⬡ RCRA TSD Facilities | ▭ Ground Water Assessment Area - Delineated Area |
| ★ National Priority List Sites | ⬡ Old Landfill Sites | - - - Ground Water Assessment Area - Zone A |
| ⊕ PCB Sites | ☆ UIC Permits | |
| ○ Pollution Incidents | ⊕ UST Permits | |

**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, MIRACLE MEADOWS 2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Scott Farm	AWS670010	Animal Operations	H	Jim Parker Rd	Jacksonville	Unkno wn	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unkno wn	ONSLOW
Kellum Baptist Church	SW8130708	NPDES Permits	L	1175 Kellum Loop Roa	Jacksonville	Unkno wn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, MIRACLE MEADOWS 2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Scott Farm	AWS670010	Operation Type	Swine State COC
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005
Kellum Baptist Church	SW8130708	Permit Type	State Stormwater
Kellum Baptist Church	SW8130708	Permit Issued Date	8/19/2013
Kellum Baptist Church	SW8130708	Permit Expiration Date	8/19/2021

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, MIRACLE MEADOWS 2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , MIRACLE MEADOWS 2**

Unsaturated Zone Rating	62.2
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

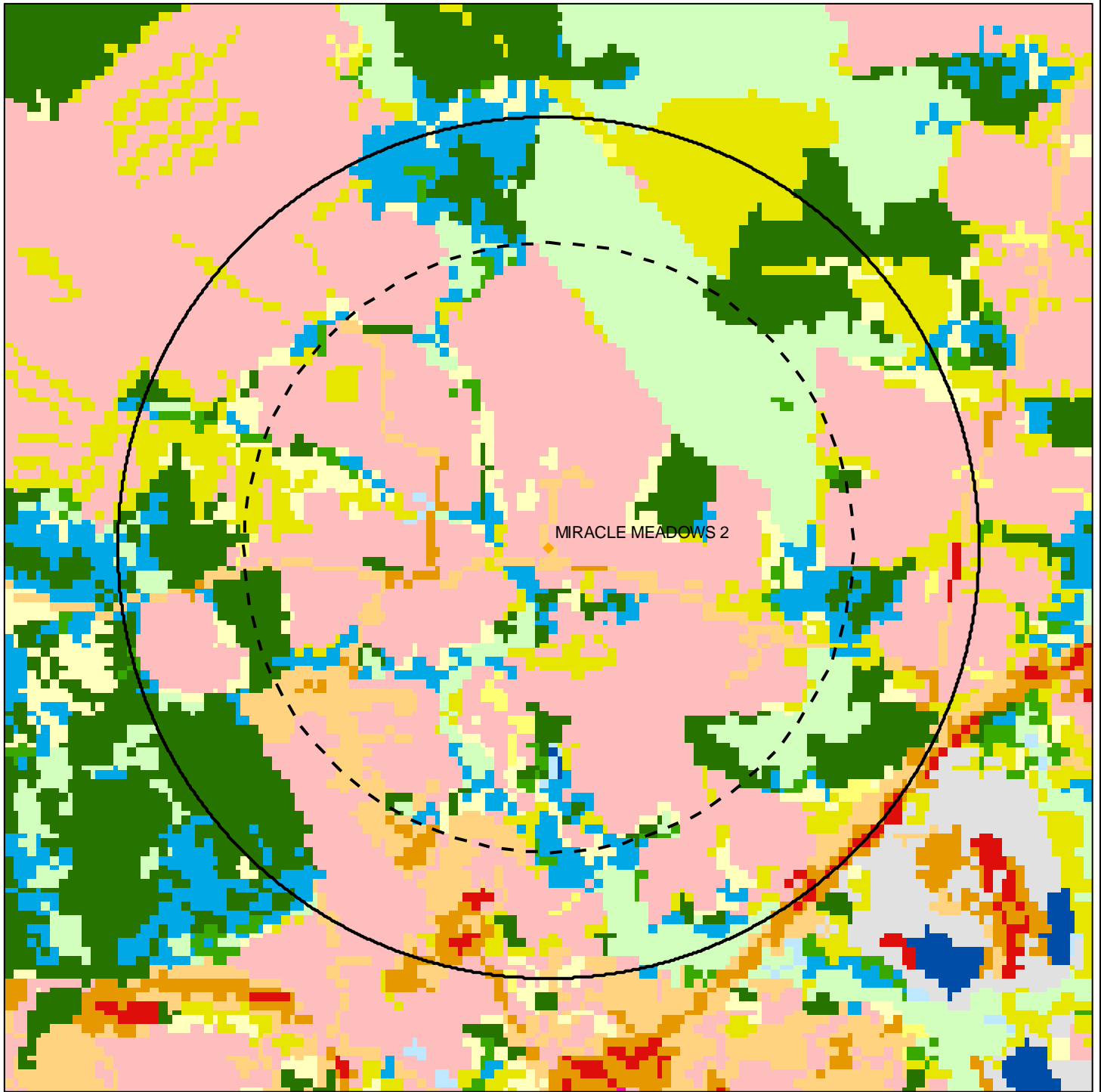
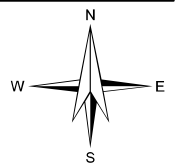


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2

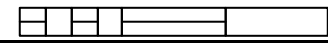


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



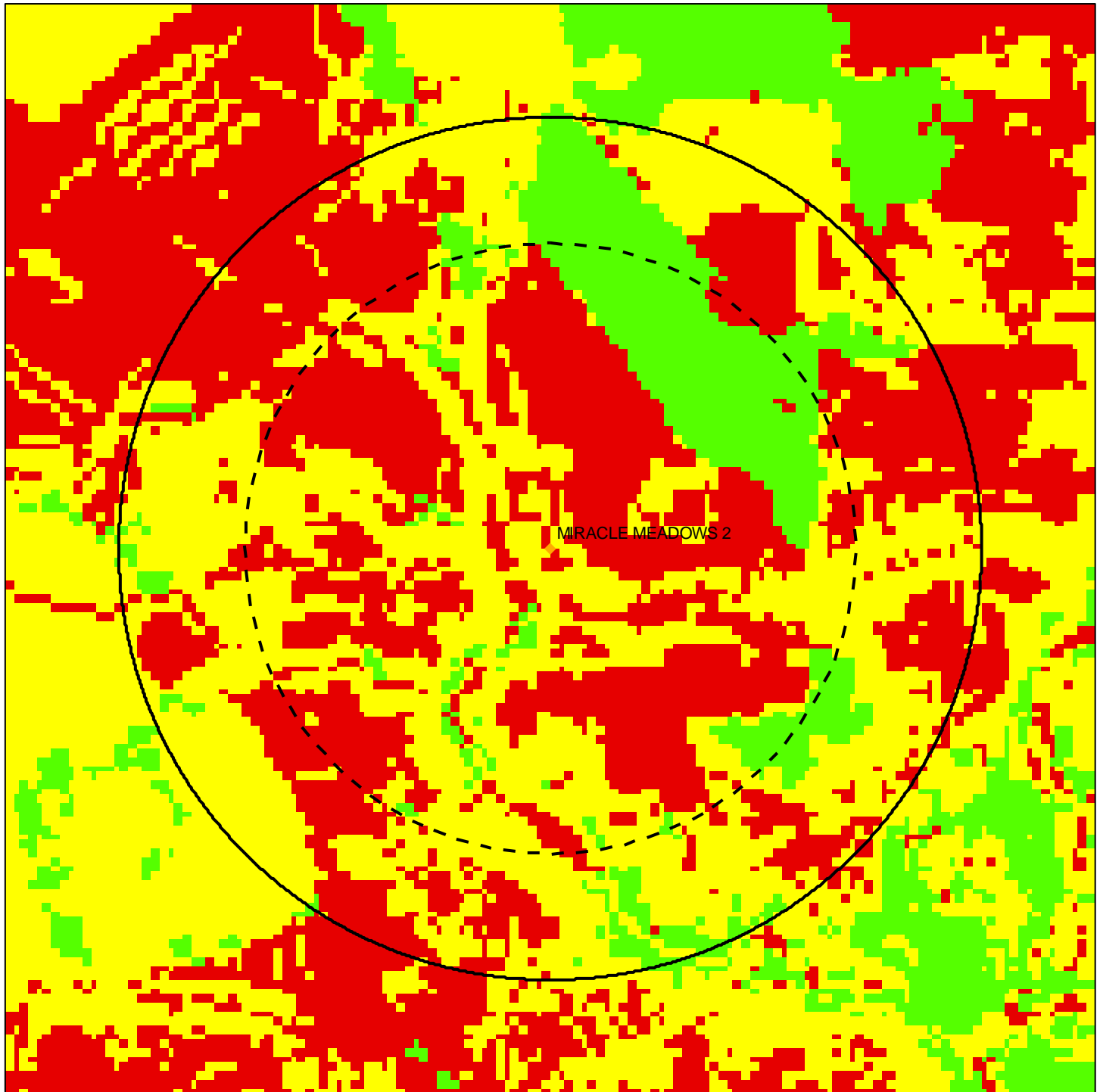
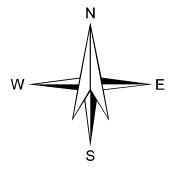
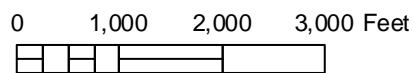


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



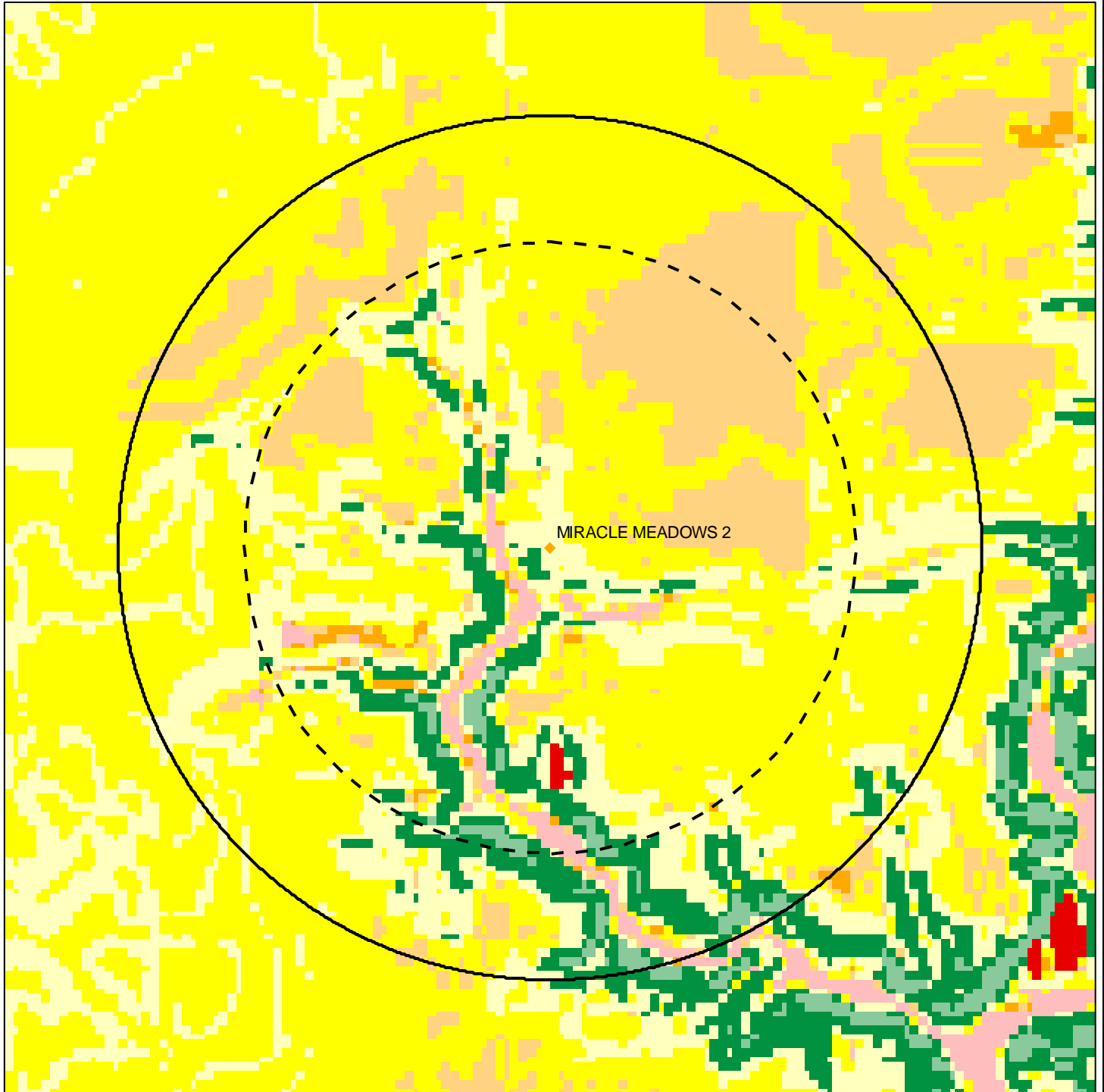
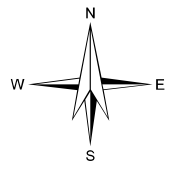
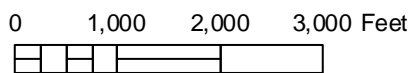


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



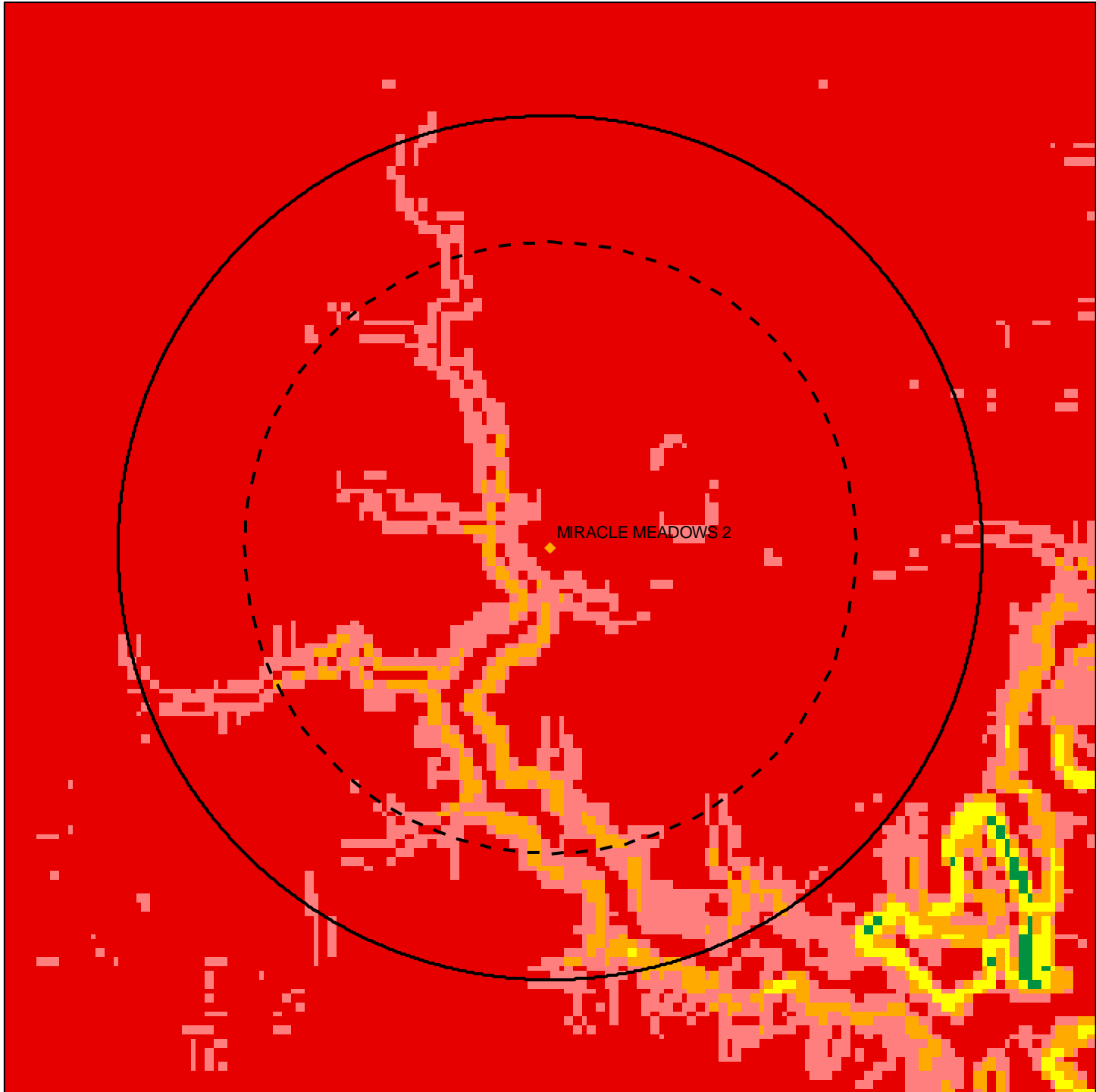
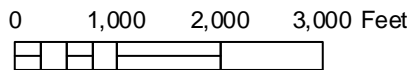
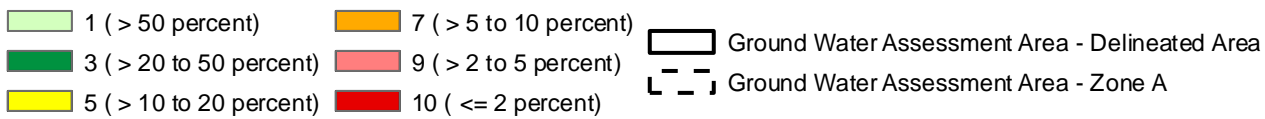
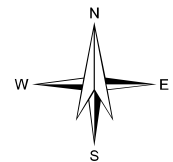


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



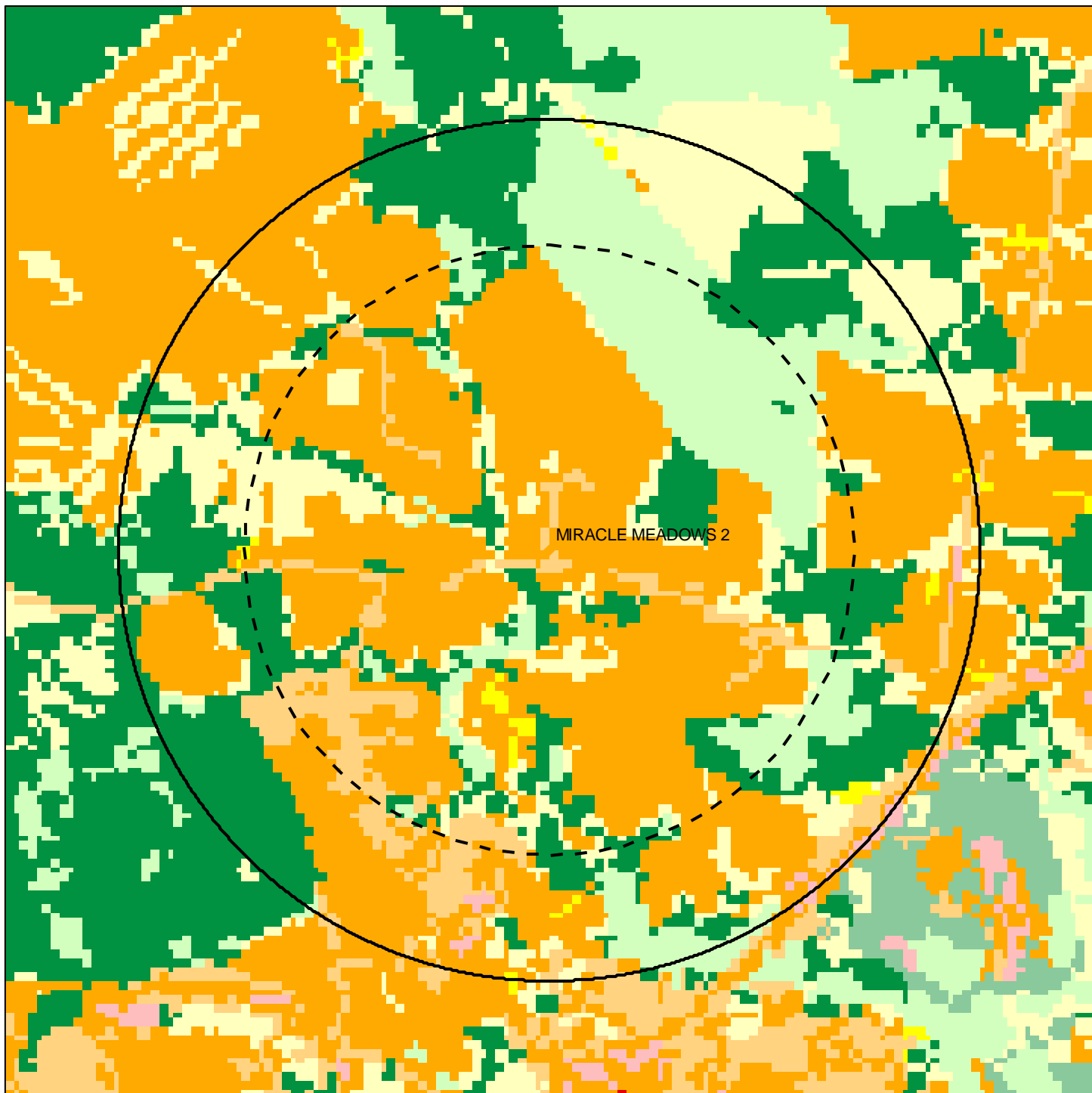
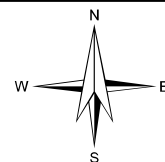











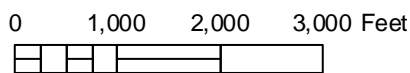


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



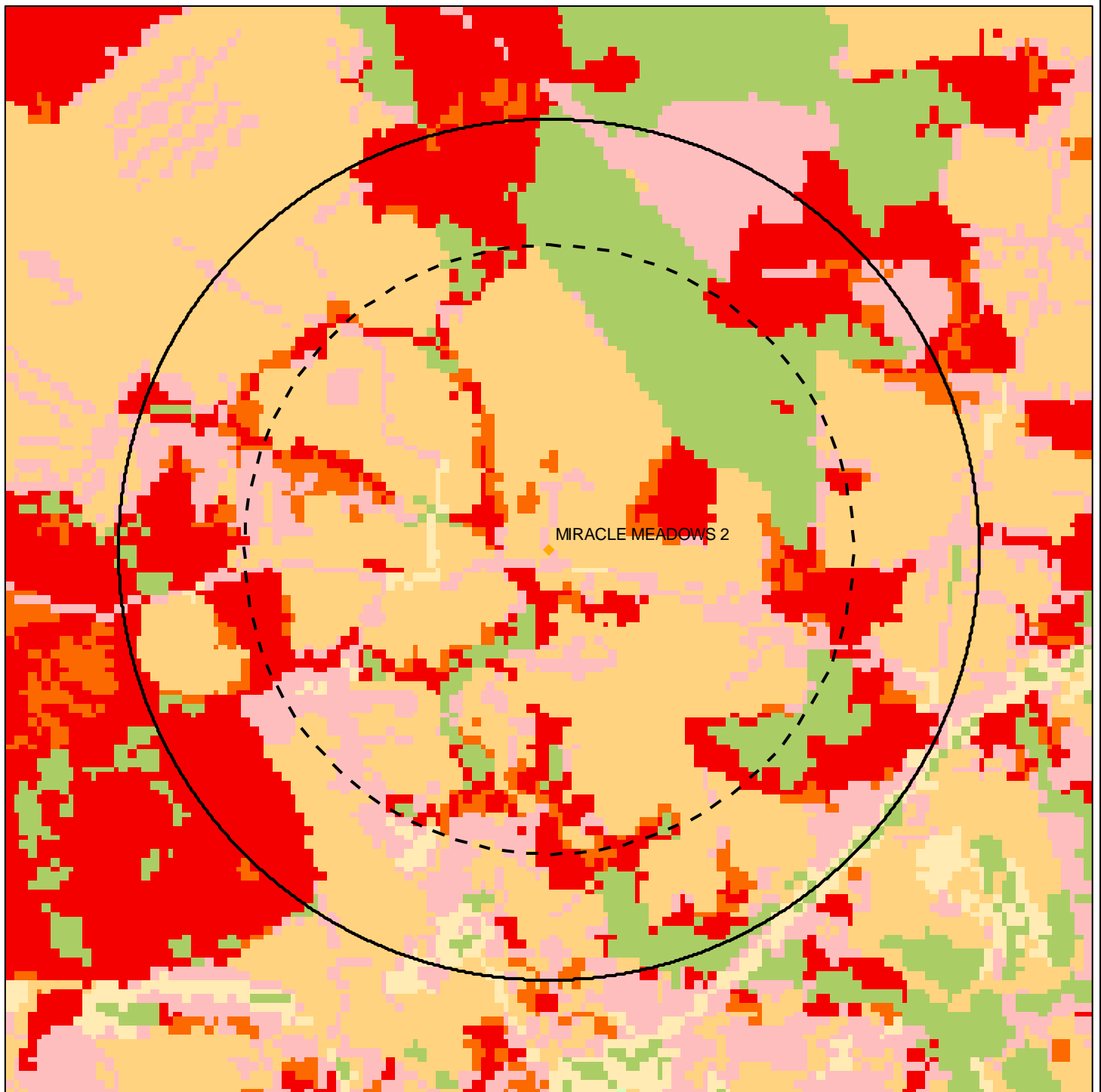
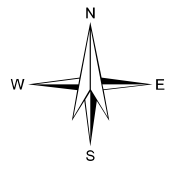
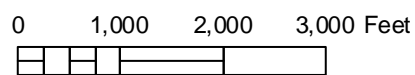


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, MIRACLE MEADOWS 2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

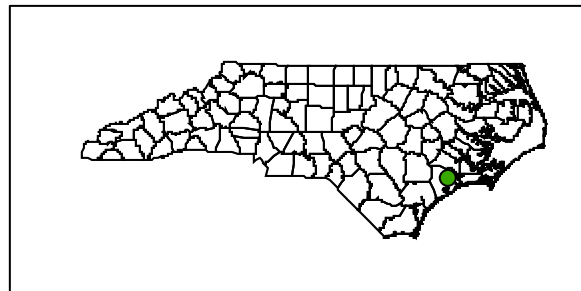
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



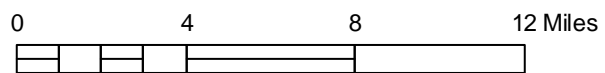
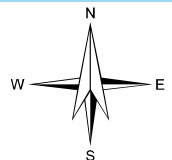


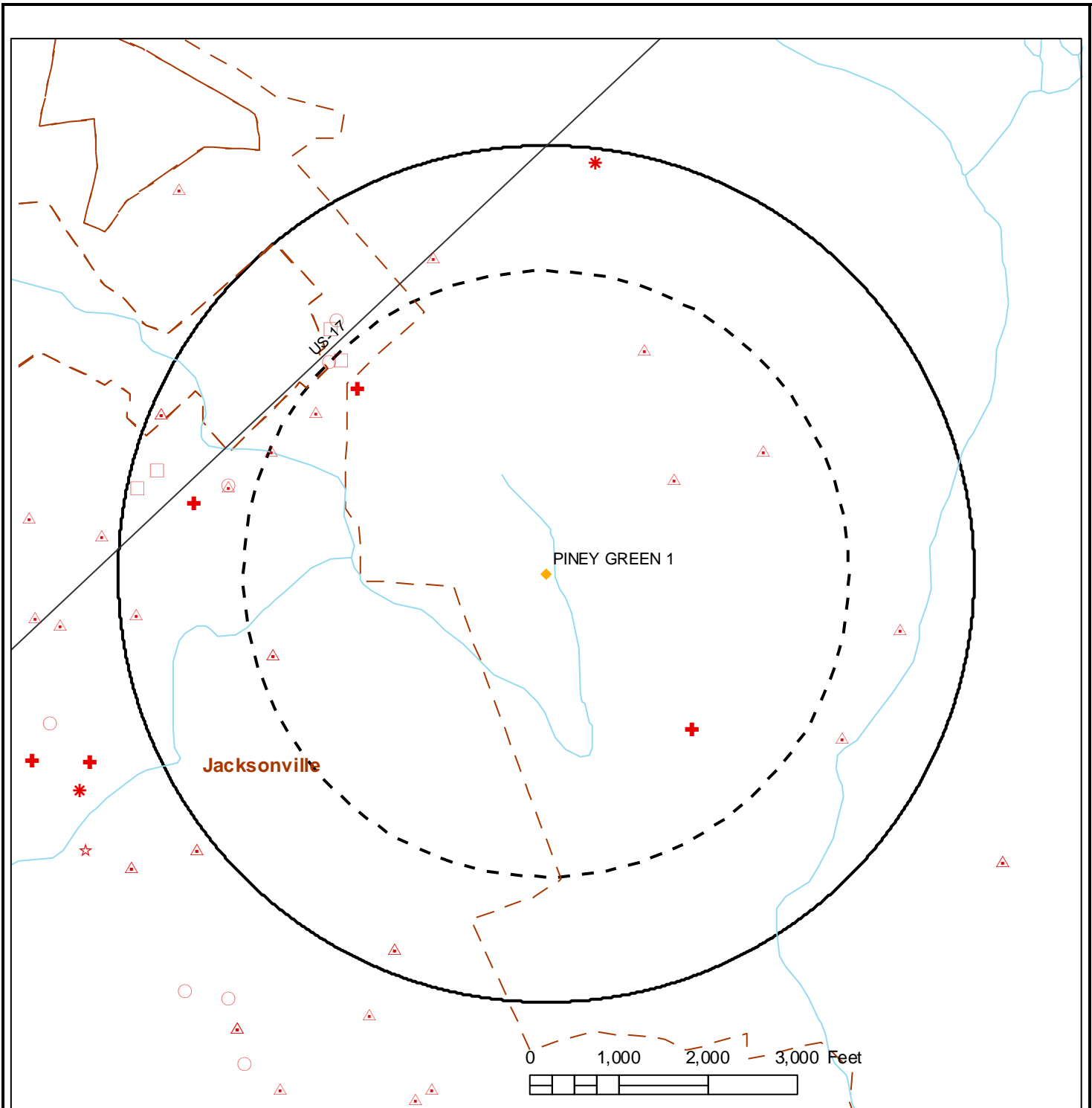
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



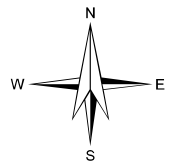


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, PINEY GREEN 1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
HOME DEPOT #3655	NC0991302563	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD - HWY 17	JACKSONVILLE	Unkno wn	ONSLOW
LEJEUNE HONDA CARS	NCD982117475	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
MOORE BUICK PONTIAC INC	NCD982118127	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
AUTO LOGIC	11084	Pollution Incidents	H	2601 N. MARINE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
MOORE BUICK	17930	Pollution Incidents	H	HWY 17	JACKSONVILLE	Unkno wn	ONSLO
COBLE DAIRY PRODUCTS- JACKSONVILLE	6596	Pollution Incidents	H	HWY 17 N	JACKSONVILLE	Unkno wn	ONSLO
Neff - Jacksonville NC	4025283	Tier II Sites	H	1112 Wolf Swamp Road	Jacksonville	Unkno wn	Onslow
PANTRY 3125 DBA QUICKSTOP	00-0-0000021309	UST Sites	H	116 PINEY GREEN ROAD	JACKSONVILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
HUMPHREY HEATING	00-0-0000020150	UST Sites	H	2423 MARINE BOULEVARD NORTH	JACKSONVILLE	Unknown	ONSLOW
CIRCLE K 2708214	00-0-0000005589	UST Sites	H	556 PINEY GREEN ROAD	JACKSONVILLE	Unknown	ONSLOW
Country Club Road Park	SW8090210	NPDES Permits	L	Country Club Rd	Jacksonville	Unknown	ONSLOW
Northeast Office Park	SW8900431	NPDES Permits	L	Country Club Rd	Jacksonville	Unknown	ONSLOW
Bojangles Restaurant at Highland Crossing	SW8051013	NPDES Permits	L	Lots 2 And 3 Highland Crossing Shopping Ctr	Jacksonville	Unknown	ONSLOW
Morton Property	SW8050234	NPDES Permits	L	Onslow County	Jacksonville	Unknown	ONSLOW
The Village Country Club Hills Section IV B	SW8980423	NPDES Permits	L	Winthrop Way	Jacksonville	Unknown	ONSLOW
Comfort Inn Suites	SW8951229	NPDES Permits	L	130 Workshop Ln	Jacksonville	Unknown	ONSLOW
Northside at the Commons, Section VII	SW8021022	NPDES Permits	L	Throught Rd Stub-Out Between	Jacksonville	Unknown	ONSLOW
Blue Springs Apartments	SW8031111	NPDES Permits	L	460 McDaniel Dr	Jacksonville	Unknown	ONSLOW
Northeast Creek Village-SW	SW8040102	NPDES Permits	L	Country Club Rd	Jacksonville	Unknown	ONSLOW
National Automotive	SW8070721	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unknown	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknown	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Marine Federal Credit Union Hwy 17	SW8970849	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unknown	ONSLOW
Sportsmans Lodge	SW8890208	NPDES Permits	L	224 Wolf Swamp Rd	Jacksonville	Unknown	ONSLOW
Regalwood WWTP	NC0032239	NPDES Permits	L	228 Regalwood Dr	Jacksonville	Unknown	ONSLOW
Foss Auto Salvage - Northeast Jacksonville	NCG100119	NPDES Permits	L	199 Drummer Kellum Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, PINEY GREEN 1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
HOME DEPOT #3655	NC0991302563	GENERATOR	SQG
HOME DEPOT #3655	NC0991302563	TRANSPORTER	N
LEJEUNE HONDA CARS	NCD982117475	GENERATOR	SQG
LEJEUNE HONDA CARS	NCD982117475	TRANSPORTER	N
MOORE BUICK PONTIAC INC	NCD982118127	GENERATOR	SQG
MOORE BUICK PONTIAC INC	NCD982118127	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
AUTO LOGIC	11084	Pollutant Type	GASOLINE/DIESEL/KEROSENE
AUTO LOGIC	11084	Site Risk	L
AUTO LOGIC	11084	Site Priority Code	70E
MOORE BUICK	17930	Pollutant Type	OTHER PETROLEUM PROD.
MOORE BUICK	17930	Site Risk	L
MOORE BUICK	17930	Site Priority Code	60D
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Pollutant Type	GASOLINE/DIESEL/KEROSENE
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Risk	I
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Priority Code	100D

PCS Name	PCS ID	Attribute	Value
Country Club Road Park	SW8090210	Permit Type	State Stormwater
Country Club Road Park	SW8090210	Permit Issued Date	5/12/2009
Northeast Office Park	SW8900431	Permit Type	State Stormwater
Northeast Office Park	SW8900431	Permit Issued Date	8/3/1990
Bojangles Restaurant at Highland Crossing	SW8051013	Permit Type	State Stormwater
Bojangles Restaurant at Highland Crossing	SW8051013	Permit Issued Date	4/20/2006
Morton Property	SW8050234	Permit Type	State Stormwater
Morton Property	SW8050234	Permit Issued Date	6/24/2005
The Village Country Club Hills Section IV B	SW8980423	Permit Type	State Stormwater
The Village Country Club Hills Section IV B	SW8980423	Permit Issued Date	8/30/2001
Comfort Inn Suites	SW8951229	Permit Type	State Stormwater
Comfort Inn Suites	SW8951229	Permit Issued Date	7/16/2009
Comfort Inn Suites	SW8951229	Permit Expiration Date	4/24/2020
Northside at the Commons, Section VII	SW8021022	Permit Type	State Stormwater
Northside at the Commons, Section VII	SW8021022	Permit Issued Date	2/20/2003
Blue Springs Apartments	SW8031111	Permit Type	State Stormwater
Blue Springs Apartments	SW8031111	Permit Issued Date	11/1/2010
Blue Springs Apartments	SW8031111	Permit Expiration Date	2/14/2028
Northeast Creek Village-SW	SW8040102	Permit Type	State Stormwater
Northeast Creek Village-SW	SW8040102	Permit Issued Date	4/21/2008
National Automotive	SW8070721	Permit Type	State Stormwater
National Automotive	SW8070721	Permit Issued Date	2/20/2008
National Automotive	SW8070721	Permit Expiration Date	8/10/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008

PCS Name	PCS ID	Attribute	Value
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Marine Federal Credit Union Hwy 17	SW8970849	Permit Type	State Stormwater
Marine Federal Credit Union Hwy 17	SW8970849	Permit Issued Date	4/25/2008
Marine Federal Credit Union Hwy 17	SW8970849	Permit Expiration Date	4/25/2022
Sportsmans Lodge	SW8890208	Permit Type	State Stormwater
Sportsmans Lodge	SW8890208	Permit Issued Date	2/22/1989
Regalwood WWTP	NC0032239	Permit Type	Discharging 100% Domestic < 1MGD
Regalwood WWTP	NC0032239	Permit Issued Date	10/2/2012
Regalwood WWTP	NC0032239	Permit Expiration Date	6/30/2017
Regalwood WWTP	NC0032239	Receiving Stream	Northeast Creek
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Issued Date	11/1/2012
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Expiration Date	10/31/2017
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Receiving Stream	Wolf Swamp

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, PINEY GREEN 1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , PINEY GREEN 1**

Unsaturated Zone Rating	61.9
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

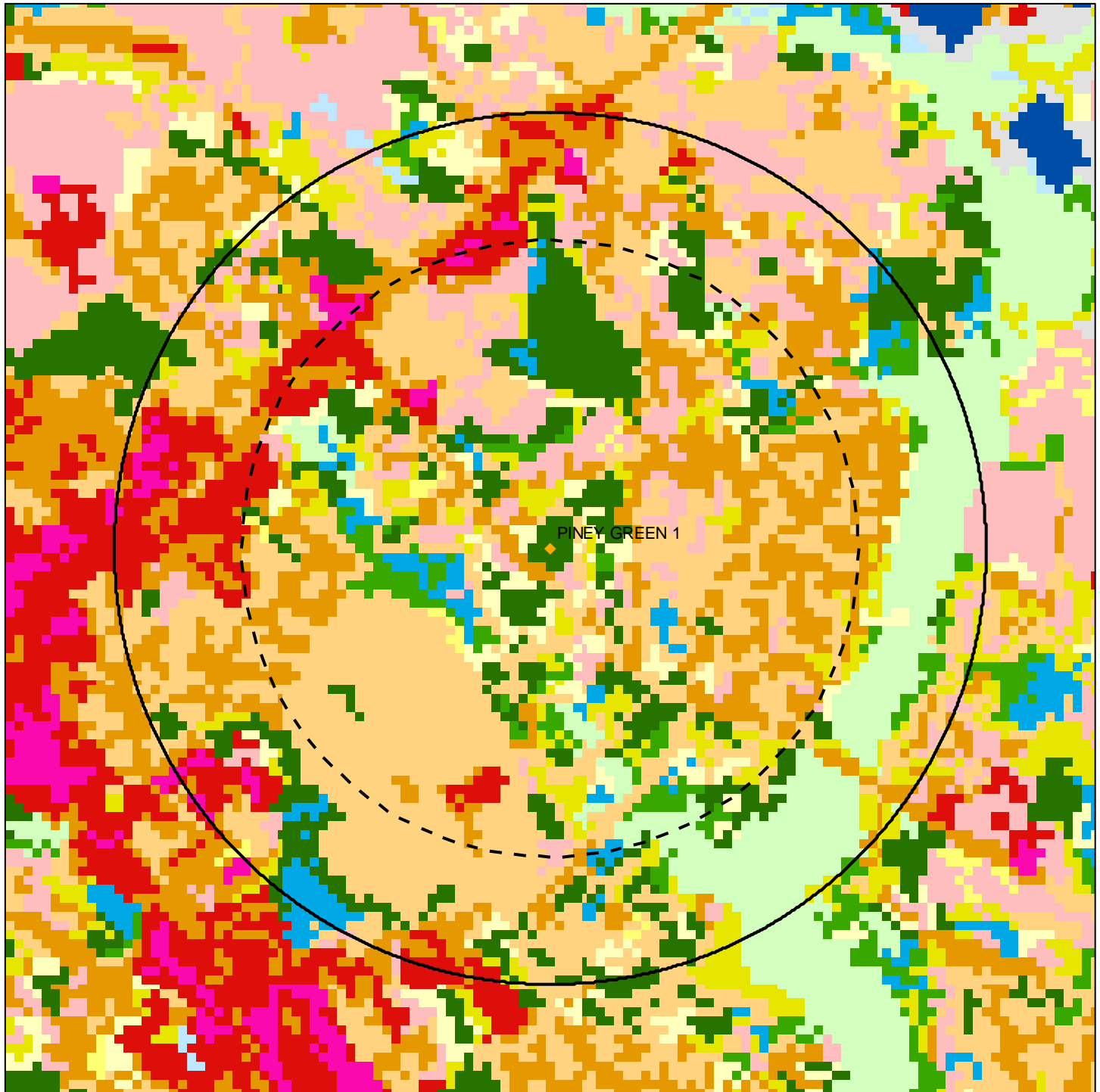
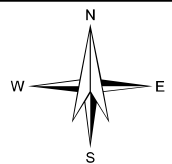


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1

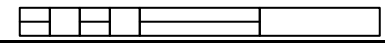


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



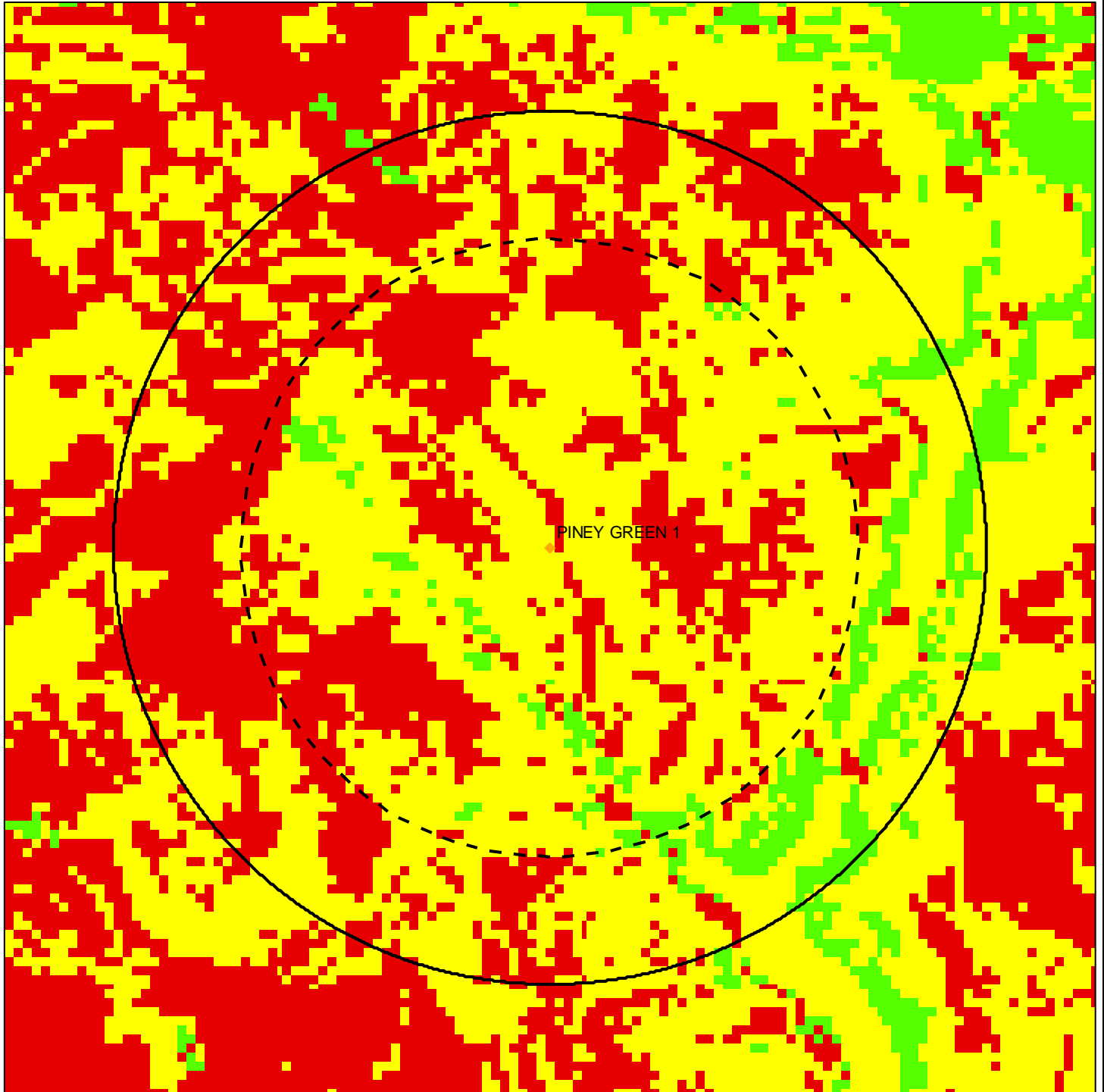
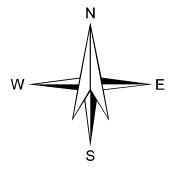
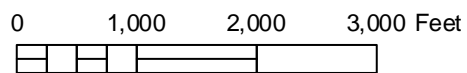


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



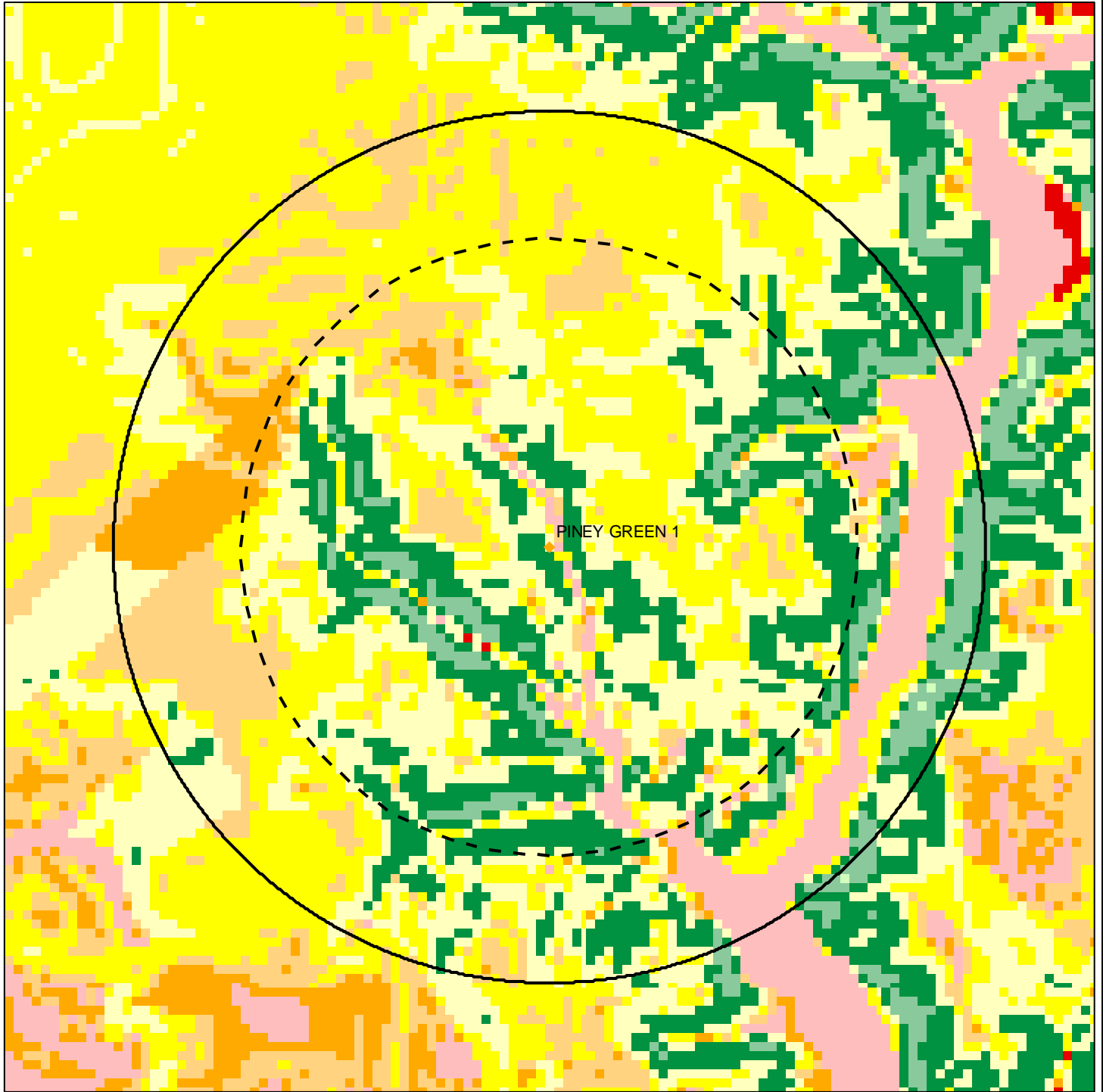
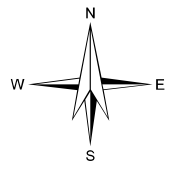
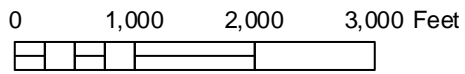


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



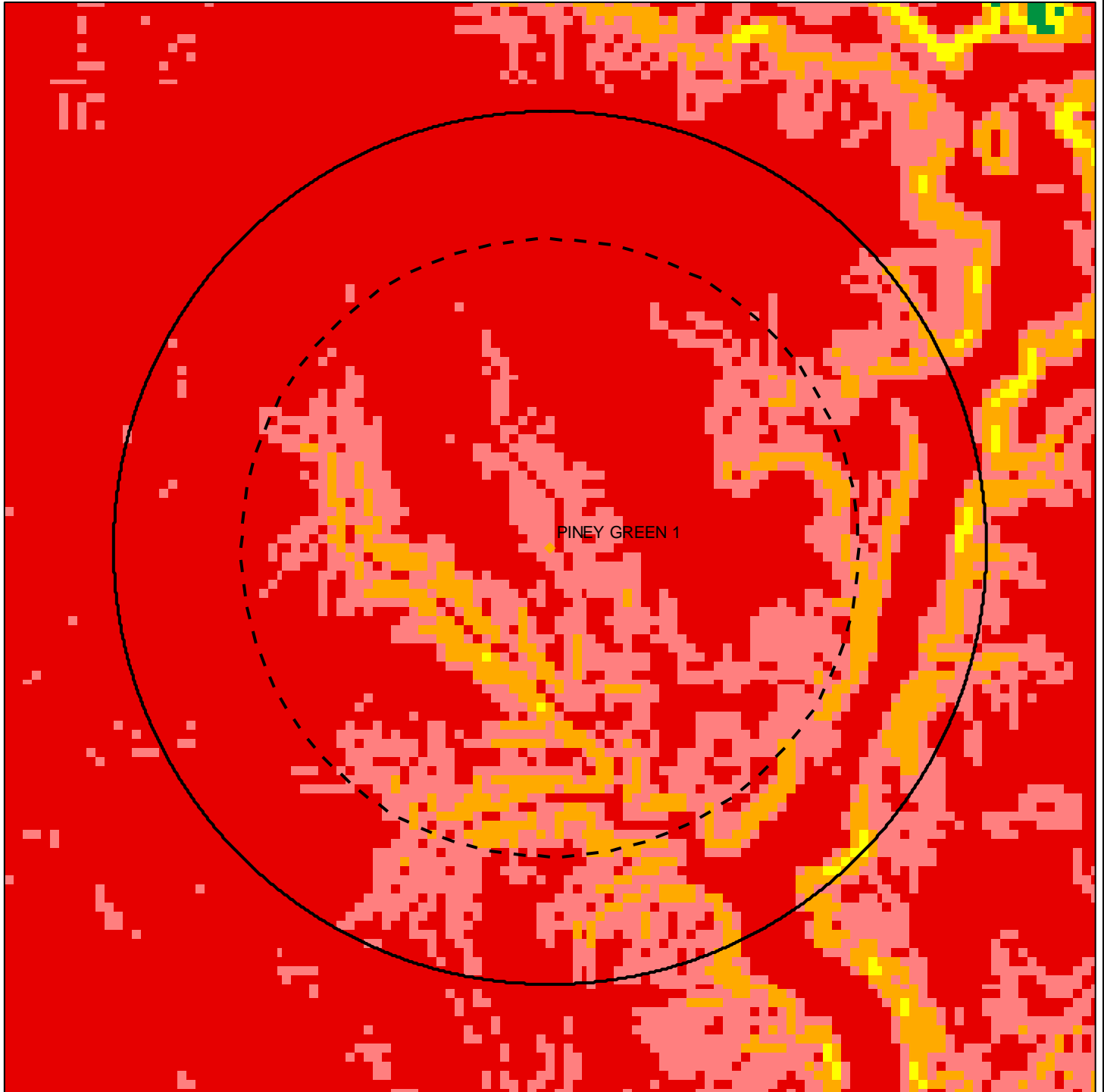
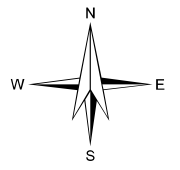








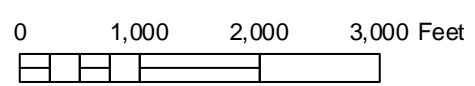


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



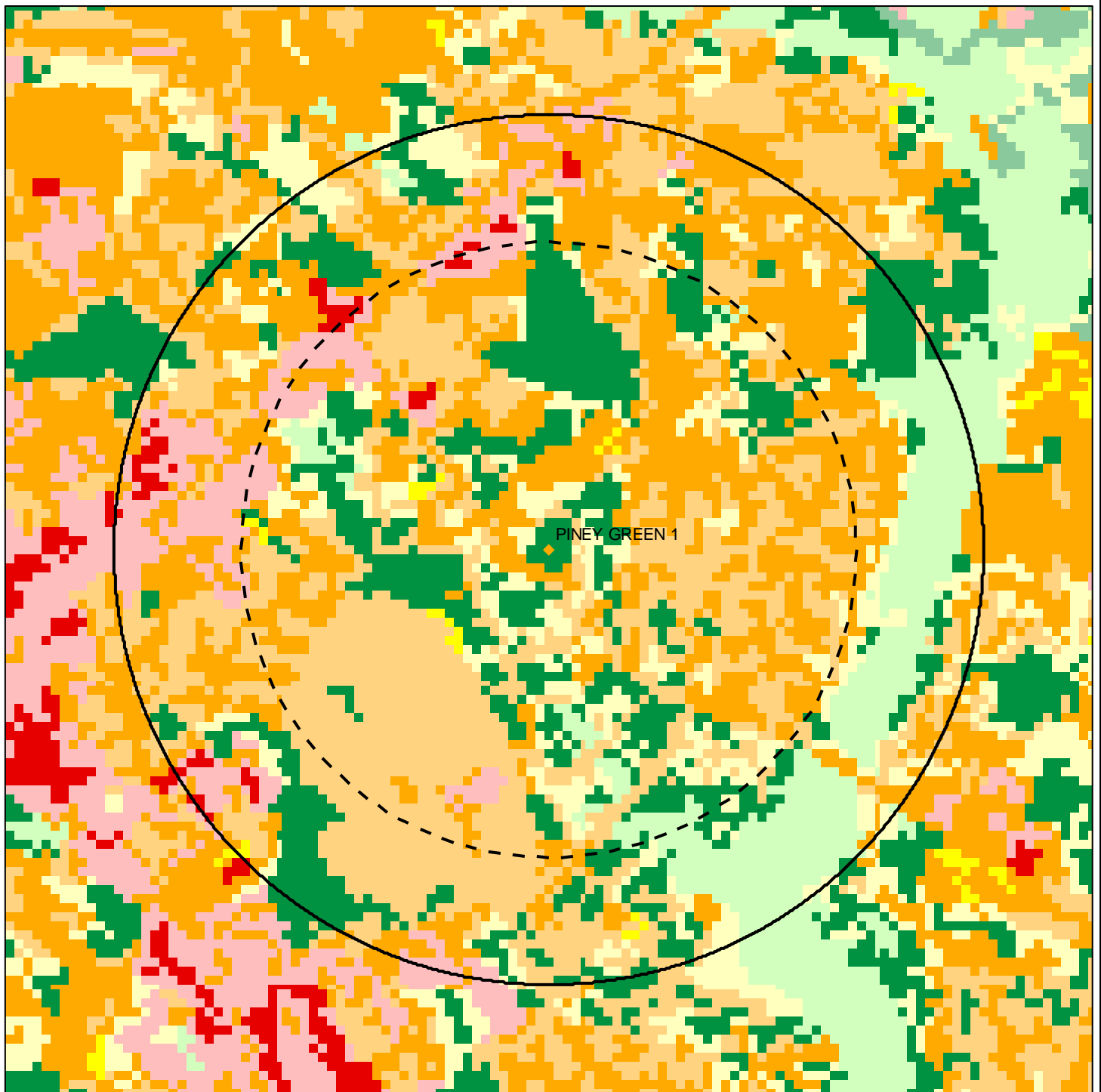
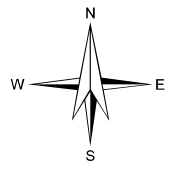


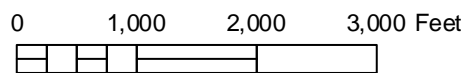


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



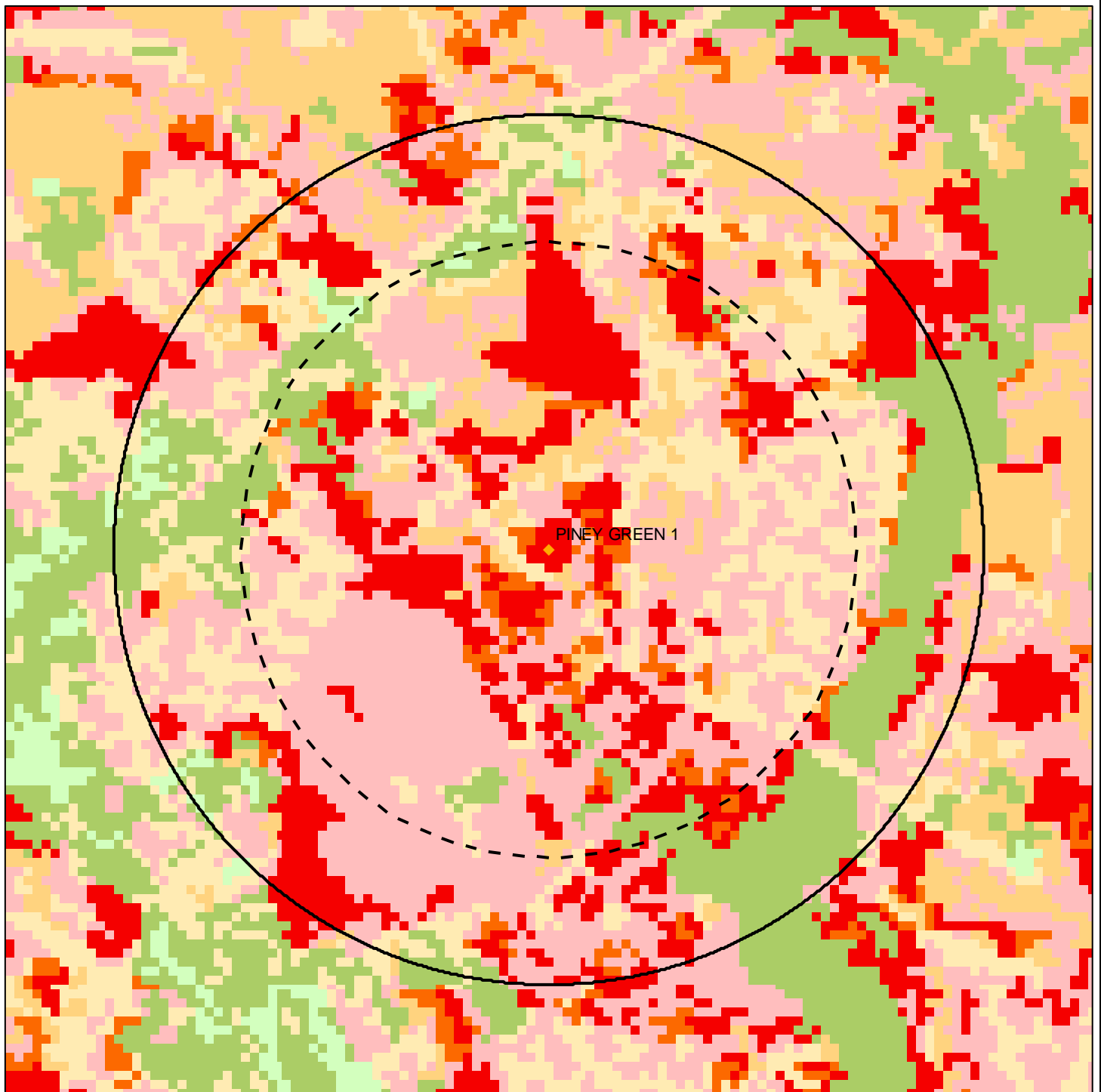
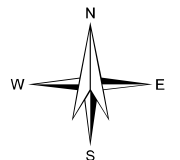
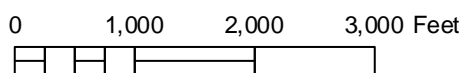


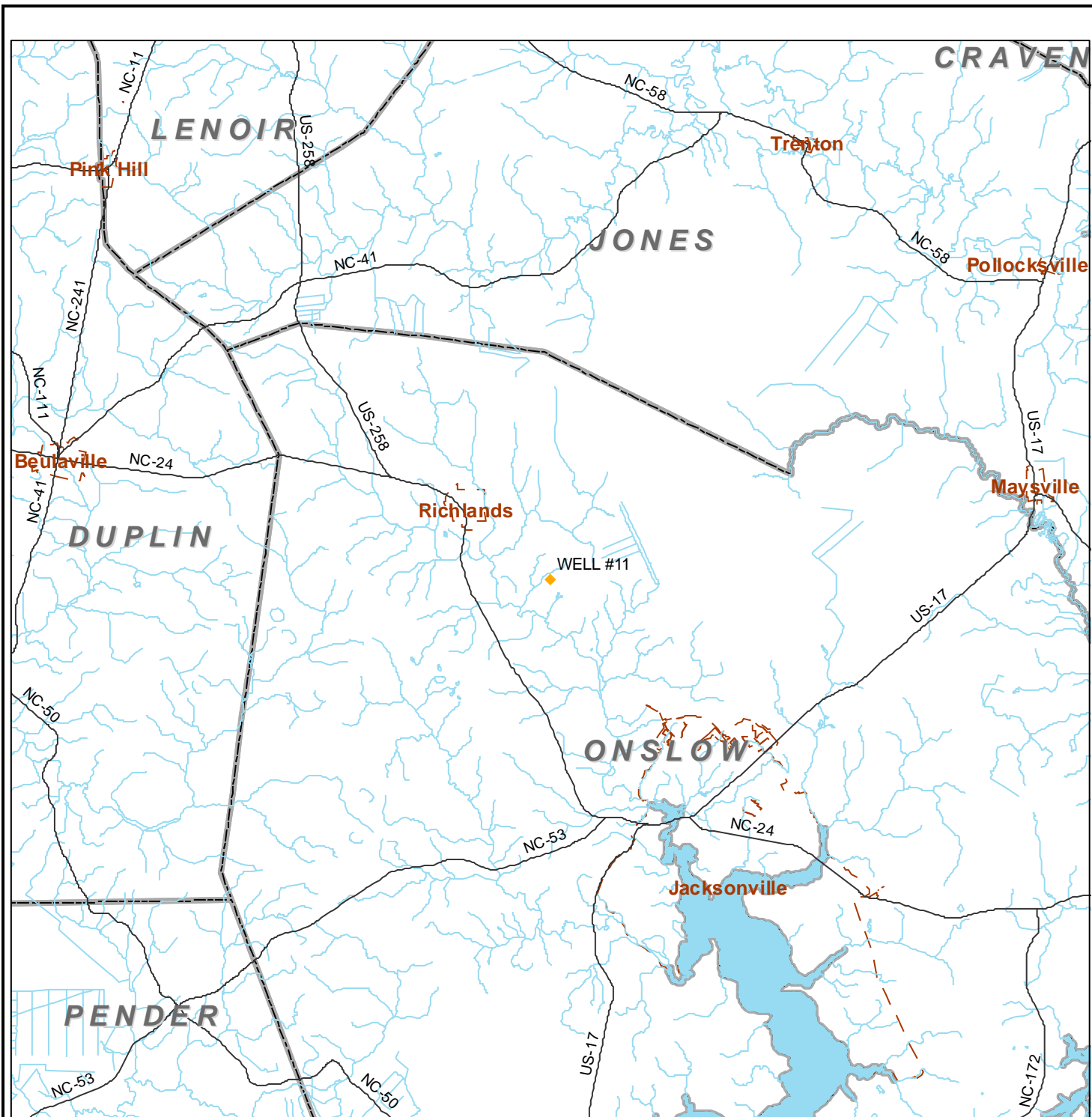
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PINEY GREEN 1



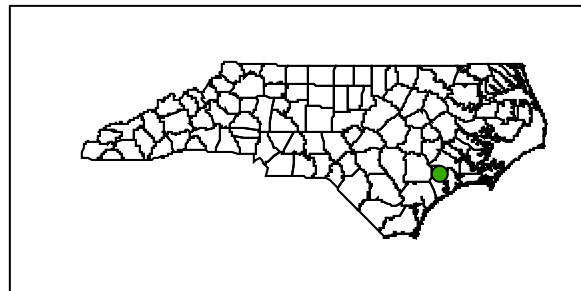
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

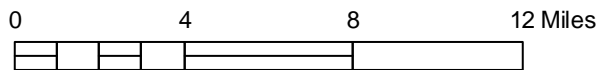
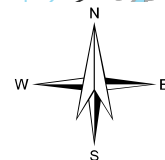


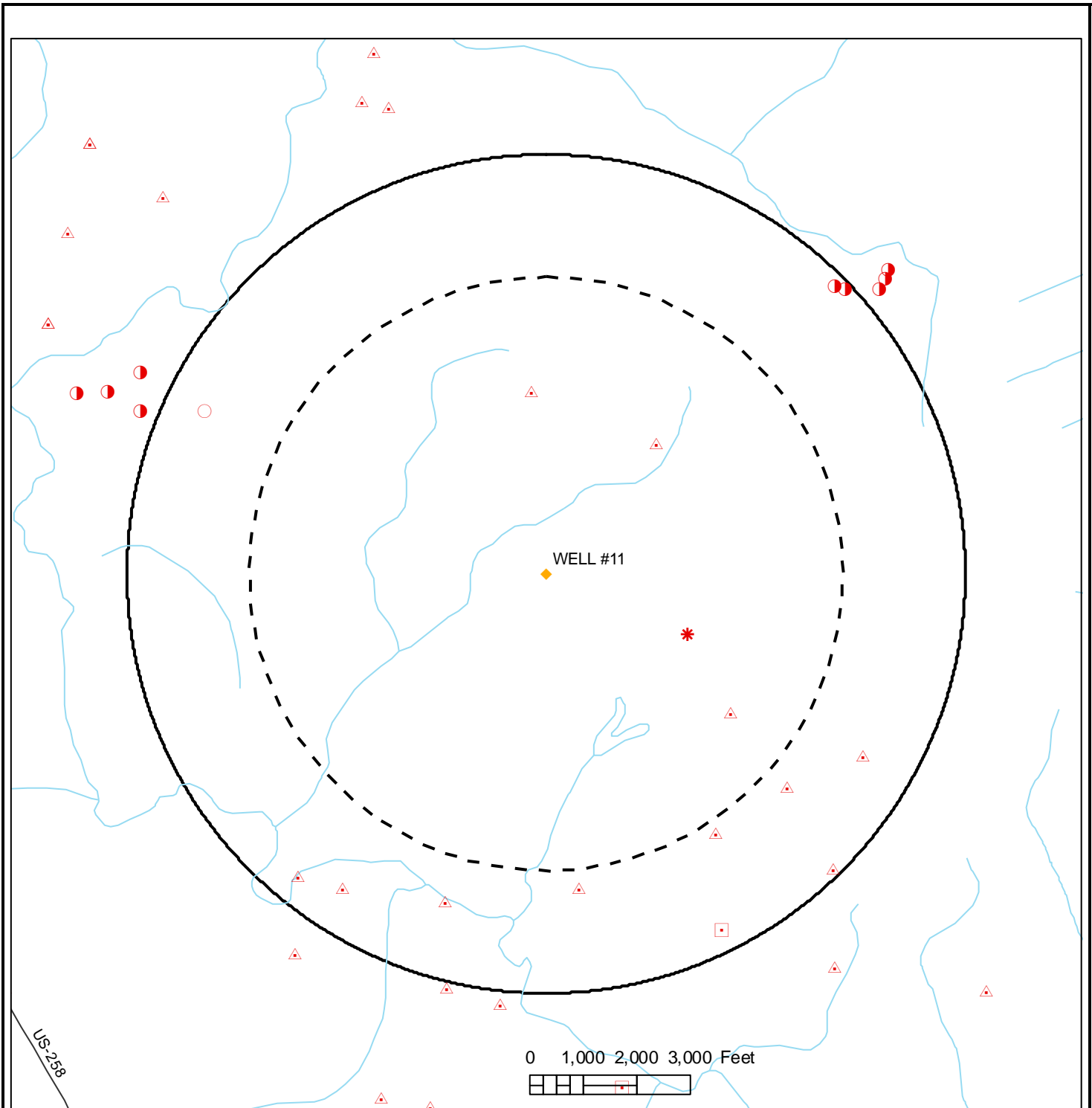


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



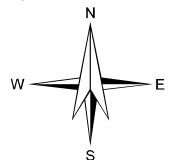


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #11**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Howard Farms - Sow	AWS670058	Animal Operations	H	165 Rhodestown Rd	Jacksonville	Unkno wn	ONSLOW
GREER PROPERTY	94029	Pollution Incidents	H	UNNAMED FARM RD OFF GUM BRANCH	RICHLANDS	Unkno wn	ONSLO
Gum Branch Central Control Building	4026174	Tier II Sites	H	5980 Gum Branch Road	Jacksonville	Unkno wn	Onslow
Stateside WWTF	WQ0035809	Non Discharge Points	M	Unknown	Unknown	Unkno wn	ONSLOW
Stateside WWTF	WQ0035809	Non Discharge Points	M	Unknown	Unknown	Unkno wn	ONSLOW
Rock Creek Section IX	SW8060122	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
River Bluff Phase IV	SW8070916	NPDES Permits	L	Off NW Bridge Rd	Jacksonville	Unkno wn	ONSLOW
Rock Creek Section VIII	SW8030407	NPDES Permits	L	Rock Creek Dr N	Richlands	Unkno wn	ONSLOW
River Bluff Phases I II III and IV	SW8040410	NPDES Permits	L	NW Bridge Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Holly Grove of Rock Creek Section I and II	SW8100709	NPDES Permits	L	Rhodestown Rd	Jacksonville	Unkno wn	ONSLOW
Morton Commercial Tract	SW8120801	NPDES Permits	L	Gum Branch And Rhodestown Rd	Richlands	Unkno wn	ONSLOW
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Stateside Development and Access Road	SW8090513	NPDES Permits	L	4190 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Rock Creek Golf & Country Club WWTP	NC0062294	NPDES Permits	L	308 Country Club Blvd	Jacksonville	Unkno wn	ONSLOW
East Coast Imports - Richlands	NCG100205	NPDES Permits	L	6315 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Humphrey Minerals Mine - Richlands	NCG020507	NPDES Permits	L	346 Quaker Bridge Rd	Jacksonville	Unkno wn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #11**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Howard Farms - Sow	AWS670058	Operation Type	Swine State COC
GREER PROPERTY	94029	Pollutant Type	OTHER PETROLEUM PROD.
Stateside WWTF	WQ0035809	Permit Type	High Rate Infiltration
Stateside WWTF	WQ0035809	Permit Type	High Rate Infiltration
Rock Creek Section IX	SW8060122	Permit Type	State Stormwater
Rock Creek Section IX	SW8060122	Permit Issued Date	3/15/2006
River Bluff Phase IV	SW8070916	Permit Type	State Stormwater
River Bluff Phase IV	SW8070916	Permit Issued Date	9/25/2007
Rock Creek Section VIII	SW8030407	Permit Type	State Stormwater
Rock Creek Section VIII	SW8030407	Permit Issued Date	7/15/2003
River Bluff Phases I II III and IV	SW8040410	Permit Type	State Stormwater
River Bluff Phases I II III and IV	SW8040410	Permit Issued Date	9/25/2007
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Type	State Stormwater
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Issued Date	9/9/2013
Morton Commercial Tract	SW8120801	Permit Type	State Stormwater
Morton Commercial Tract	SW8120801	Permit Issued Date	8/7/2012
Morton Commercial Tract	SW8120801	Permit Expiration Date	8/7/2020
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Issued Date	6/4/2009
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Expiration Date	10/19/2021
Stateside Development and Access Road	SW8090513	Permit Type	State Stormwater
Stateside Development and Access Road	SW8090513	Permit Issued Date	6/12/2009
Rock Creek Golf & Country Club WWTP	NC0062294	Permit Type	Discharging 100% Domestic < 1MGD
Rock Creek Golf & Country Club WWTP	NC0062294	Permit Issued Date	9/14/2012
Rock Creek Golf & Country Club WWTP	NC0062294	Permit Expiration Date	6/30/2017
Rock Creek Golf & Country Club WWTP	NC0062294	Receiving Stream	NEW RIVER
East Coast Imports - Richlands	NCG100205	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
East Coast Imports - Richlands	NCG100205	Permit Issued Date	6/11/2010
East Coast Imports - Richlands	NCG100205	Permit Expiration Date	10/31/2014
East Coast Imports - Richlands	NCG100205	Receiving Stream	NEW RIVER
Humphrey Minerals Mine - Richlands	NCG020507	Permit Type	Mining Activities Stormwater Discharge COC
Humphrey Minerals Mine - Richlands	NCG020507	Permit Issued Date	1/1/2010
Humphrey Minerals Mine - Richlands	NCG020507	Permit Expiration Date	12/31/2014
Humphrey Minerals Mine - Richlands	NCG020507	Receiving Stream	Unnamed Tributary to New River (Rufus Creek)

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #11**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #11**

Unsaturated Zone Rating	61.2
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

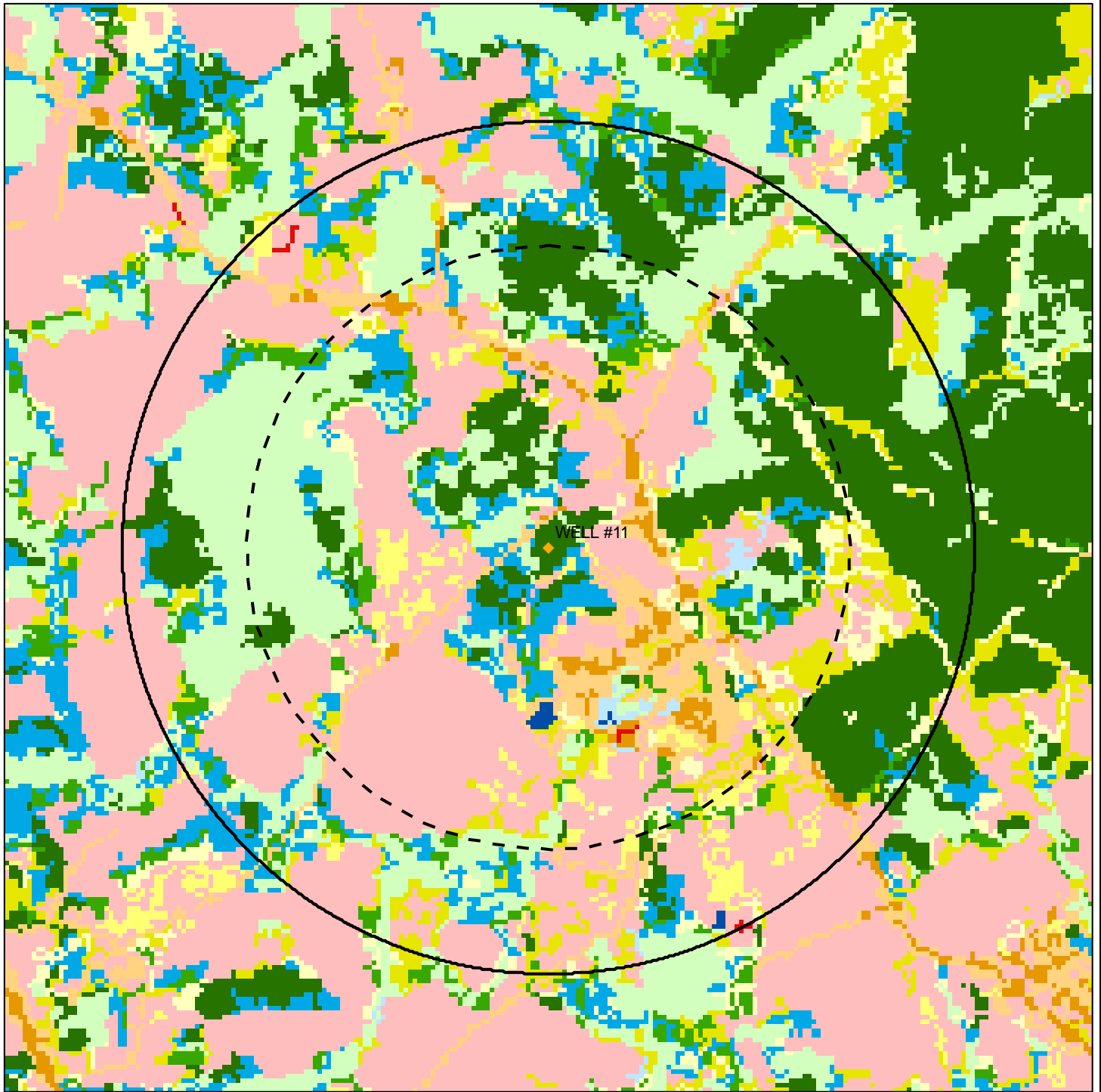
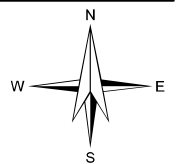


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11

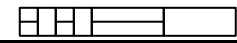


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



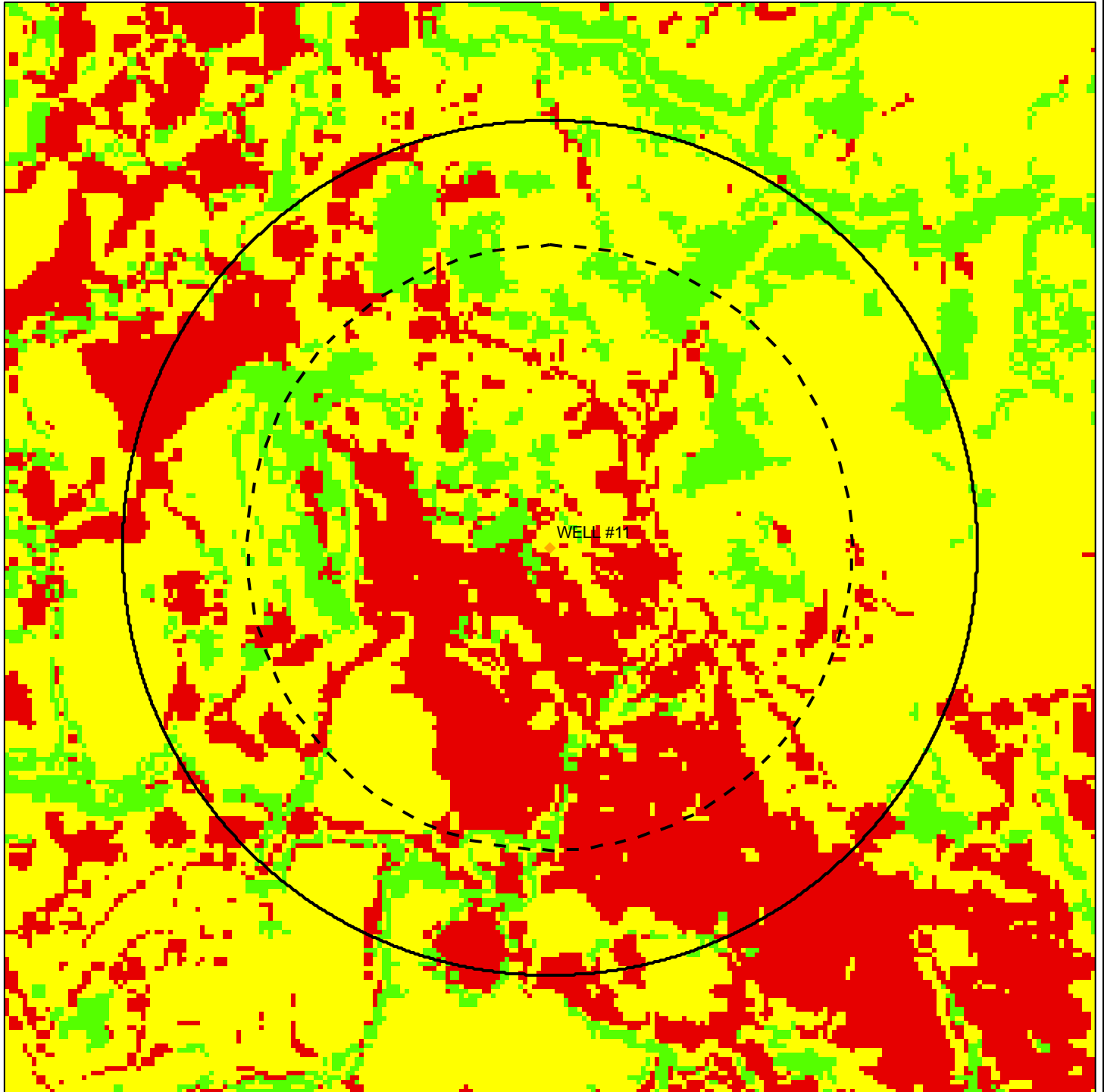
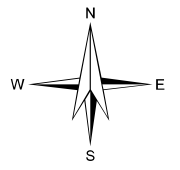
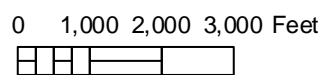


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



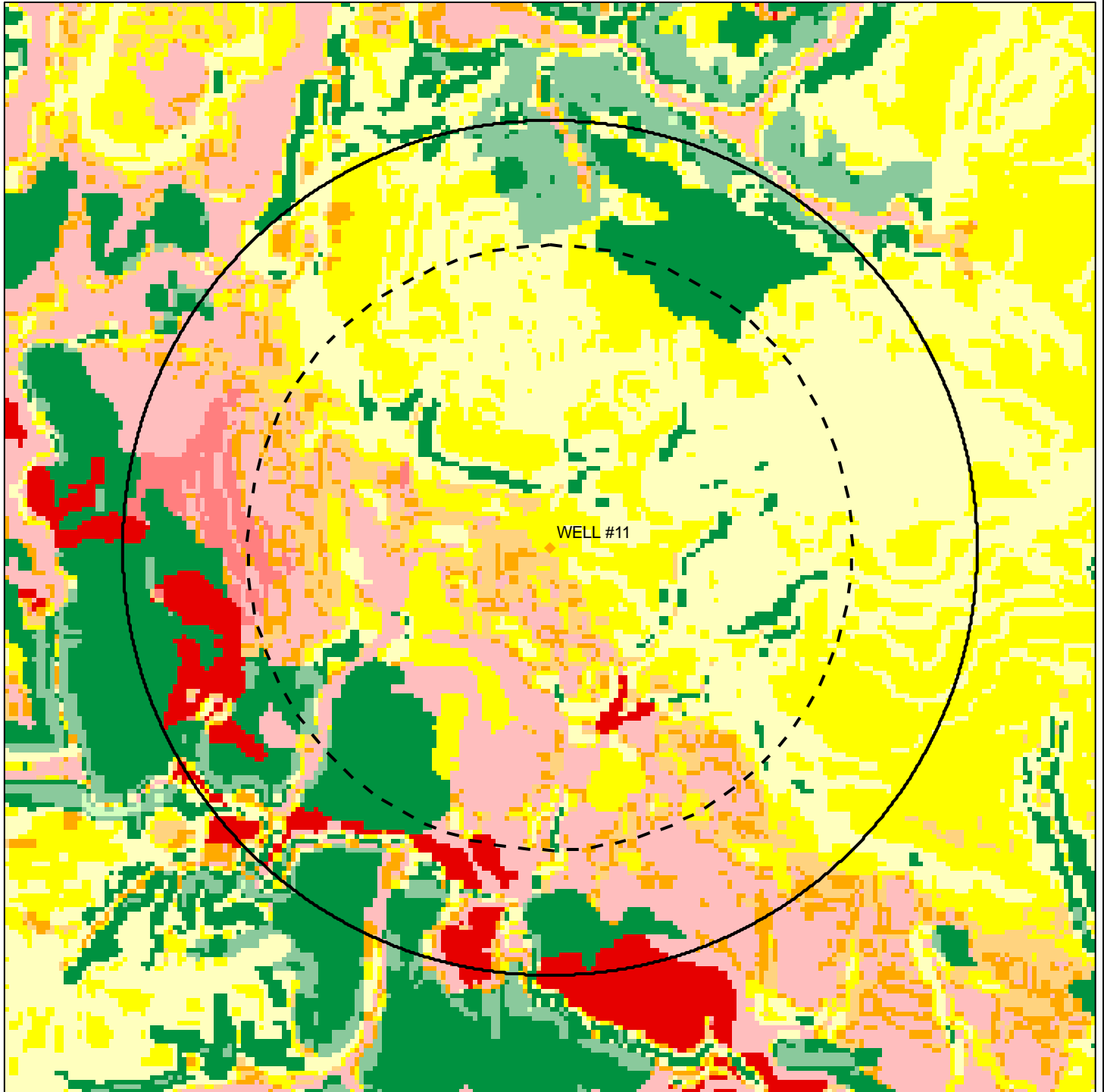
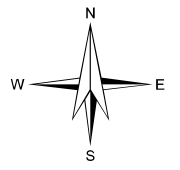
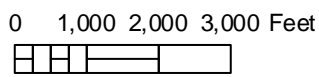


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11



- | | | |
|-------------------------------|-----------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to 1,280 sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



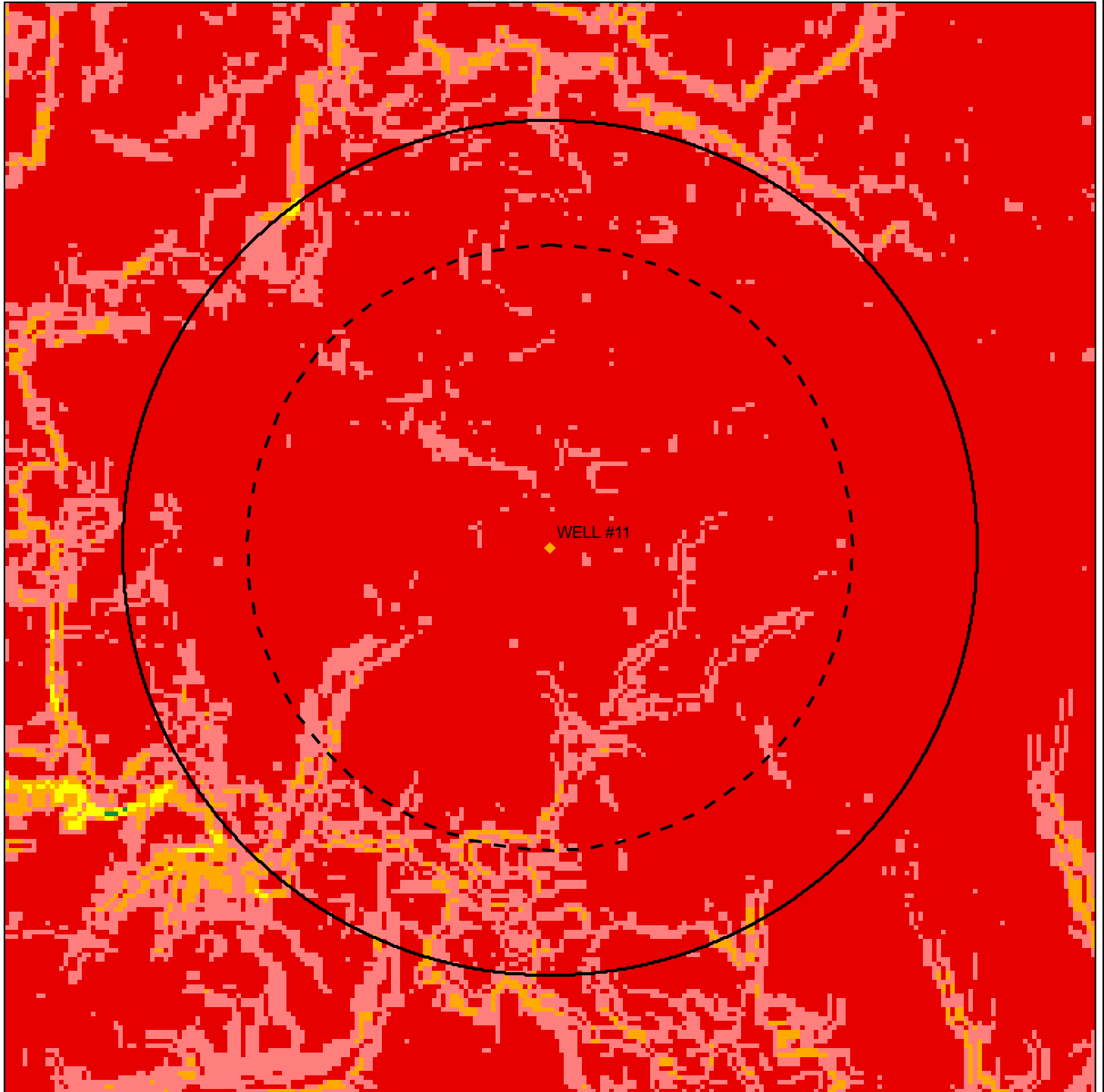
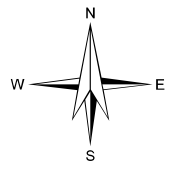










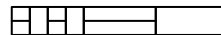
FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |

0 1,000 2,000 3,000 Feet



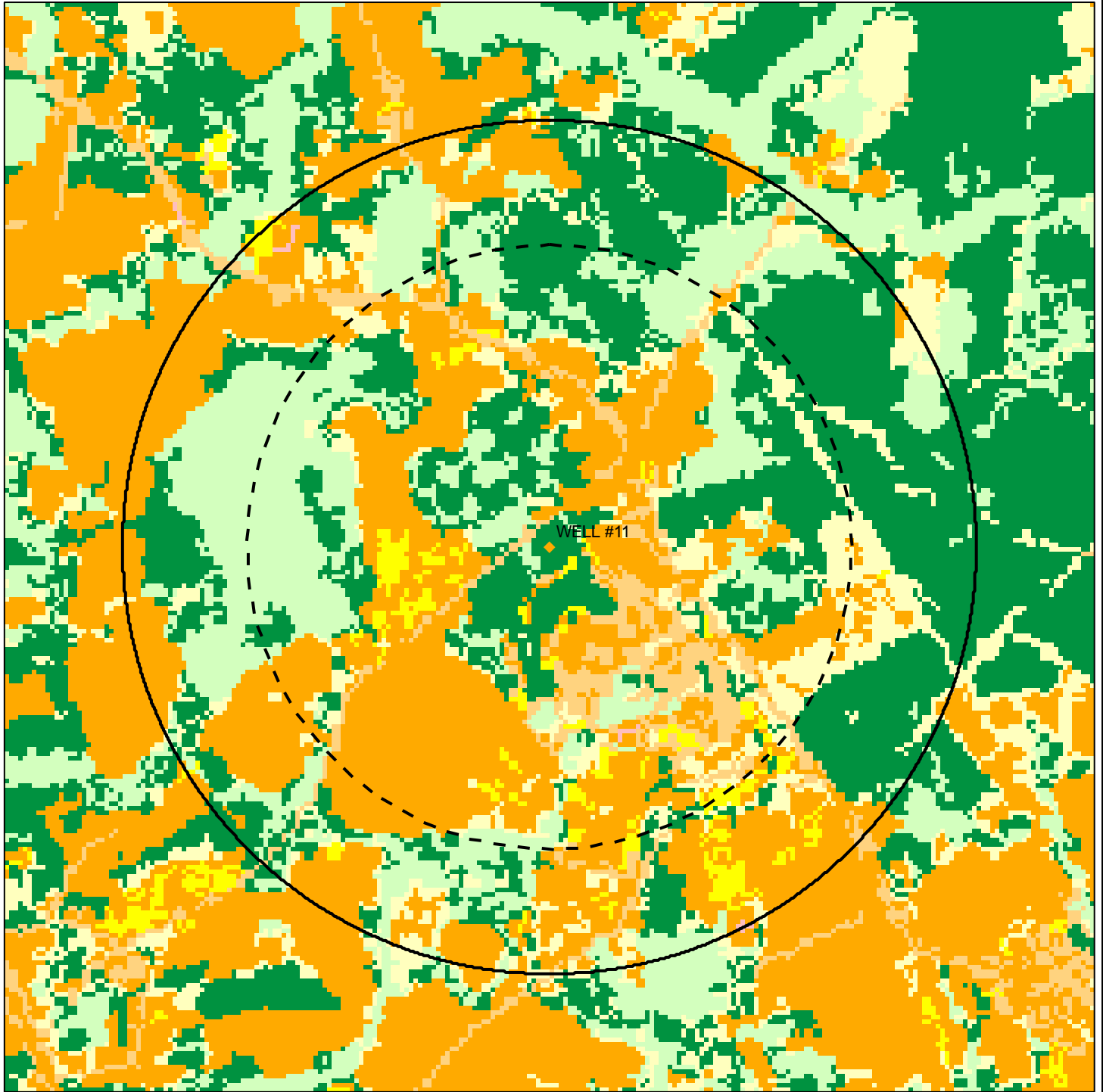











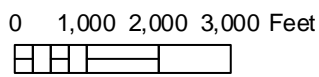
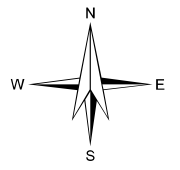


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



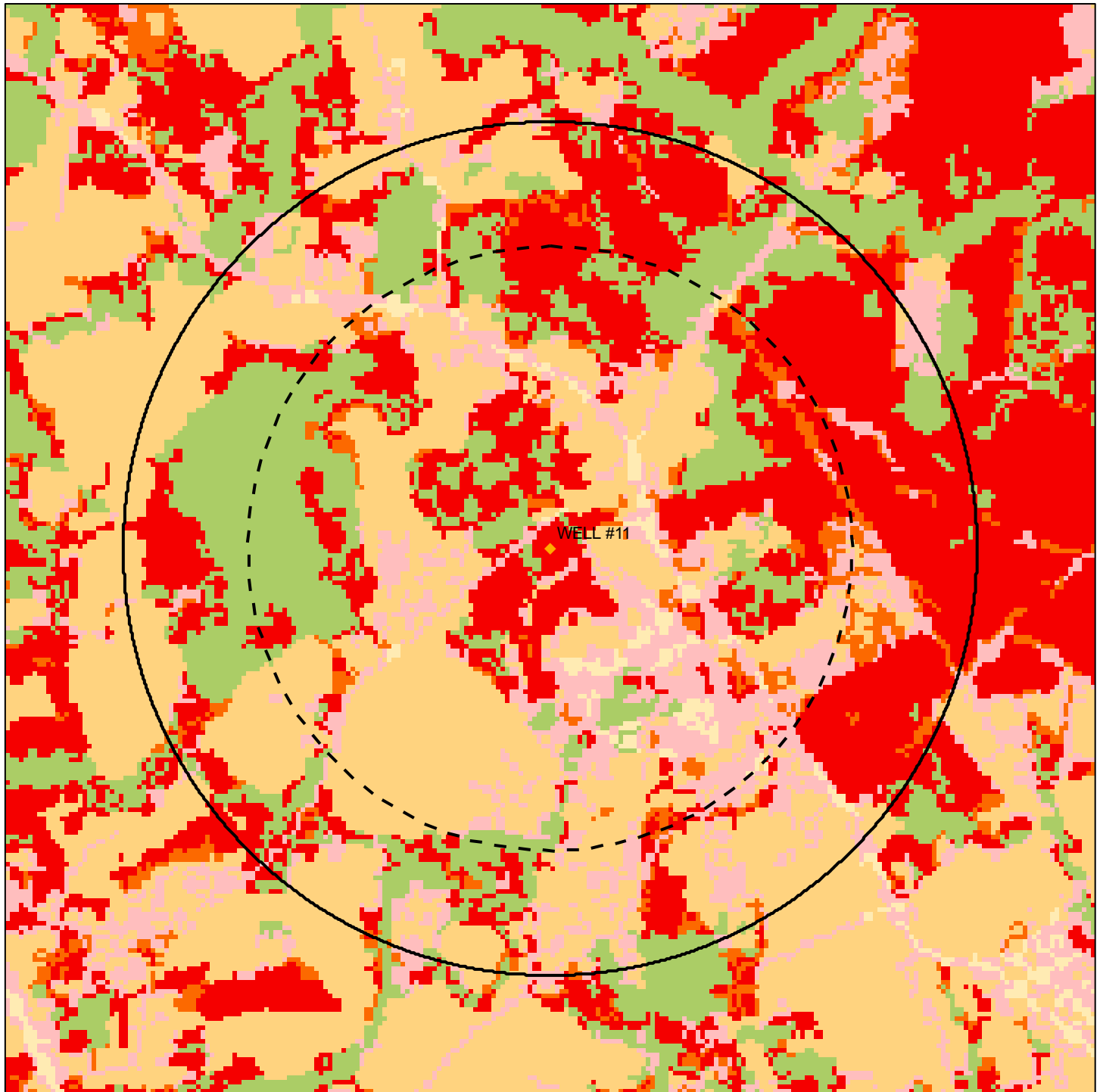
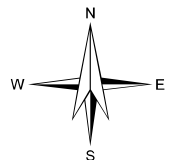


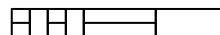
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #11

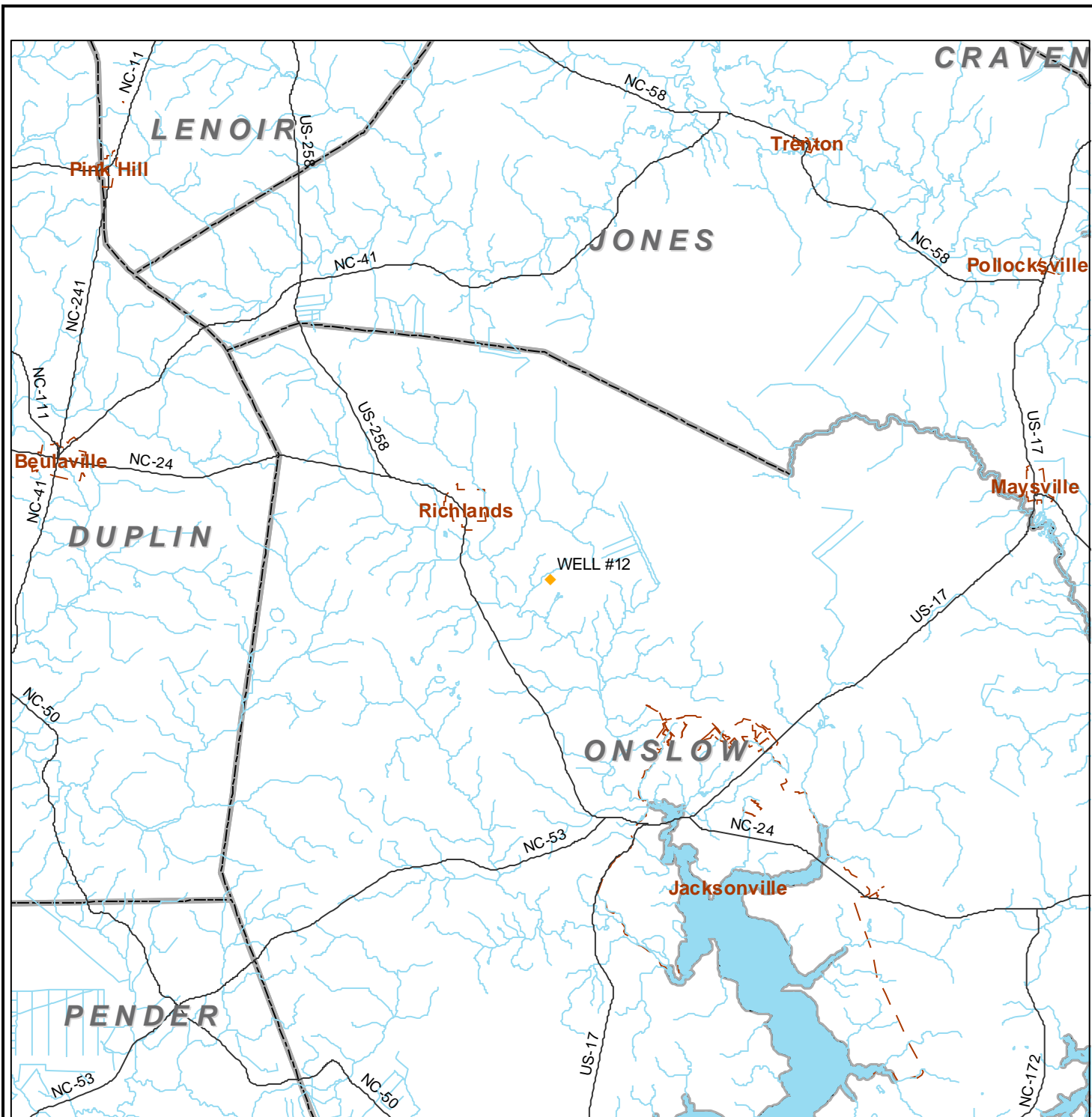


- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

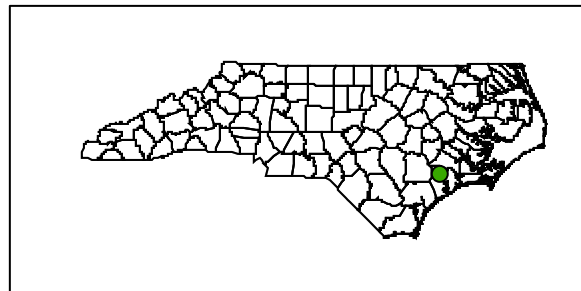
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet

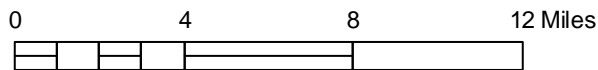
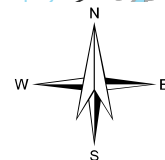


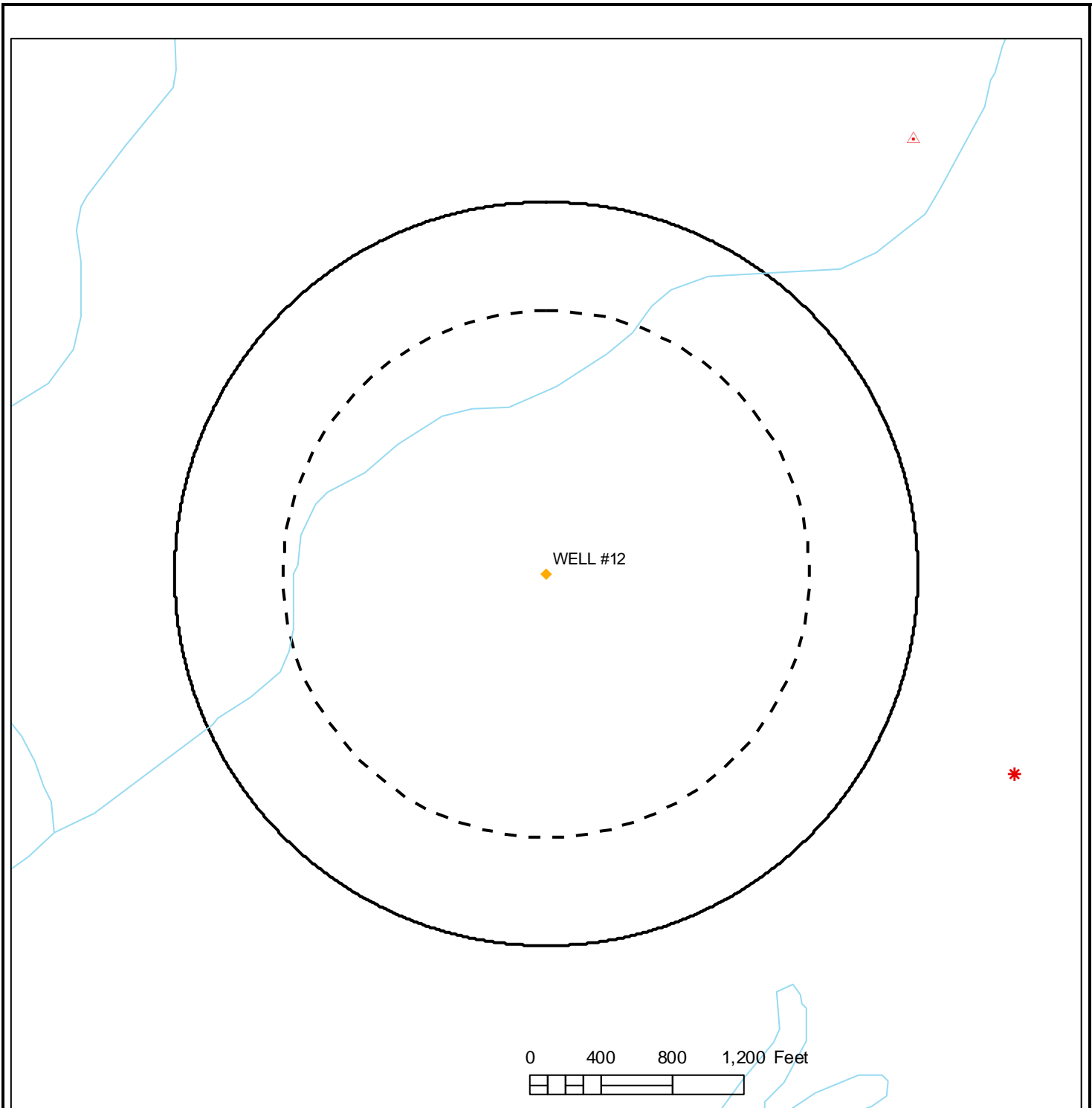


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



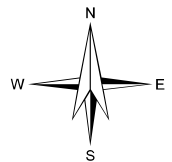


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #12**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #12**

Unique Attributes

PCS Name	PCS ID	Attribute	Value

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #12**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #12**

Unsaturated Zone Rating	63.5
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

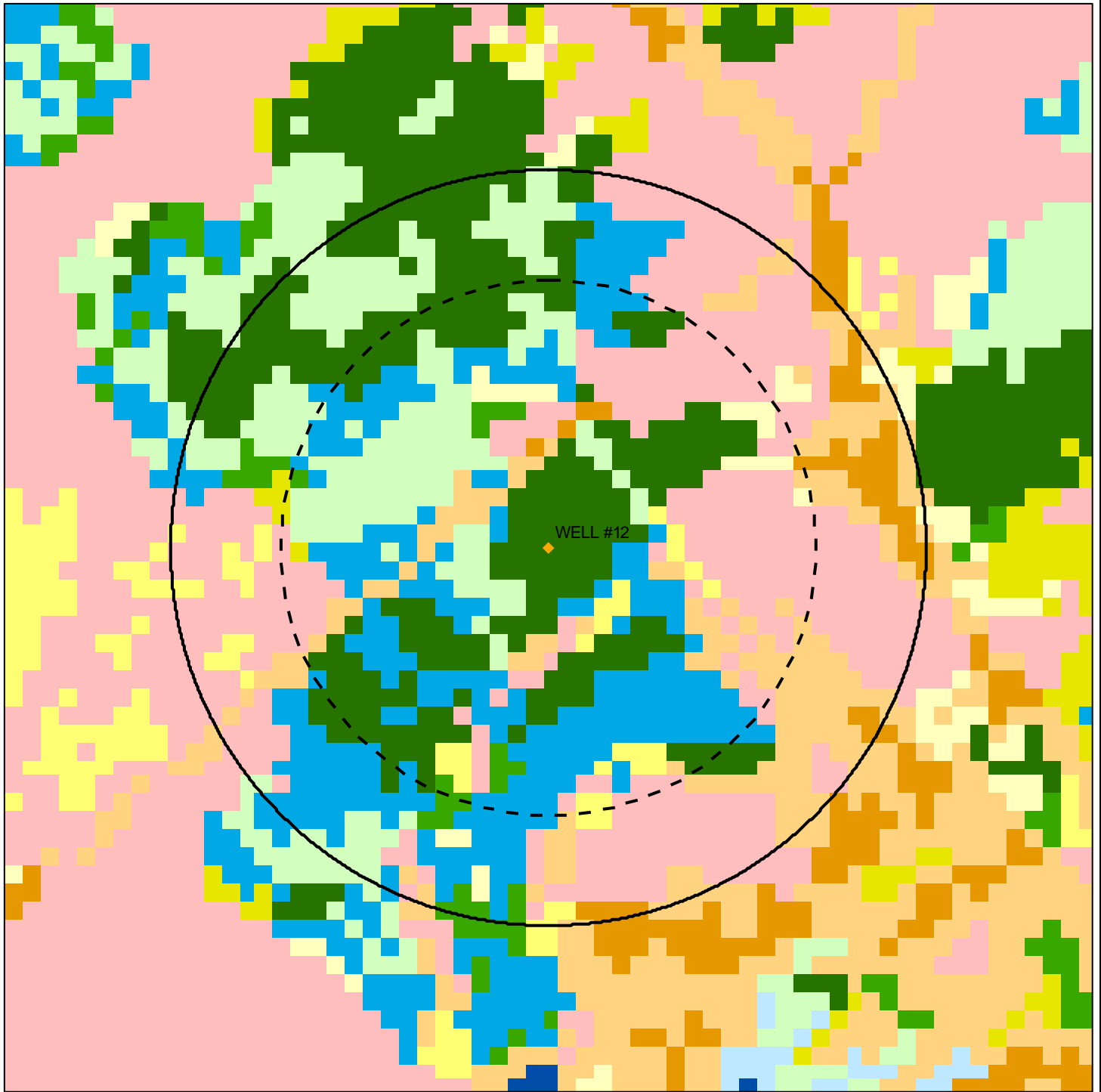
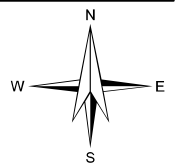


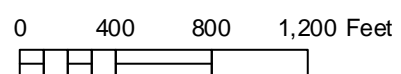
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



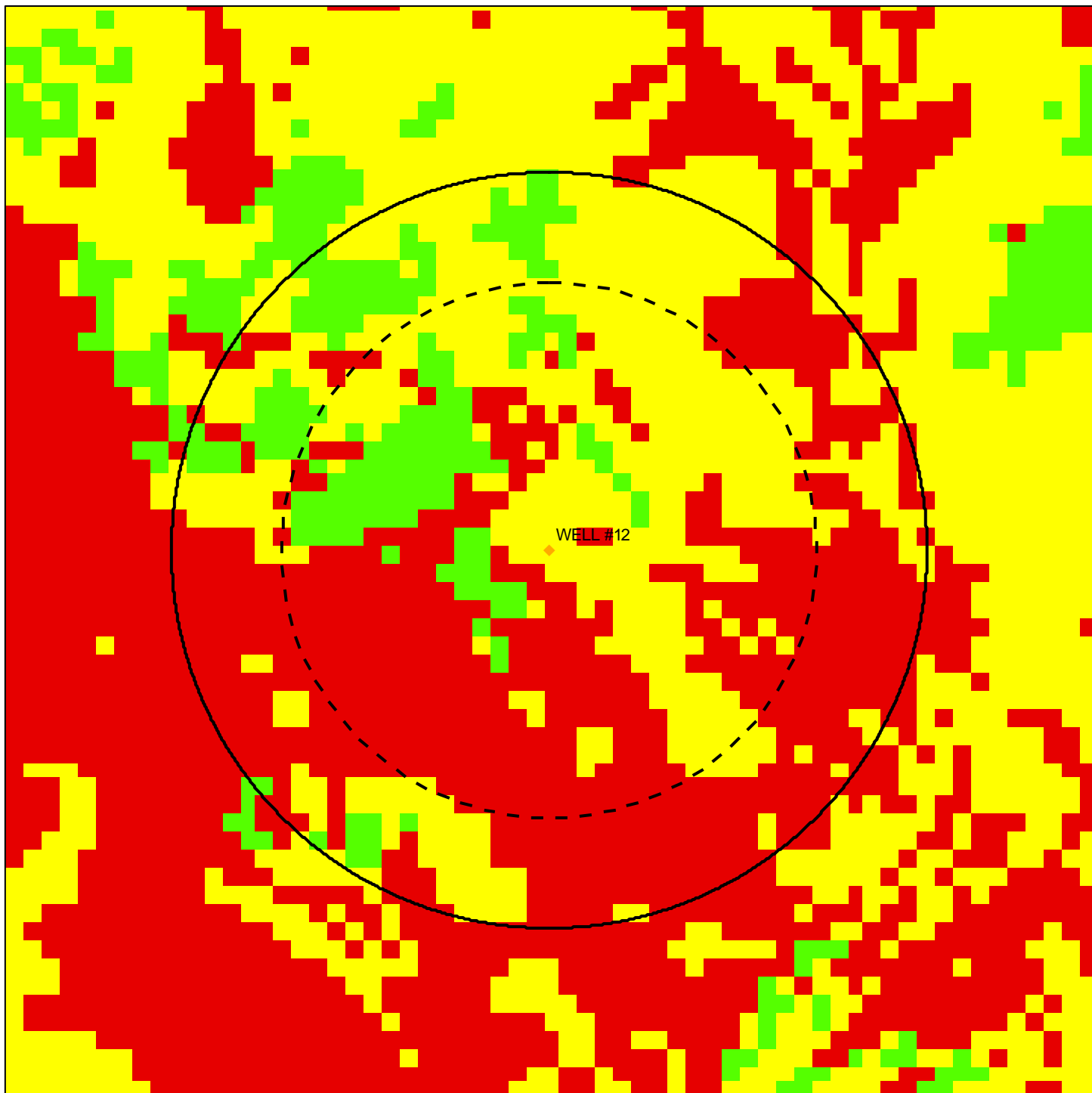
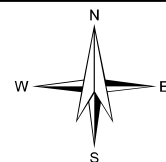
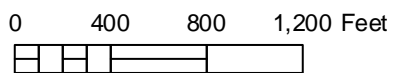


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



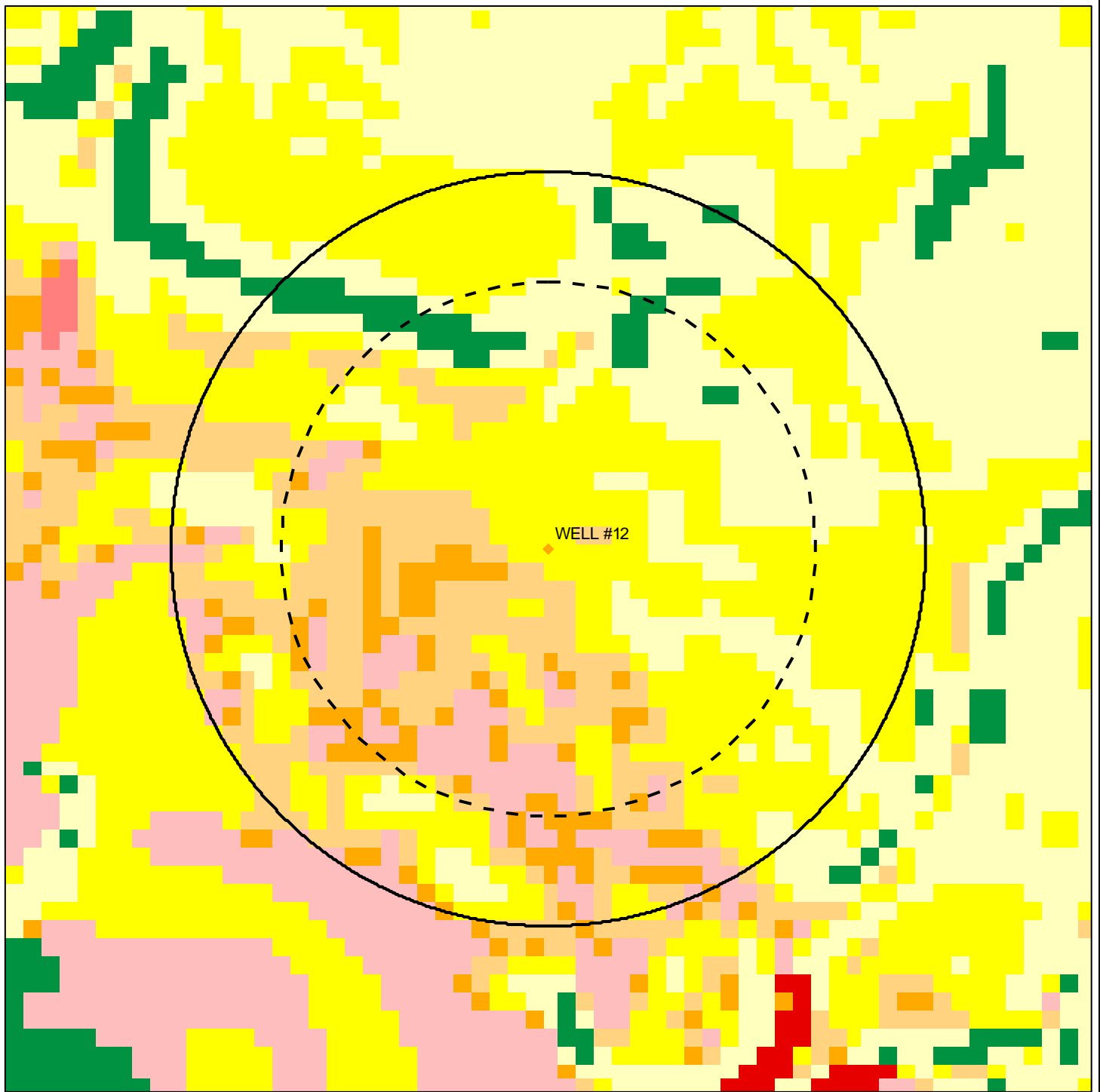
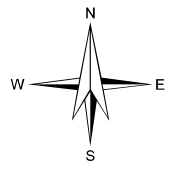
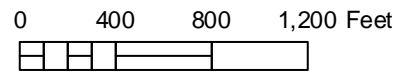


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



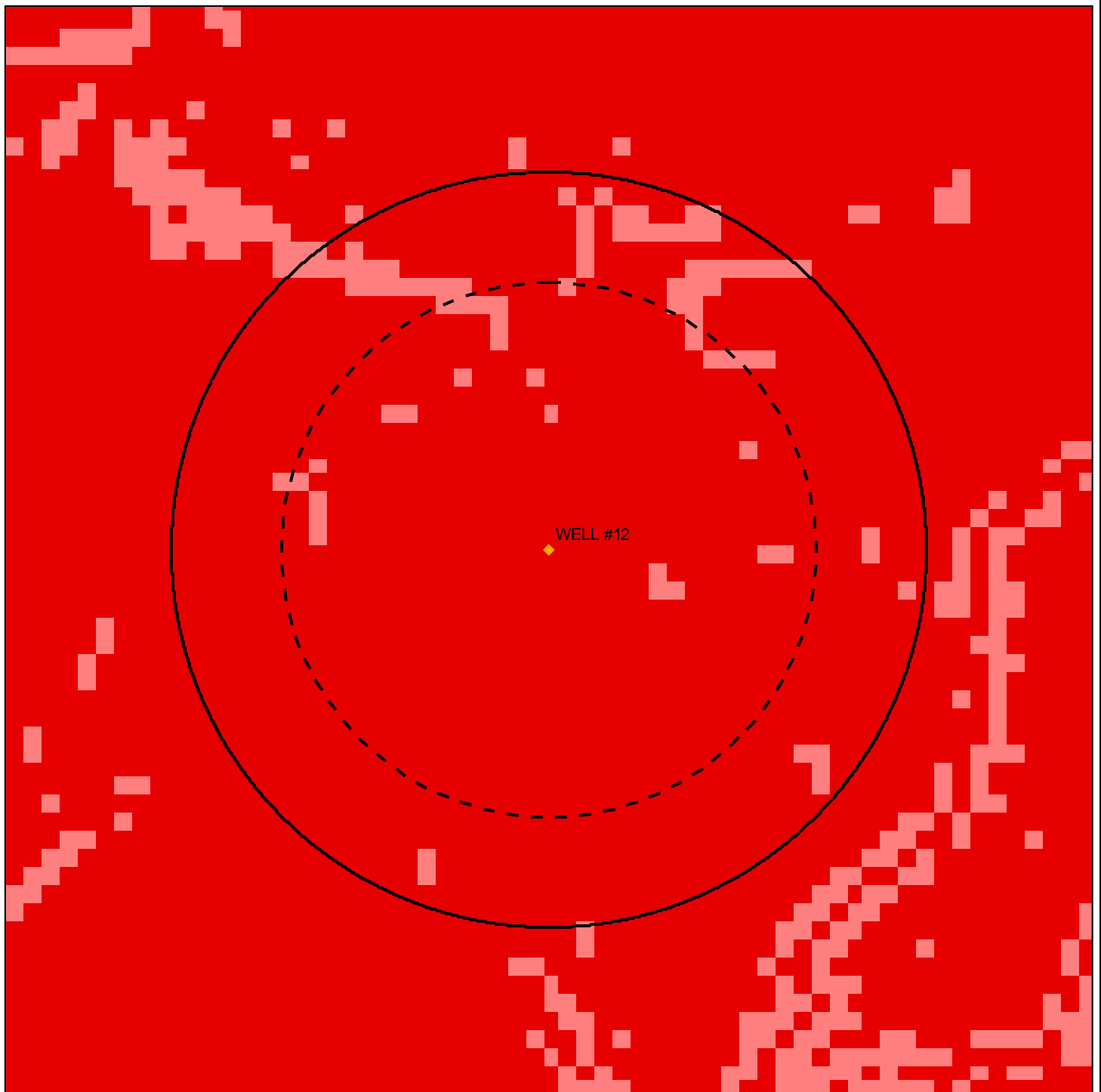
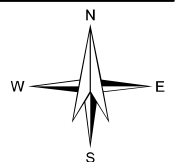








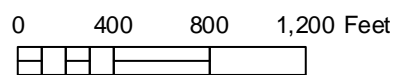


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



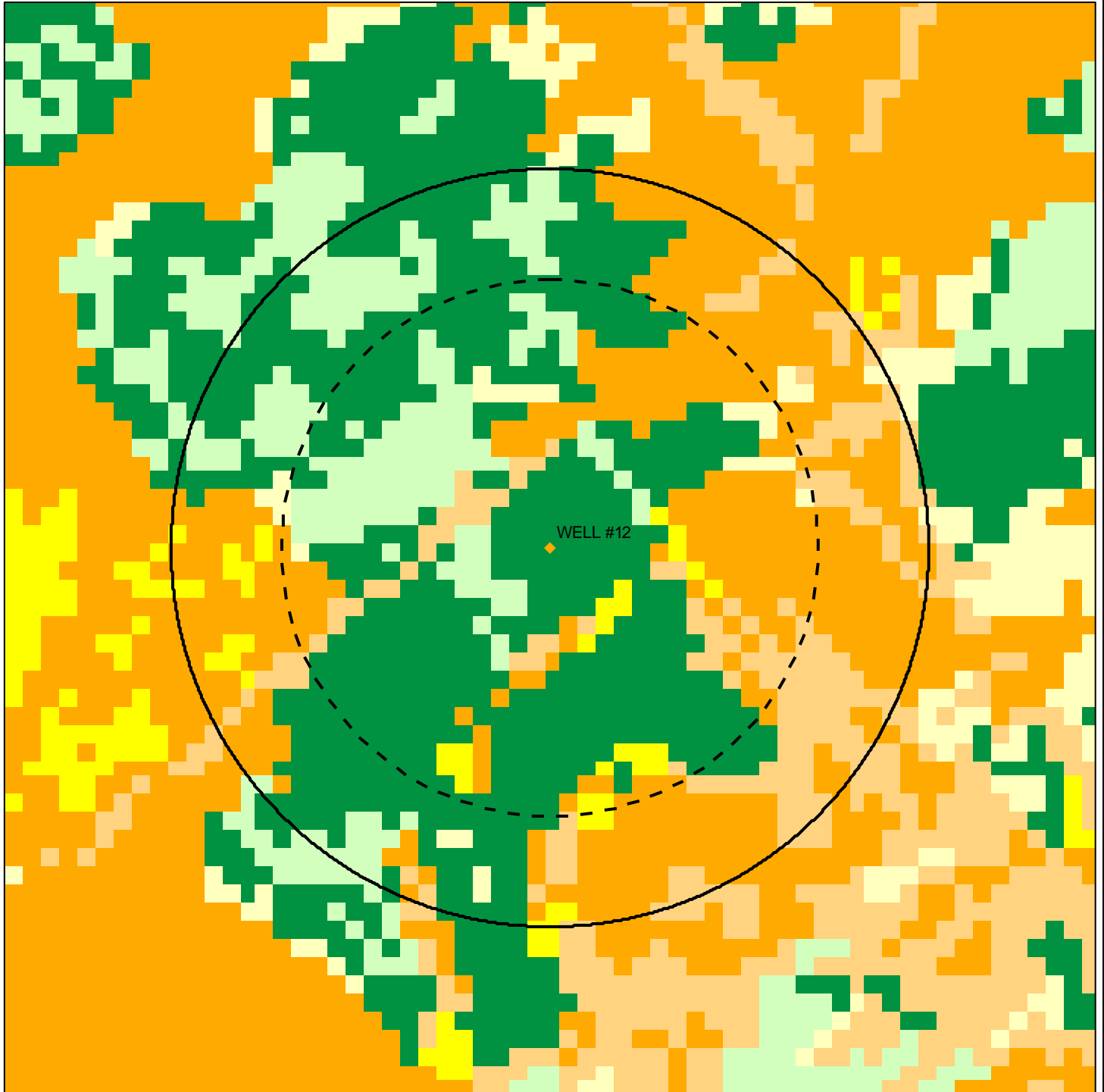
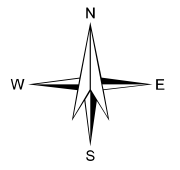











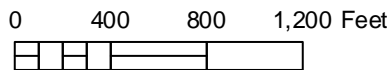


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



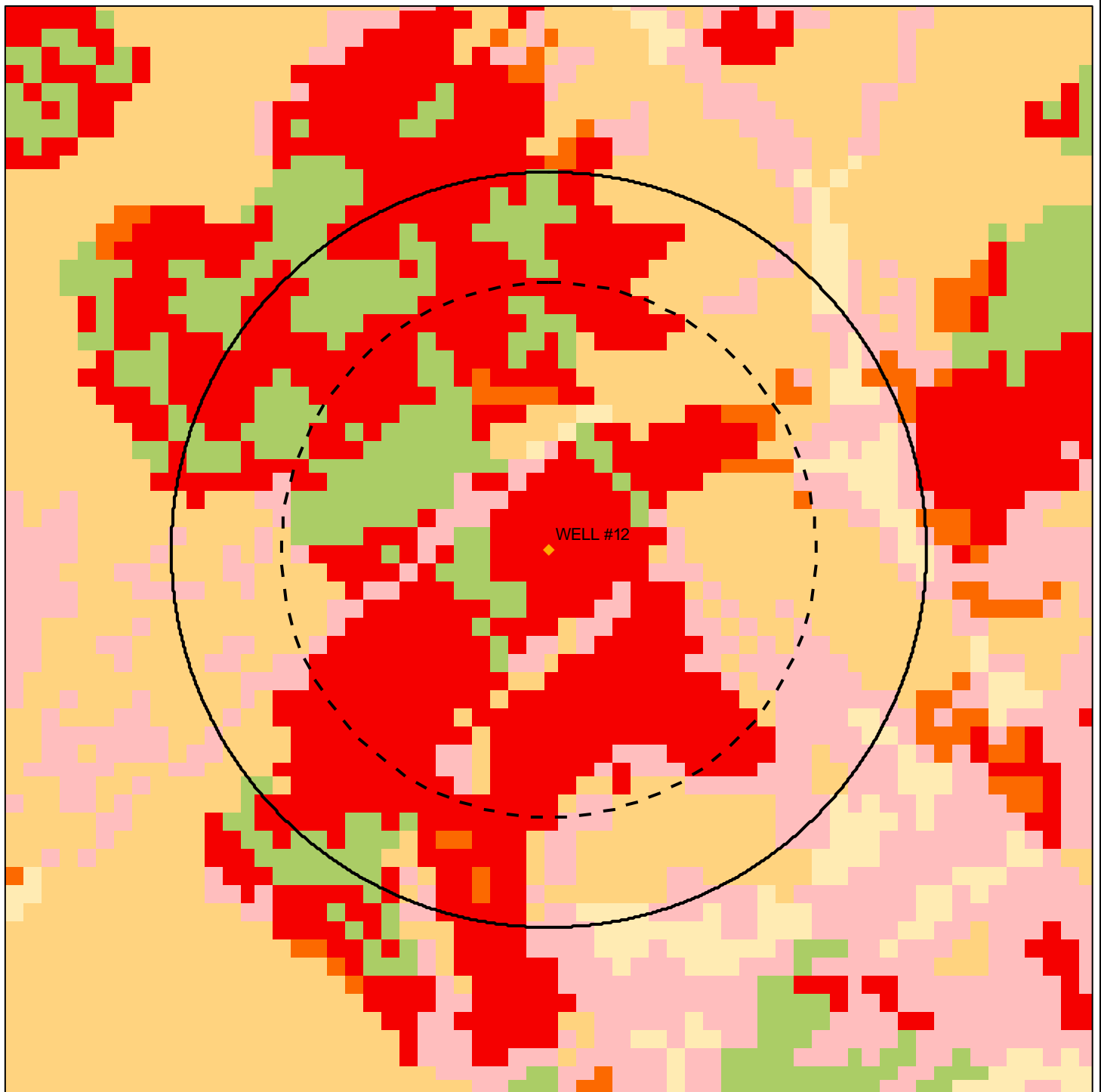
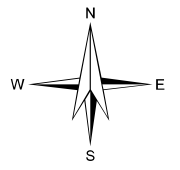
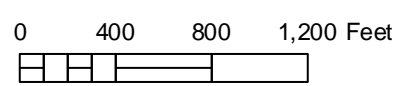


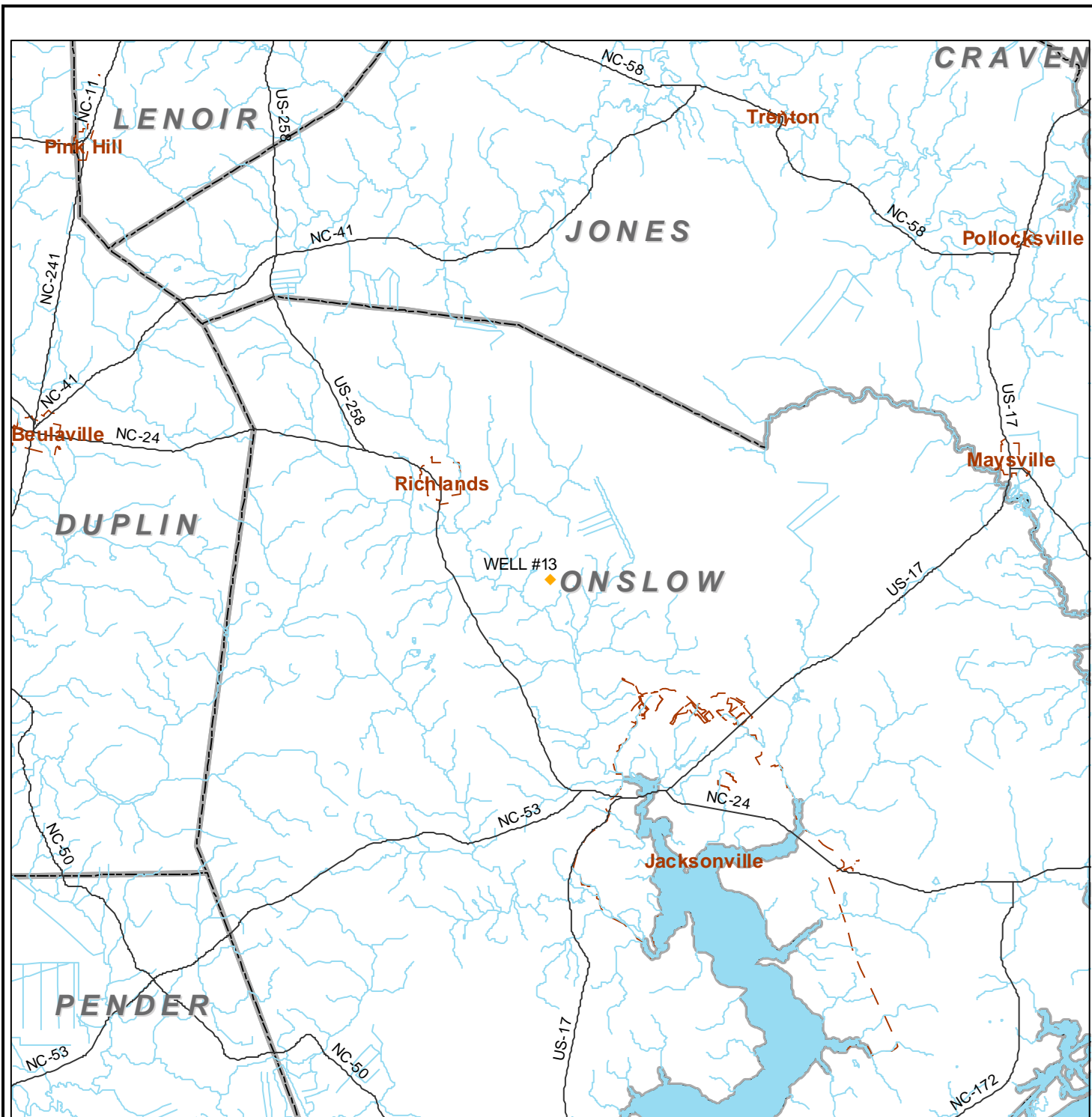
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #12



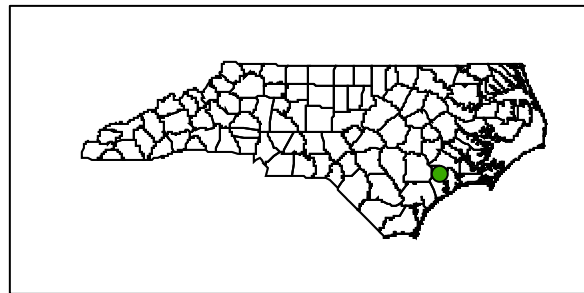
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

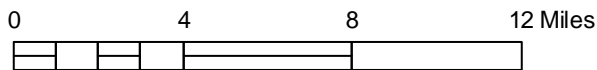
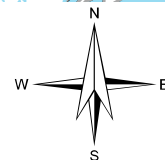


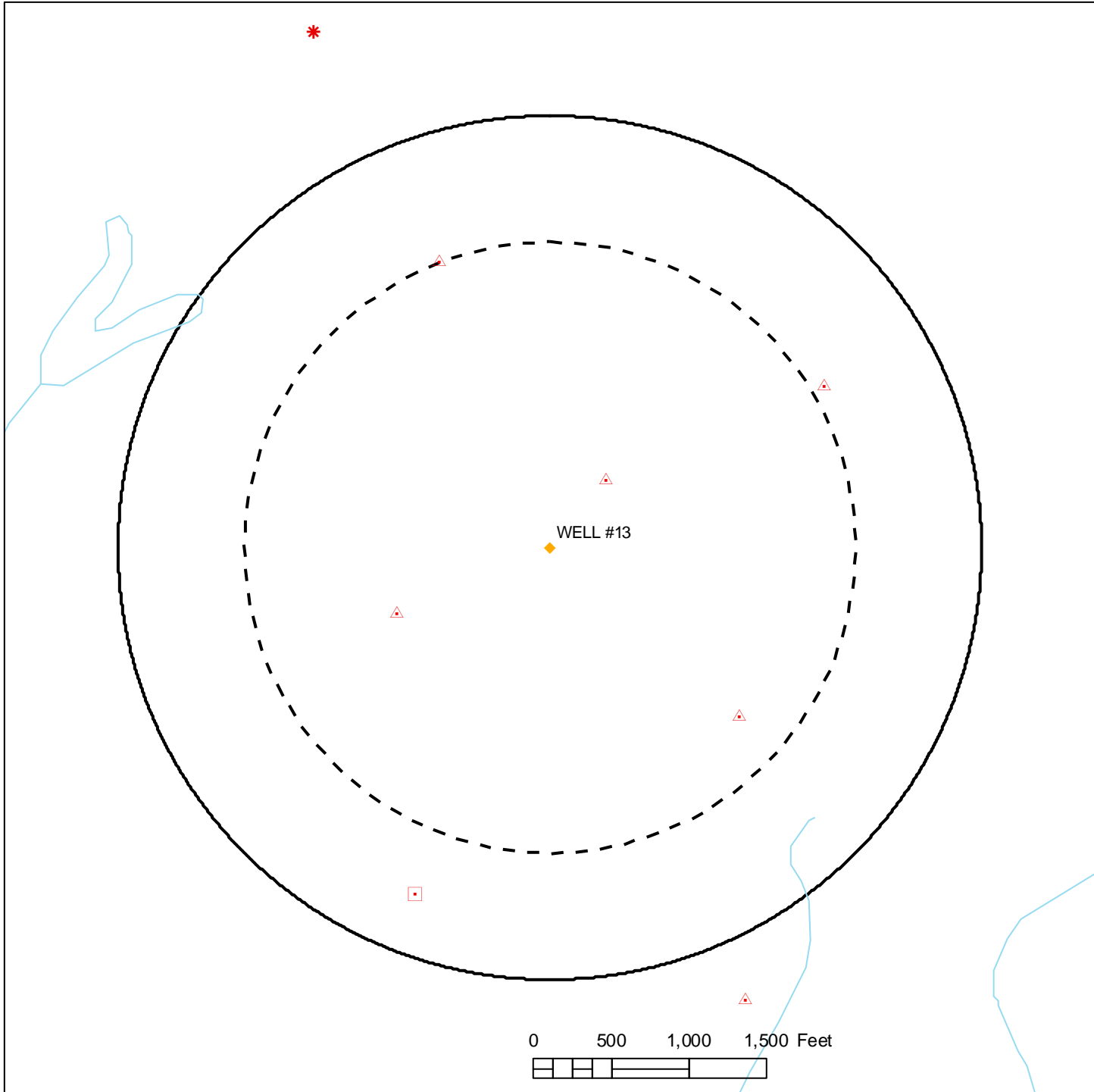


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



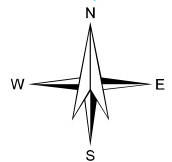


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #13**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Howard Farms - Sow	AWS670058	Animal Operations	H	165 Rhodestown Rd	Jacksonville	Unknown	ONSLOW
Rock Creek Section VIII	SW8030407	NPDES Permits	L	Rock Creek Dr N	Richlands	Unknown	ONSLOW
Holly Grove of Rock Creek Section I and II	SW8100709	NPDES Permits	L	Rhodestown Rd	Jacksonville	Unknown	ONSLOW
Morton Commercial Tract	SW8120801	NPDES Permits	L	Gum Branch And Rhodestown Rd	Richlands	Unknown	ONSLOW
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Stateside Development and Access Road	SW8090513	NPDES Permits	L	4190 Gum Branch Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #13**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Howard Farms - Sow	AWS670058	Operation Type	Swine State COC
Rock Creek Section VIII	SW8030407	Permit Type	State Stormwater
Rock Creek Section VIII	SW8030407	Permit Issued Date	7/15/2003
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Type	State Stormwater
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Issued Date	9/9/2013
Morton Commercial Tract	SW8120801	Permit Type	State Stormwater
Morton Commercial Tract	SW8120801	Permit Issued Date	8/7/2012
Morton Commercial Tract	SW8120801	Permit Expiration Date	8/7/2020
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Type	State Stormwater
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Issued Date	6/4/2009
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Expiration Date	10/19/2021
Stateside Development and Access Road	SW8090513	Permit Type	State Stormwater
Stateside Development and Access Road	SW8090513	Permit Issued Date	6/12/2009

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #13**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #13**

Unsaturated Zone Rating	67.7
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

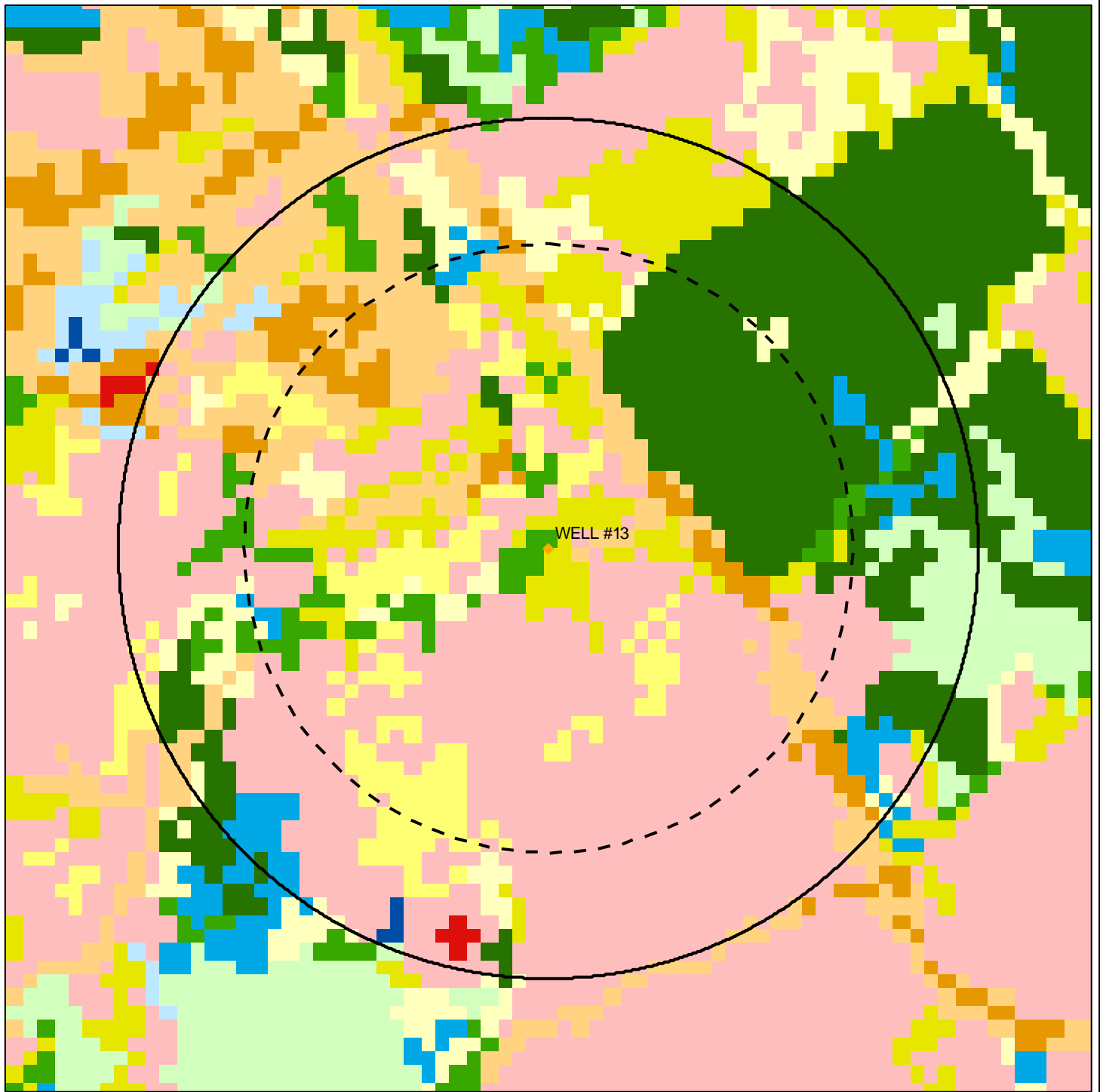
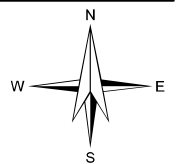


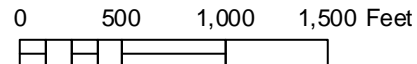
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



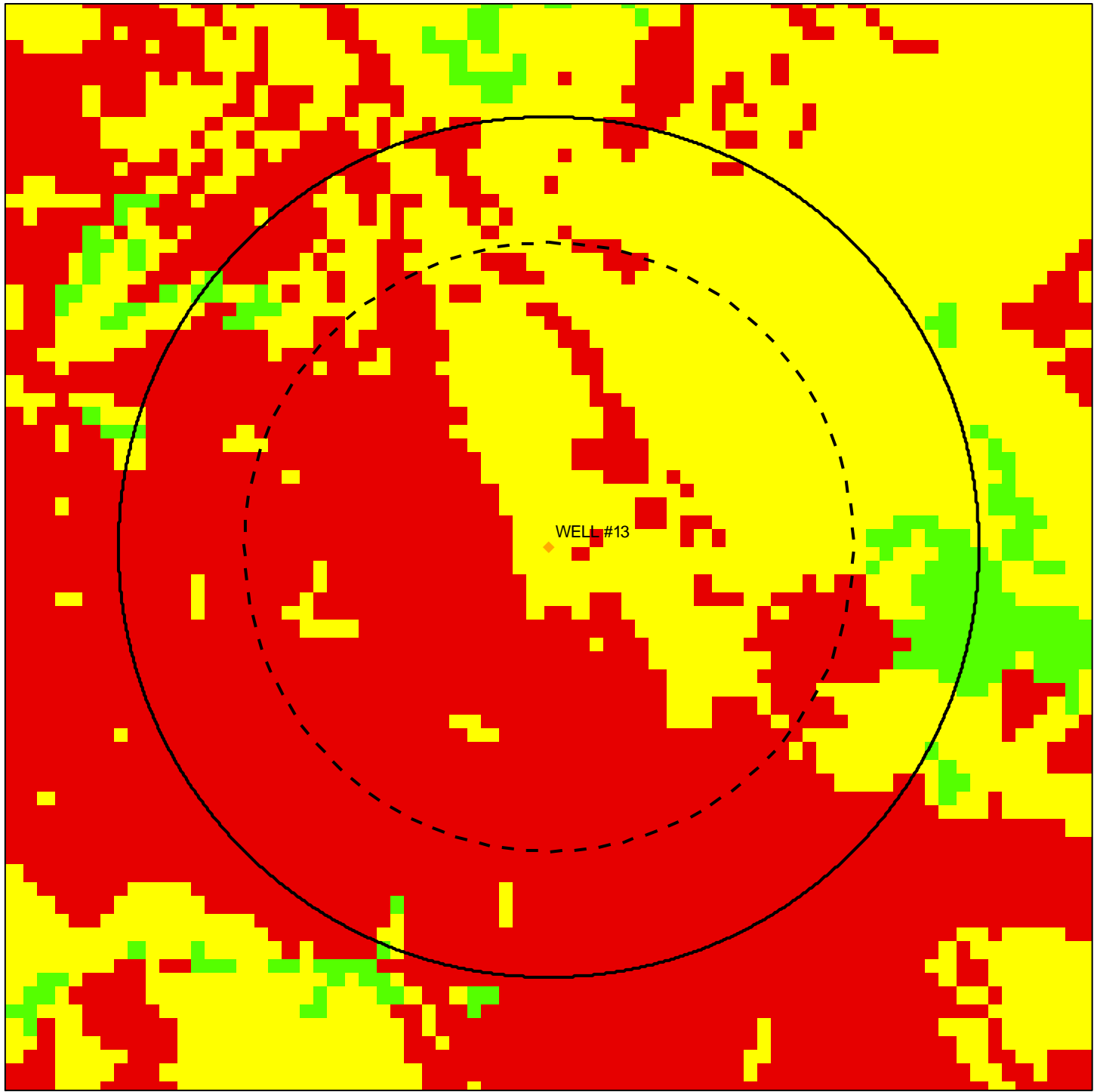
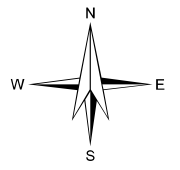
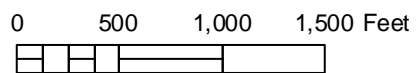


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



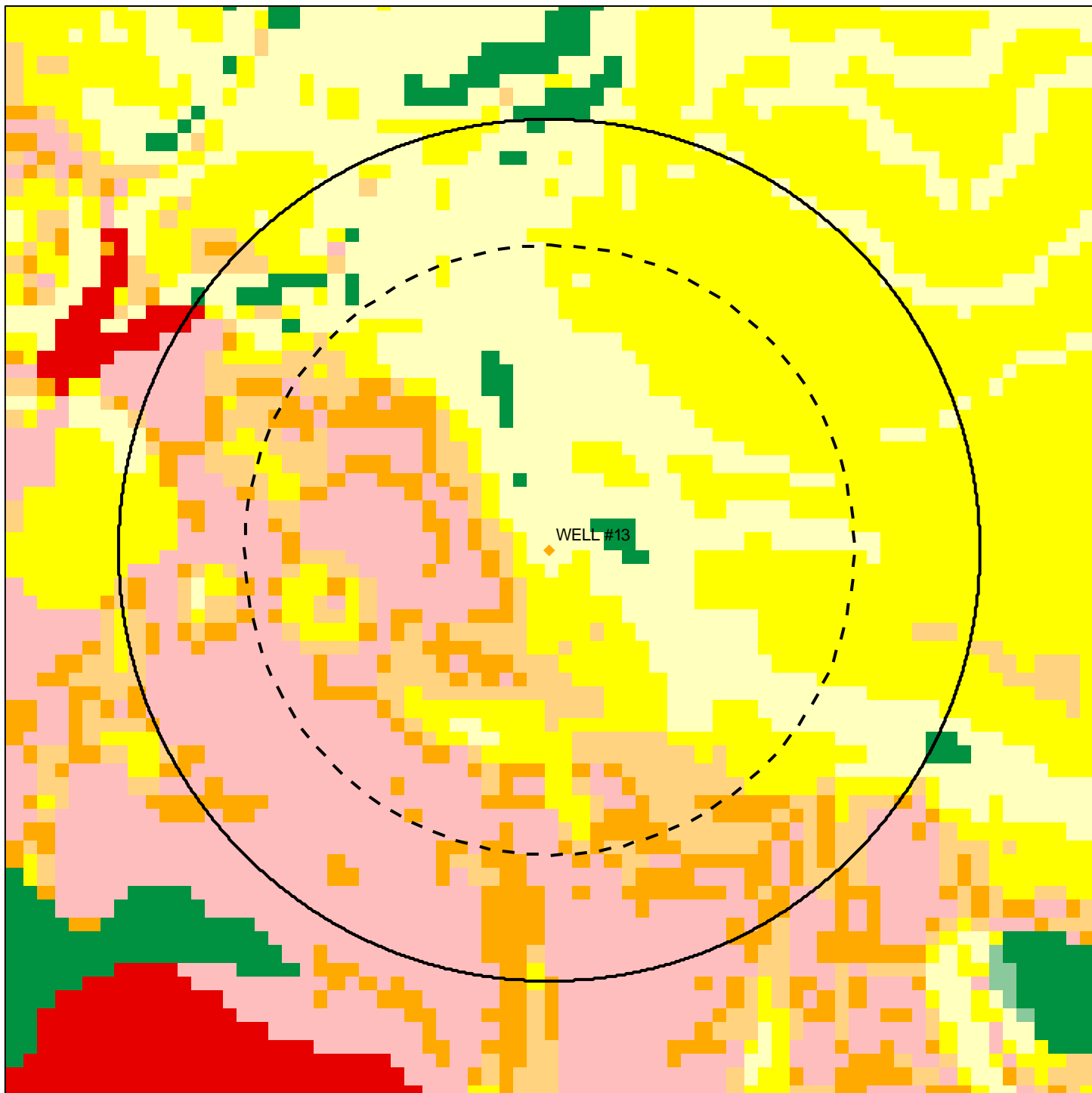
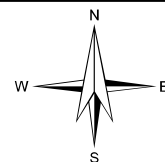
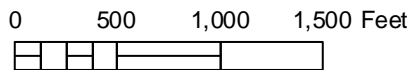


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



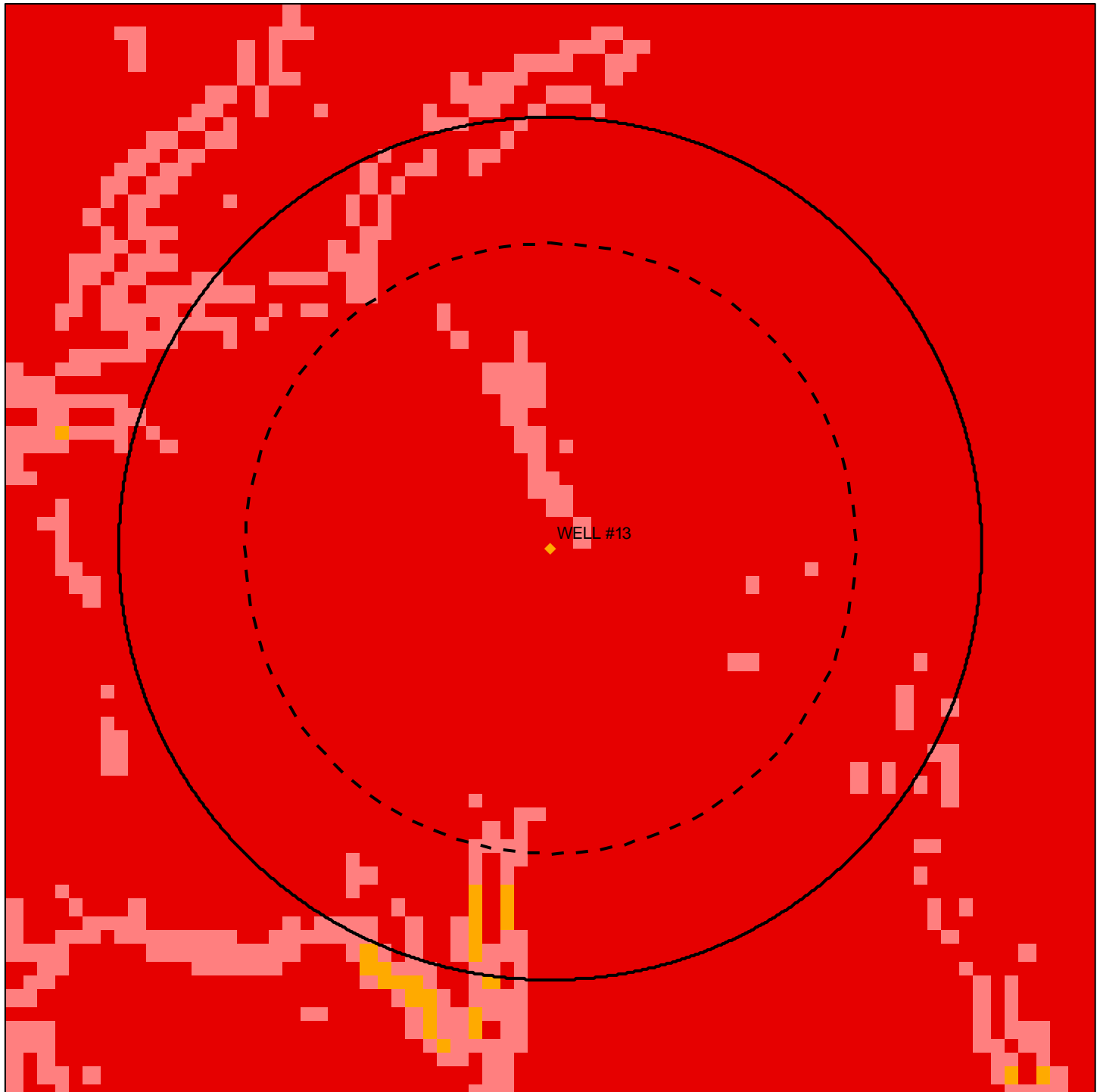
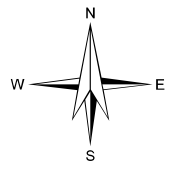








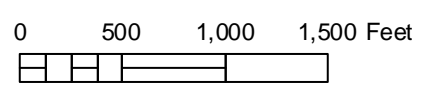


FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



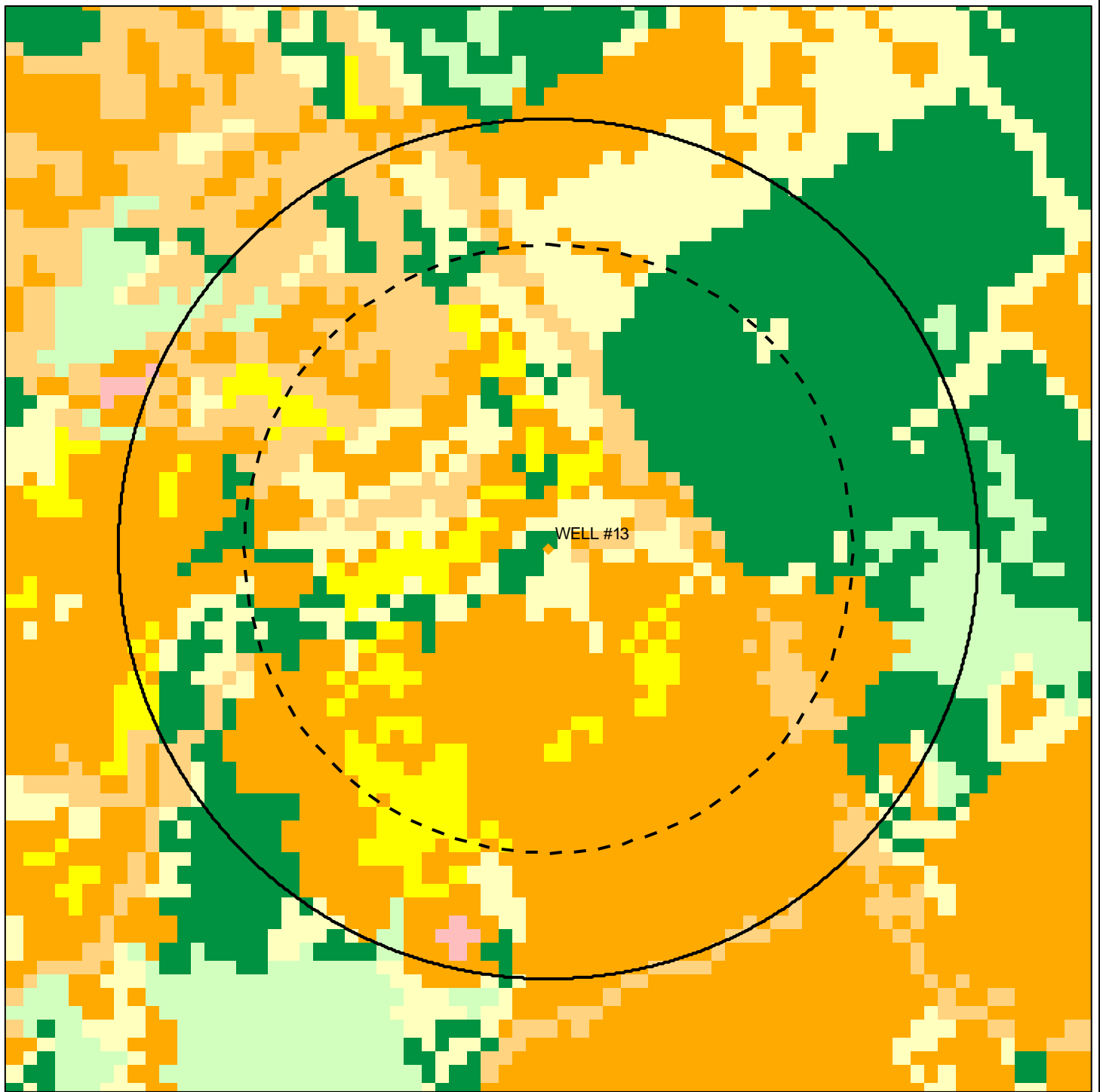
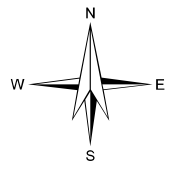











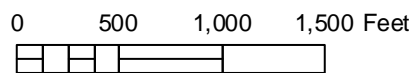


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



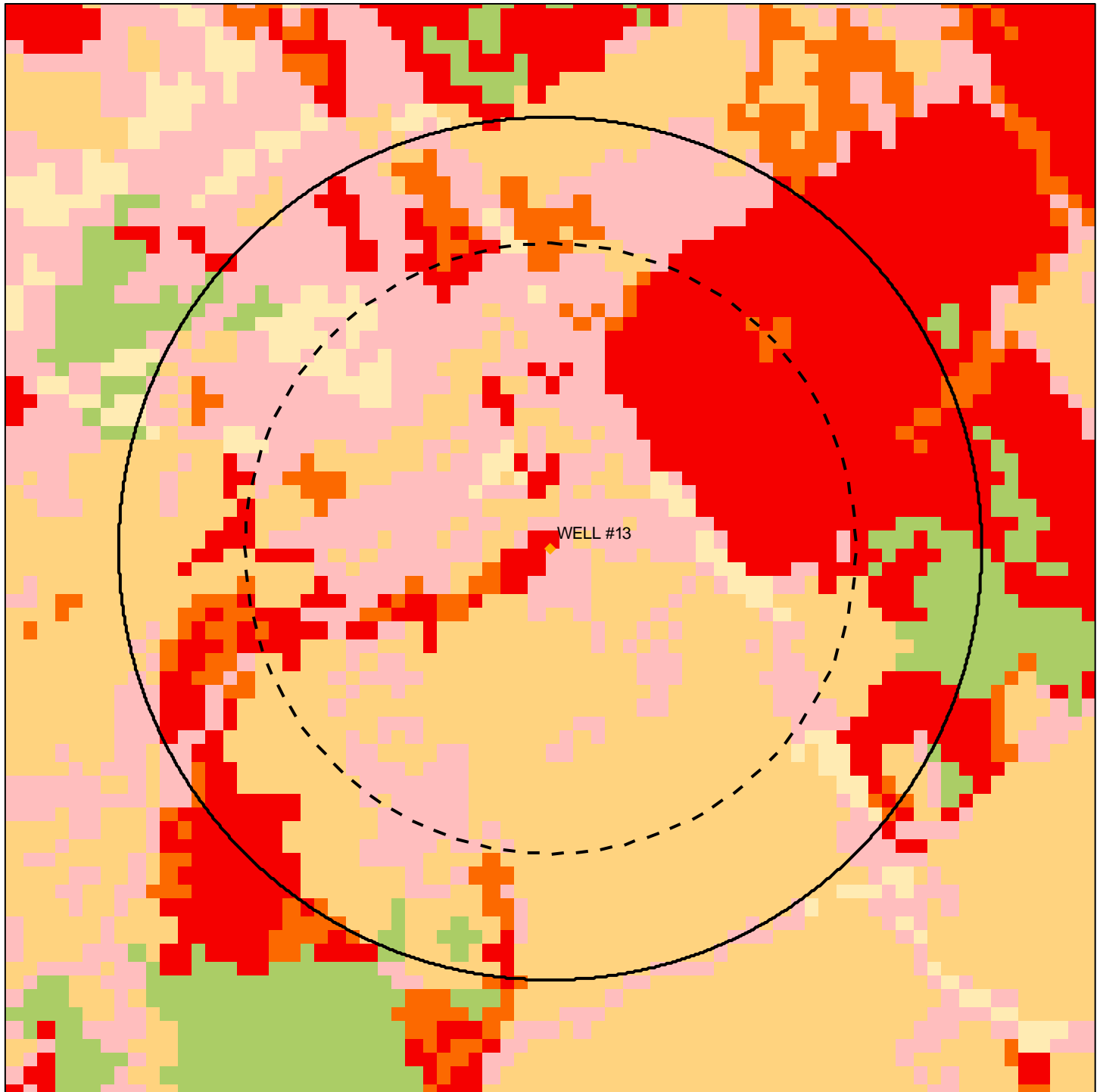
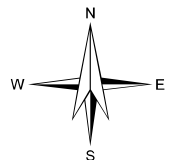
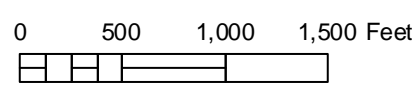


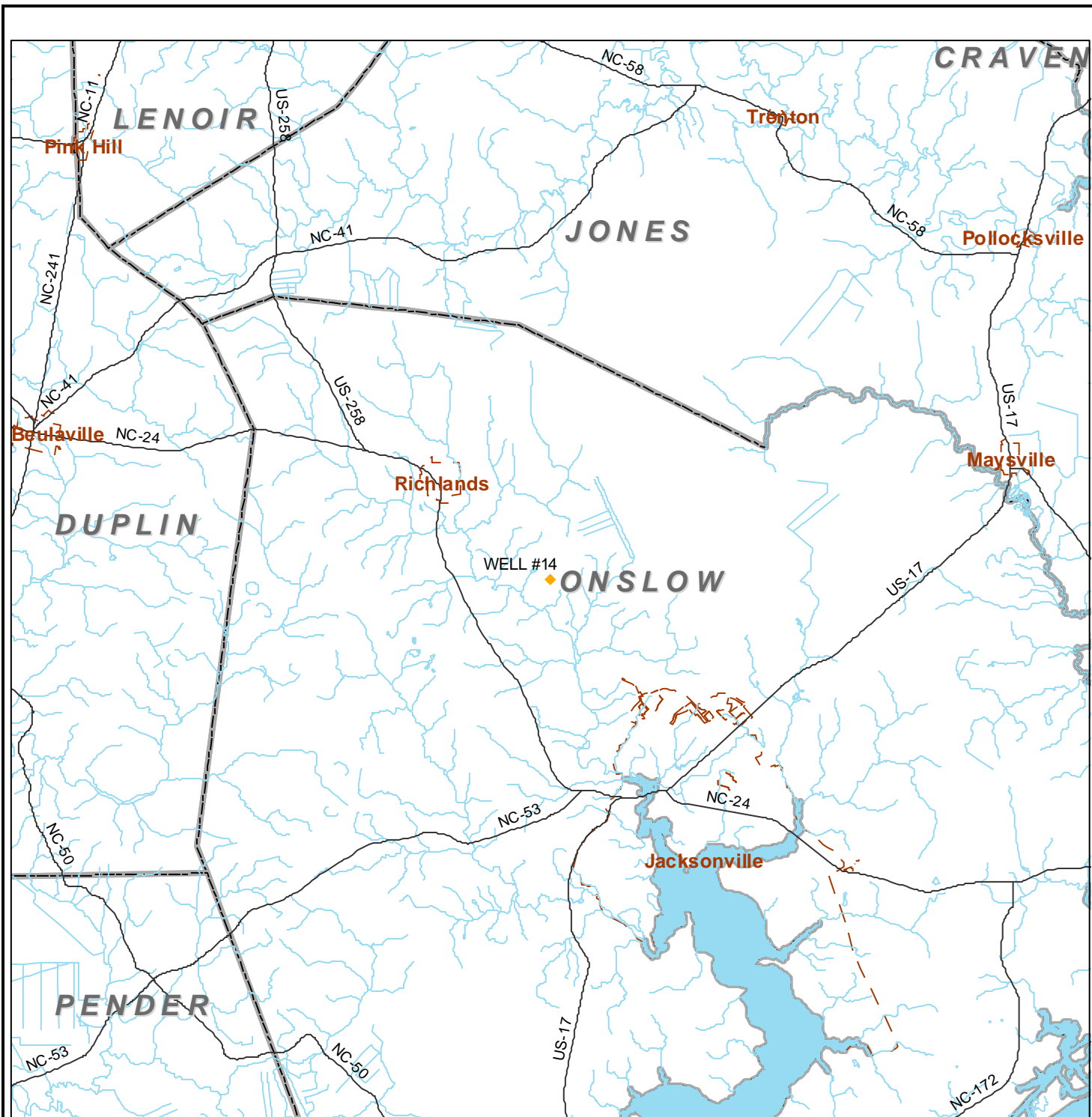
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #13



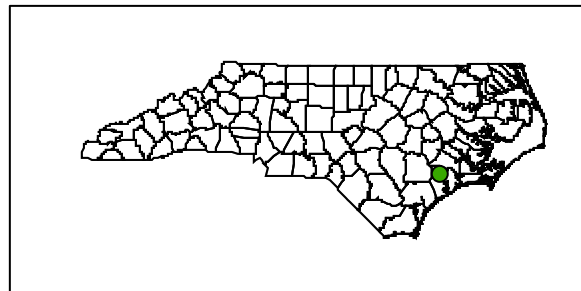
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

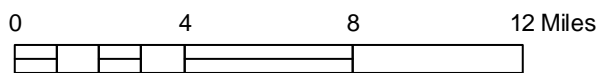
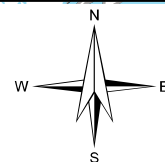


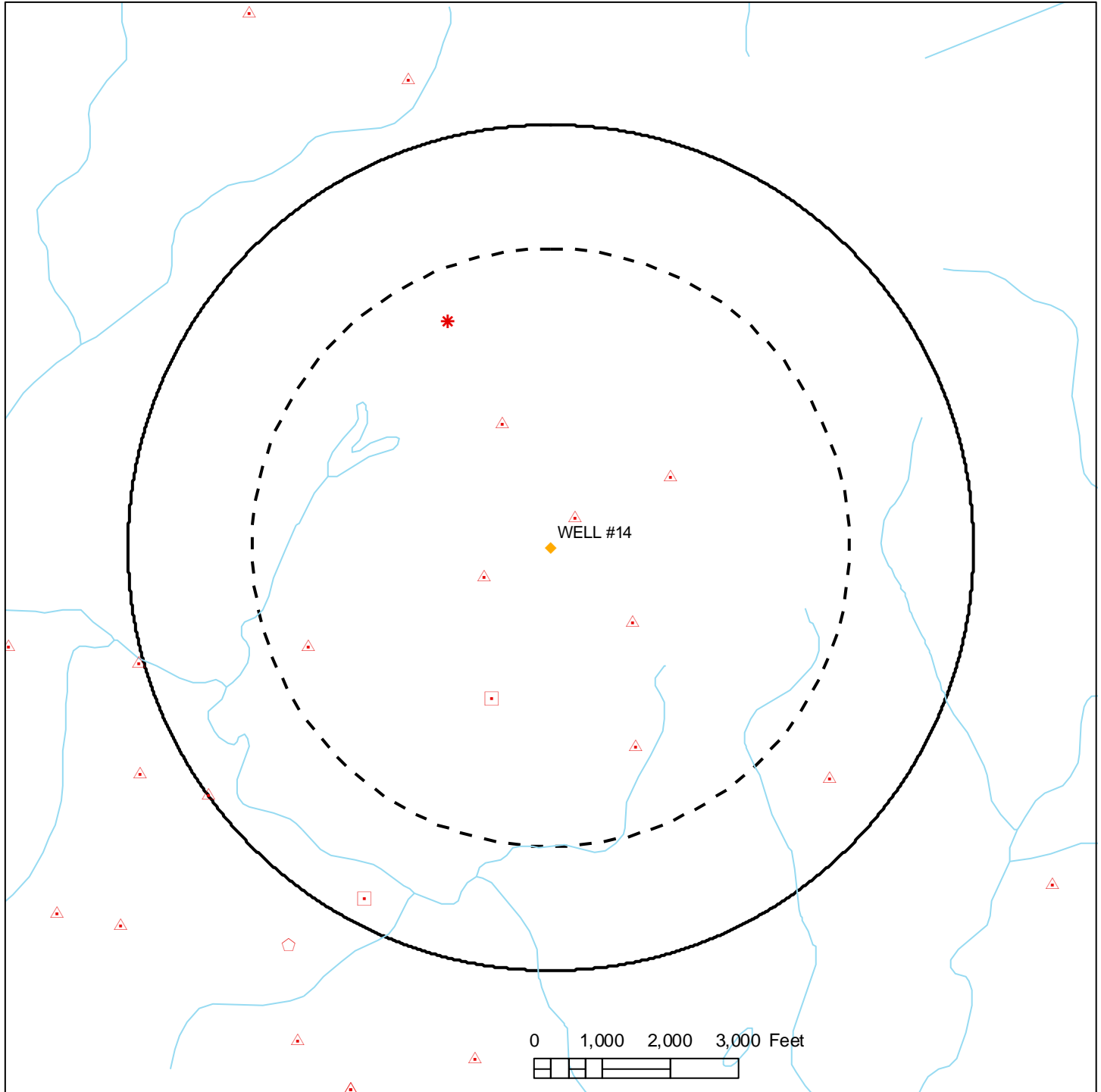


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



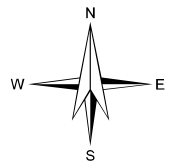


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #14**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Howard Farms - Finish	AWS670003	Animal Operations	H	437 Rhodestown Rd	Jacksonville	Unkno wn	ONSLOW
Howard Farms - Sow	AWS670058	Animal Operations	H	165 Rhodestown Rd	Jacksonville	Unkno wn	ONSLOW
Gum Branch Central Control Building	4026174	Tier II Sites	H	5980 Gum Branch Road	Jacksonville	Unkno wn	Onslow
River's Edge Section III	SW8060102	NPDES Permits	L	Rhodestown Rd	Richlands	Unkno wn	ONSLOW
The Bluffs on New River	SW8081221	NPDES Permits	L	Gum Branch And Timothy Rd	Jacksonville	Unkno wn	ONSLOW
Changing Hearts Ministries	SW8140518	NPDES Permits	L	5393 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Rock Creek Section IX	SW8060122	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Rock Creek Section VIII	SW8030407	NPDES Permits	L	Rock Creek Dr N	Richlands	Unkno wn	ONSLOW
Holly Grove of Rock Creek Section I and II	SW8100709	NPDES Permits	L	Rhodestown Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Morton Commercial Tract	SW8120801	NPDES Permits	L	Gum Branch And Rhodestown Rd	Richlands	Unknown	ONSLOW
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Stateside Development and Access Road	SW8090513	NPDES Permits	L	4190 Gum Branch Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #14**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Howard Farms - Finish	AWS670003	Operation Type	Swine State COC
Howard Farms - Sow	AWS670058	Operation Type	Swine State COC
River's Edge Section III	SW8060102	Permit Type	State Stormwater
River's Edge Section III	SW8060102	Permit Issued Date	3/15/2006
The Bluffs on New River	SW8081221	Permit Type	State Stormwater
The Bluffs on New River	SW8081221	Permit Issued Date	11/6/2012
Changing Hearts Ministries	SW8140518	Permit Type	State Stormwater
Changing Hearts Ministries	SW8140518	Permit Issued Date	7/29/2014
Rock Creek Section IX	SW8060122	Permit Type	State Stormwater
Rock Creek Section IX	SW8060122	Permit Issued Date	3/15/2006
Rock Creek Section VIII	SW8030407	Permit Type	State Stormwater
Rock Creek Section VIII	SW8030407	Permit Issued Date	7/15/2003
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Type	State Stormwater
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Issued Date	9/9/2013
Morton Commercial Tract	SW8120801	Permit Type	State Stormwater
Morton Commercial Tract	SW8120801	Permit Issued Date	8/7/2012
Morton Commercial Tract	SW8120801	Permit Expiration Date	8/7/2020
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Issued Date	6/4/2009
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Expiration Date	10/19/2021
Stateside Development and Access Road	SW8090513	Permit Type	State Stormwater
Stateside Development and Access Road	SW8090513	Permit Issued Date	6/12/2009

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #14**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #14**

Unsaturated Zone Rating	65.0
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

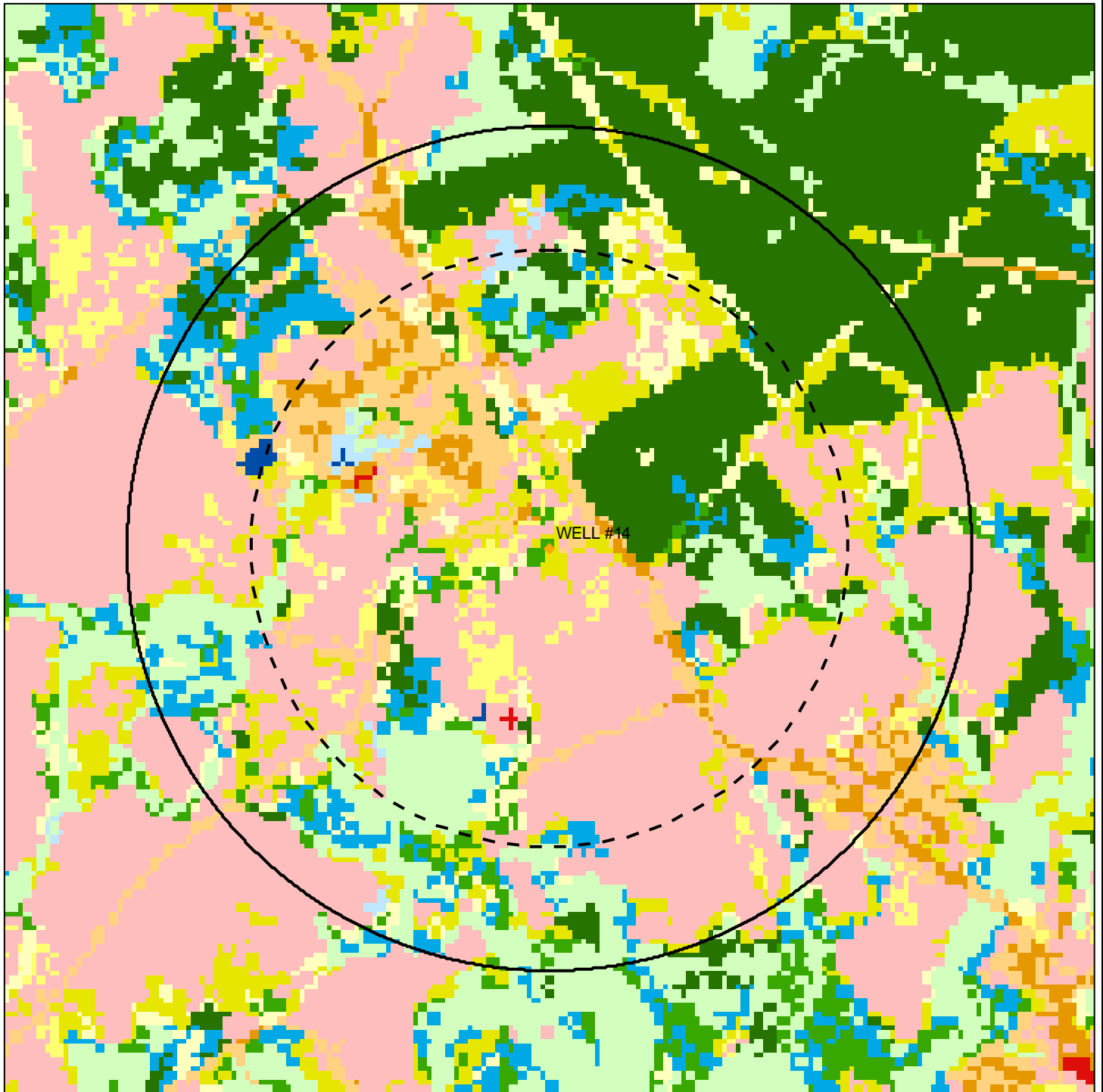
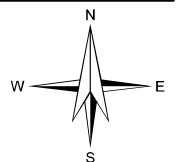


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14

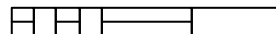


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



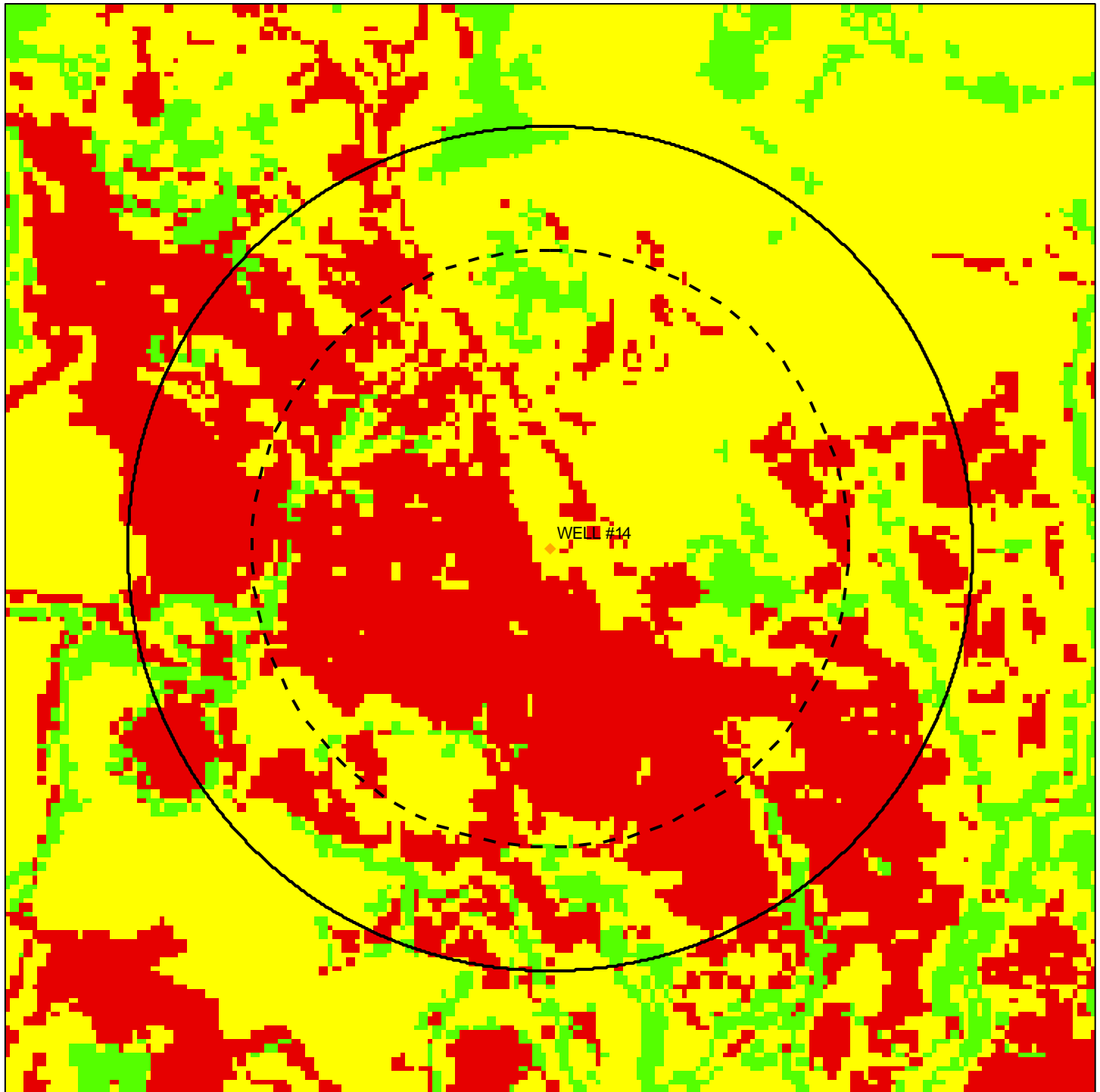
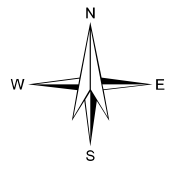
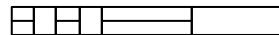


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



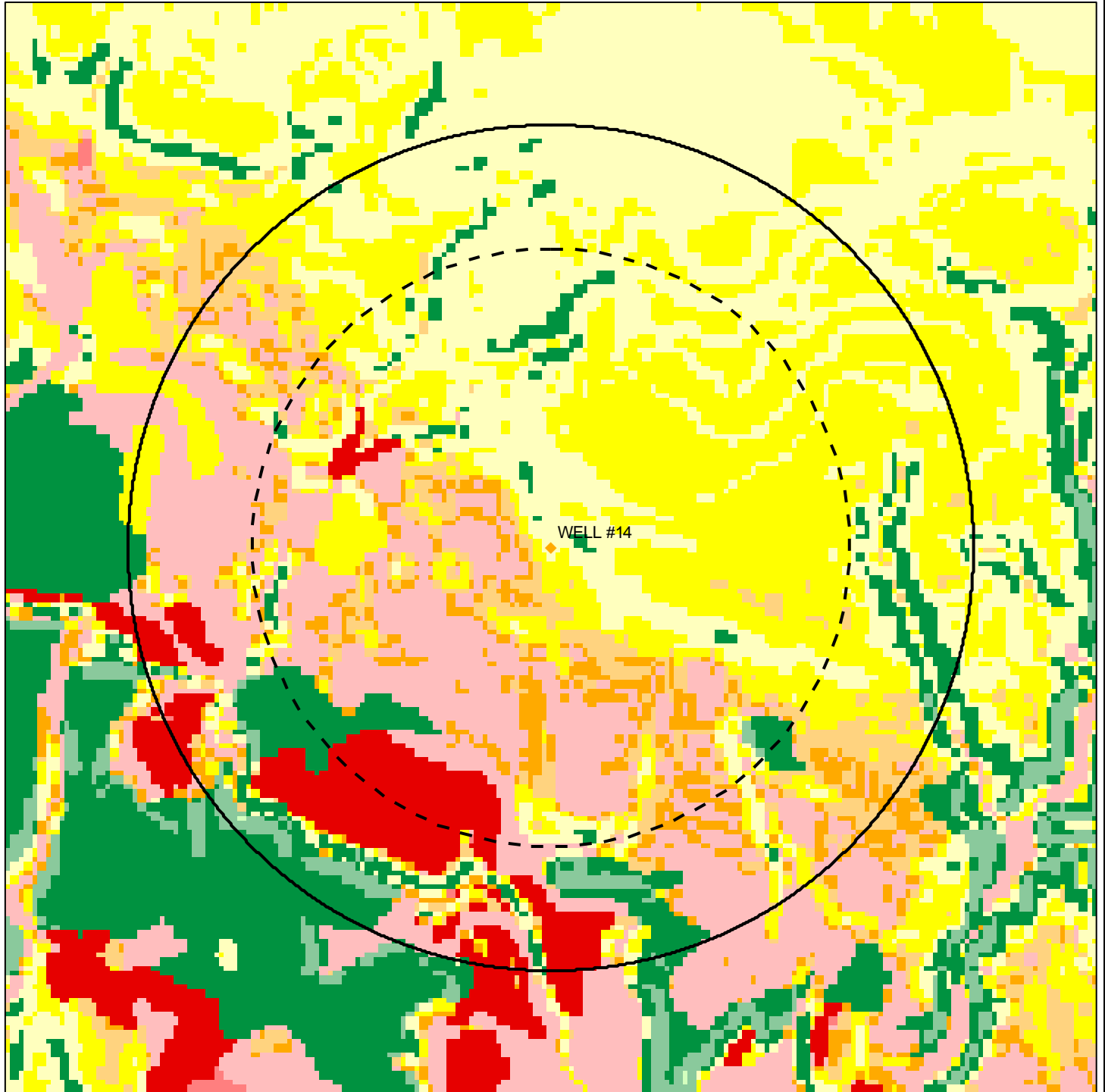
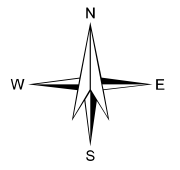












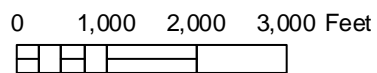


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to $1,280$ sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |



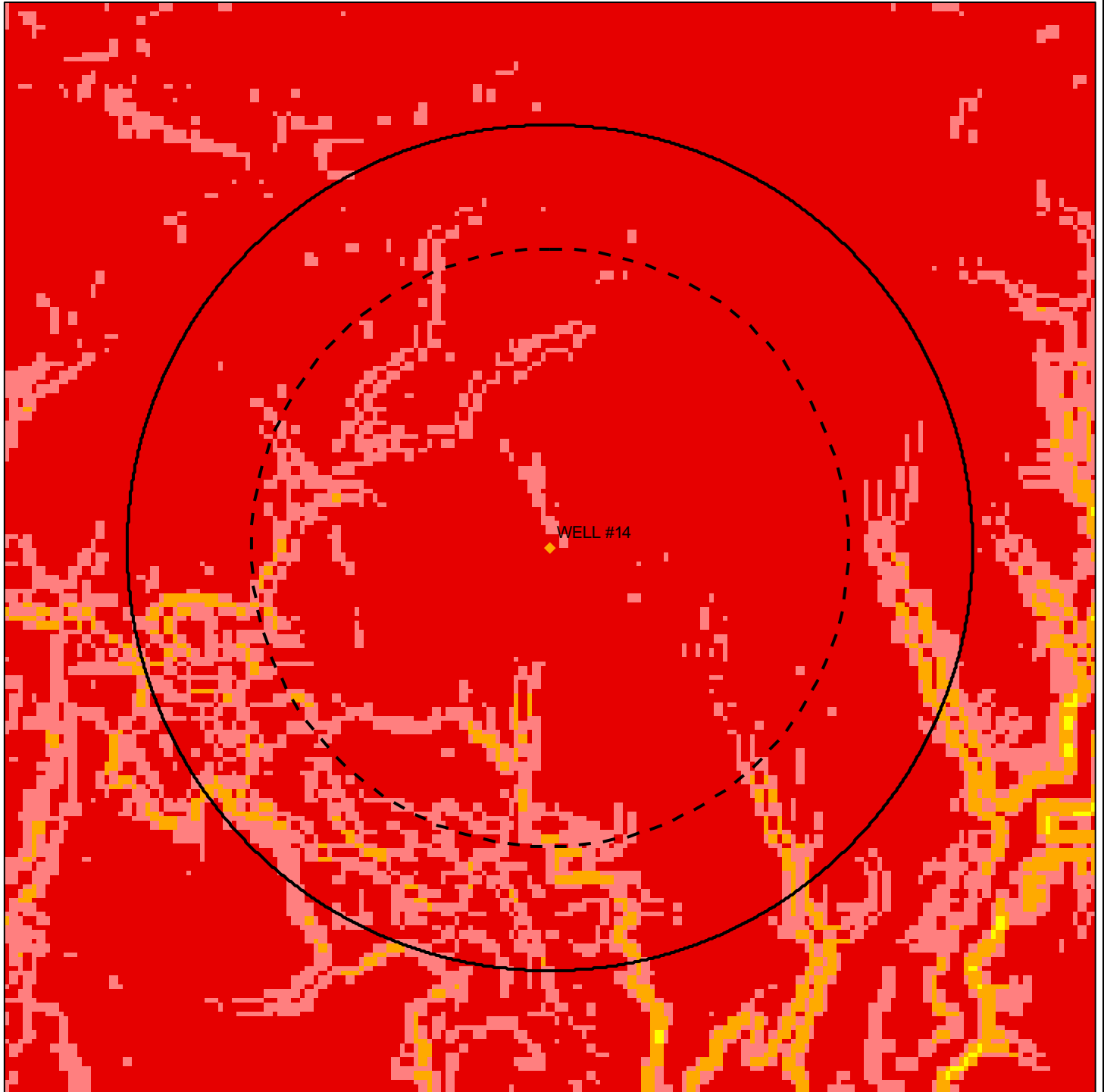
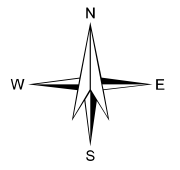








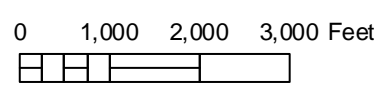


FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14



- | | | |
|--|---|---|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area
 Ground Water Assessment Area - Zone A |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) | |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



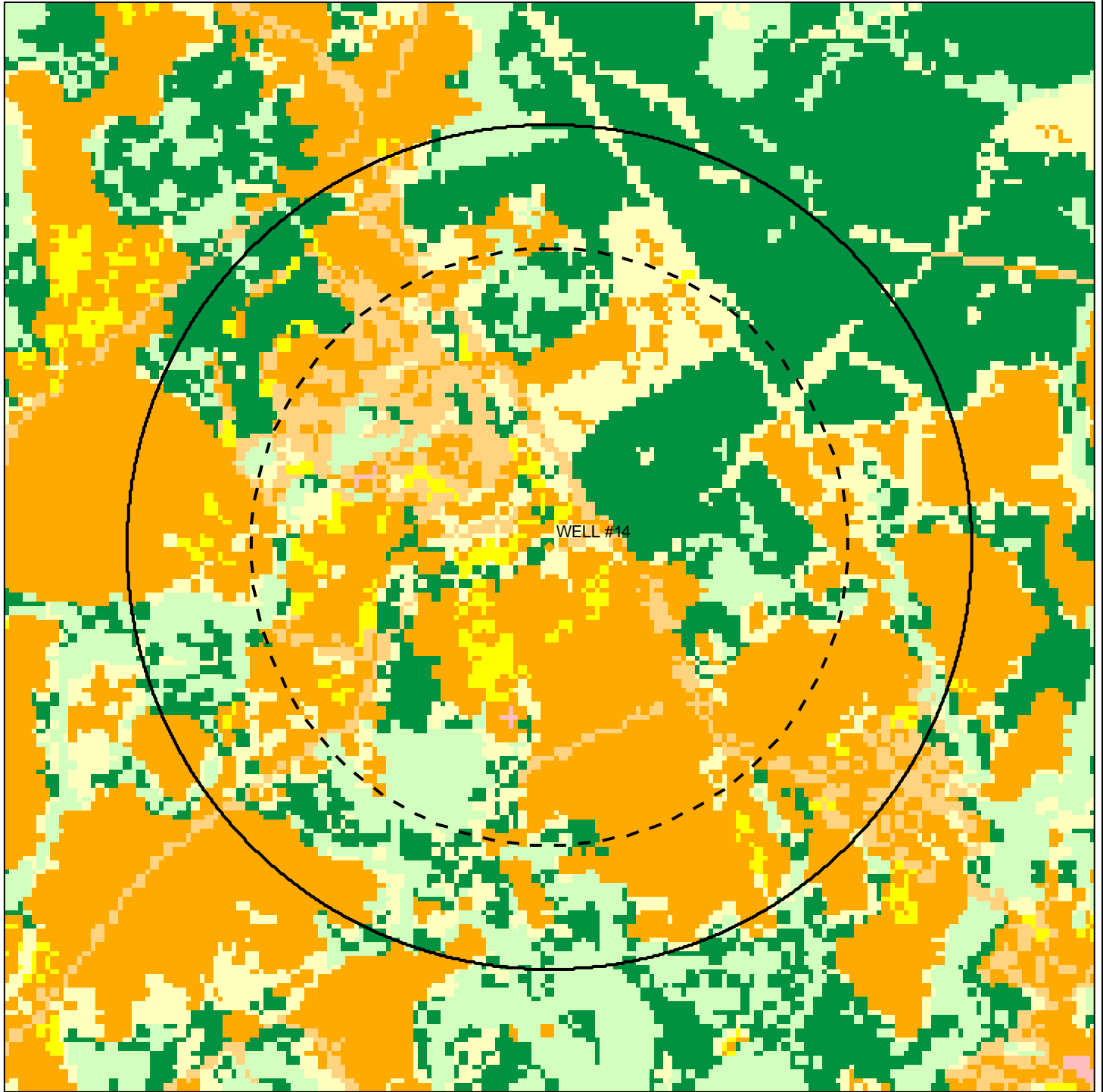











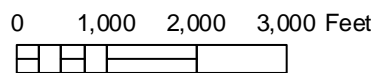
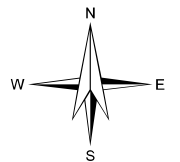


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



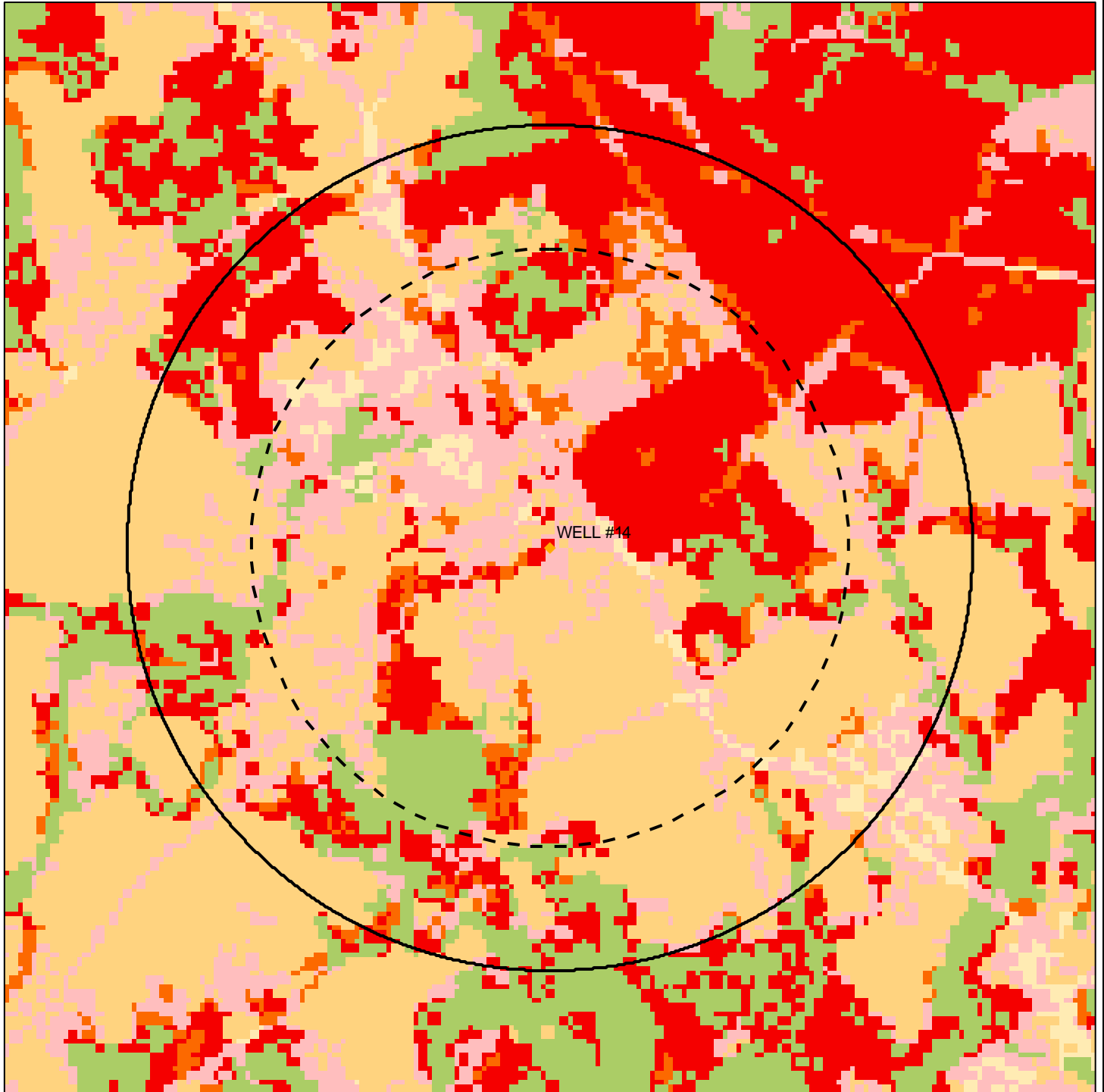
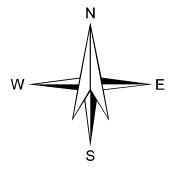
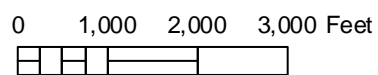


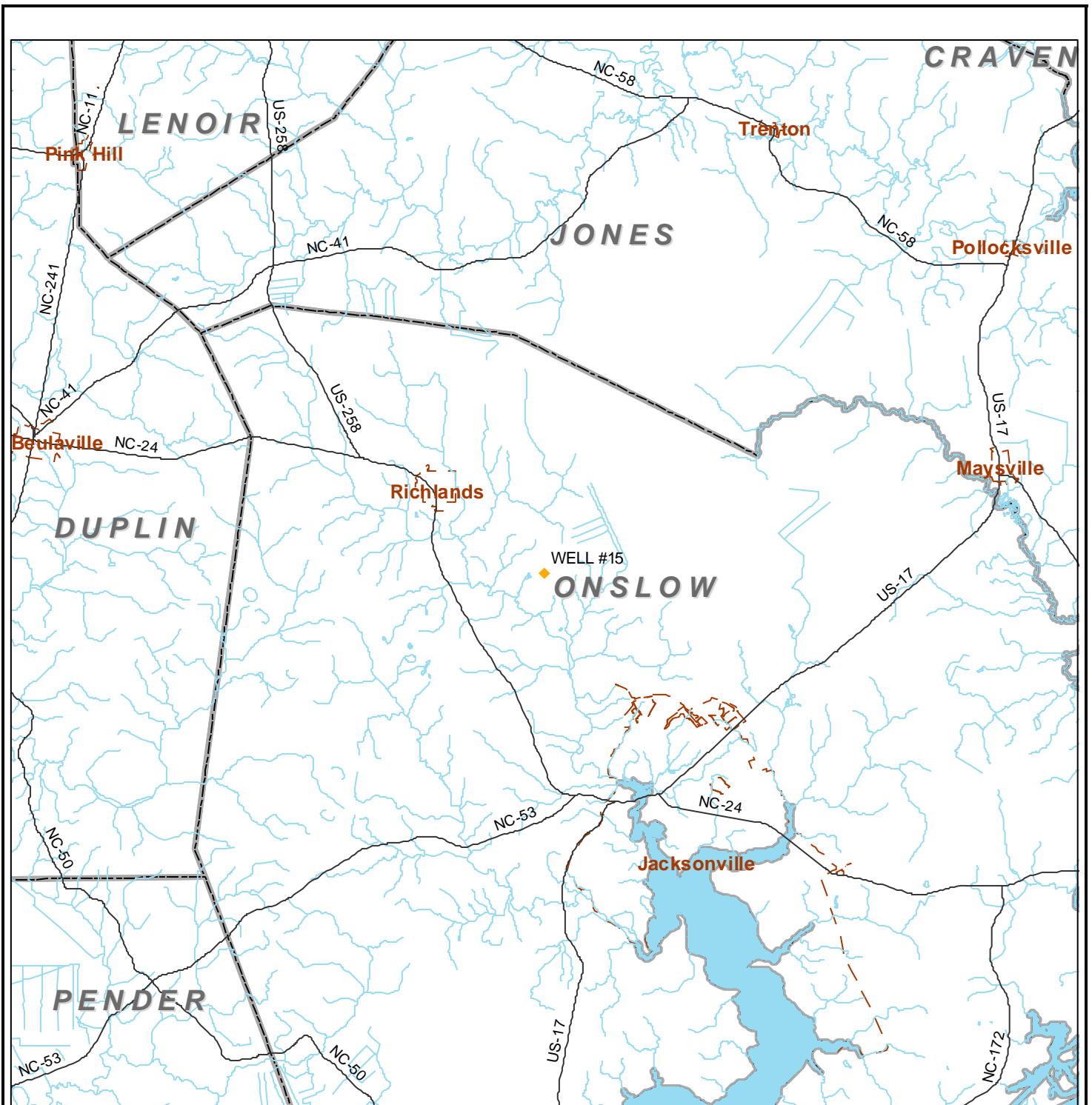
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #14



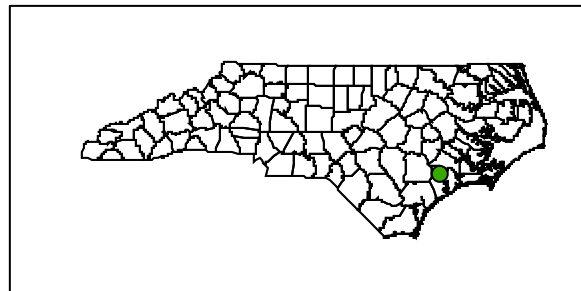
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

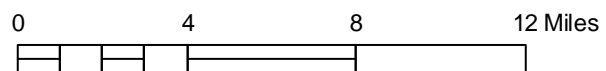
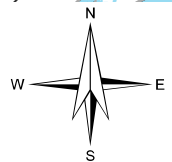


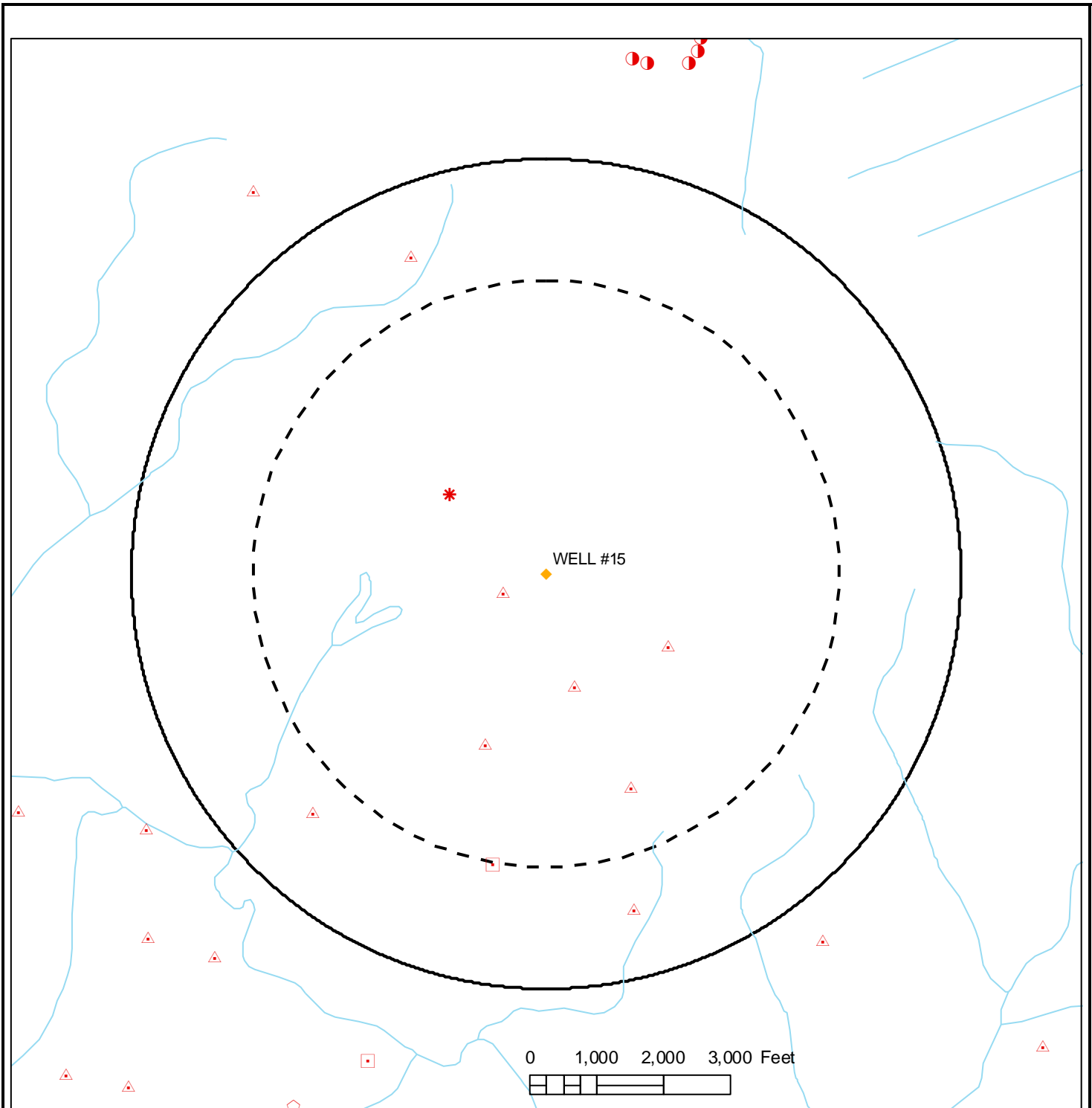


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



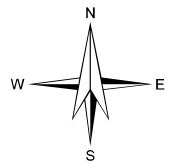


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #15**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Howard Farms - Sow	AWS670058	Animal Operations	H	165 Rhodestown Rd	Jacksonville	Unkown	ONSLOW
Gum Branch Central Control Building	4026174	Tier II Sites	H	5980 Gum Branch Road	Jacksonville	Unkown	Onslow
Changing Hearts Ministries	SW8140518	NPDES Permits	L	5393 Gum Branch Rd	Jacksonville	Unkown	ONSLOW
Rock Creek Section IX	SW8060122	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkown	ONSLOW
Rock Creek Section VIII	SW8030407	NPDES Permits	L	Rock Creek Dr N	Richlands	Unkown	ONSLOW
Holly Grove of Rock Creek Section I and II	SW8100709	NPDES Permits	L	Rhodestown Rd	Jacksonville	Unkown	ONSLOW
Morton Commercial Tract	SW8120801	NPDES Permits	L	Gum Branch And Rhodestown Rd	Richlands	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Stateside Development and Access Road	SW8090513	NPDES Permits	L	4190 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Humphrey Minerals Mine - Richlands	NCG020507	NPDES Permits	L	346 Quaker Bridge Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #15**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Howard Farms - Sow	AWS670058	Operation Type	Swine State COC
Changing Hearts Ministries	SW8140518	Permit Type	State Stormwater
Changing Hearts Ministries	SW8140518	Permit Issued Date	7/29/2014
Rock Creek Section IX	SW8060122	Permit Type	State Stormwater
Rock Creek Section IX	SW8060122	Permit Issued Date	3/15/2006
Rock Creek Section VIII	SW8030407	Permit Type	State Stormwater
Rock Creek Section VIII	SW8030407	Permit Issued Date	7/15/2003
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Type	State Stormwater
Holly Grove of Rock Creek Section I and II	SW8100709	Permit Issued Date	9/9/2013
Morton Commercial Tract	SW8120801	Permit Type	State Stormwater
Morton Commercial Tract	SW8120801	Permit Issued Date	8/7/2012
Morton Commercial Tract	SW8120801	Permit Expiration Date	8/7/2020
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Type	State Stormwater
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Issued Date	6/4/2009
Stateside Elementary School formerly Gum Branch Elementary School	SW8061242	Permit Expiration Date	10/19/2021
Stateside Development and Access Road	SW8090513	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Stateside Development and Access Road	SW8090513	Permit Issued Date	6/12/2009
Humphrey Minerals Mine - Richlands	NCG020507	Permit Type	Mining Activities Stormwater Discharge COC
Humphrey Minerals Mine - Richlands	NCG020507	Permit Issued Date	1/1/2010
Humphrey Minerals Mine - Richlands	NCG020507	Permit Expiration Date	12/31/2014
Humphrey Minerals Mine - Richlands	NCG020507	Receiving Stream	Unnamed Tributary to New River (Rufus Creek)

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #15**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating		Moderate	

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #15**

Unsaturated Zone Rating	64.1
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

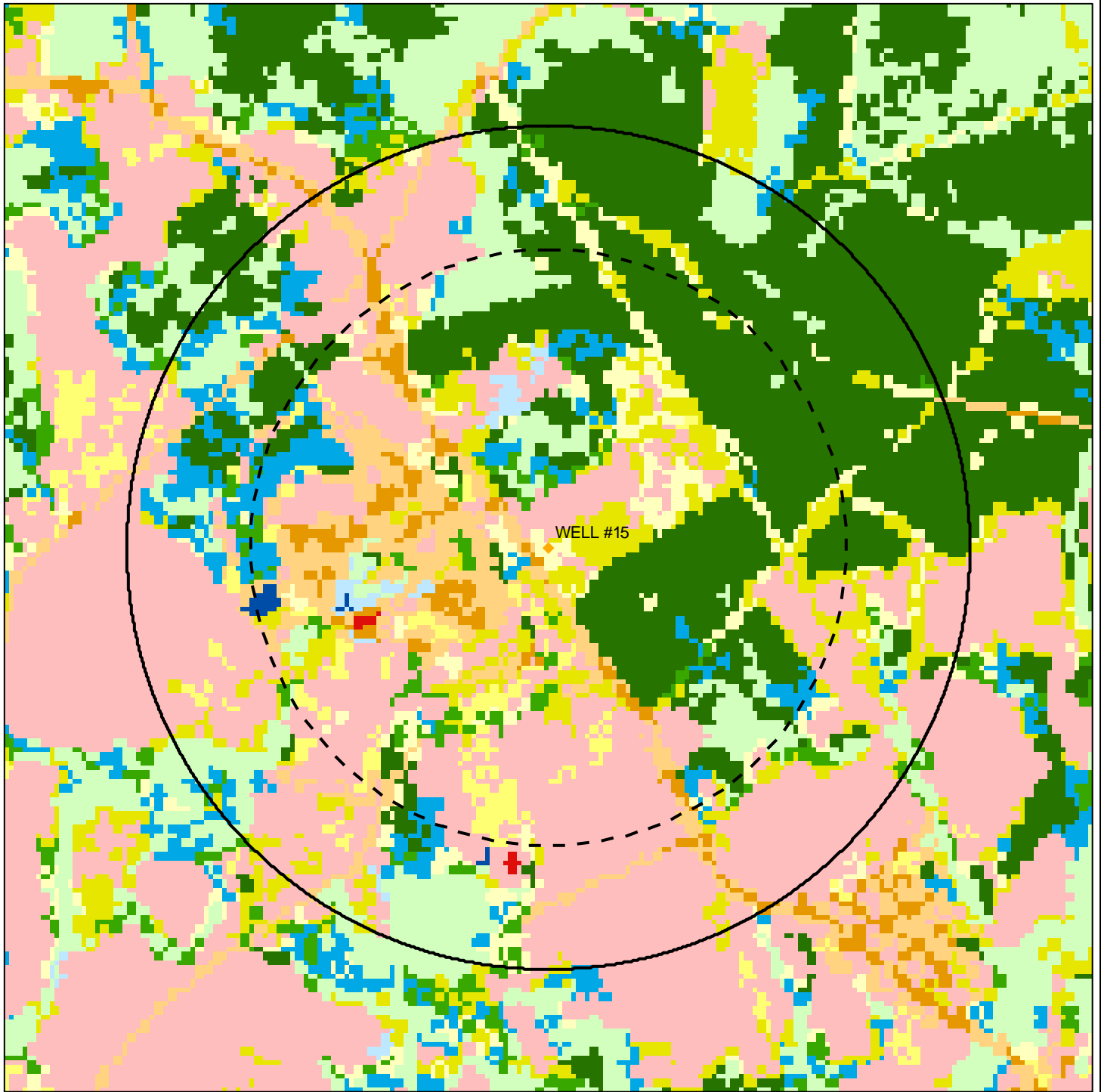
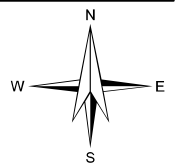


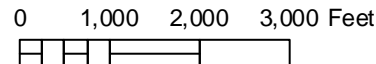
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



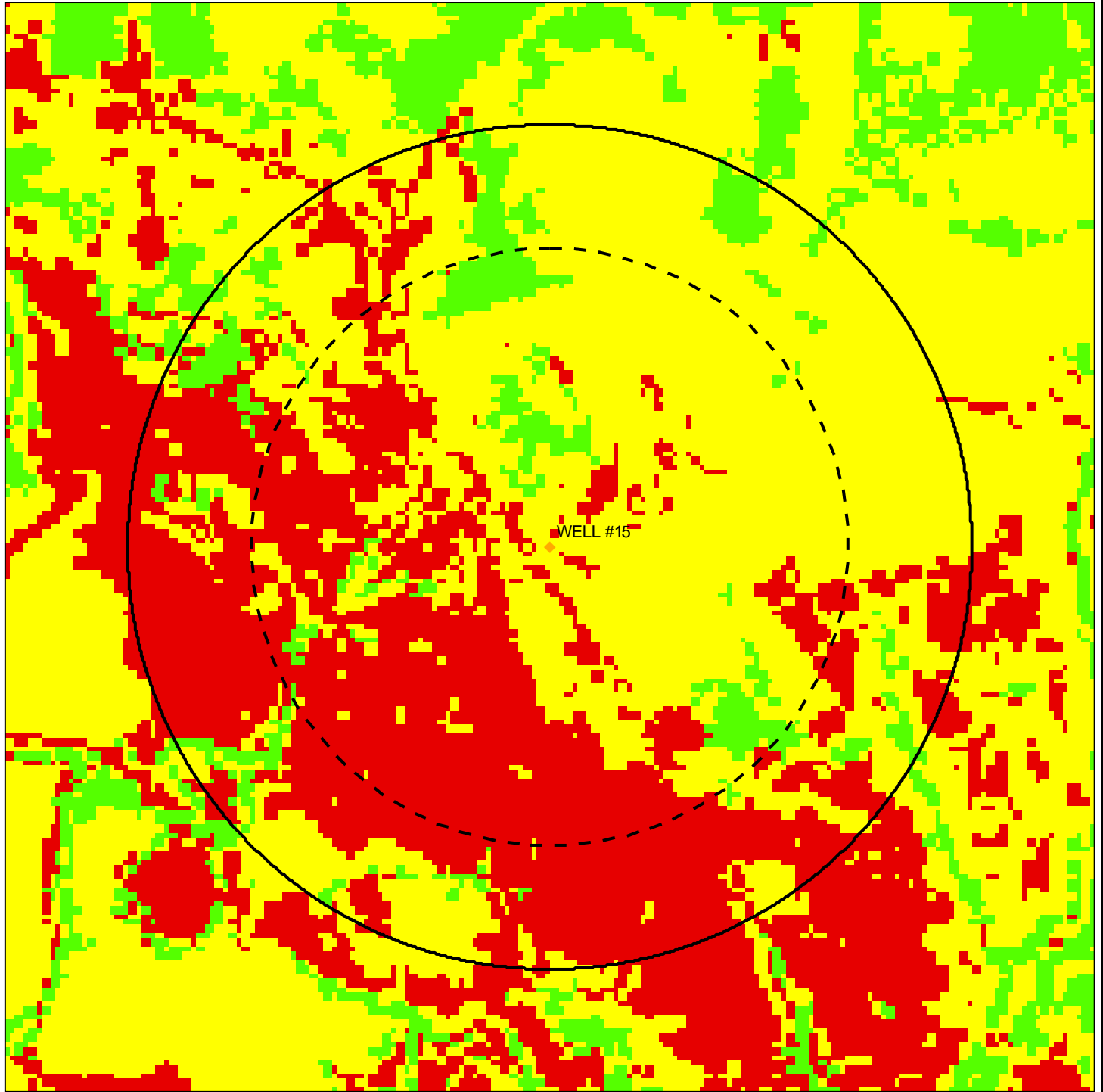
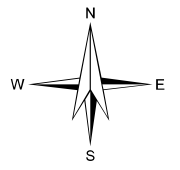
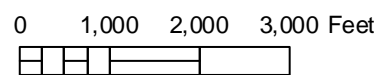


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



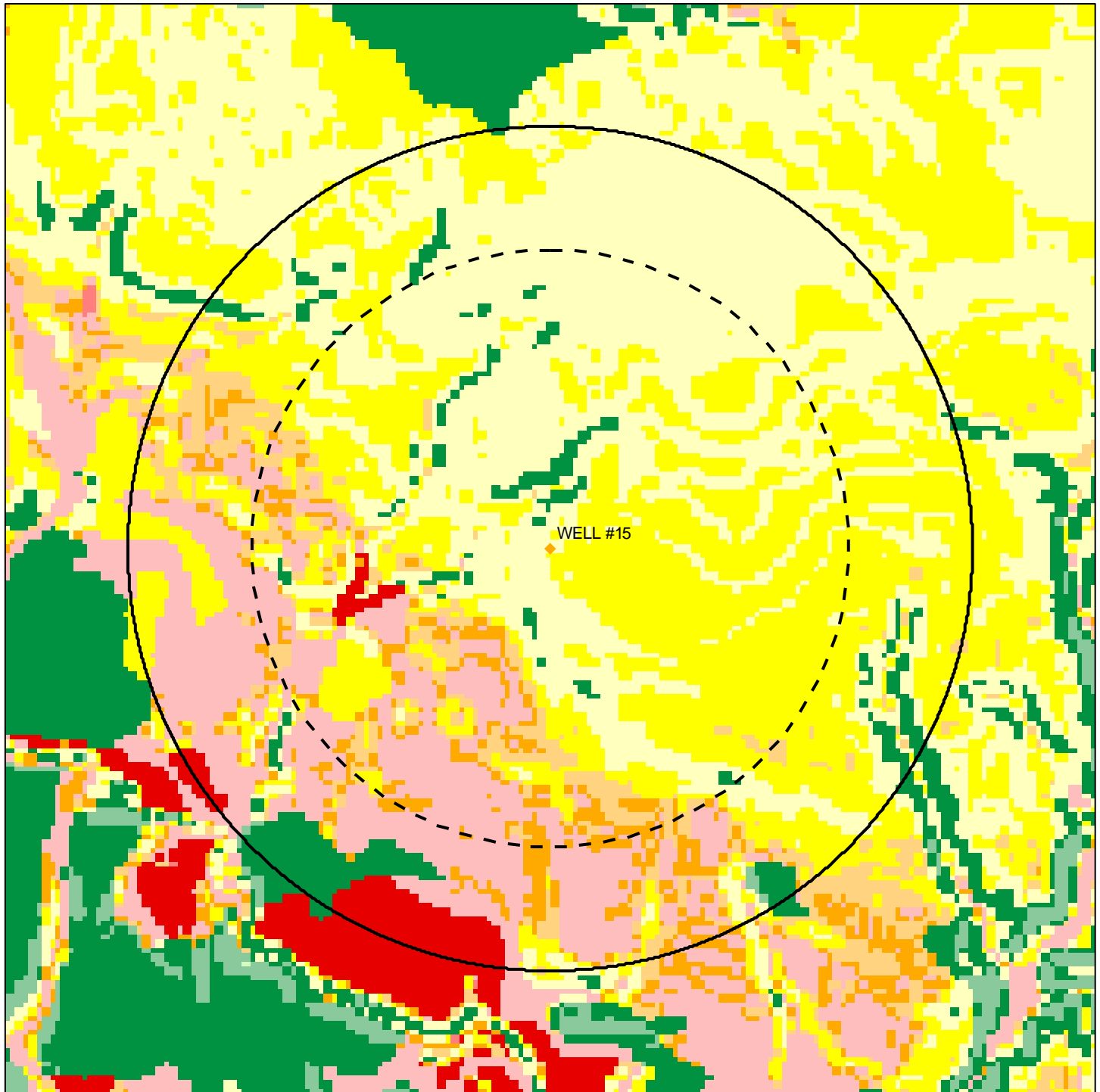
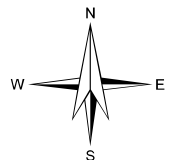












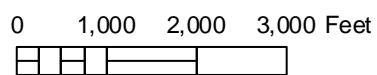


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to $1,280$ sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |



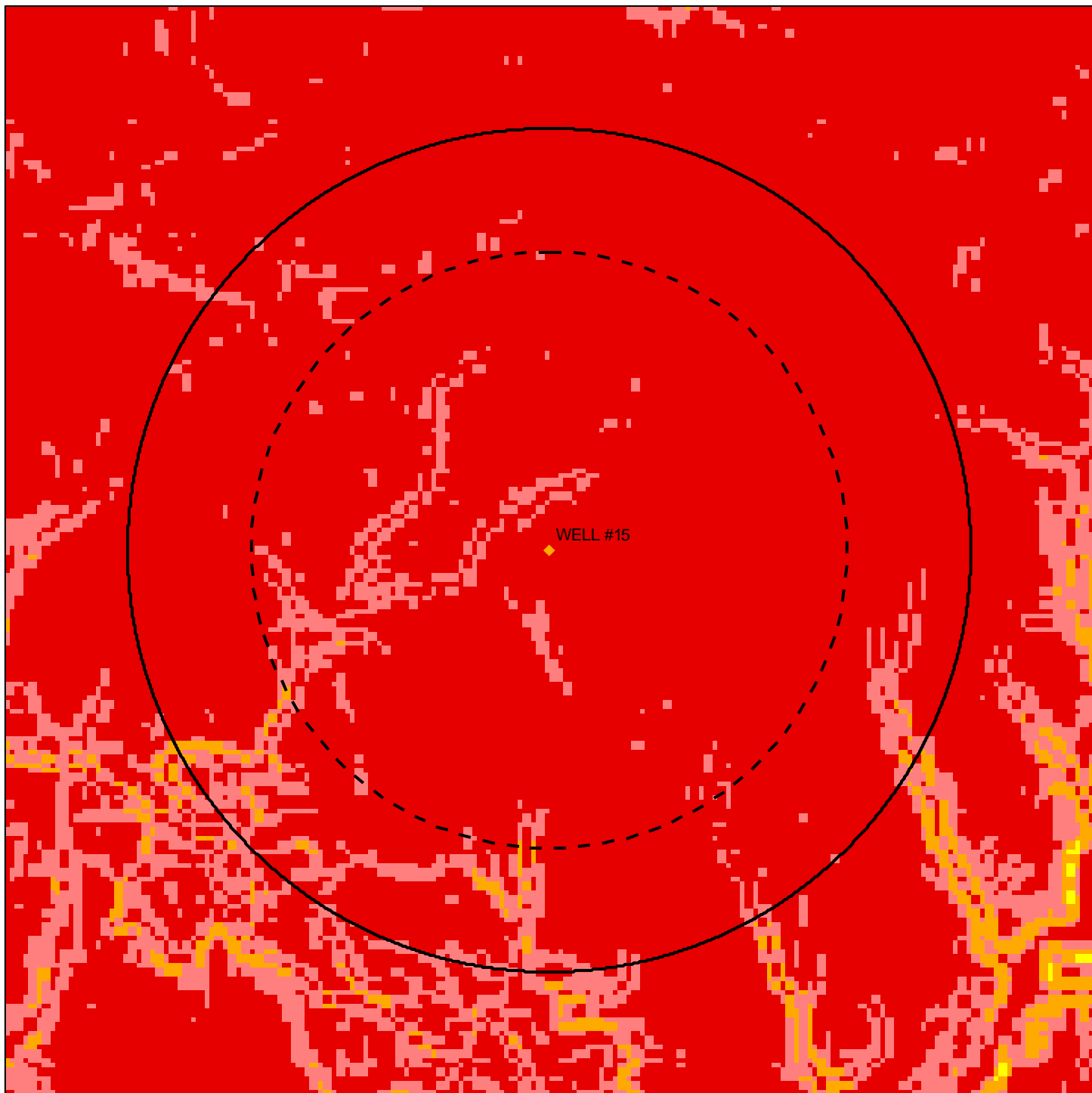
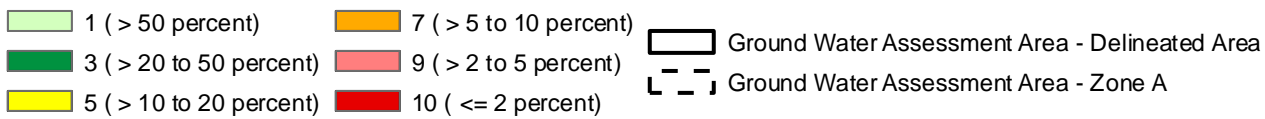
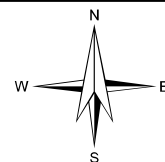
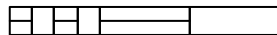


FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



0 1,000 2,000 3,000 Feet



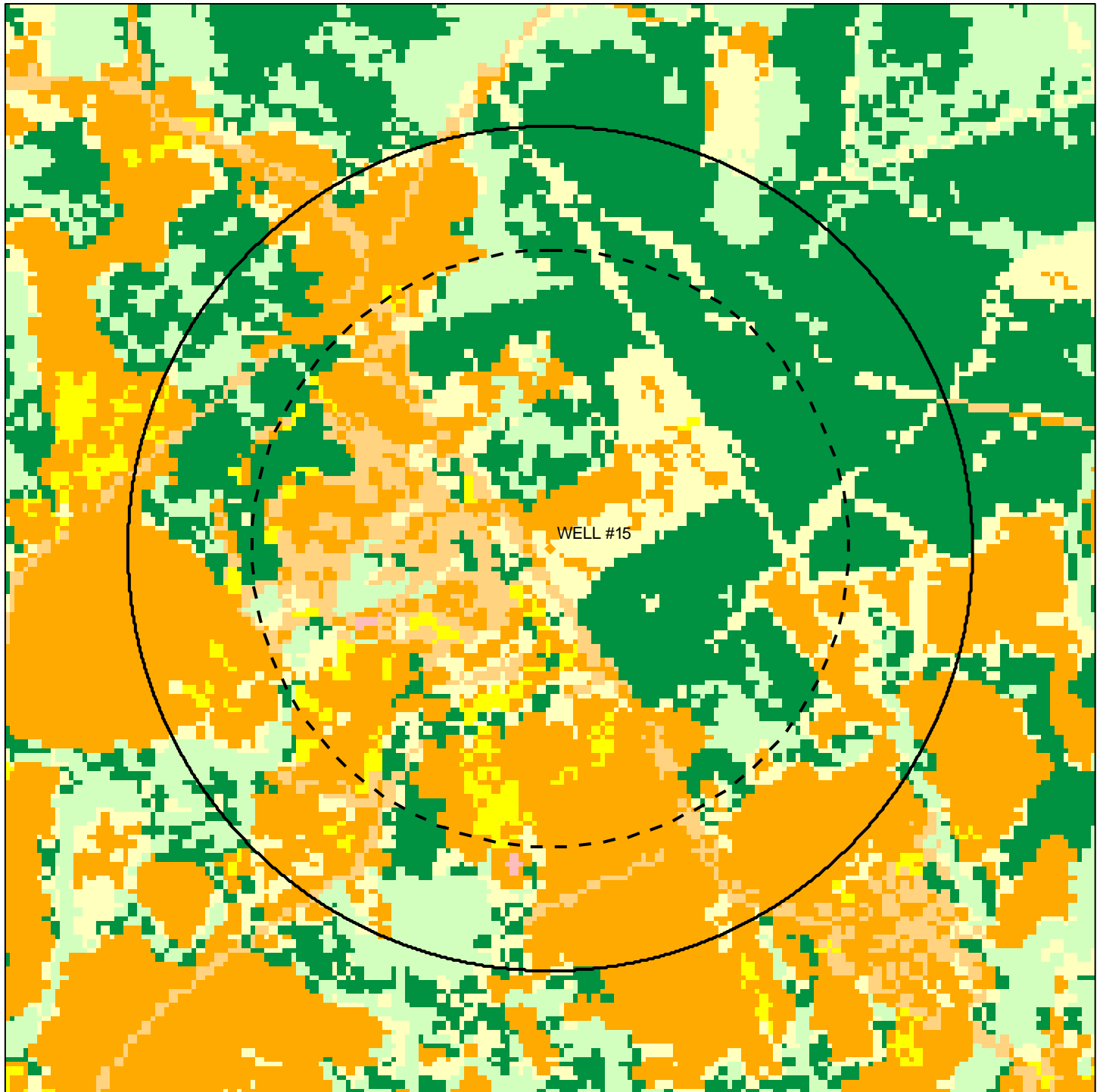
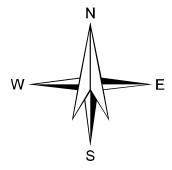


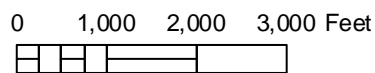


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



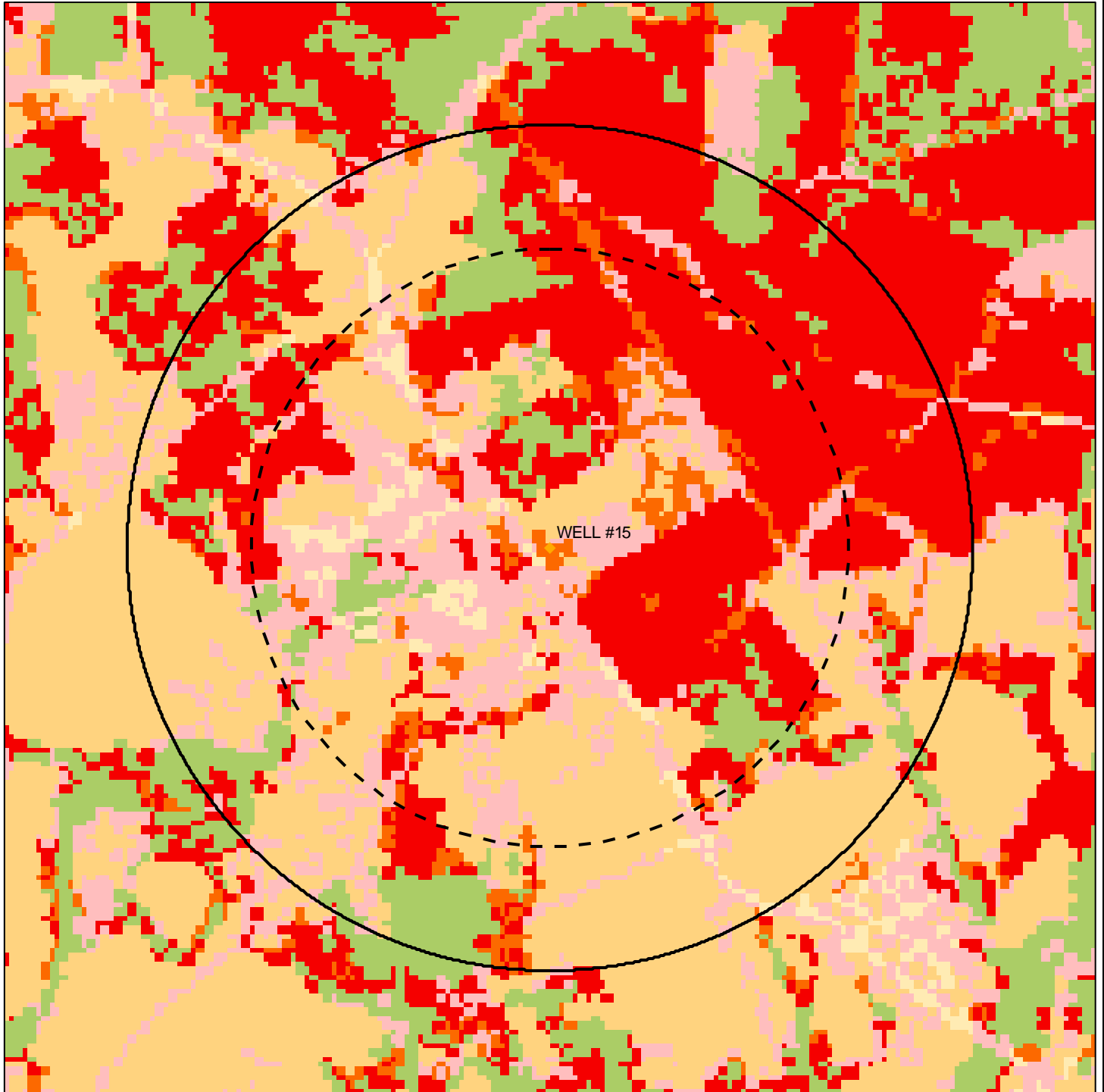
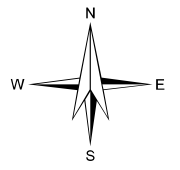
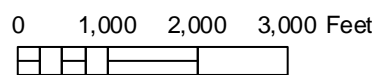


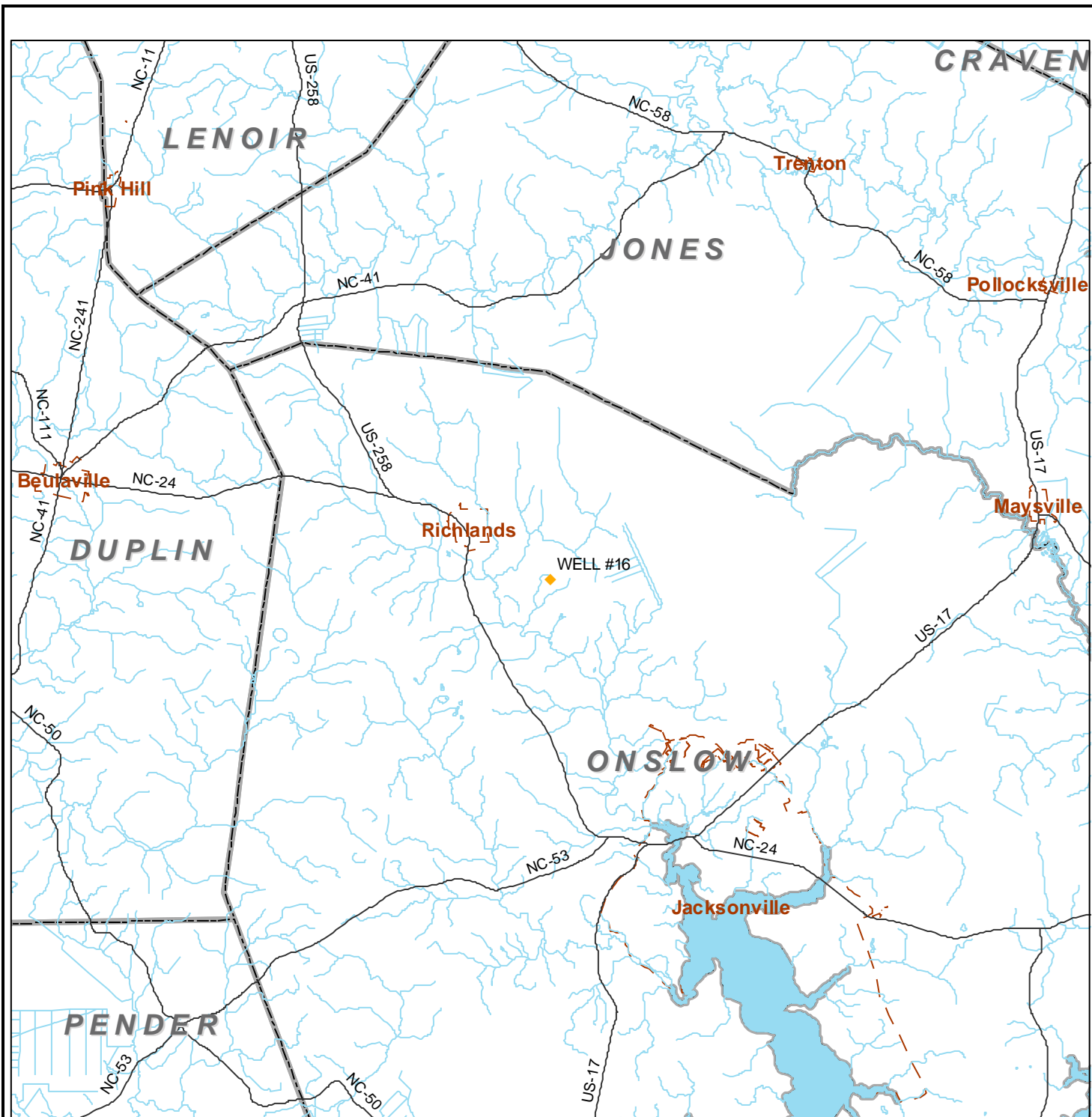
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #15



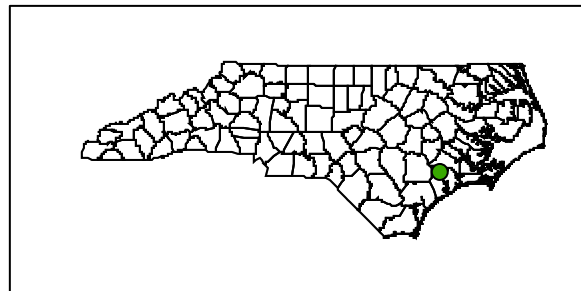
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

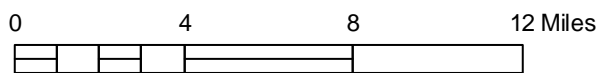
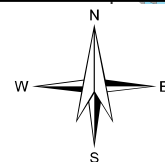


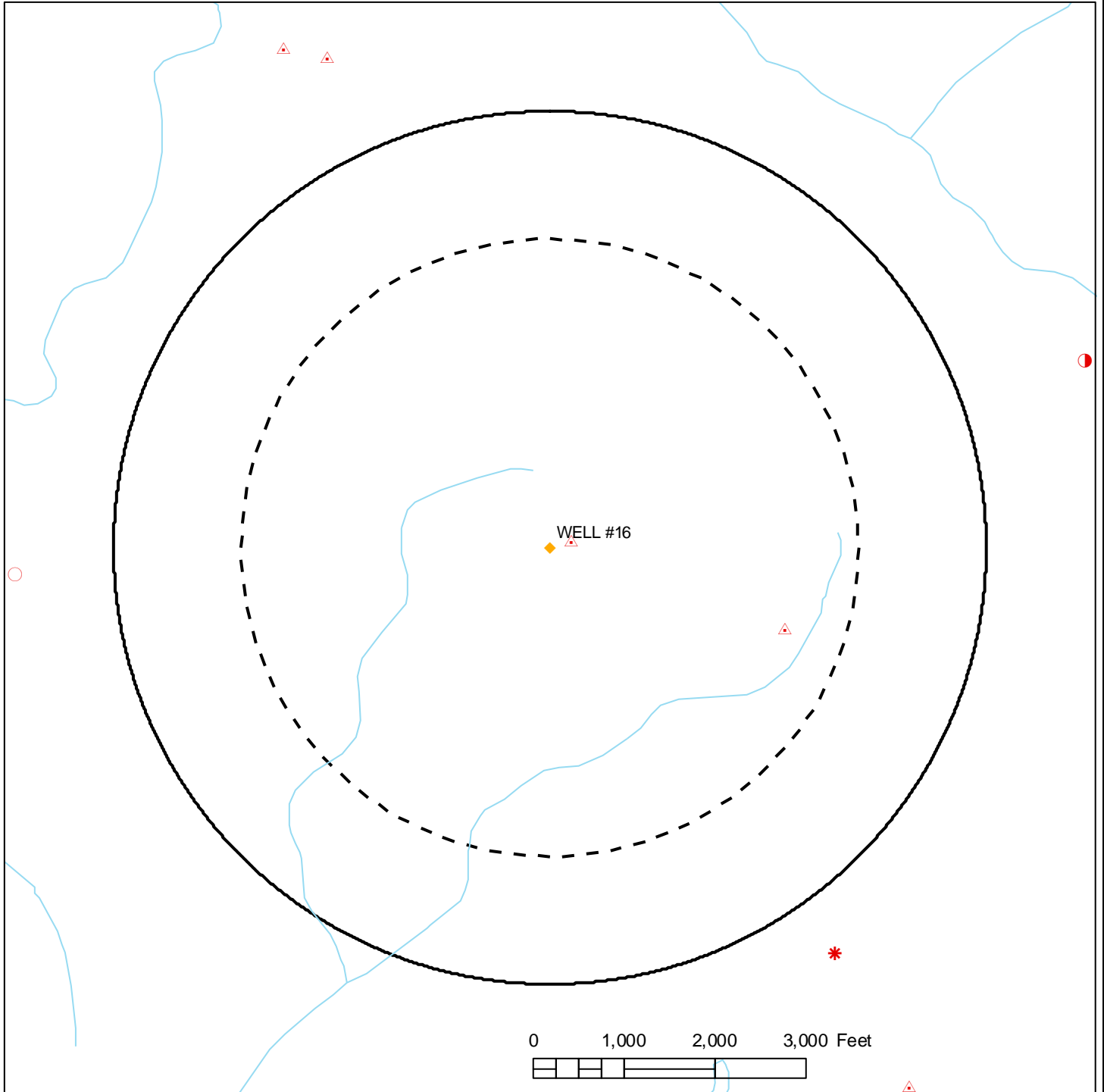


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



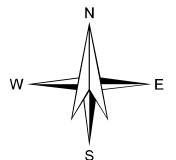


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16

PCS Types

- | | | |
|---------------------------------|--------------------------|--|
| □ Animal Operations | ⬡ Septage Disposal Sites | — Roads |
| △ CERCLIS Sites | ⬢ Soil Remediation Sites | — Rivers and Streams |
| □ RCRA Gen. / Trans. Facilities | * Solid Waste Facilities | ▬ Major Hydrology |
| ● Non Discharge Permits | * Tier II Sites | ▬ Municipal Boundaries |
| △ NPDES Permits | ⬢ RCRA TSD Facilities | ▬ Ground Water Assessment Area - Delineated Area |
| ★ National Priority List Sites | ⬢ Old Landfill Sites | ▬ Ground Water Assessment Area - Zone A |
| ⊕ PCB Sites | ☆ UIC Permits | |
| ○ Pollution Incidents | ⊕ UST Permits | |



**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #16**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
East Coast Imports - Richlands	NCG100205	NPDES Permits	L	6315 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Humphrey Minerals Mine - Richlands	NCG020507	NPDES Permits	L	346 Quaker Bridge Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #16**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
East Coast Imports - Richlands	NCG100205	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
East Coast Imports - Richlands	NCG100205	Permit Issued Date	6/11/2010
East Coast Imports - Richlands	NCG100205	Permit Expiration Date	10/31/2014
East Coast Imports - Richlands	NCG100205	Receiving Stream	NEW RIVER
Humphrey Minerals Mine - Richlands	NCG020507	Permit Type	Mining Activities Stormwater Discharge COC
Humphrey Minerals Mine - Richlands	NCG020507	Permit Issued Date	1/1/2010
Humphrey Minerals Mine - Richlands	NCG020507	Permit Expiration Date	12/31/2014
Humphrey Minerals Mine - Richlands	NCG020507	Receiving Stream	Unnamed Tributary to New River (Rufus Creek)

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #16**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating		Moderate	

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #16**

Unsaturated Zone Rating	58.6
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

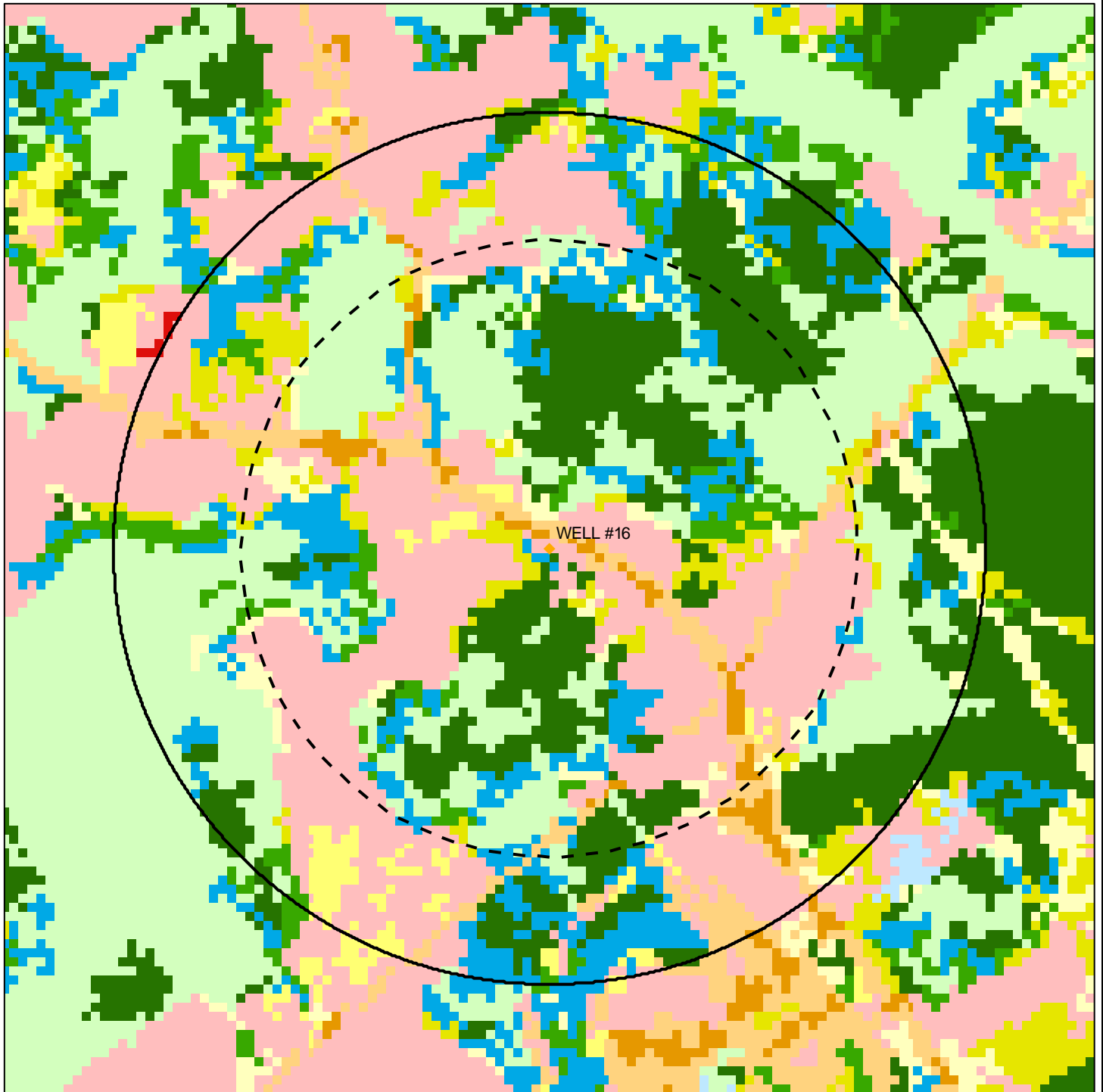
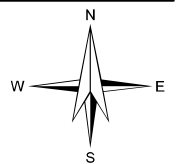


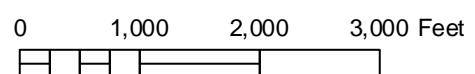
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



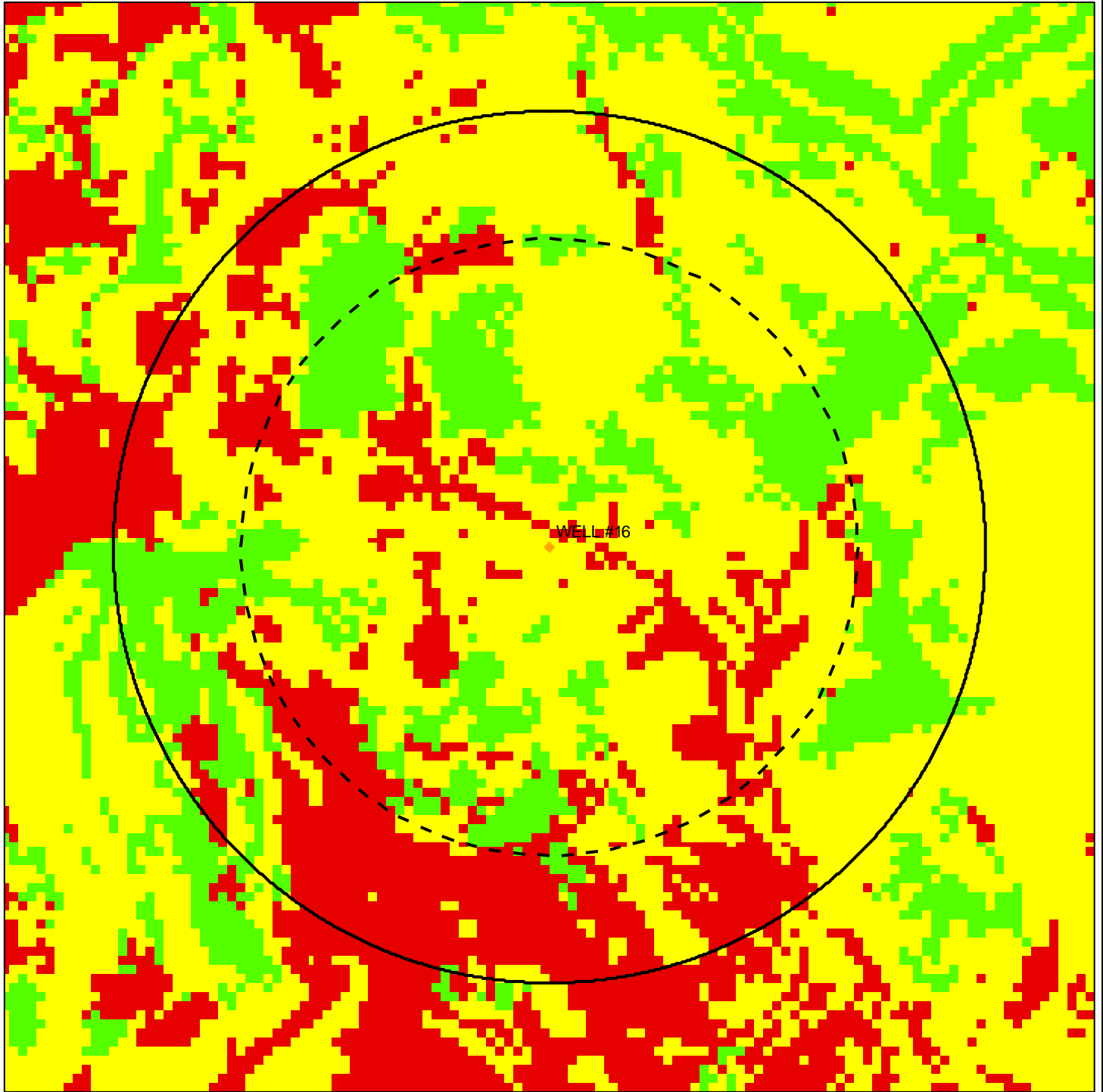
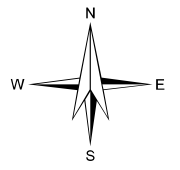
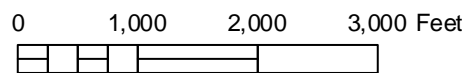


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



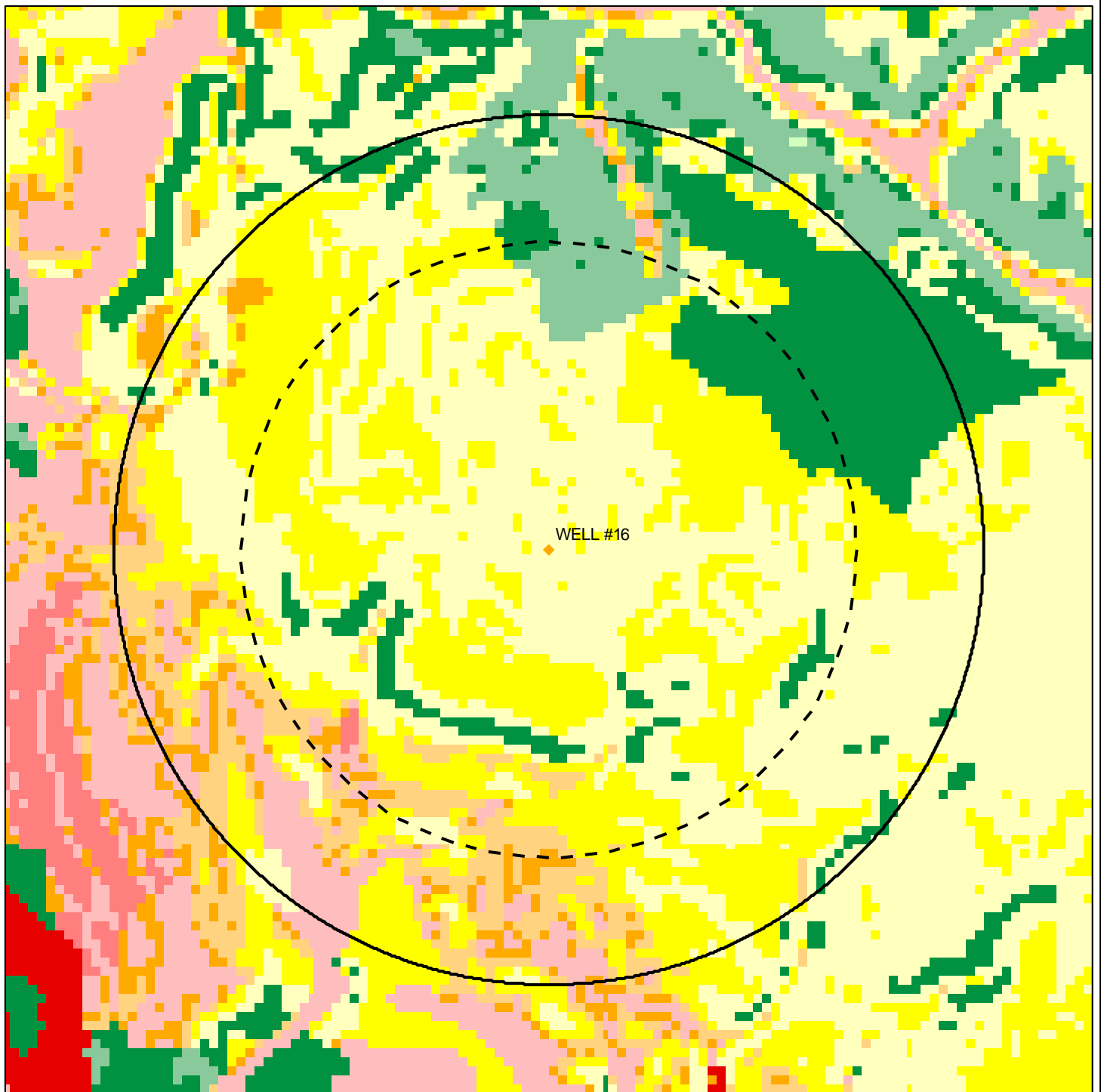
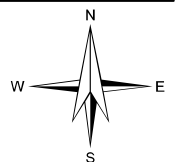
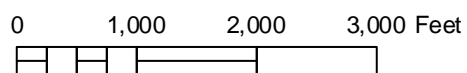


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



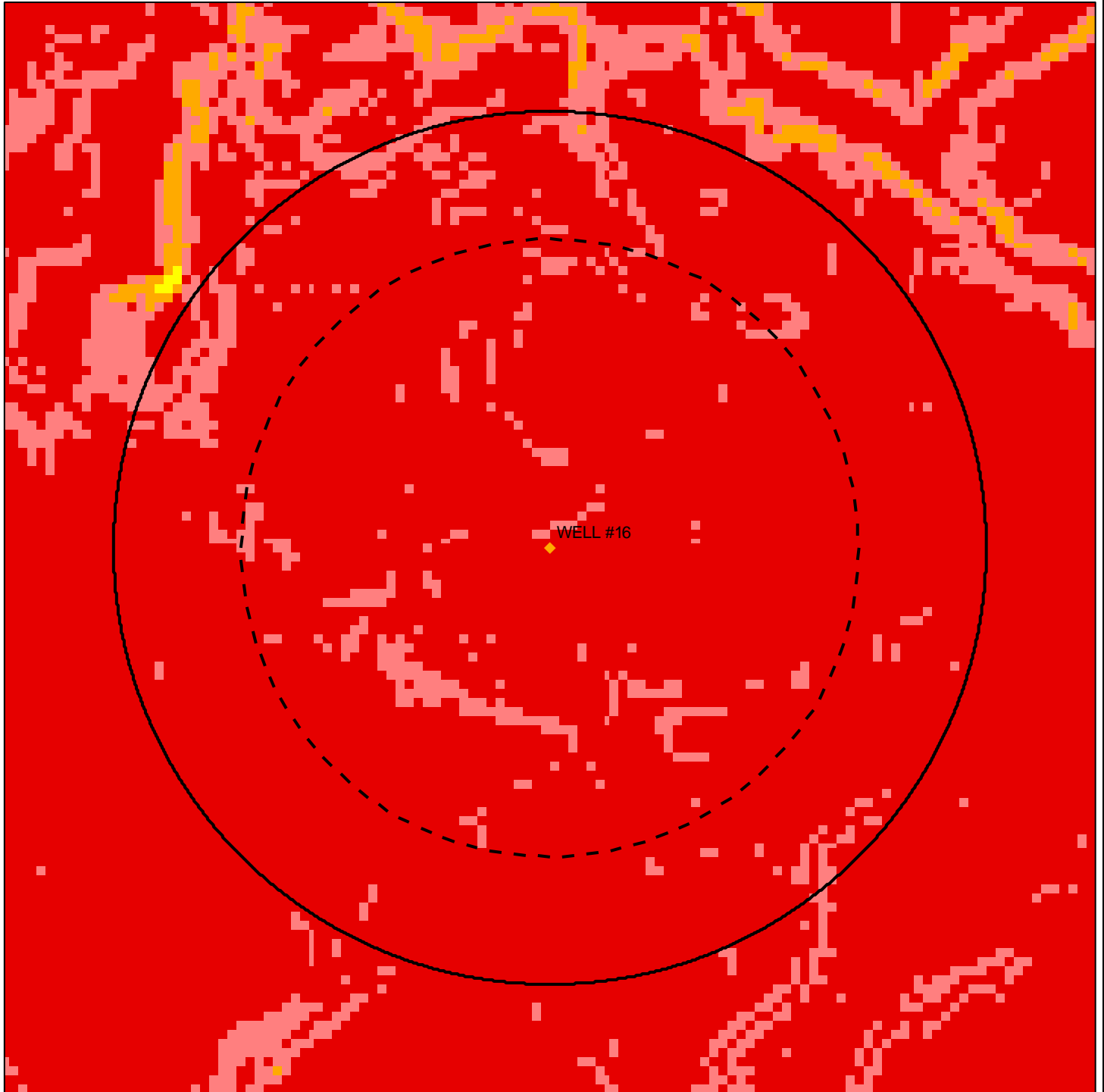
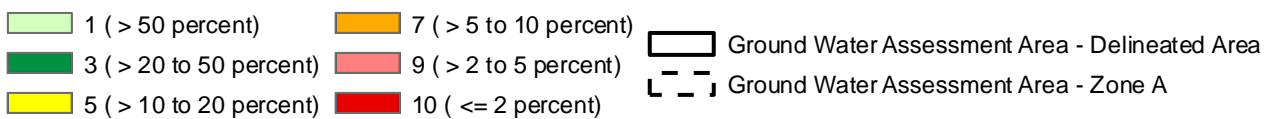
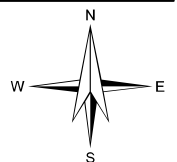
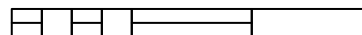


FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



0 1,000 2,000 3,000 Feet



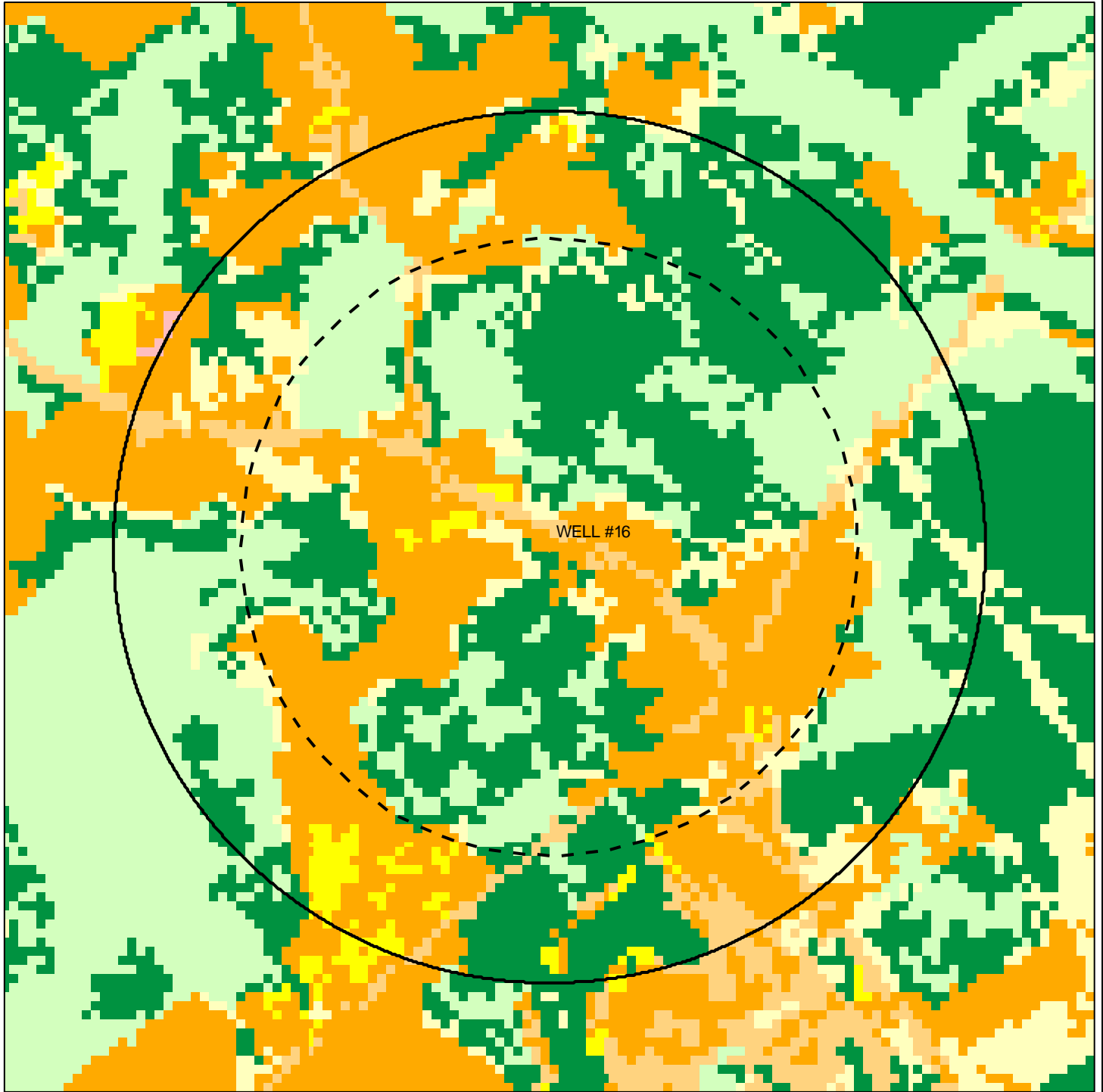
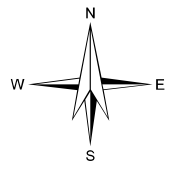











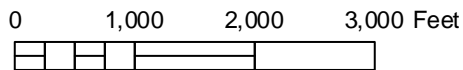


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



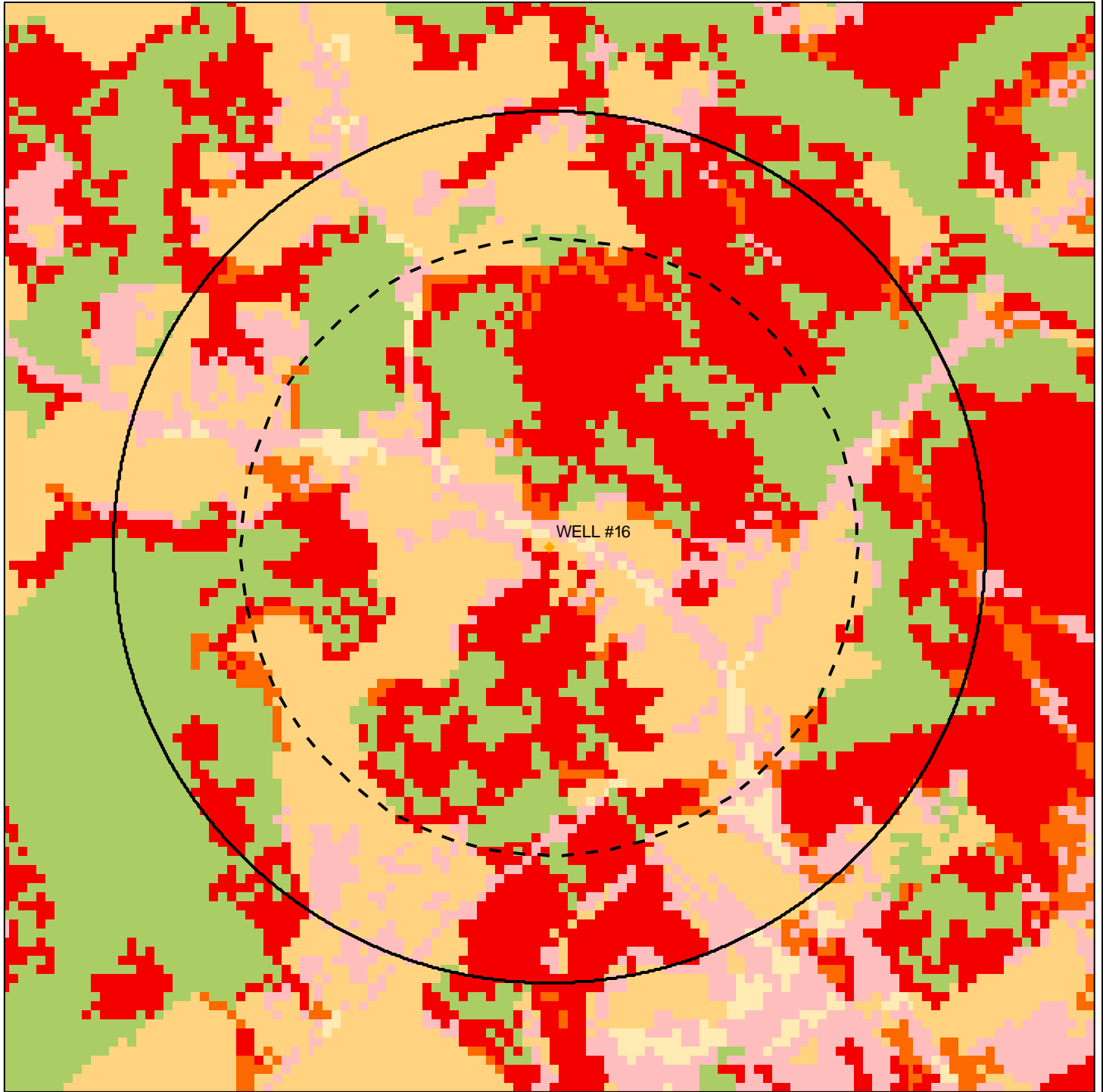
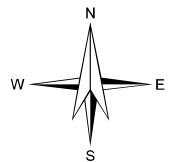
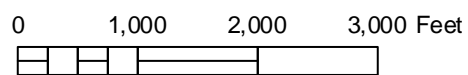


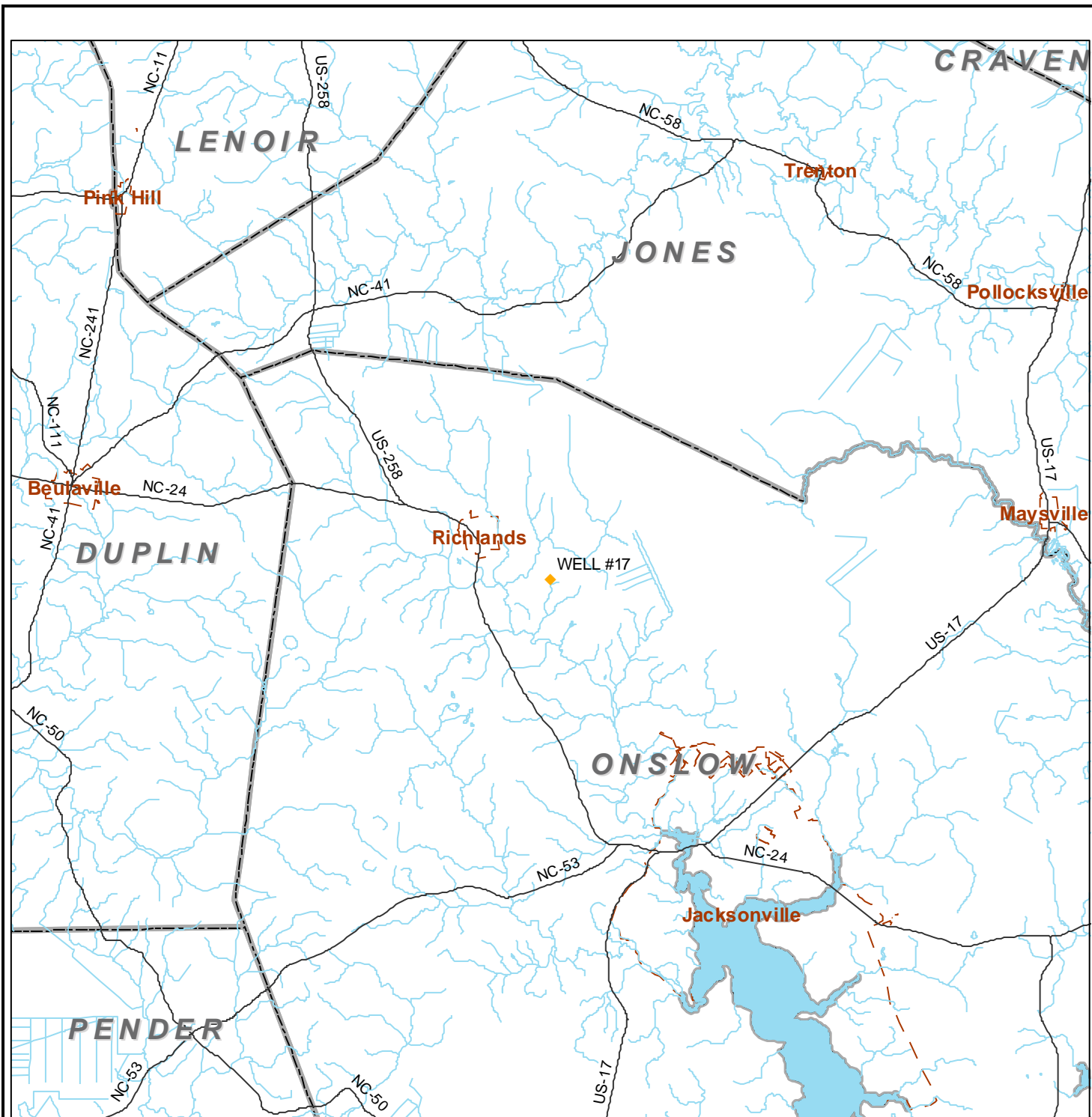
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #16



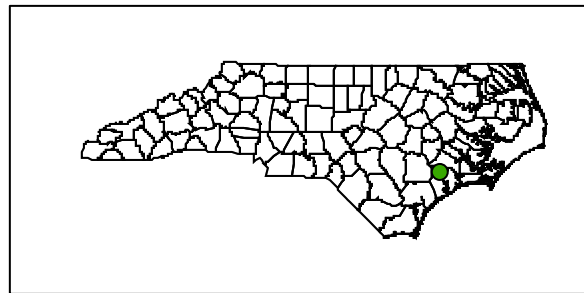
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

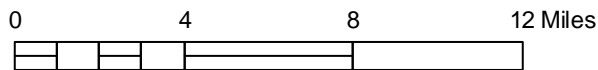
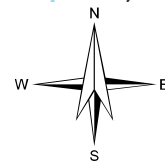


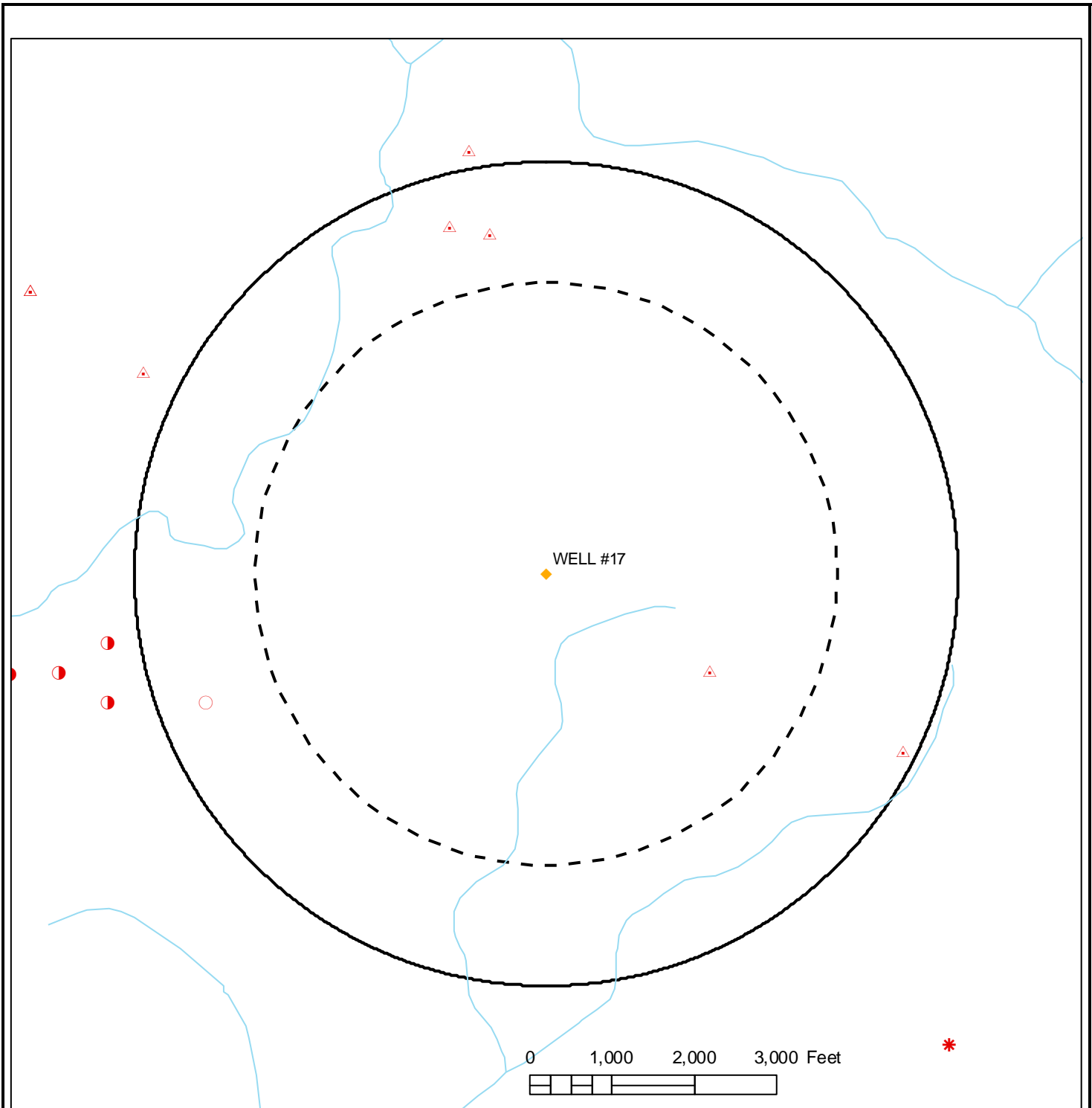


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



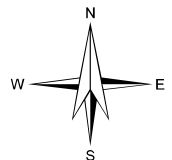


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17

PCS Types

- | | | |
|---------------------------------|--------------------------|--|
| □ Animal Operations | ◇ Septage Disposal Sites | — Roads |
| △ CERCLIS Sites | ○ Soil Remediation Sites | — Rivers and Streams |
| □ RCRA Gen. / Trans. Facilities | * Solid Waste Facilities | ■ Major Hydrology |
| ● Non Discharge Permits | * Tier II Sites | — Municipal Boundaries |
| △ NPDES Permits | ◇ RCRA TSD Facilities | ▭ Ground Water Assessment Area - Delineated Area |
| ★ National Priority List Sites | ◇ Old Landfill Sites | ▭ Ground Water Assessment Area - Zone A |
| ⊕ PCB Sites | ☆ UIC Permits | |
| ○ Pollution Incidents | ⊕ UST Permits | |



**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #17**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
GREER PROPERTY	94029	Pollution Incidents	H	UNNAMED FARM RD OFF GUM BRANCH	RICHLANDS	Unknown	ONSLOW
Melody Pointe	SW8080511	NPDES Permits	L	Cowhorn Rd	Richlands	Unknown	ONSLOW
Cow Horn Village Subdivision	SW8060917	NPDES Permits	L	Cow Horn Rd	Jacksonville	Unknown	ONSLOW
East Coast Imports - Richlands	NCG100205	NPDES Permits	L	6315 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Humphrey Minerals Mine - Richlands	NCG020507	NPDES Permits	L	346 Quaker Bridge Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #17**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
GREER PROPERTY	94029	Pollutant Type	OTHER PETROLEUM PROD.
Melody Pointe	SW8080511	Permit Type	State Stormwater
Melody Pointe	SW8080511	Permit Issued Date	5/27/2008
Cow Horn Village Subdivision	SW8060917	Permit Type	State Stormwater
Cow Horn Village Subdivision	SW8060917	Permit Issued Date	12/11/2006
East Coast Imports - Richlands	NCG100205	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
East Coast Imports - Richlands	NCG100205	Permit Issued Date	6/11/2010
East Coast Imports - Richlands	NCG100205	Permit Expiration Date	10/31/2014
East Coast Imports - Richlands	NCG100205	Receiving Stream	NEW RIVER
Humphrey Minerals Mine - Richlands	NCG020507	Permit Type	Mining Activities Stormwater Discharge COC
Humphrey Minerals Mine - Richlands	NCG020507	Permit Issued Date	1/1/2010
Humphrey Minerals Mine - Richlands	NCG020507	Permit Expiration Date	12/31/2014
Humphrey Minerals Mine - Richlands	NCG020507	Receiving Stream	Unnamed Tributary to New River (Rufus Creek)

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #17**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating		Moderate	

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #17**

Unsaturated Zone Rating	58.6
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

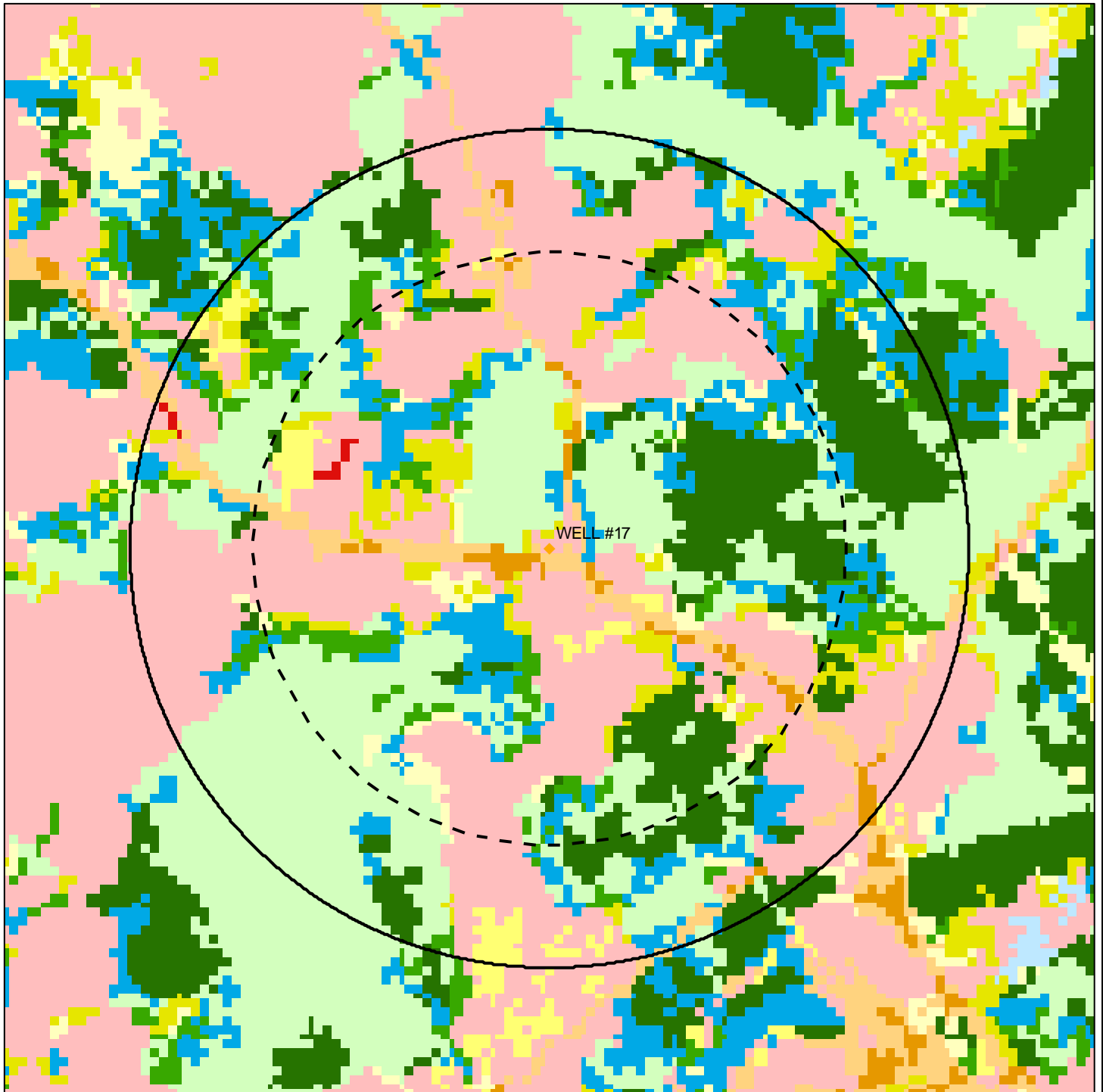
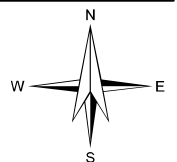


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17

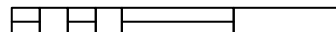


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



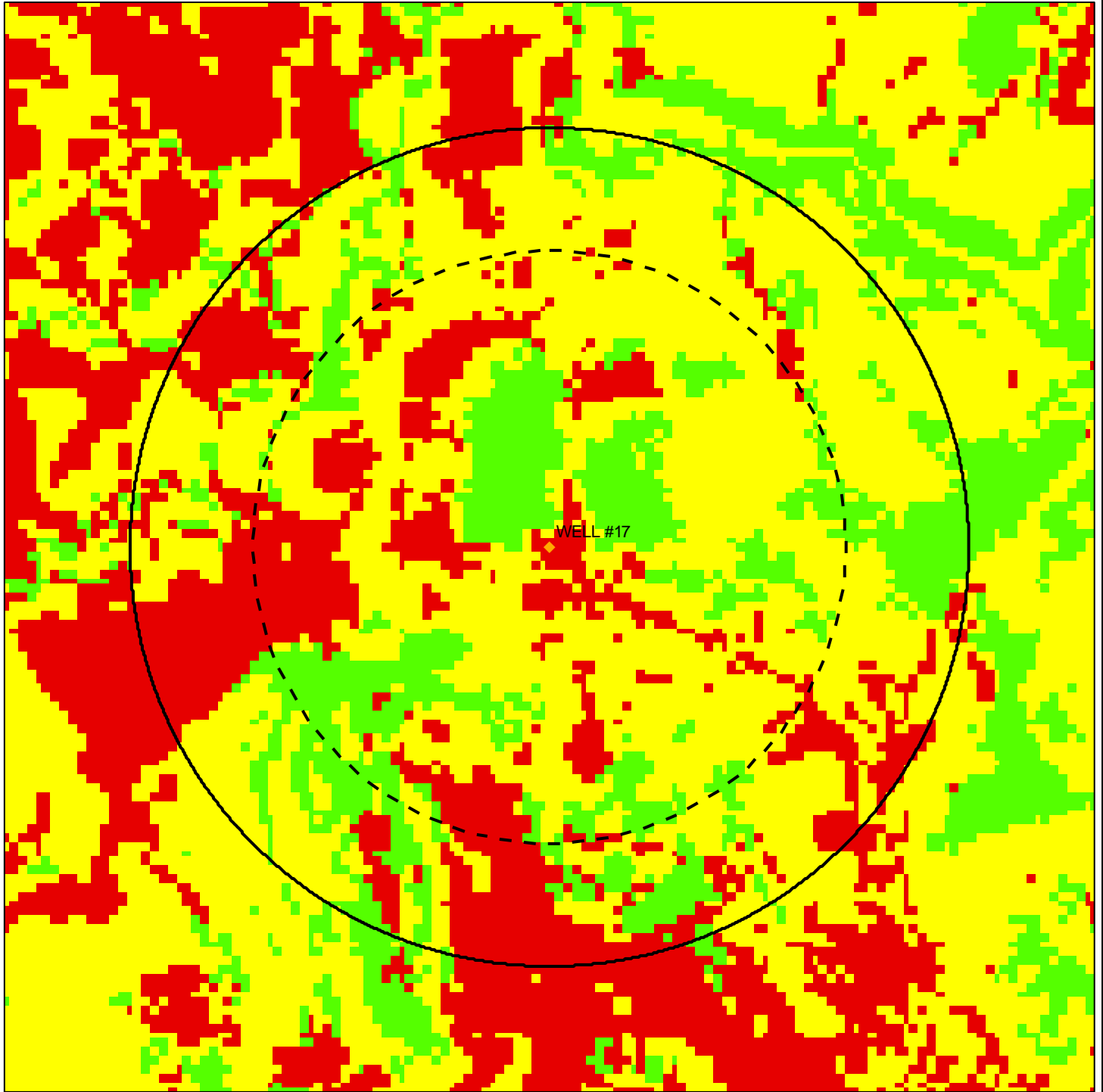
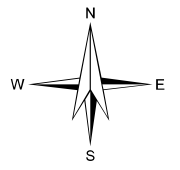
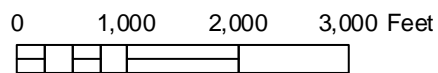


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



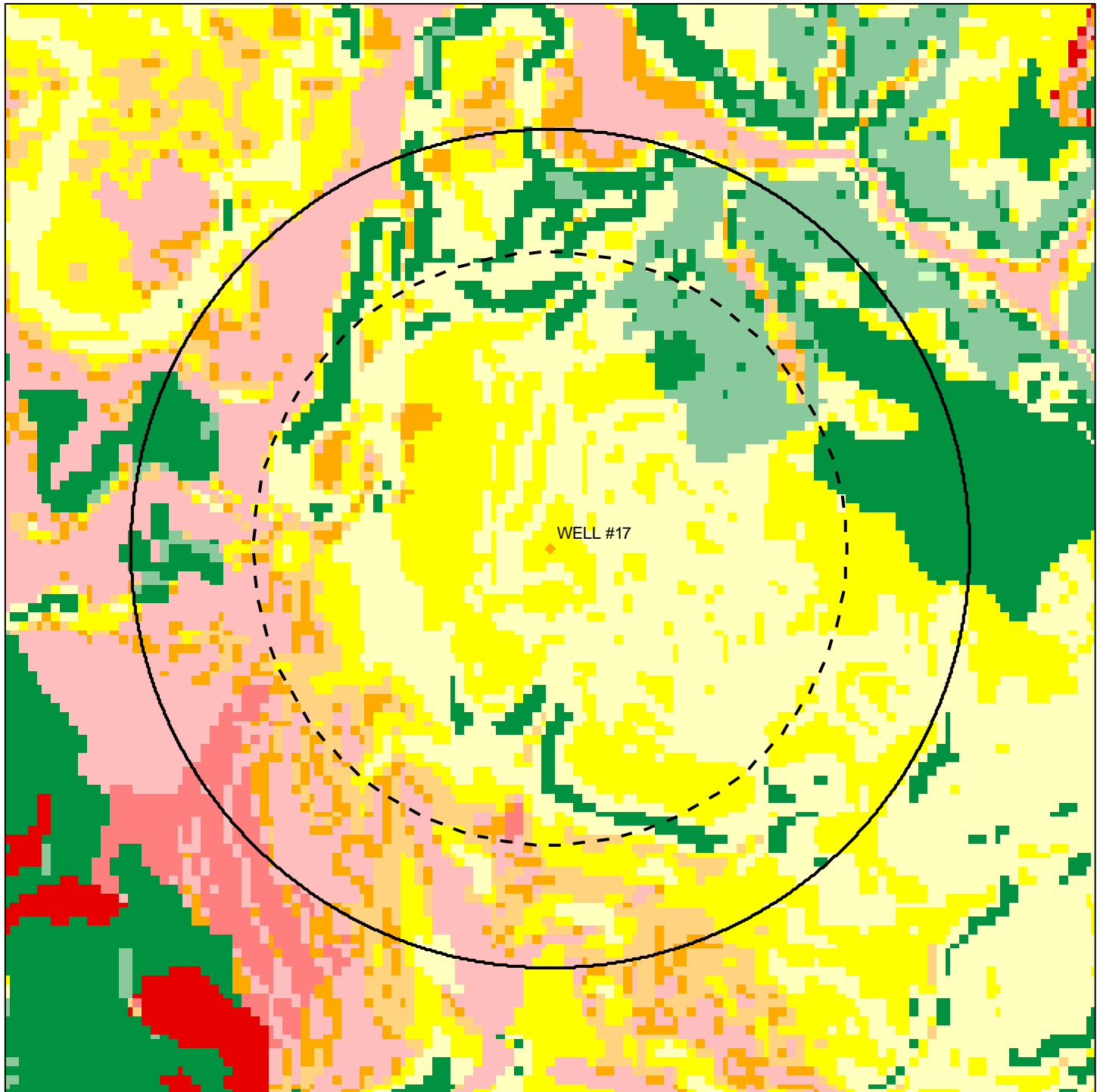
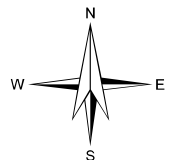












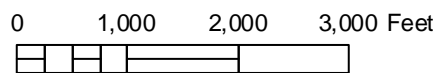


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to 1,280 sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |



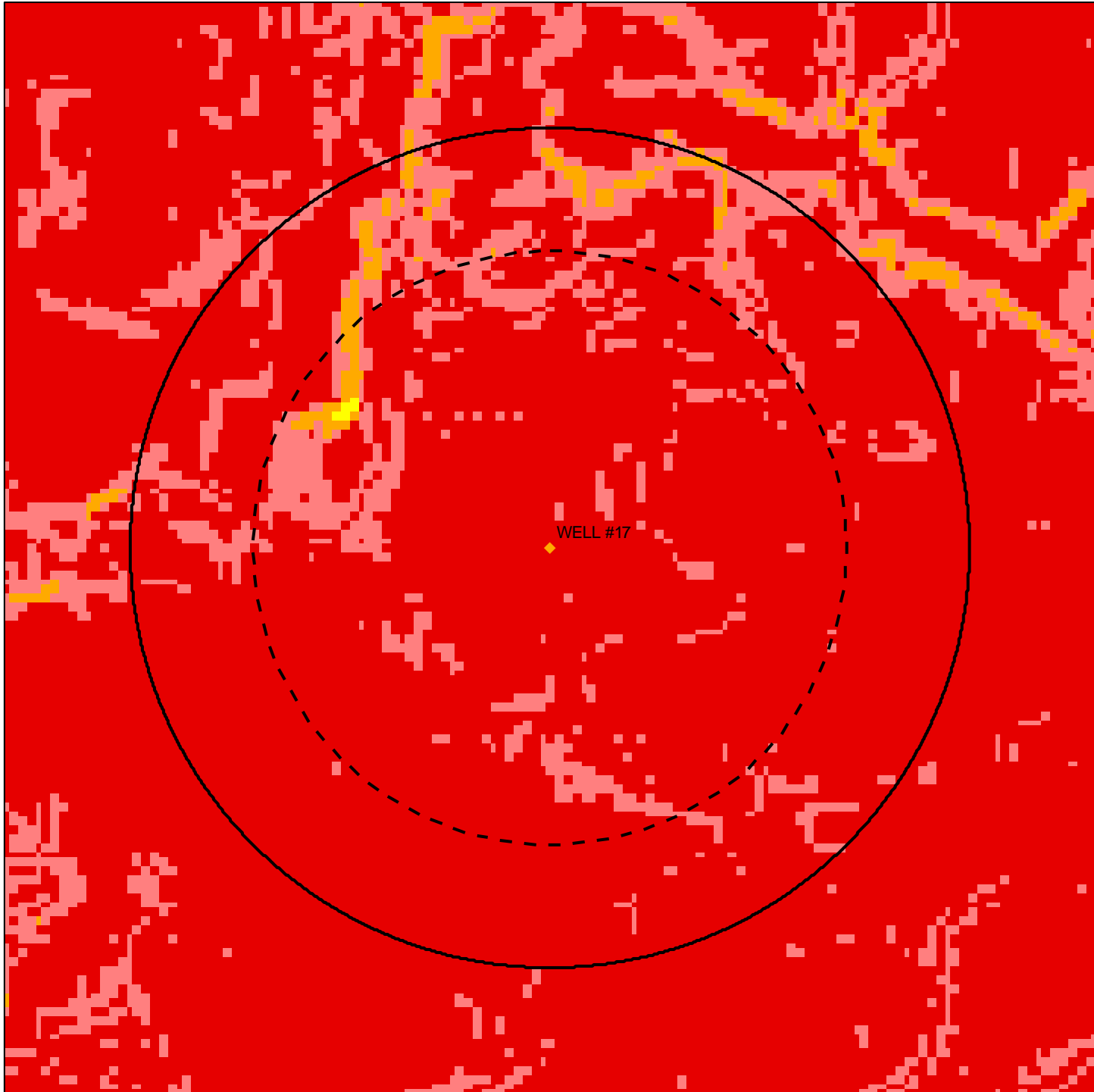
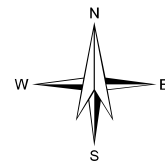








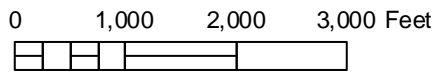


FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



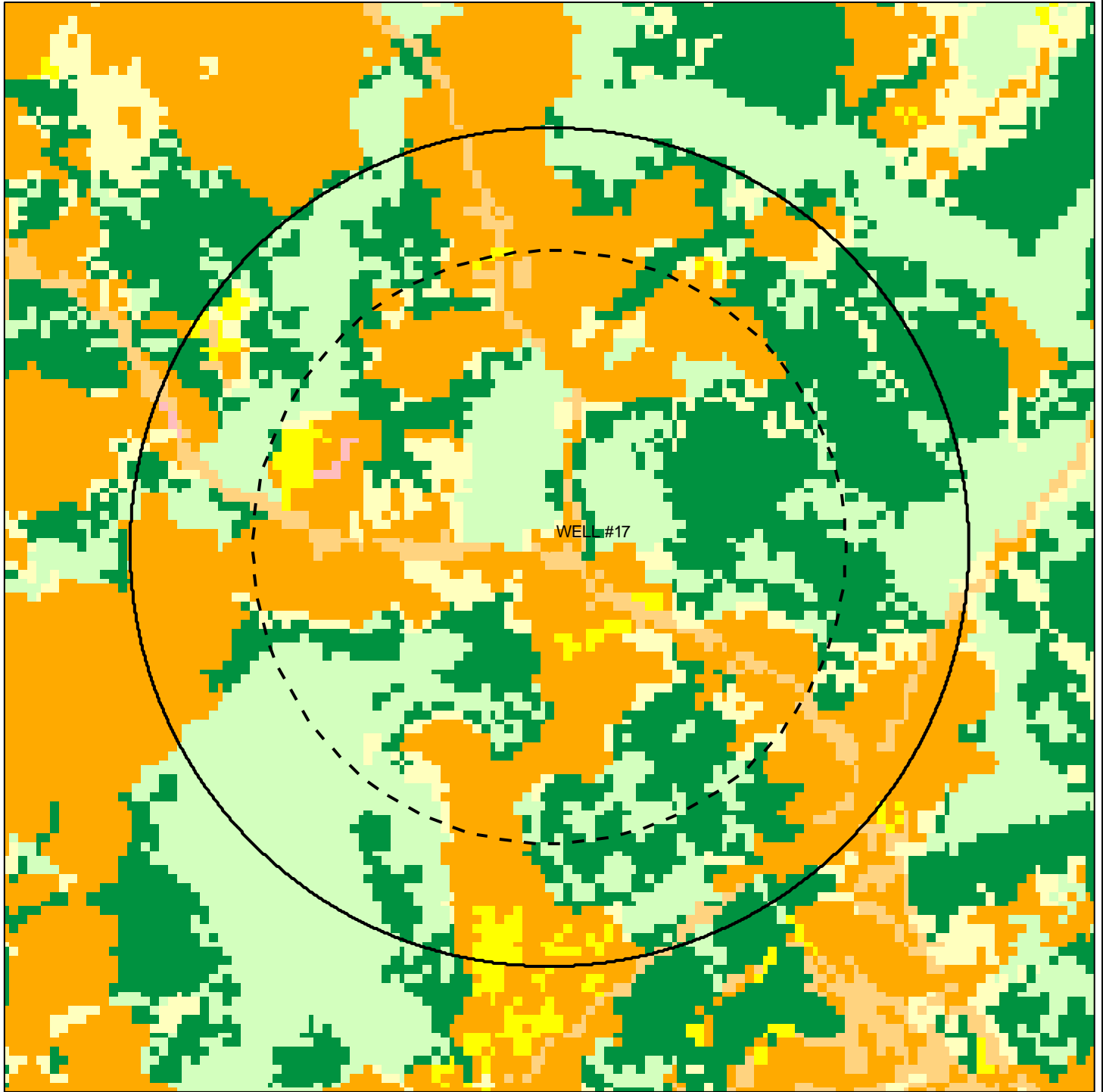
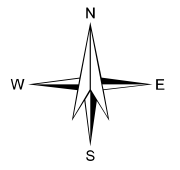











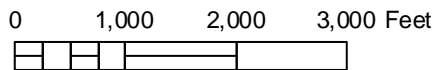


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



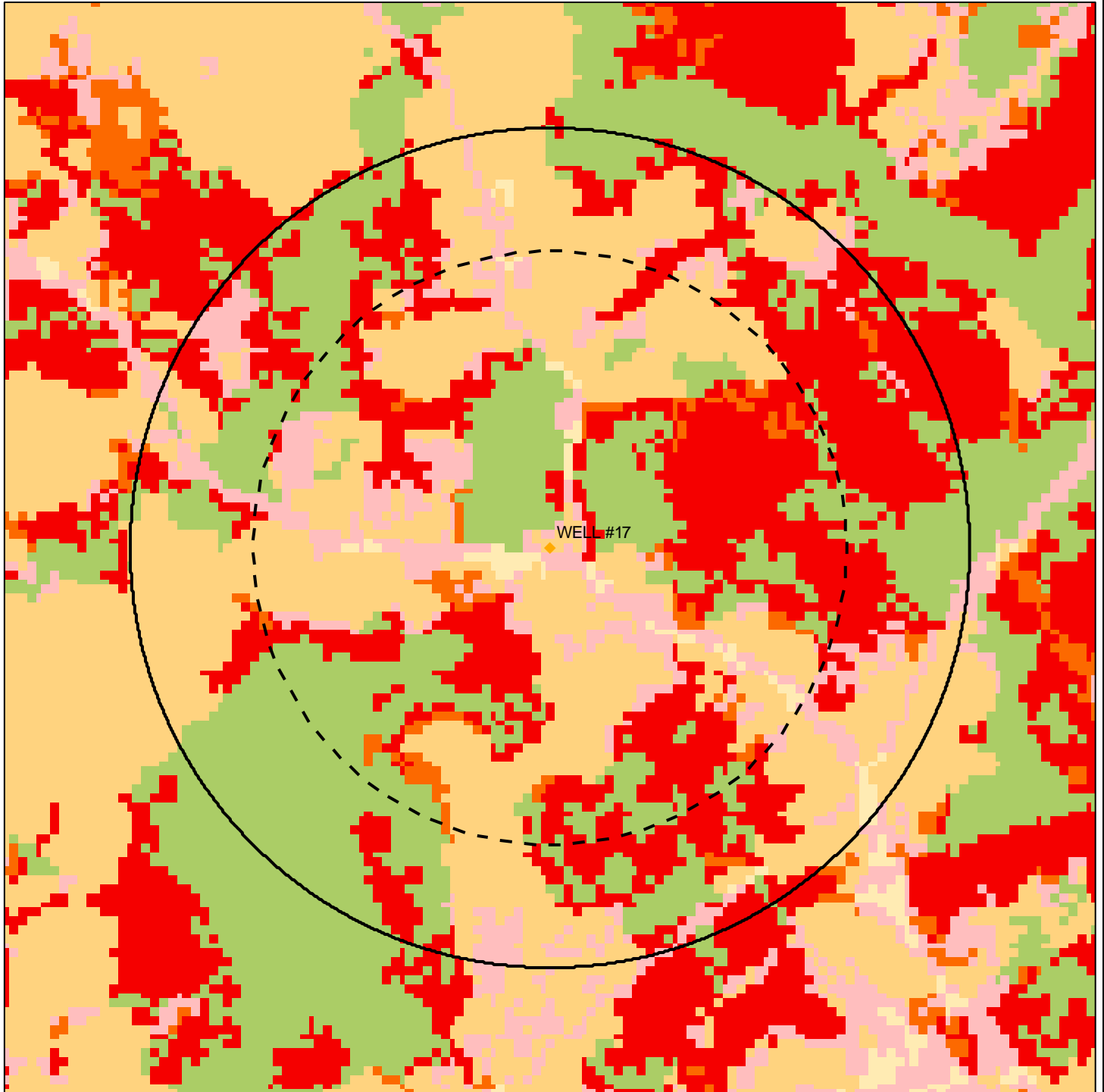
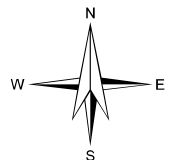
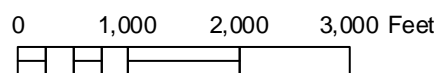


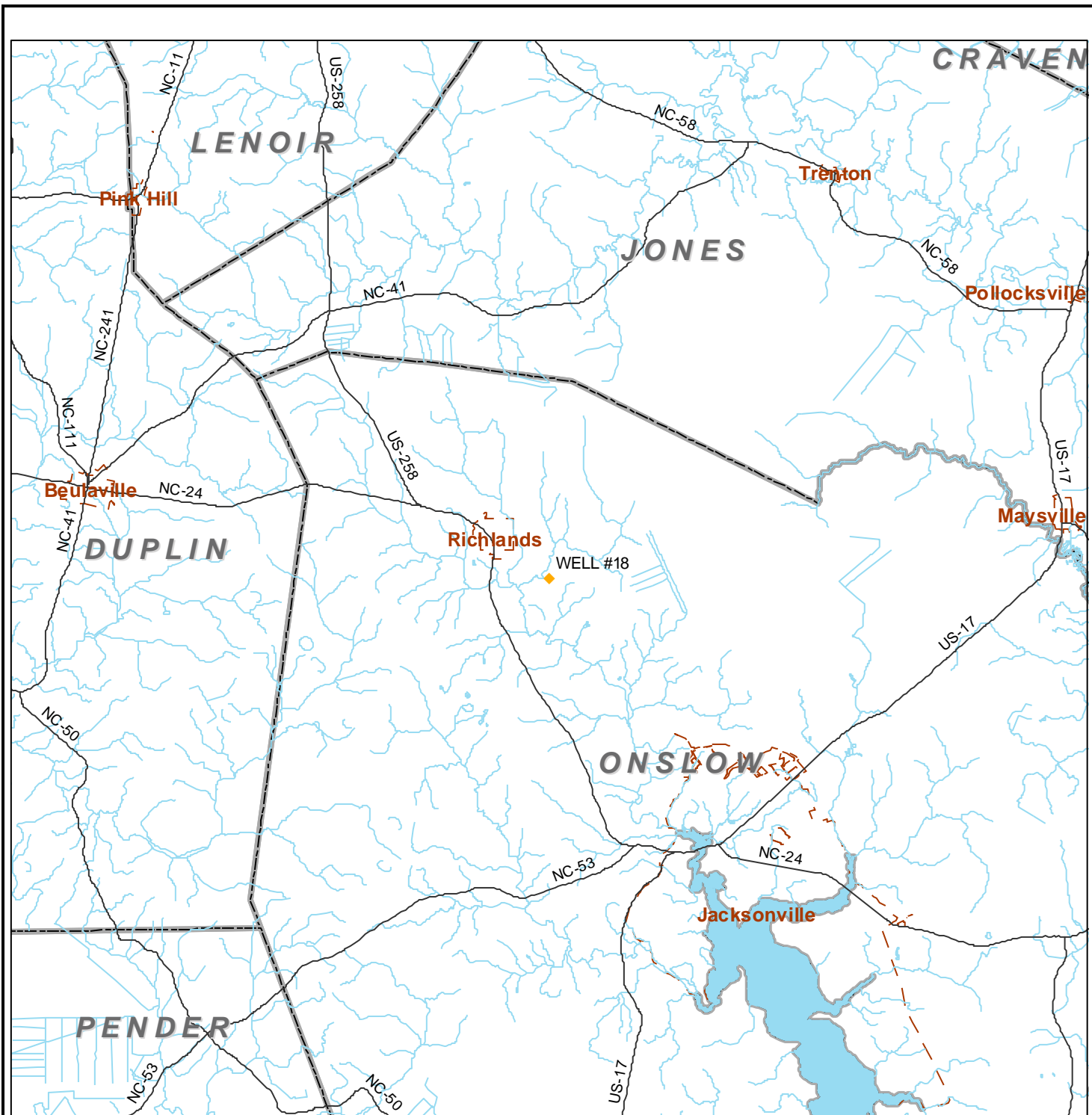
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #17



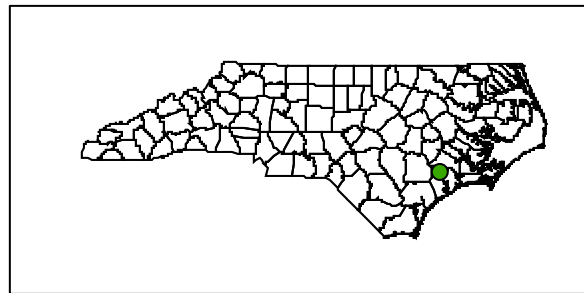
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

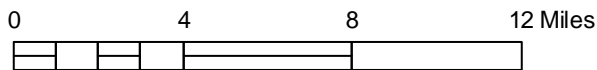
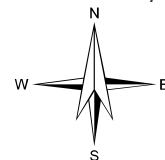


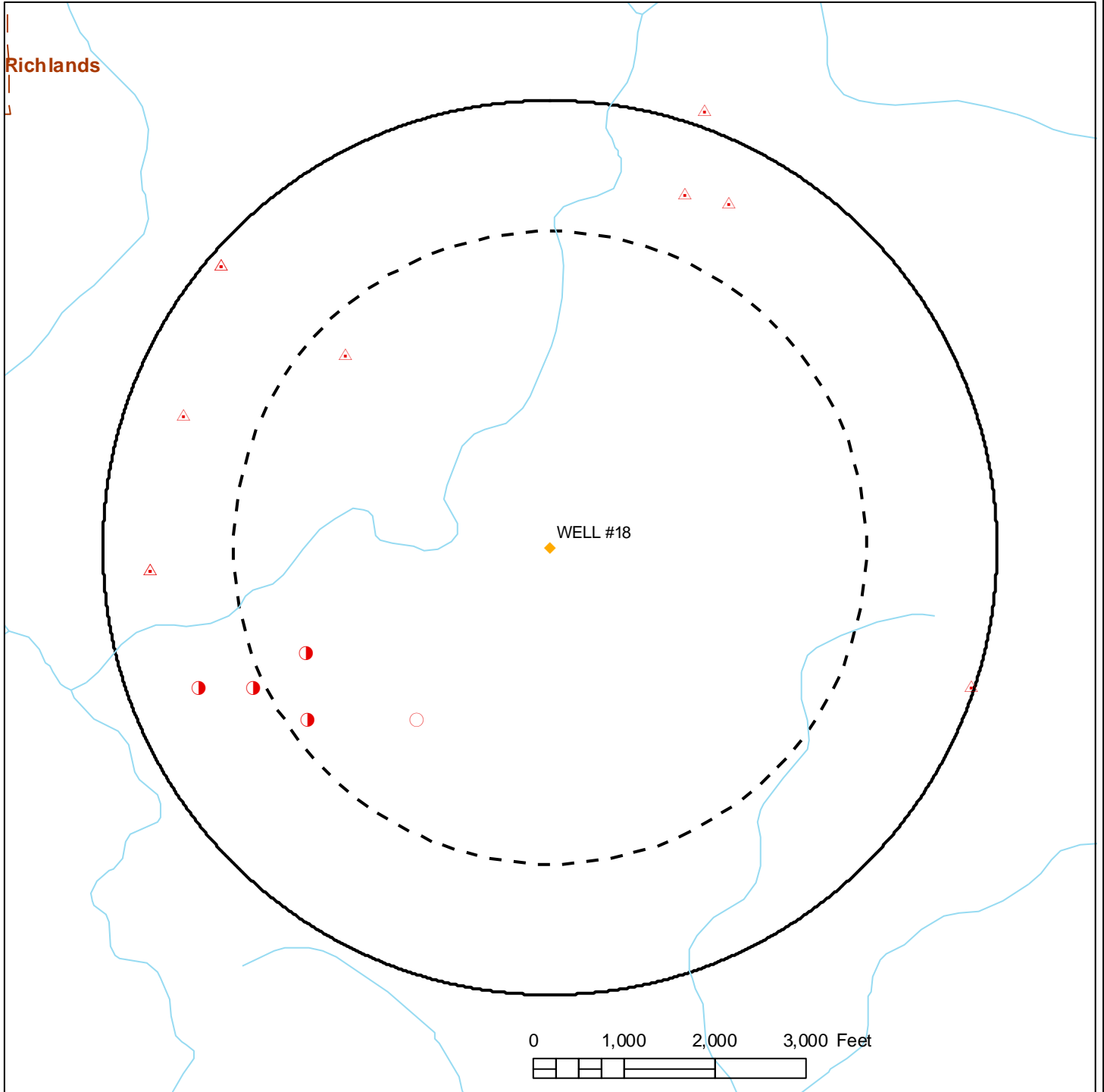


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



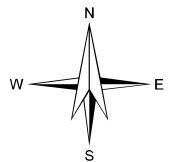


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18

PCS Types

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> ▣ Animal Operations △ CERCLIS Sites □ RCRA Gen. / Trans. Facilities ● Non Discharge Permits ▲ NPDES Permits ★ National Priority List Sites ⊕ PCB Sites ○ Pollution Incidents | <ul style="list-style-type: none"> ◇ Septage Disposal Sites ○ Soil Remediation Sites * Solid Waste Facilities ✳ Tier II Sites ⊕ RCRA TSD Facilities ⊕ Old Landfill Sites ☆ UIC Permits ⊕ UST Permits | <ul style="list-style-type: none"> — Roads — Rivers and Streams ■ Major Hydrology ▭ Municipal Boundaries ▭ Ground Water Assessment Area - Delineated Area ▭ Ground Water Assessment Area - Zone A |
|---|--|---|



**Table 4. Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #18**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
GREER PROPERTY	94029	Pollution Incidents	H	UNNAMED FARM RD OFF GUM BRANCH	RICHLANDS	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Non Discharge Points	M	Unknown	Unknown	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Non Discharge Points	M	Unknown	Unknown	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Non Discharge Points	M	Unknown	Unknown	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Non Discharge Points	M	Unknown	Unknown	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	SW8100905	NPDES Permits	L	Gum Branch Rd	Richlands	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Mills Field Road Secondary Road Improvements Project 3C.067068	SW8130425	NPDES Permits	L	Mills Field Rd	Richlands	Unknown	ONSLOW
Crimson Faire	SW8110609	NPDES Permits	L	Gum Branch Rd	Richlands	Unknown	ONSLOW
Lloyd Property Stream & Wetland Restoration Project	SW8060862	NPDES Permits	L	Gum Branch Rd	Richlands	Unknown	ONSLOW
Stateside Elementary School Offsite Sewer Service	SW8090319	NPDES Permits	L	Gum Branch Rd	Richlands	Unknown	ONSLOW
Melody Pointe	SW8080511	NPDES Permits	L	Cowhorn Rd	Richlands	Unknown	ONSLOW
Cow Horn Village Subdivision	SW8060917	NPDES Permits	L	Cow Horn Rd	Jacksonville	Unknown	ONSLOW
East Coast Imports - Richlands	NCG100205	NPDES Permits	L	6315 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Northwest Regional Wastewater Reclamation Facility	NCG110149	NPDES Permits	L	Gum Branch Rd	Richlands	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #18**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
GREER PROPERTY	94029	Pollutant Type	OTHER PETROLEUM PROD.
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Permit Type	High Rate Infiltration
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Permit Type	High Rate Infiltration
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Permit Type	High Rate Infiltration
Northwest Regional Wastewater Reclamation Facility	WQ0034367	Permit Type	High Rate Infiltration
Northwest Regional Wastewater Reclamation Facility	SW8100905	Permit Type	State Stormwater
Northwest Regional Wastewater Reclamation Facility	SW8100905	Permit Issued Date	11/30/2012
Mills Field Road Secondary Road Improvements Project 3C.067068	SW8130425	Permit Type	State Stormwater
Mills Field Road Secondary Road Improvements Project 3C.067068	SW8130425	Permit Issued Date	5/16/2013
Crimson Faire	SW8110609	Permit Type	State Stormwater
Crimson Faire	SW8110609	Permit Issued Date	9/6/2011
Lloyd Property Stream & Wetland Restoration Project	SW8060862	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Lloyd Property Stream & Wetland Restoration Project	SW8060862	Permit Issued Date	10/24/2006
Stateside Elementary School Offsite Sewer Service	SW8090319	Permit Type	State Stormwater
Stateside Elementary School Offsite Sewer Service	SW8090319	Permit Issued Date	6/4/2009
Melody Pointe	SW8080511	Permit Type	State Stormwater
Melody Pointe	SW8080511	Permit Issued Date	5/27/2008
Cow Horn Village Subdivision	SW8060917	Permit Type	State Stormwater
Cow Horn Village Subdivision	SW8060917	Permit Issued Date	12/11/2006
East Coast Imports - Richlands	NCG100205	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
East Coast Imports - Richlands	NCG100205	Permit Issued Date	6/11/2010
East Coast Imports - Richlands	NCG100205	Permit Expiration Date	10/31/2014
East Coast Imports - Richlands	NCG100205	Receiving Stream	NEW RIVER
Northwest Regional Wastewater Reclamation Facility	NCG110149	Permit Type	Municipal WWTP > 1MGD, Stormwater Discharge, COC
Northwest Regional Wastewater Reclamation Facility	NCG110149	Permit Issued Date	6/1/2013
Northwest Regional Wastewater Reclamation Facility	NCG110149	Permit Expiration Date	5/31/2018
Northwest Regional Wastewater Reclamation Facility	NCG110149	Receiving Stream	Cowhorn Swamp

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #18**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating		Moderate	

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #18**

Unsaturated Zone Rating	60.9
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

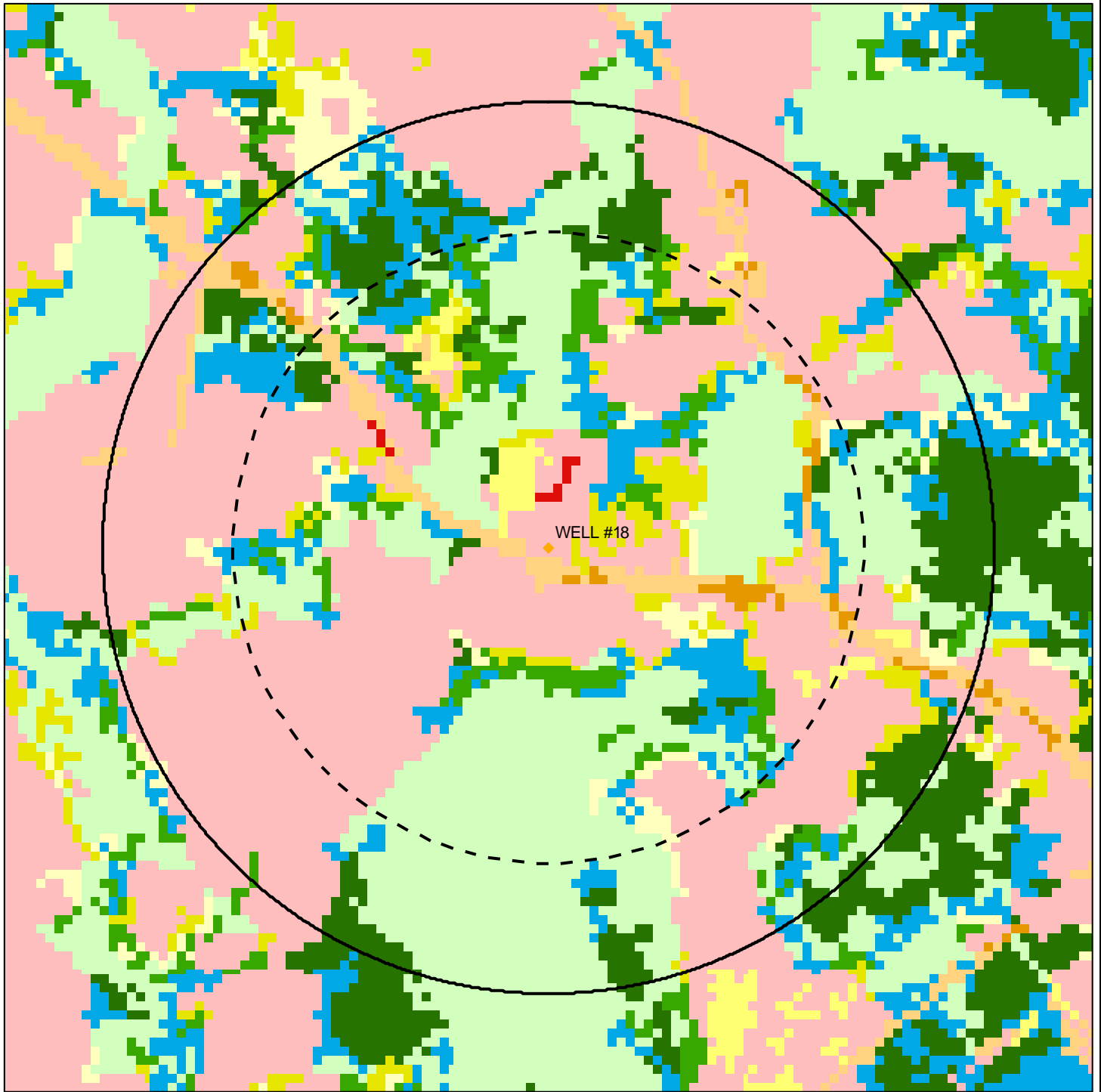
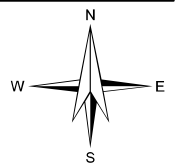


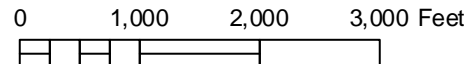
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



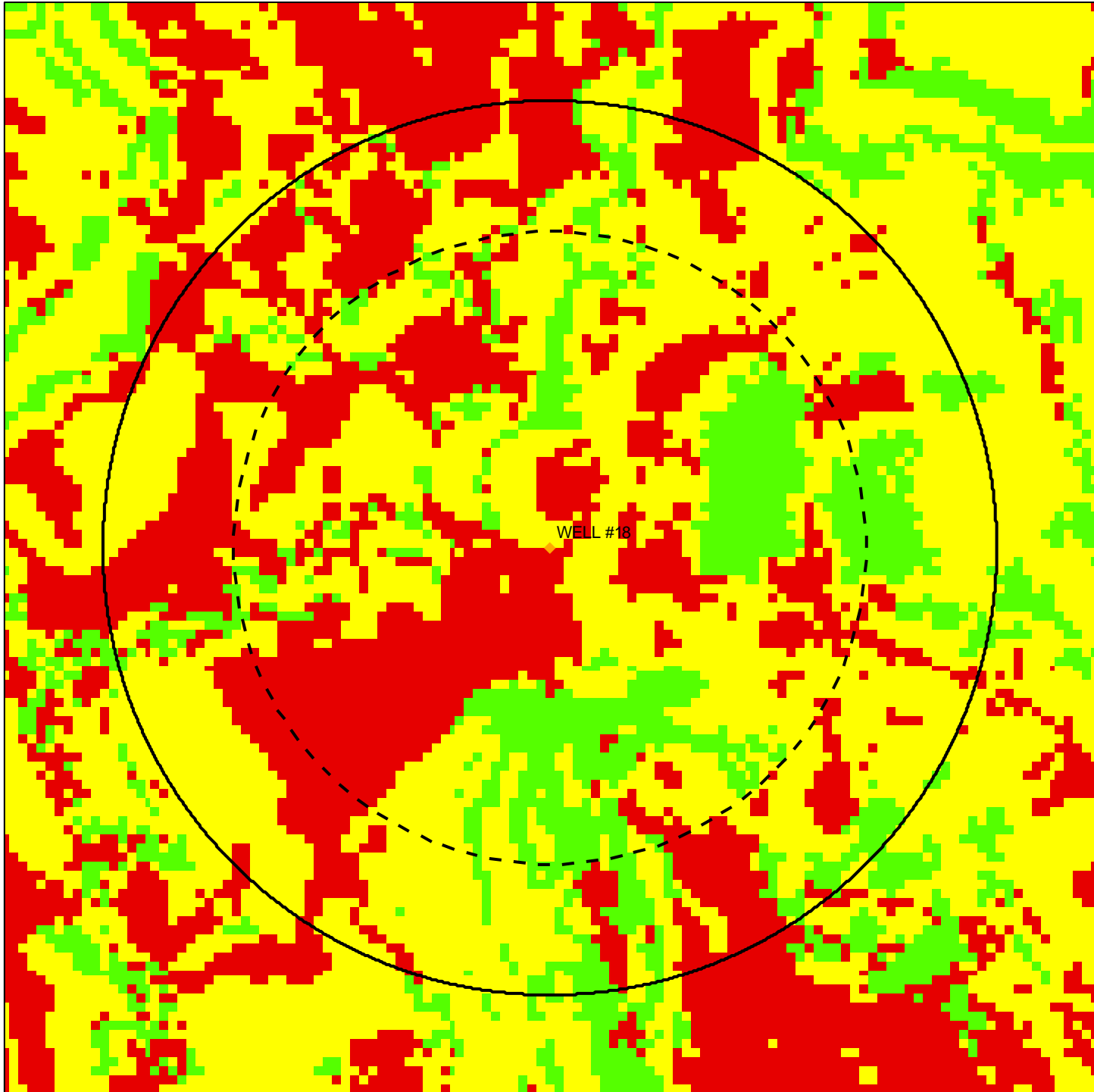
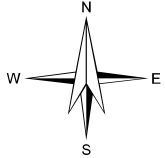
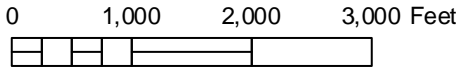


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



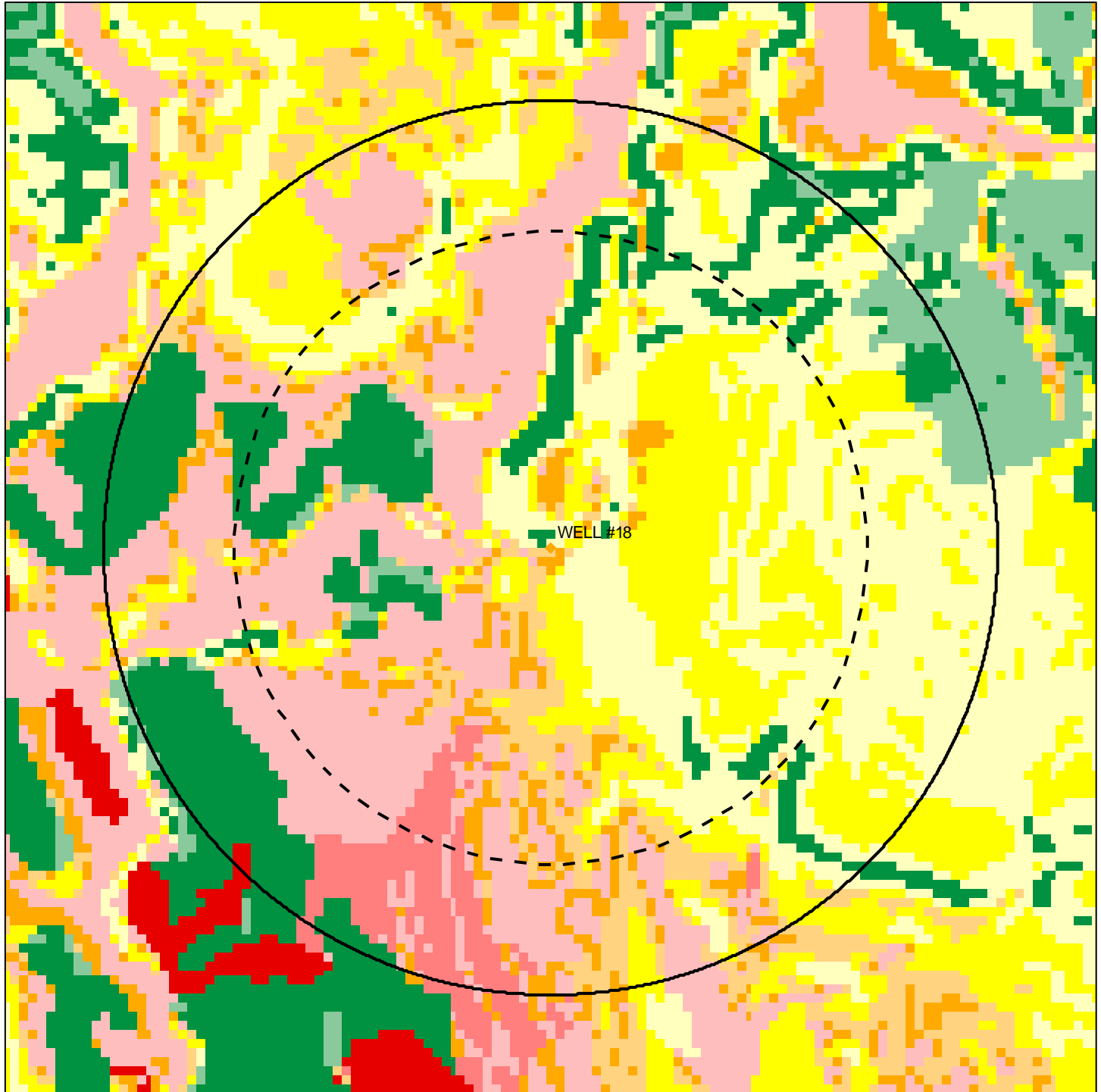
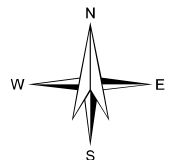














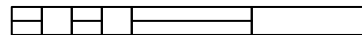
FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to 1,280 sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |

0 1,000 2,000 3,000 Feet



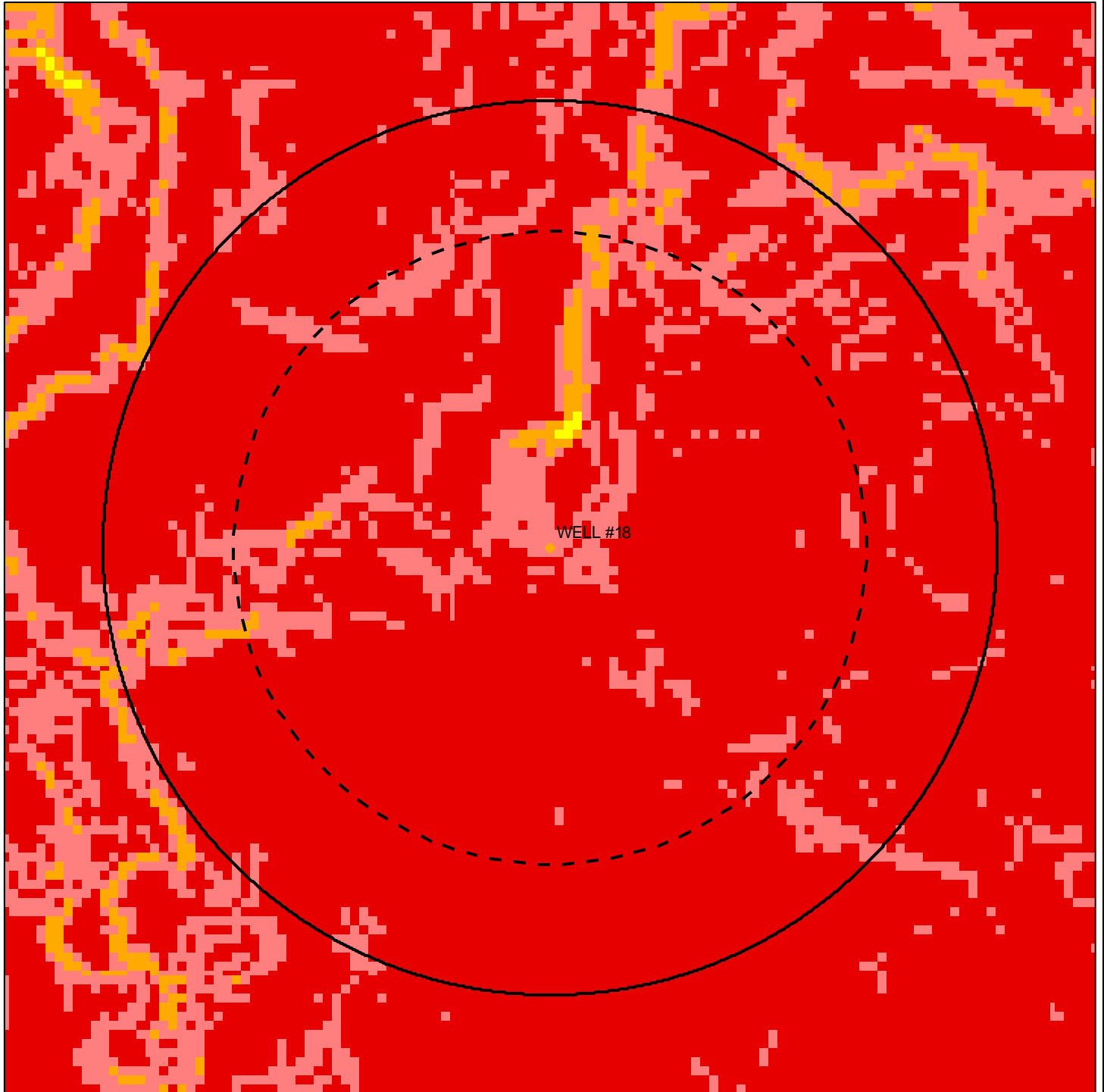
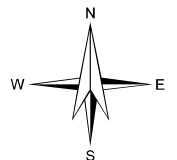










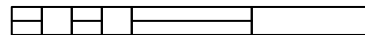
FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |

0 1,000 2,000 3,000 Feet



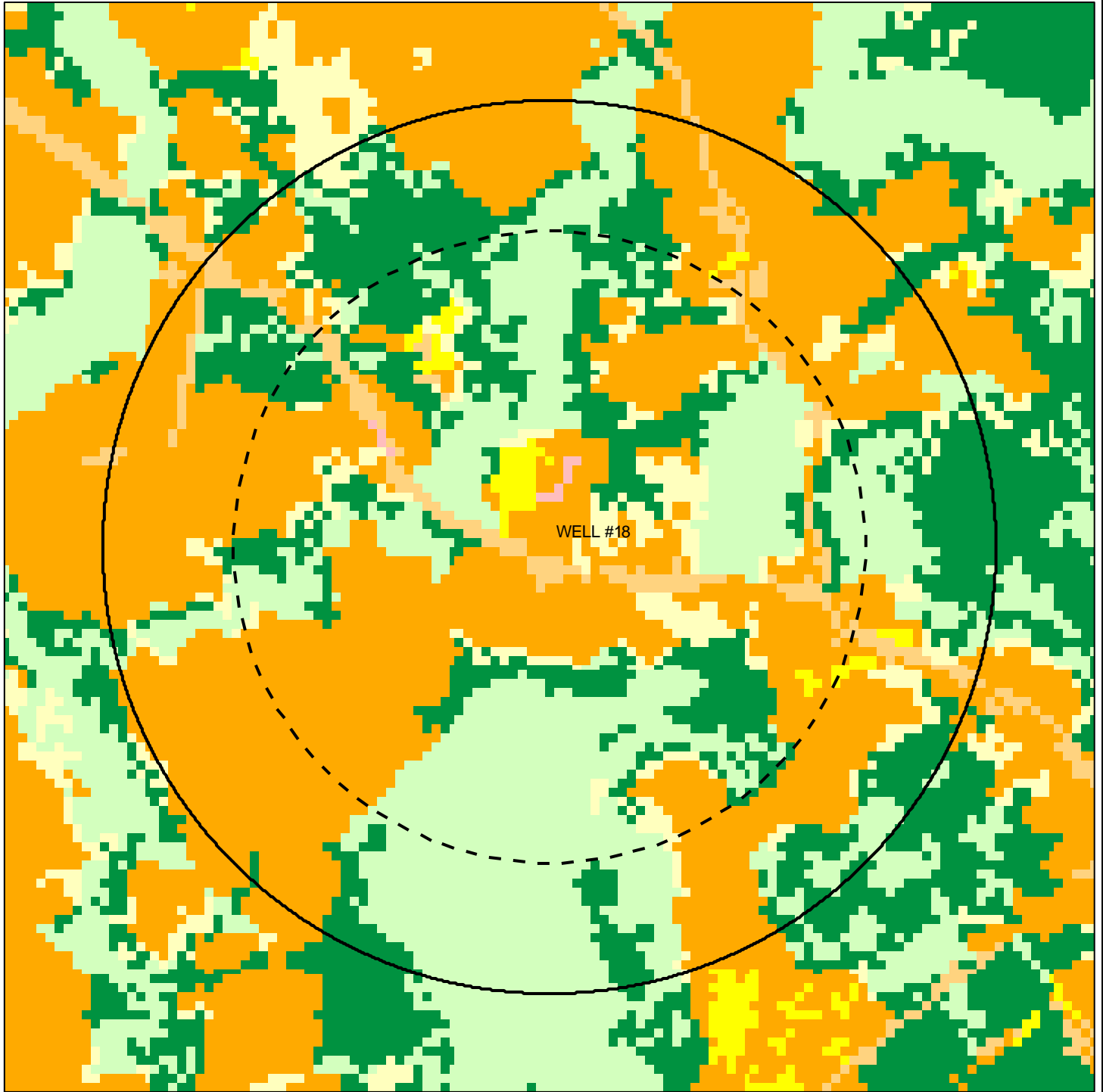
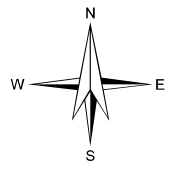
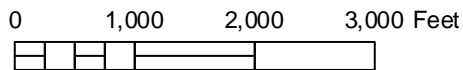


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- | | |
|--|--|
| 1 Water, Wetlands (Woody and Herbaceous) | 6 Developed, Open Space |
| 2 Barren Land (Rock/Sand/Clay) | 7 Developed, Low Intensity; Cultivated Crops |
| 3 Forest (Deciduous, Evergreen, Mixed) | 8 Developed, Medium Intensity |
| 4 Grassland/Herbaceous; Shrub/Scrub | 10 Developed, High Intensity |
| 5 Pasture/Hay | |
| Ground Water Assessment Area - Delineated Area | |
| Ground Water Assessment Area - Zone A | |



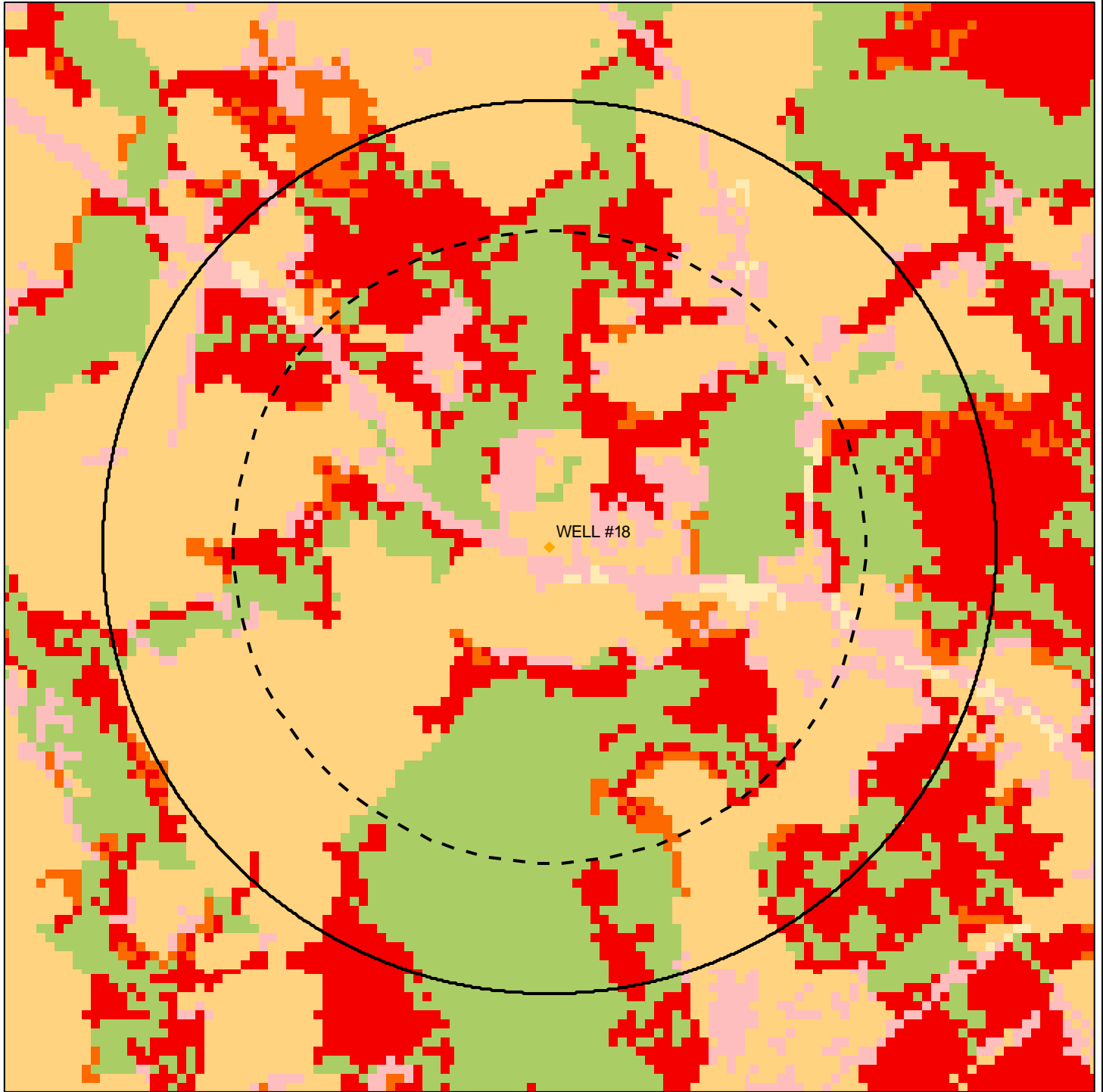
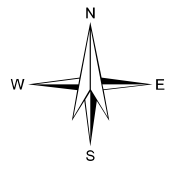
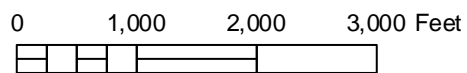


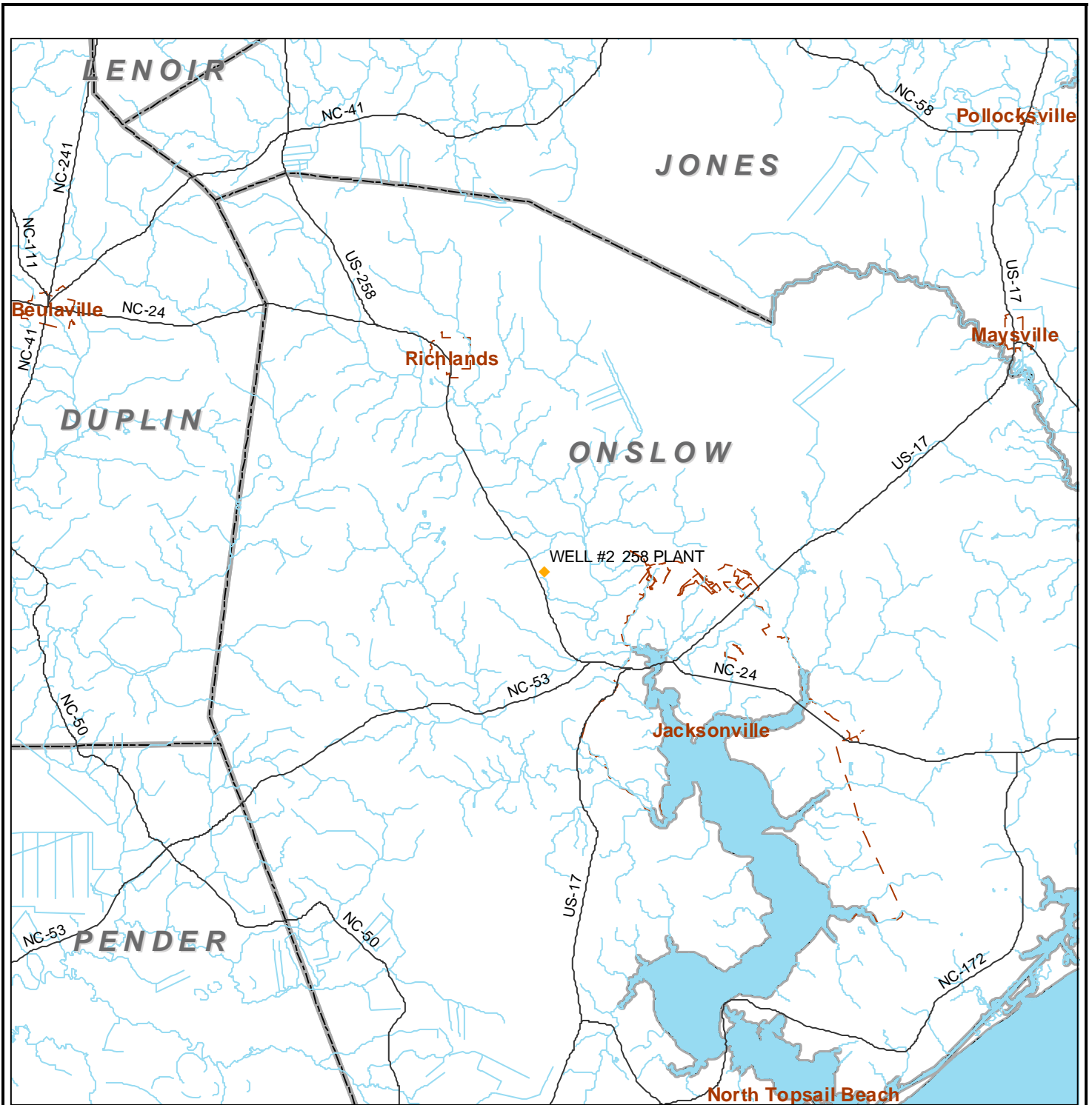
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #18



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

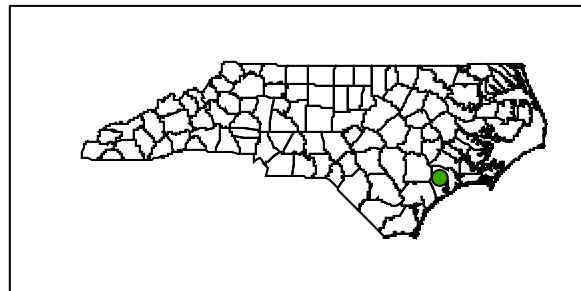
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



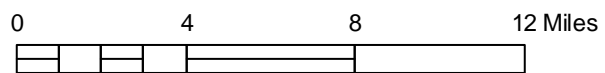
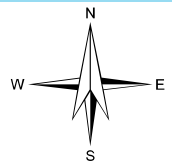


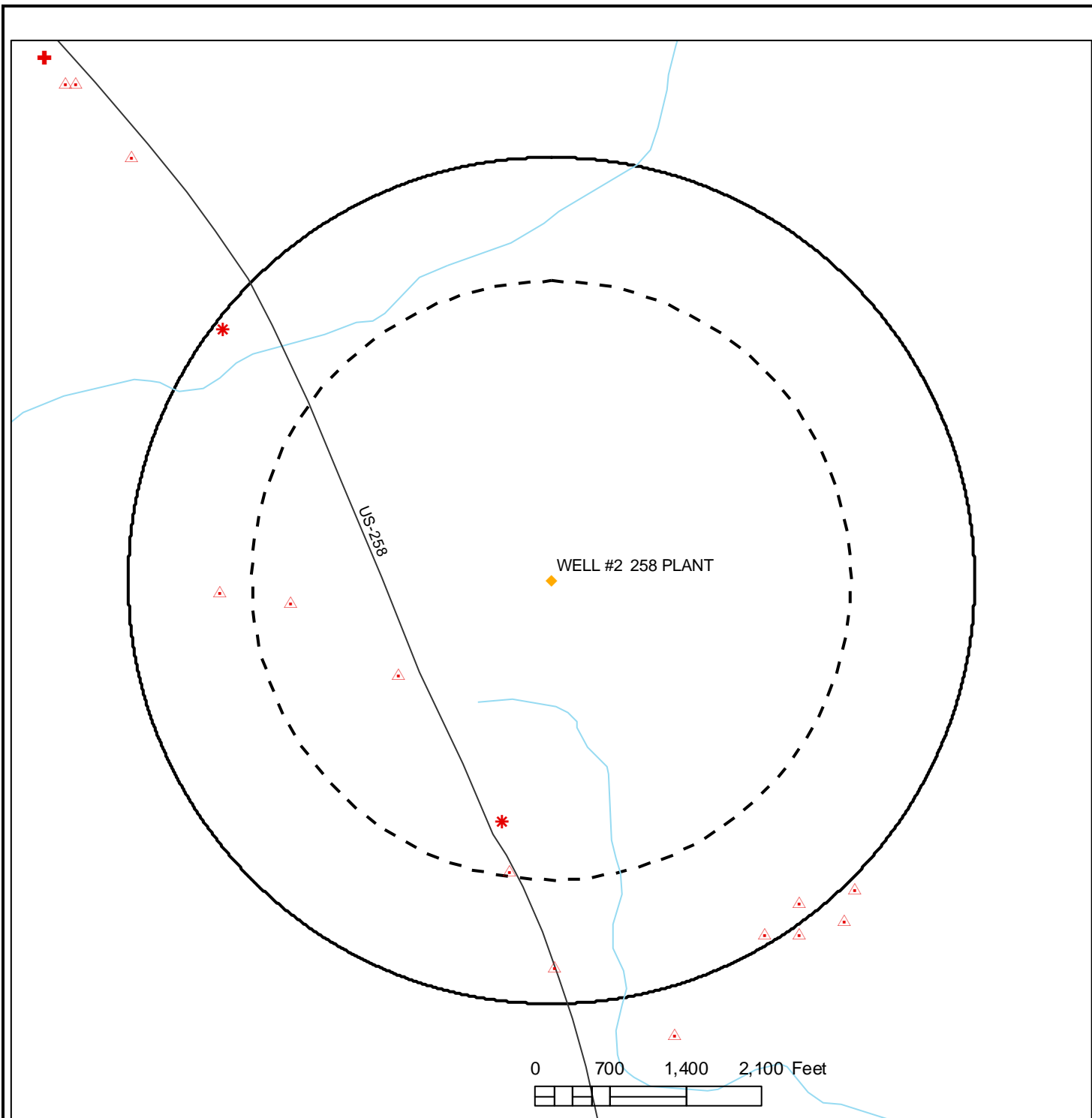
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- - - County Boundaries

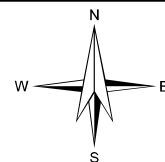




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT

PCS Types

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> □ Animal Operations △ CERCLIS Sites □ RCRA Gen. / Trans. Facilities ● Non Discharge Permits △ NPDES Permits ★ National Priority List Sites ⊕ PCB Sites ○ Pollution Incidents | <ul style="list-style-type: none"> ○ Septage Disposal Sites ○ Soil Remediation Sites ★ Solid Waste Facilities ★ Tier II Sites ○ RCRA TSD Facilities ○ Old Landfill Sites ☆ UIC Permits ⊕ UST Permits | <ul style="list-style-type: none"> — Roads — Rivers and Streams ■ Major Hydrology — Municipal Boundaries □ Ground Water Assessment Area - Delineated Area □ Ground Water Assessment Area - Zone A |
|---|--|---|



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #2 258 PLANT**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
258 Central Water Control Building	4026173	Tier II Sites	H	4334 Richlands Highway	Jacksonville	Unkno wn	Onslow
Water Well #6	4026175	Tier II Sites	H	4963 Richlands Highway	Jacksonville	Unkno wn	Onslow
Burton Park Pump Station Upgrades and Force Main	SW8121028	NPDES Permits	L	Richlands Hwy	Jacksonville	Unkno wn	ONSLOW
ABC Supply Company	SW8090122	NPDES Permits	L	Burton Park Blvd At WC Jarman Dr	Jacksonville	Unkno wn	ONSLOW
Jarmans Fork Sewer Extension	SW8900616	NPDES Permits	L	US Hwy 258	Jacksonville	Unkno wn	ONSLOW
Brown Site	SW8021130	NPDES Permits	L	Hwy 258	Jacksonville	Unkno wn	ONSLOW
Liberty Park Townhomes	SW8120401	NPDES Permits	L	Liberty Park Rd	Jacksonville	Unkno wn	ONSLOW
Liberty Tree Crossing Section 3	SW8031010	NPDES Permits	L	NCSR 1226 Liberty Park Rd	Jacksonville	Unkno wn	ONSLOW
Cape Fear Precast Mildred Thomas Crt Facility	NCG070187	NPDES Permits	L	620 Mildred Ct	Jacksonville	Unkno wn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #2 258 PLANT**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Burton Park Pump Station Upgrades and Force Main	SW8121028	Permit Type	State Stormwater
Burton Park Pump Station Upgrades and Force Main	SW8121028	Permit Issued Date	11/14/2012
ABC Supply Company	SW8090122	Permit Type	State Stormwater
ABC Supply Company	SW8090122	Permit Issued Date	5/1/2015
ABC Supply Company	SW8090122	Permit Expiration Date	1/1/2022
Jarmans Fork Sewer Extension	SW8900616	Permit Type	State Stormwater
Jarmans Fork Sewer Extension	SW8900616	Permit Issued Date	7/13/1990
Brown Site	SW8021130	Permit Type	State Stormwater
Brown Site	SW8021130	Permit Issued Date	3/27/2003
Liberty Park Townhomes	SW8120401	Permit Type	State Stormwater
Liberty Park Townhomes	SW8120401	Permit Issued Date	4/20/2012
Liberty Tree Crossing Section 3	SW8031010	Permit Type	State Stormwater
Liberty Tree Crossing Section 3	SW8031010	Permit Issued Date	3/1/2004
Cape Fear Precast Mildred Thomas Crt Facility	NCG070187	Permit Type	Stone, Clay, Glass, and Concrete Products Stormwater Discharge COC
Cape Fear Precast Mildred Thomas Crt Facility	NCG070187	Permit Issued Date	10/4/2013
Cape Fear Precast Mildred Thomas Crt Facility	NCG070187	Permit Expiration Date	5/31/2018
Cape Fear Precast Mildred Thomas Crt Facility	NCG070187	Receiving Stream	NEW RIVER

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #2 258 PLANT**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #2 258 PLANT**

Unsaturated Zone Rating	57.0
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

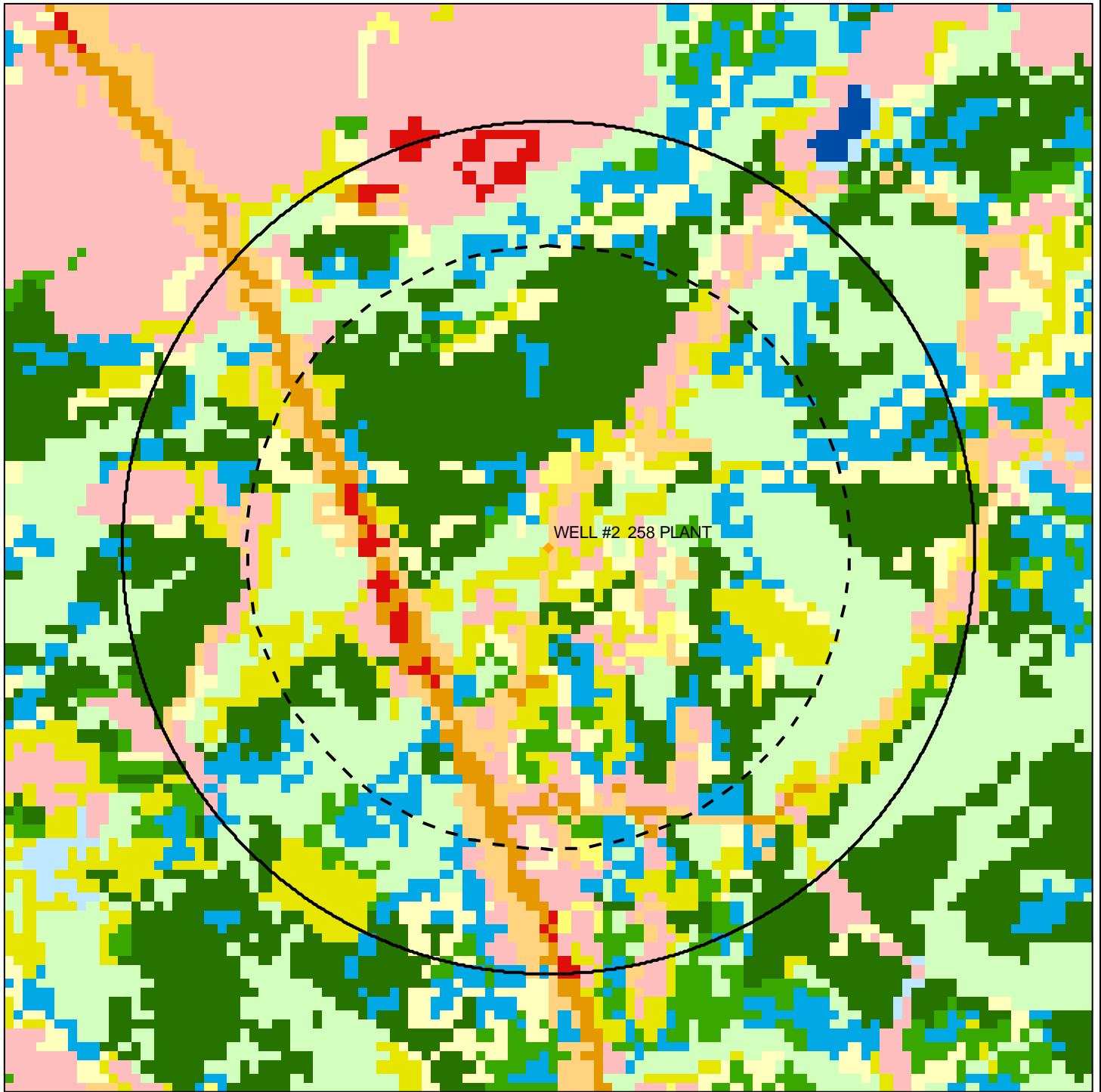
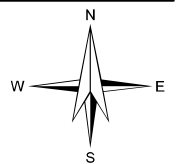


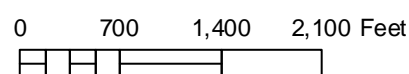
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



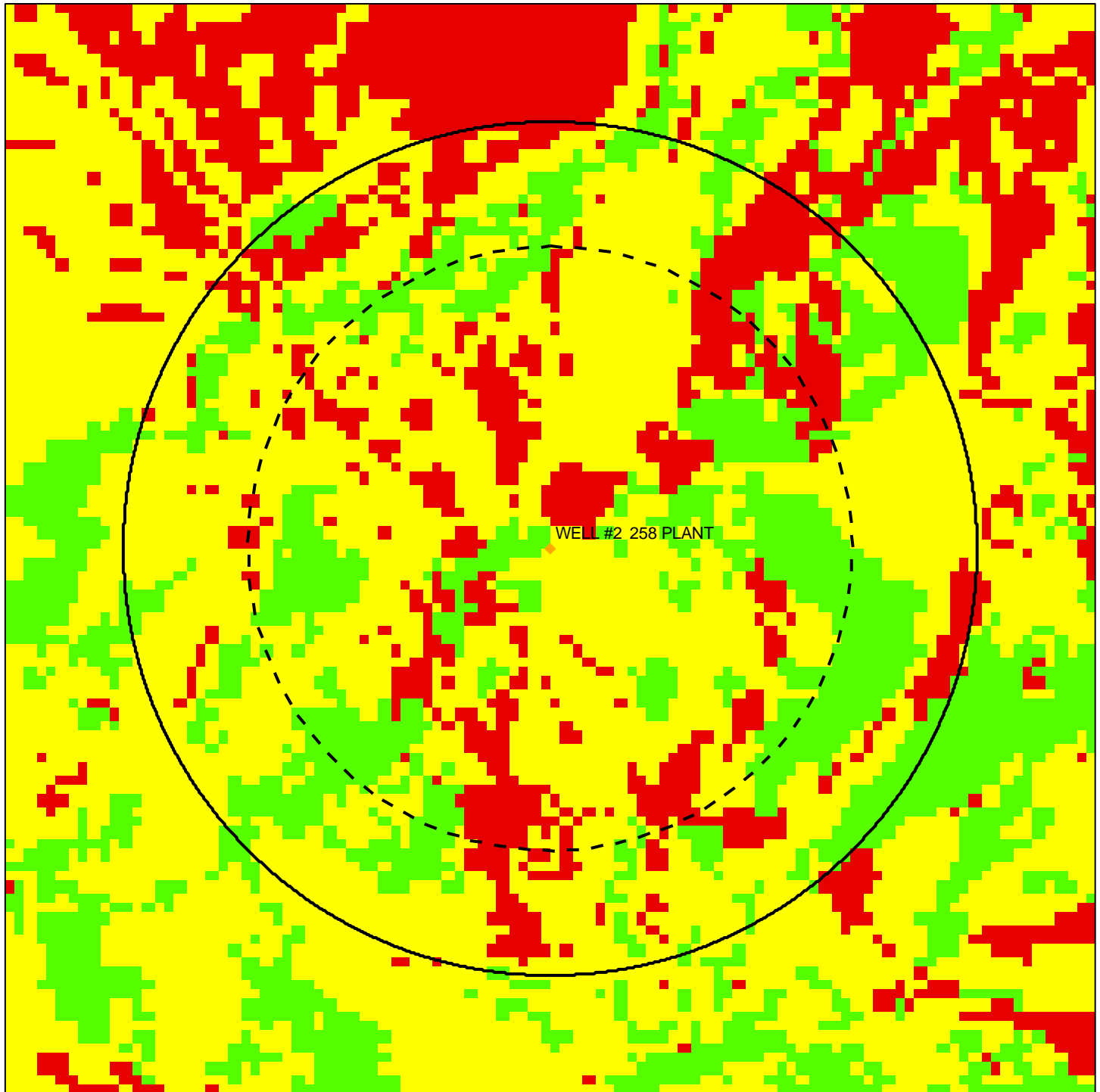
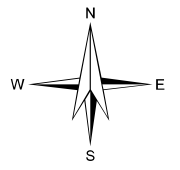
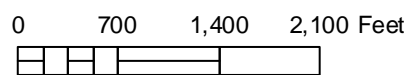


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



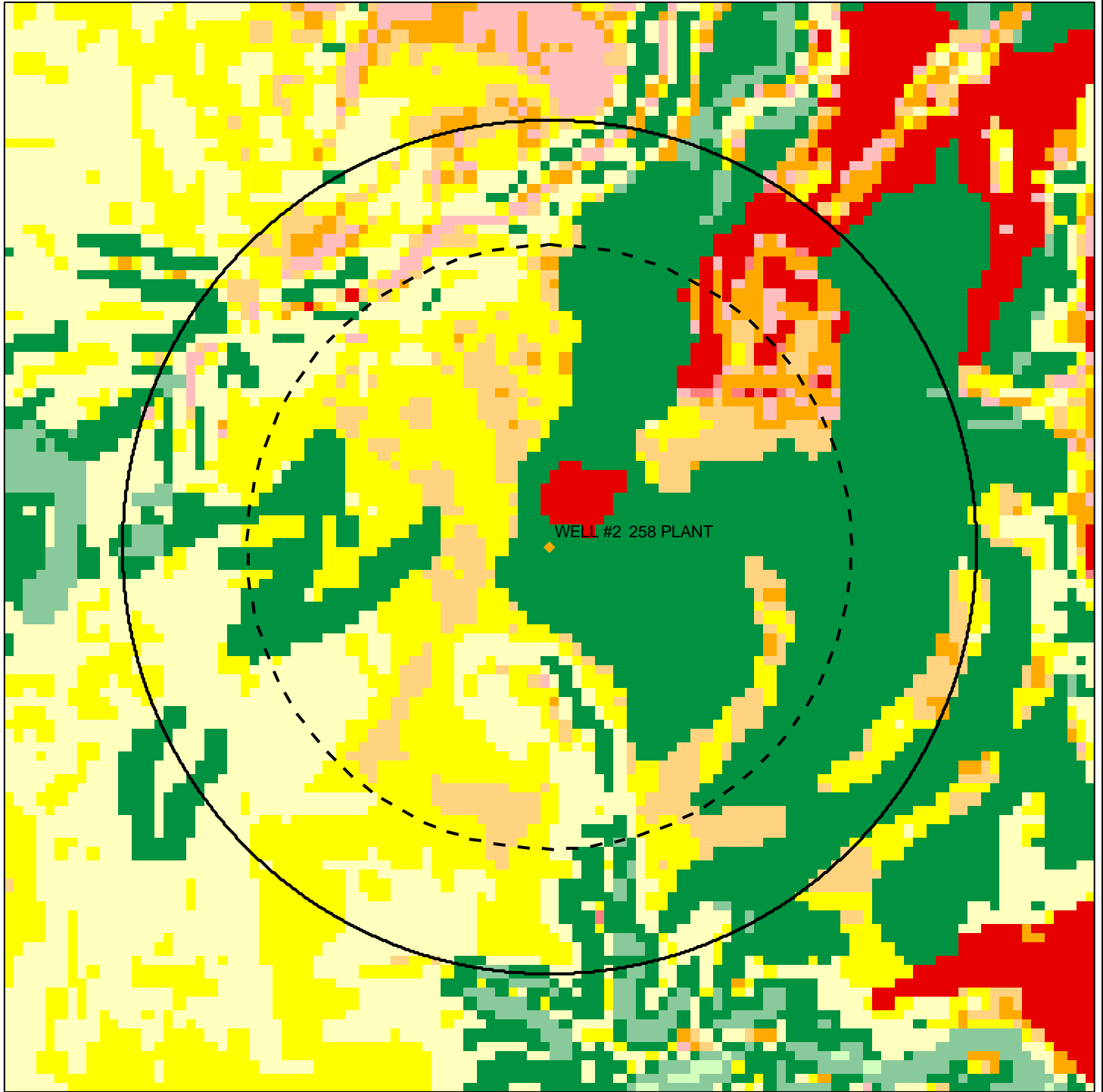
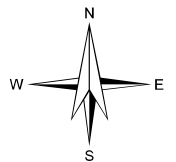














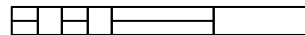
FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to 1,280 sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |

0 700 1,400 2,100 Feet



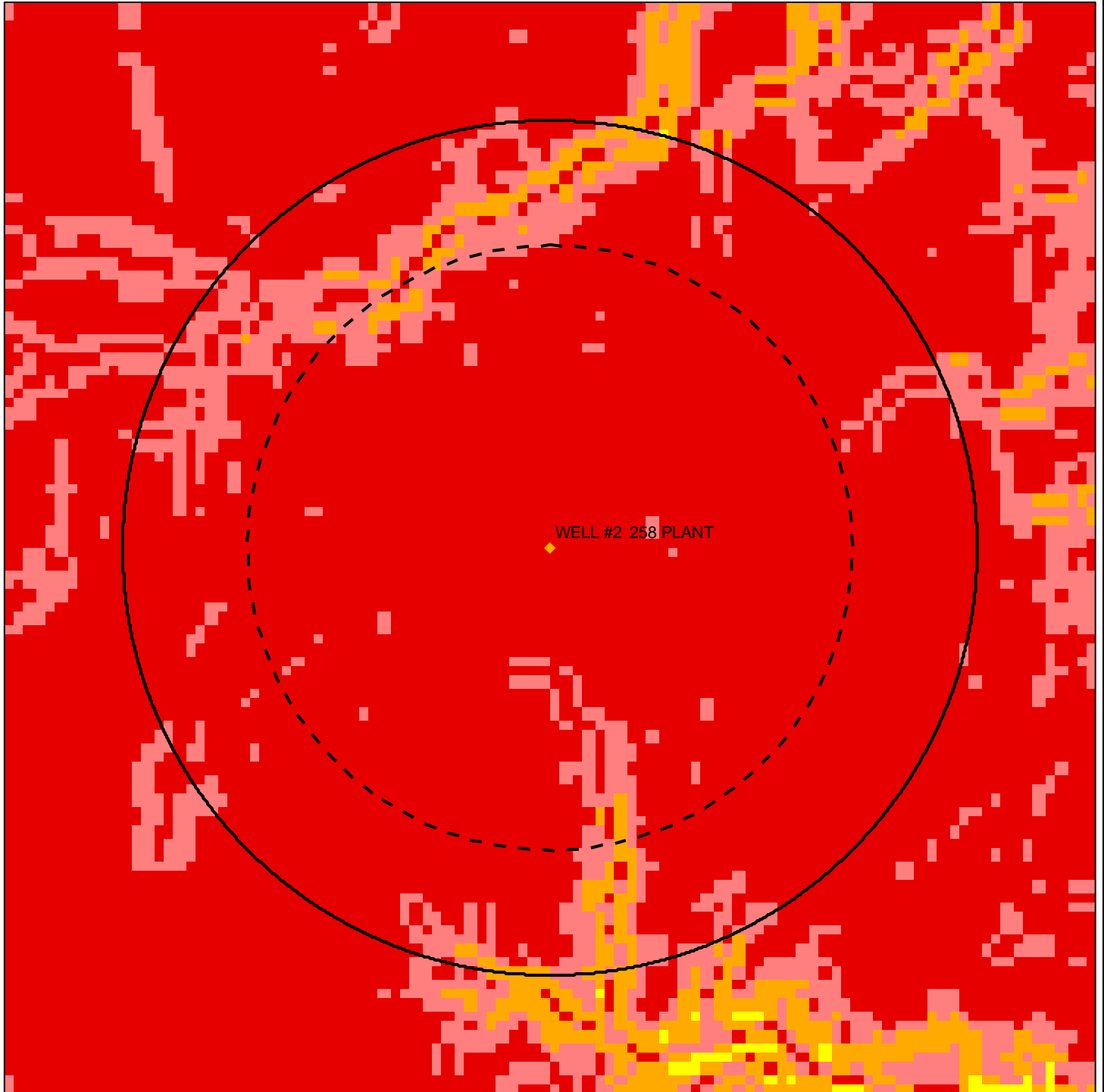
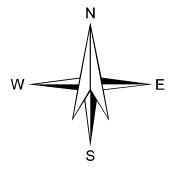








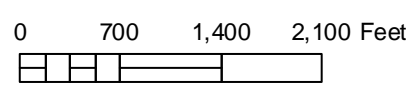


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



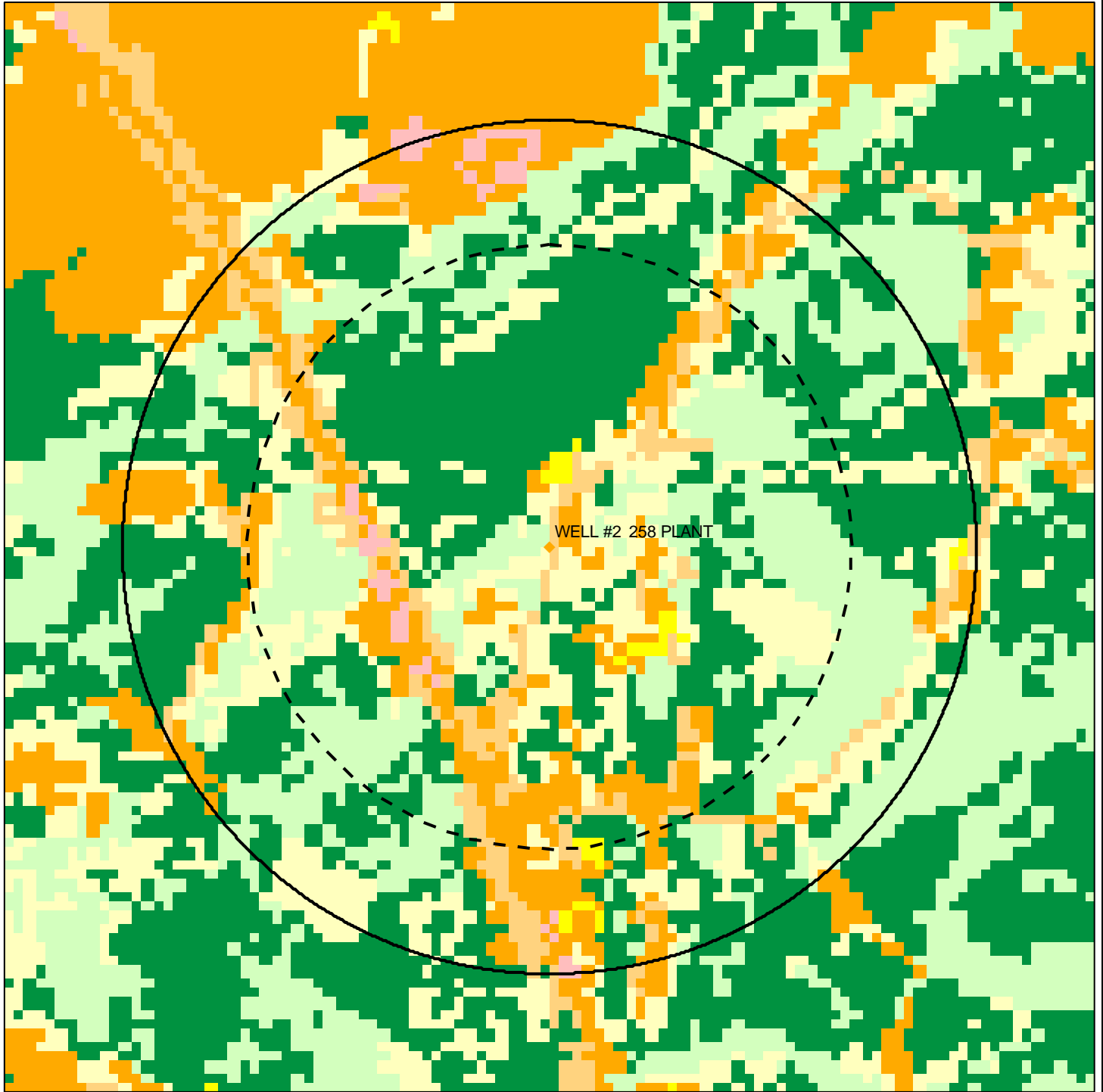
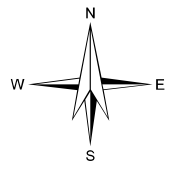











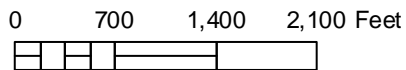


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



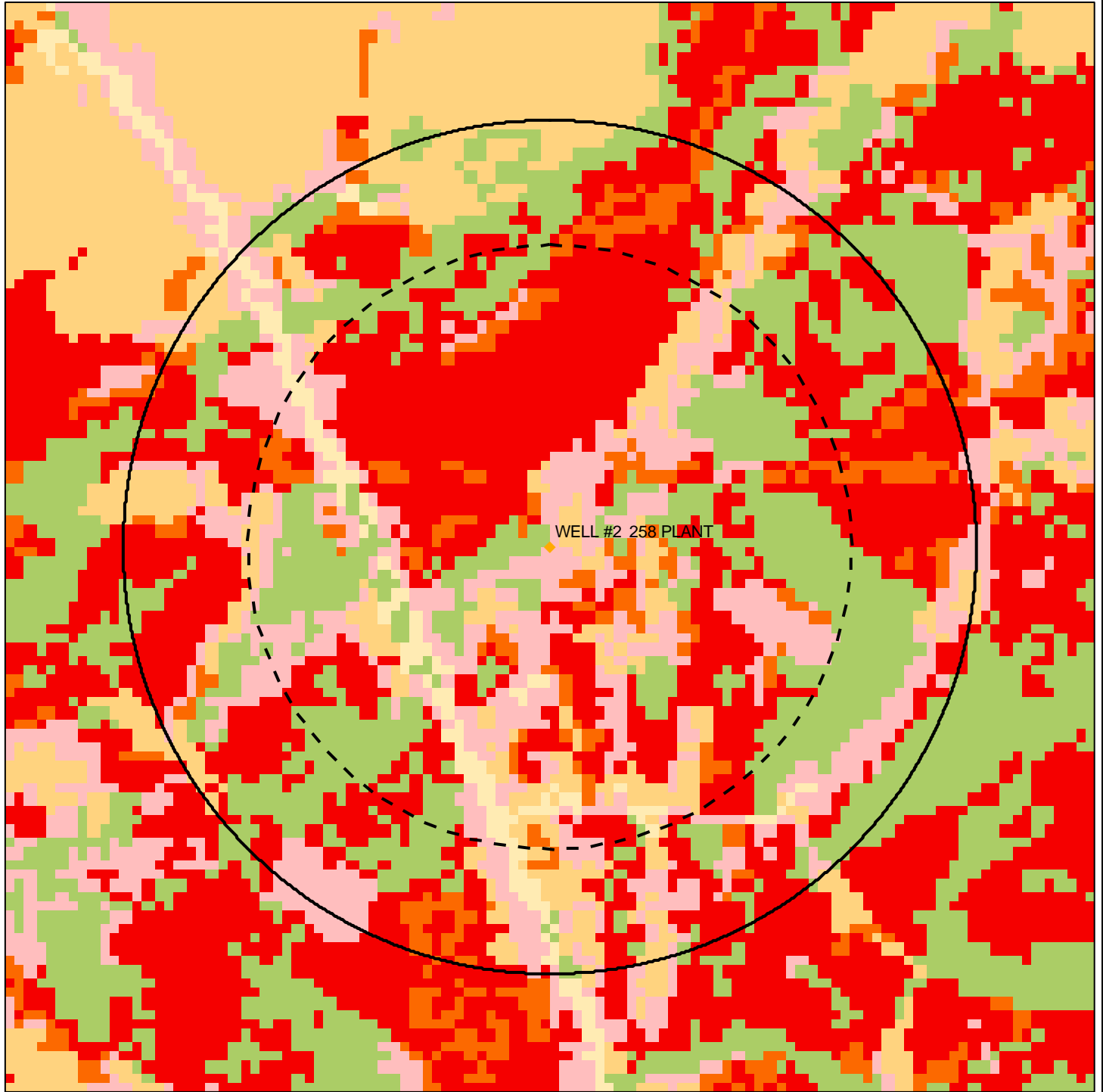
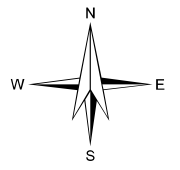
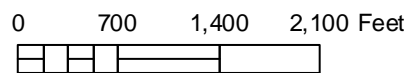


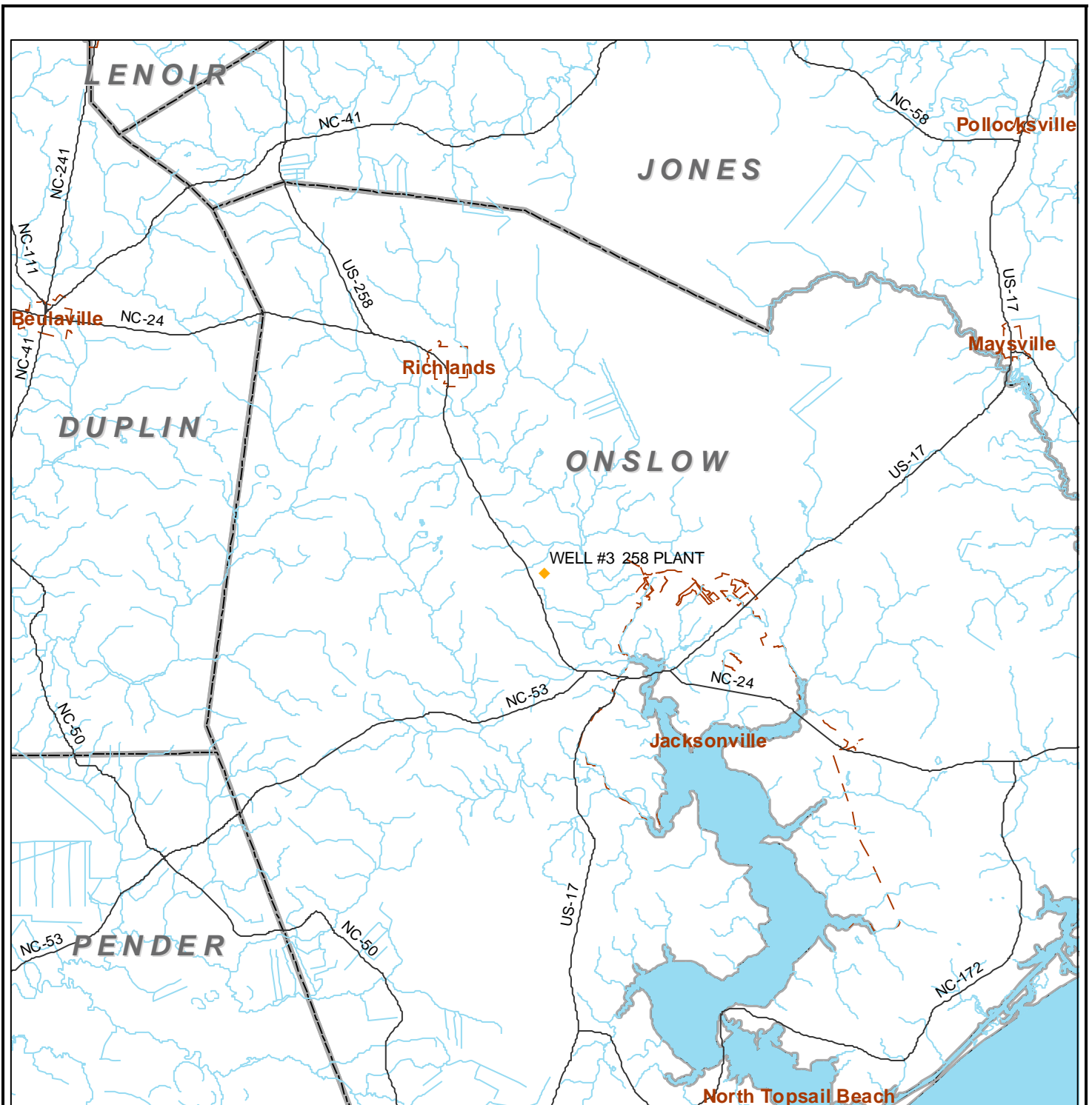
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #2 258 PLANT



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

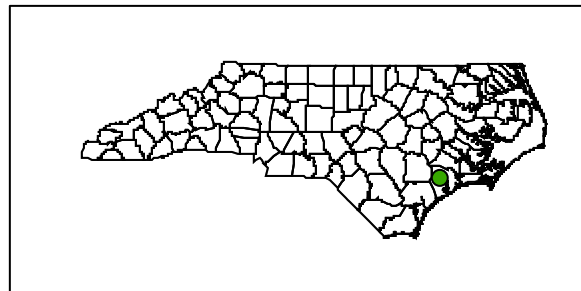
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



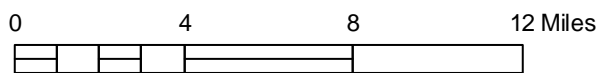
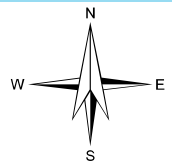


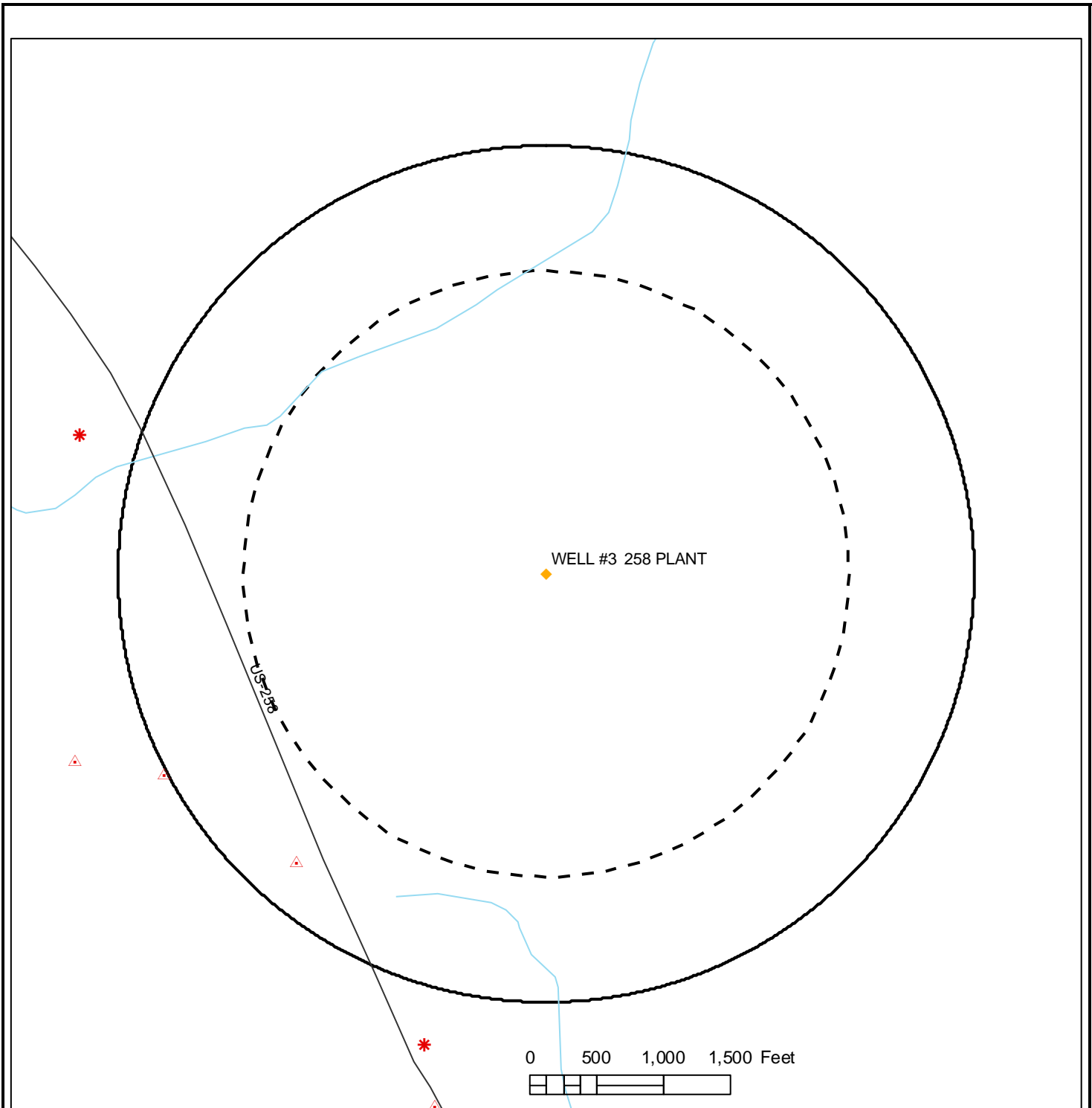
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

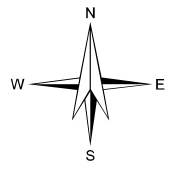




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #3 258 PLANT**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Brown Site	SW8021130	NPDES Permits	L	Hwy 258	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #3 258 PLANT**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Brown Site	SW8021130	Permit Type	State Stormwater
Brown Site	SW8021130	Permit Issued Date	3/27/2003

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #3 258 PLANT**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #3 258 PLANT

Unsaturated Zone Rating	57.8
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

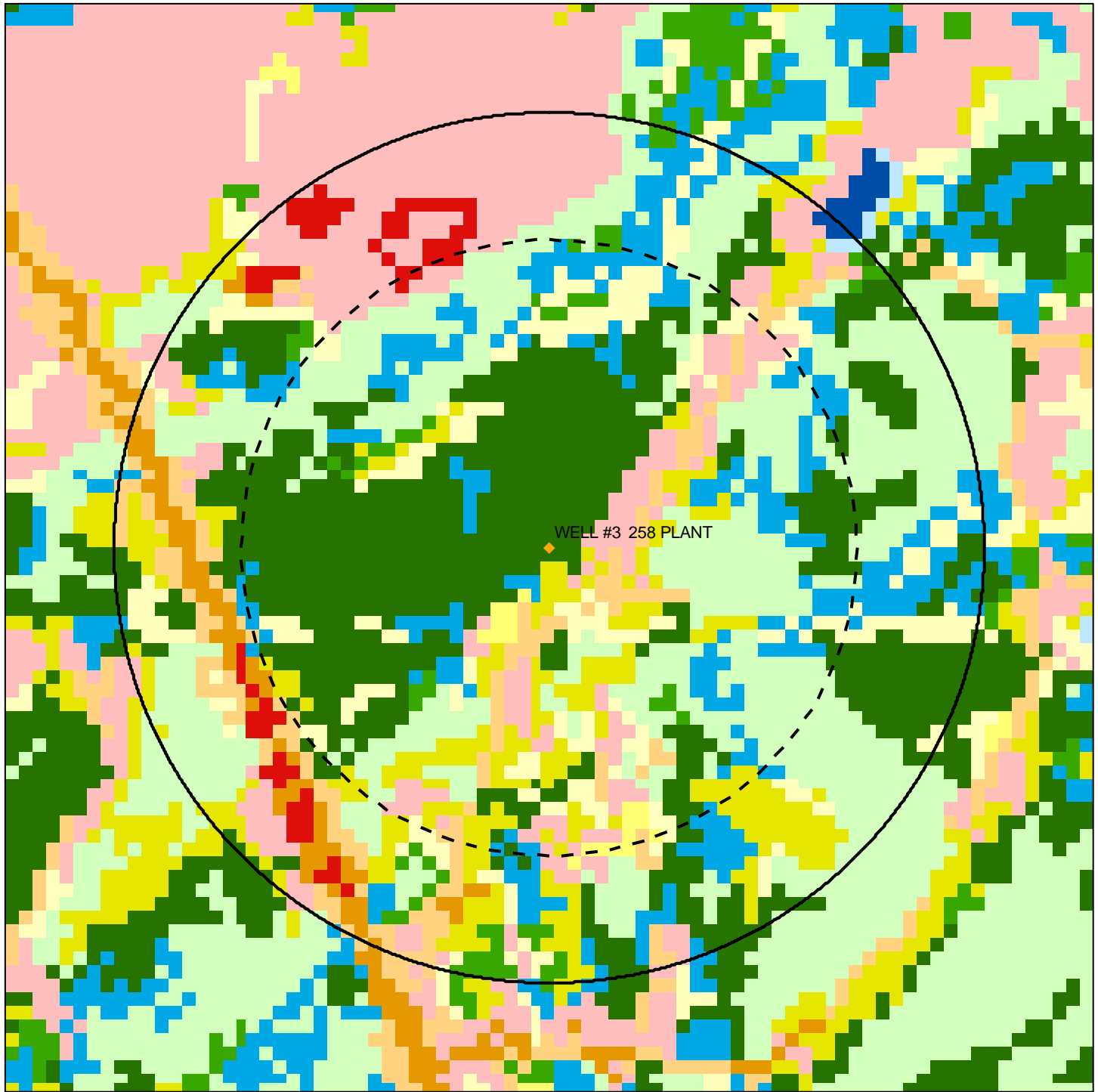
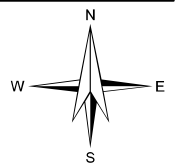


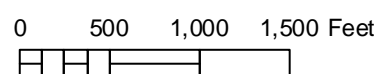
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



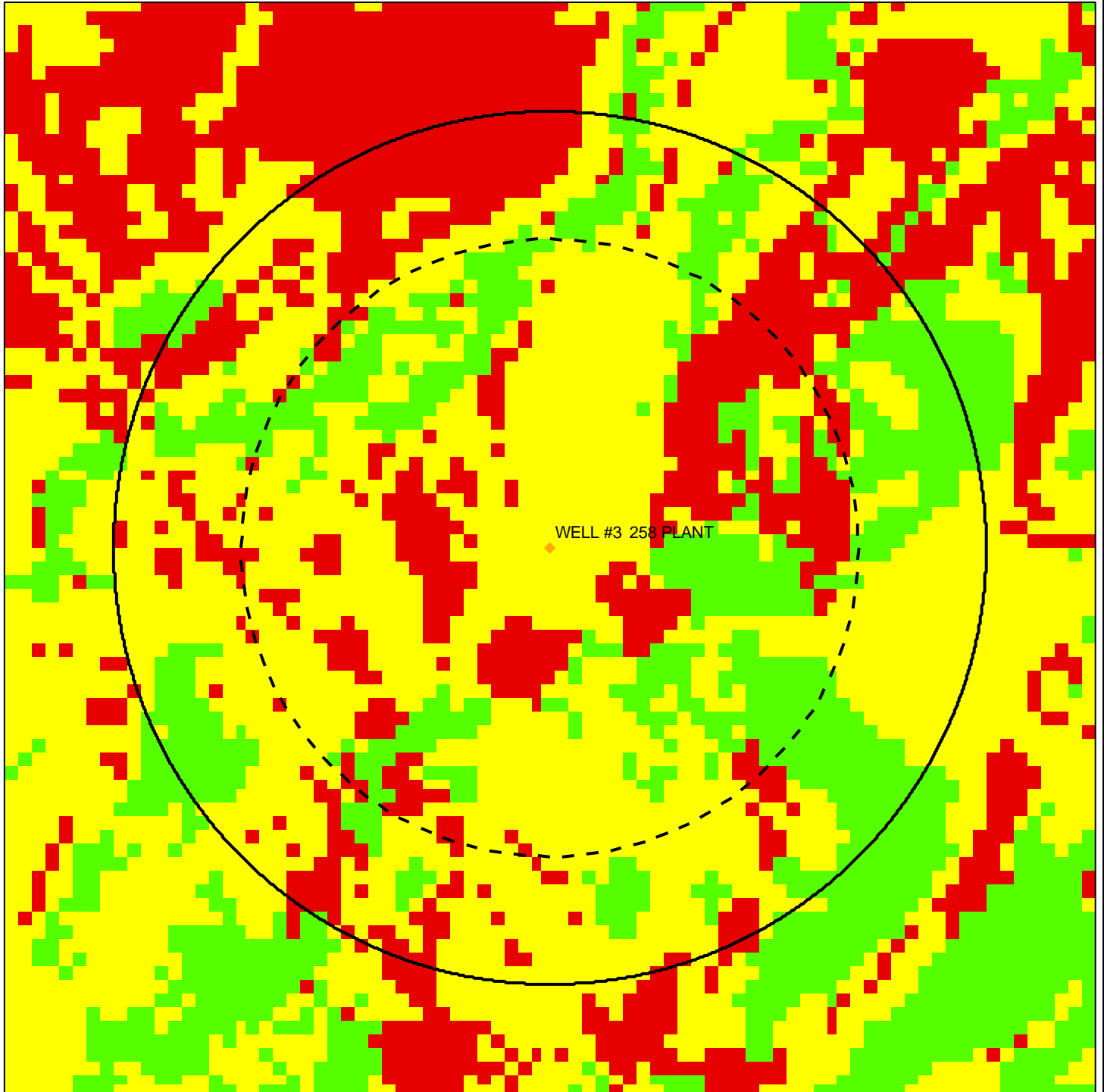
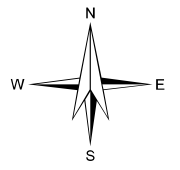
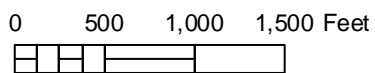


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



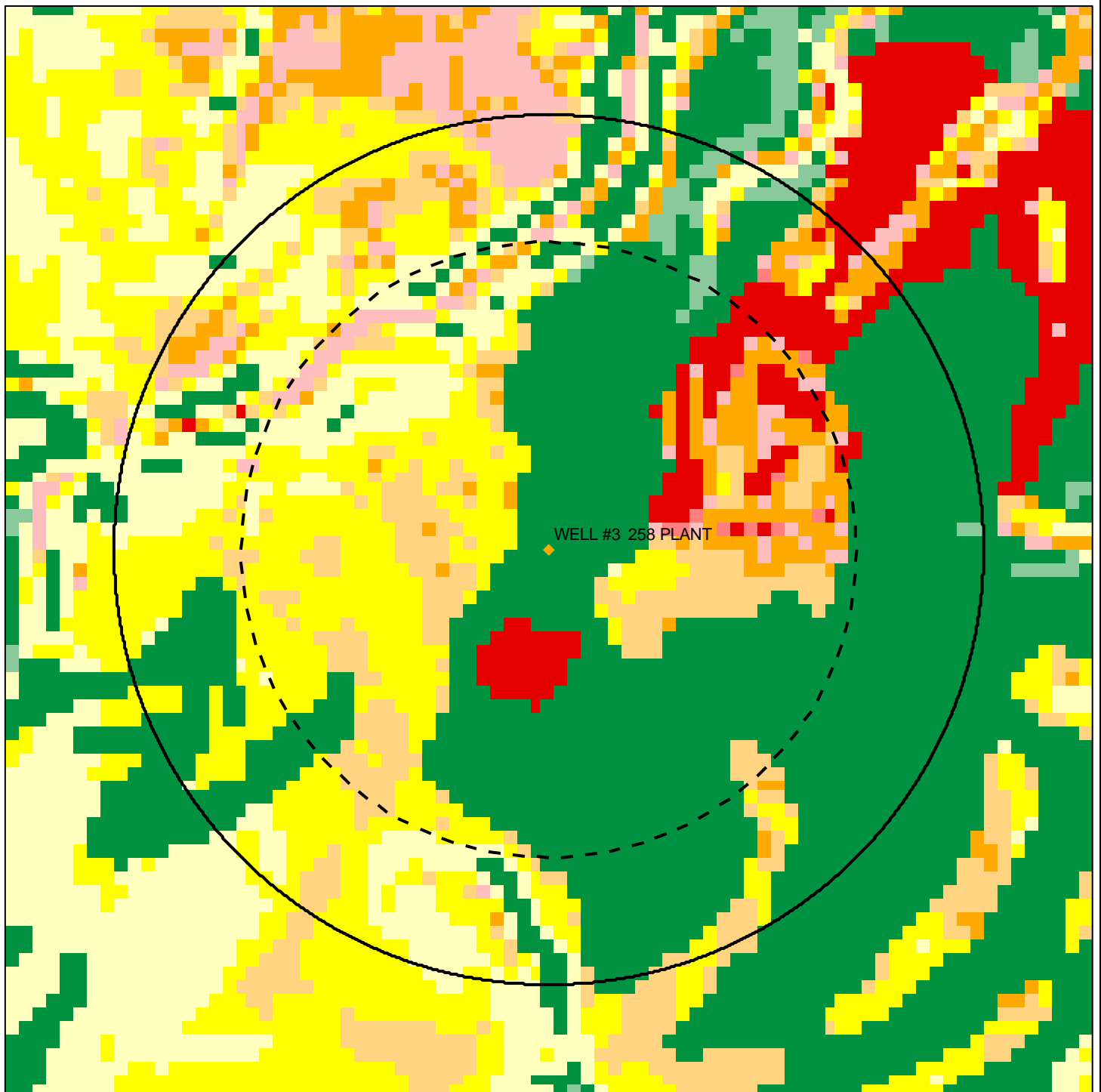
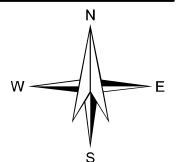
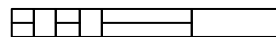


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |

0 500 1,000 1,500 Feet



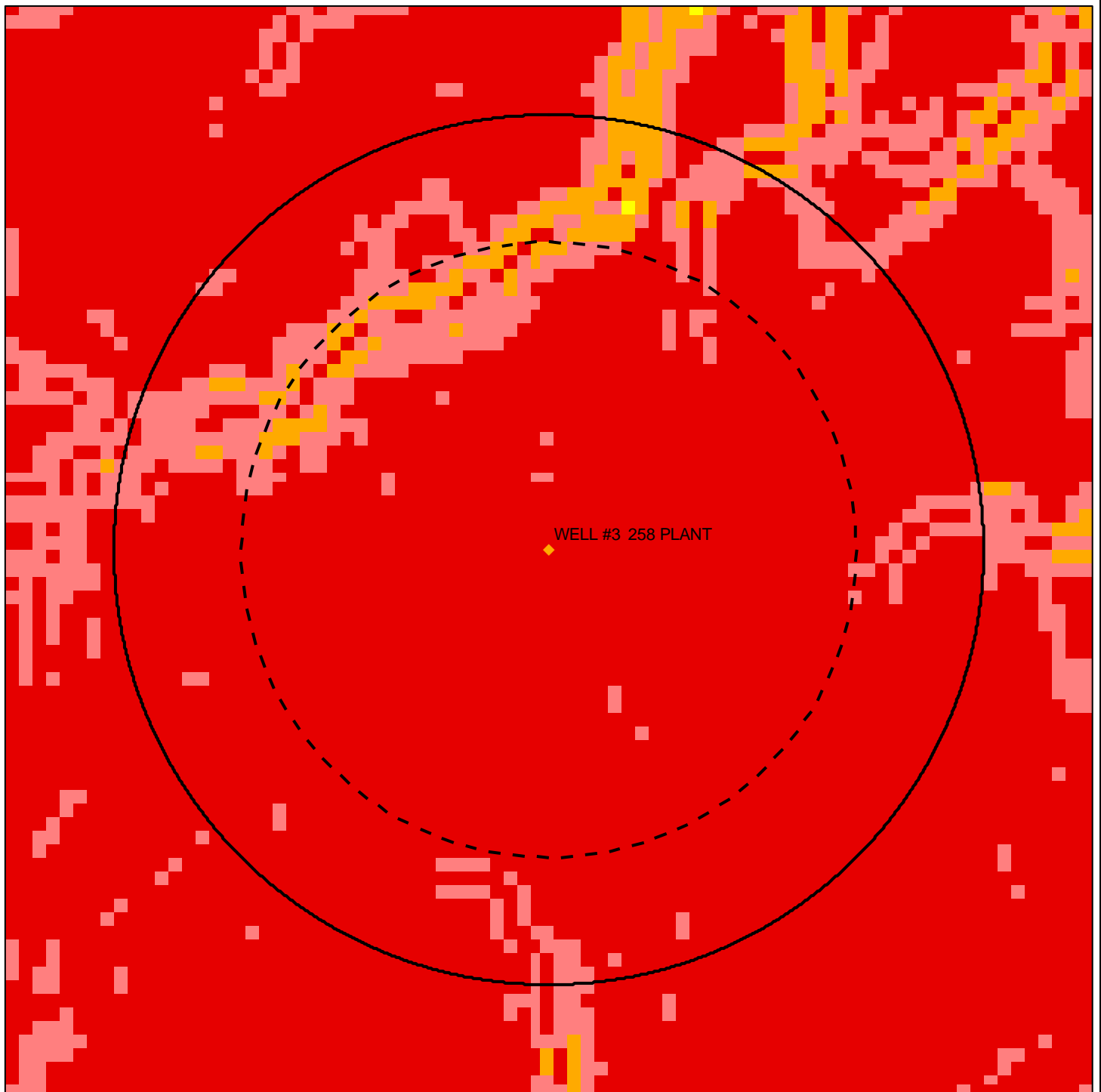
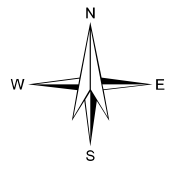
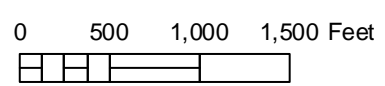


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- | | | |
|--|---|---|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



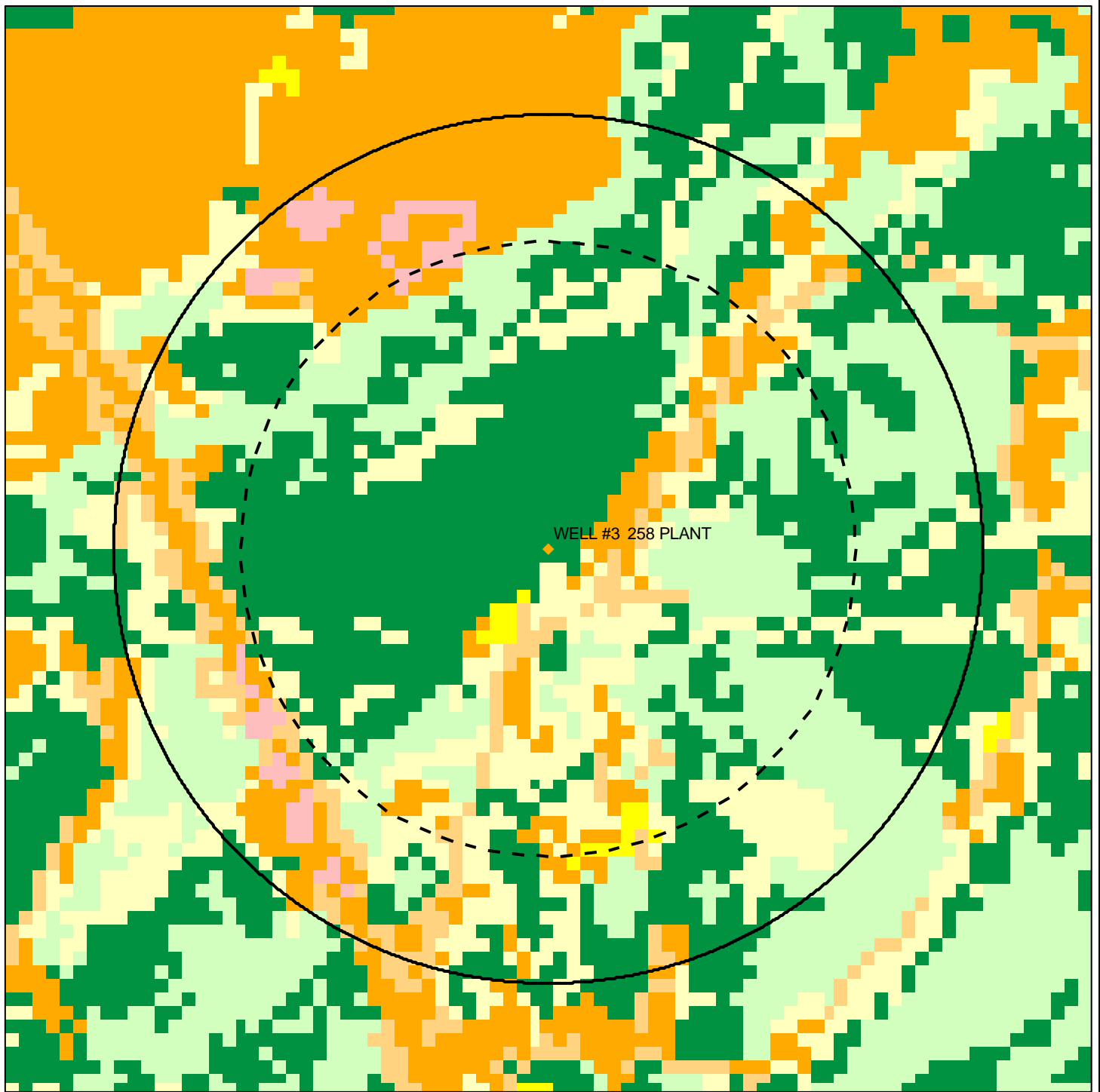
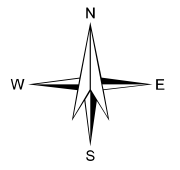
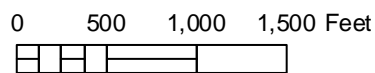


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- | | |
|--|--|
| 1 Water, Wetlands (Woody and Herbaceous) | 6 Developed, Open Space |
| 2 Barren Land (Rock/Sand/Clay) | 7 Developed, Low Intensity; Cultivated Crops |
| 3 Forest (Deciduous, Evergreen, Mixed) | 8 Developed, Medium Intensity |
| 4 Grassland/Herbaceous; Shrub/Scrub | 10 Developed, High Intensity |
| 5 Pasture/Hay | |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



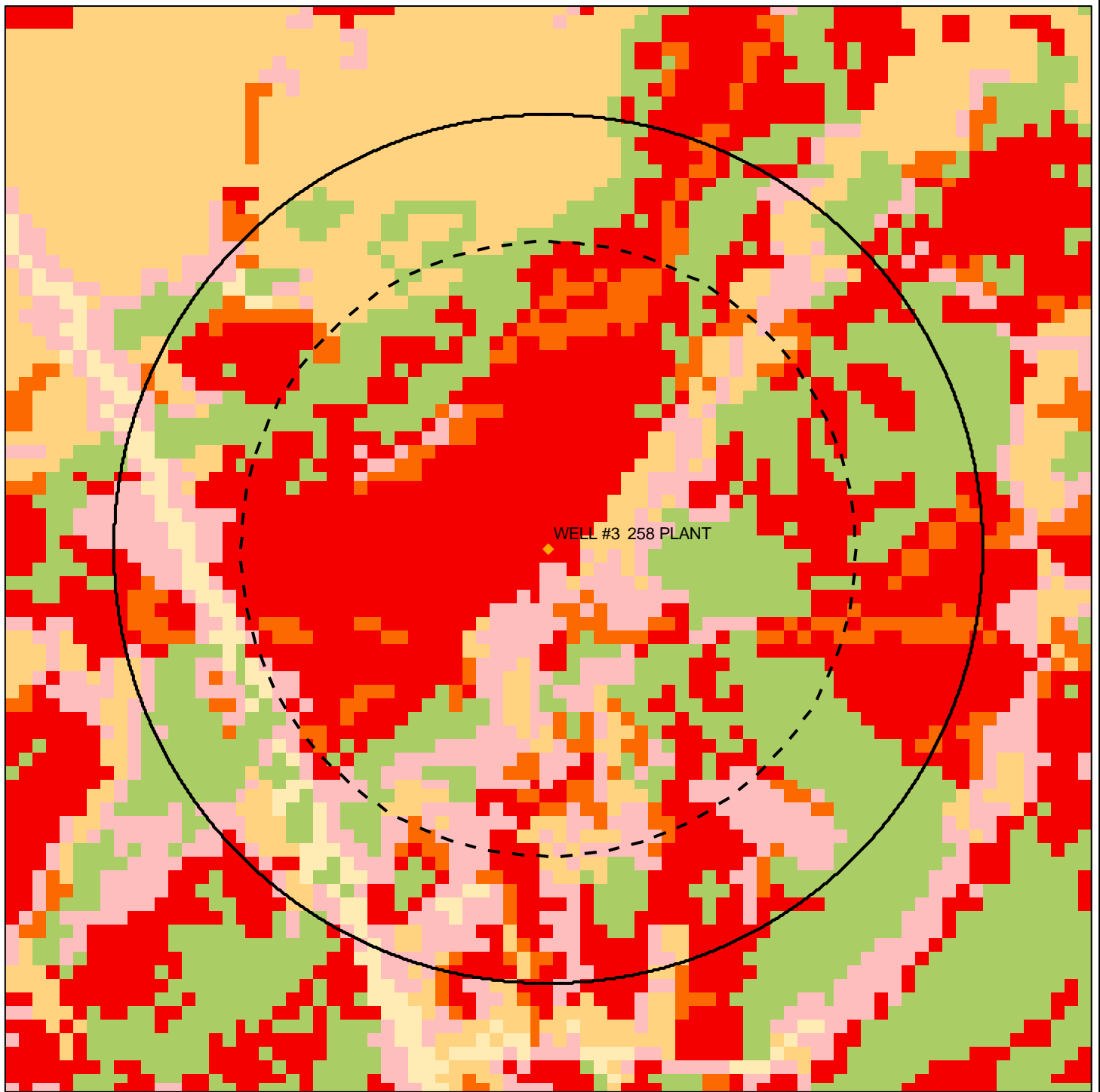
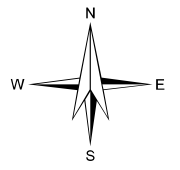
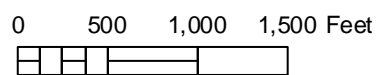


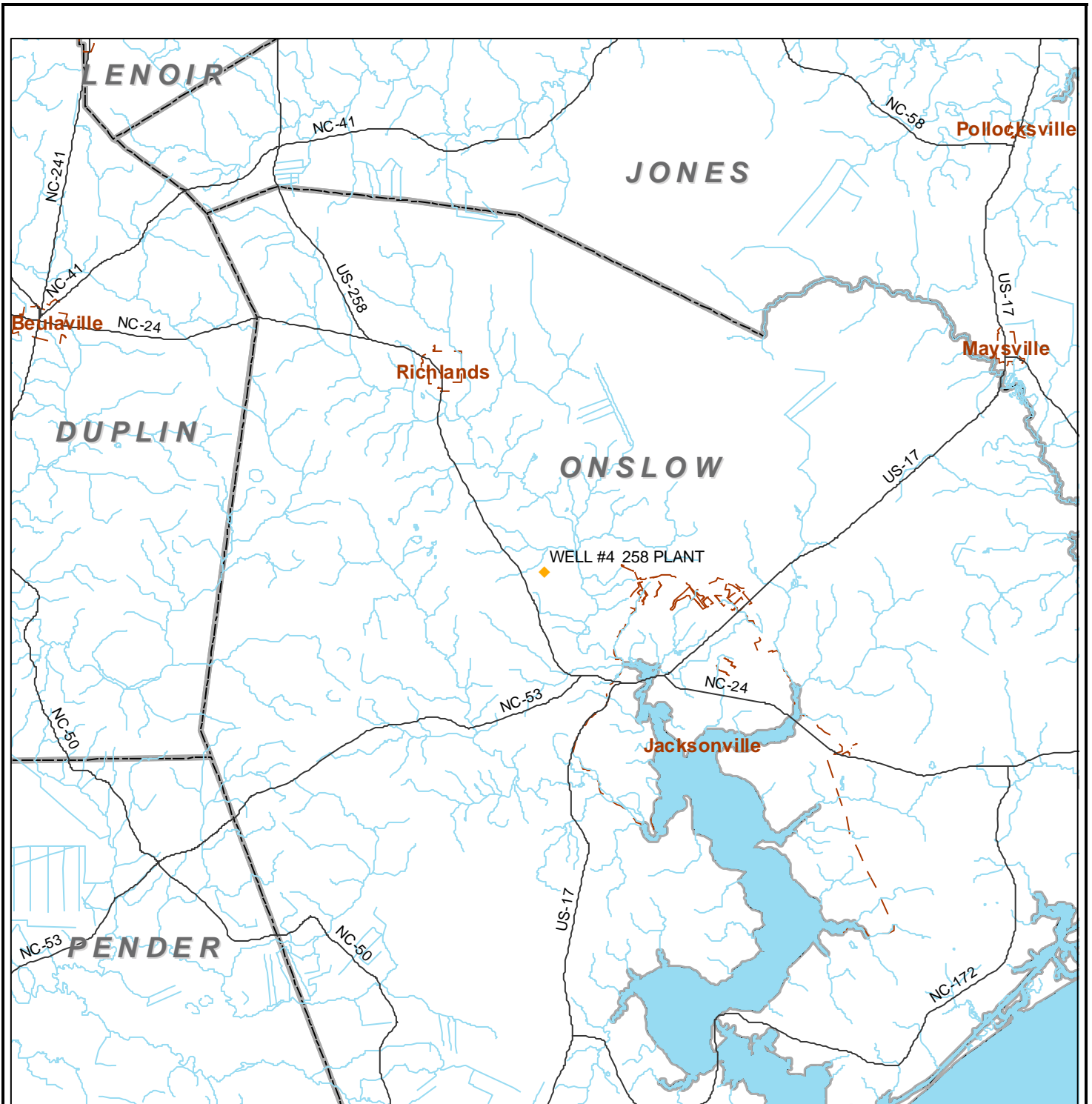
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #3 258 PLANT



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

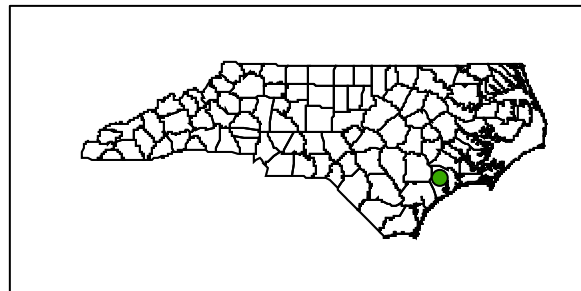
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



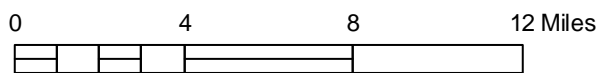
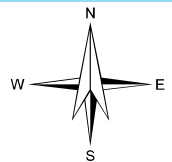


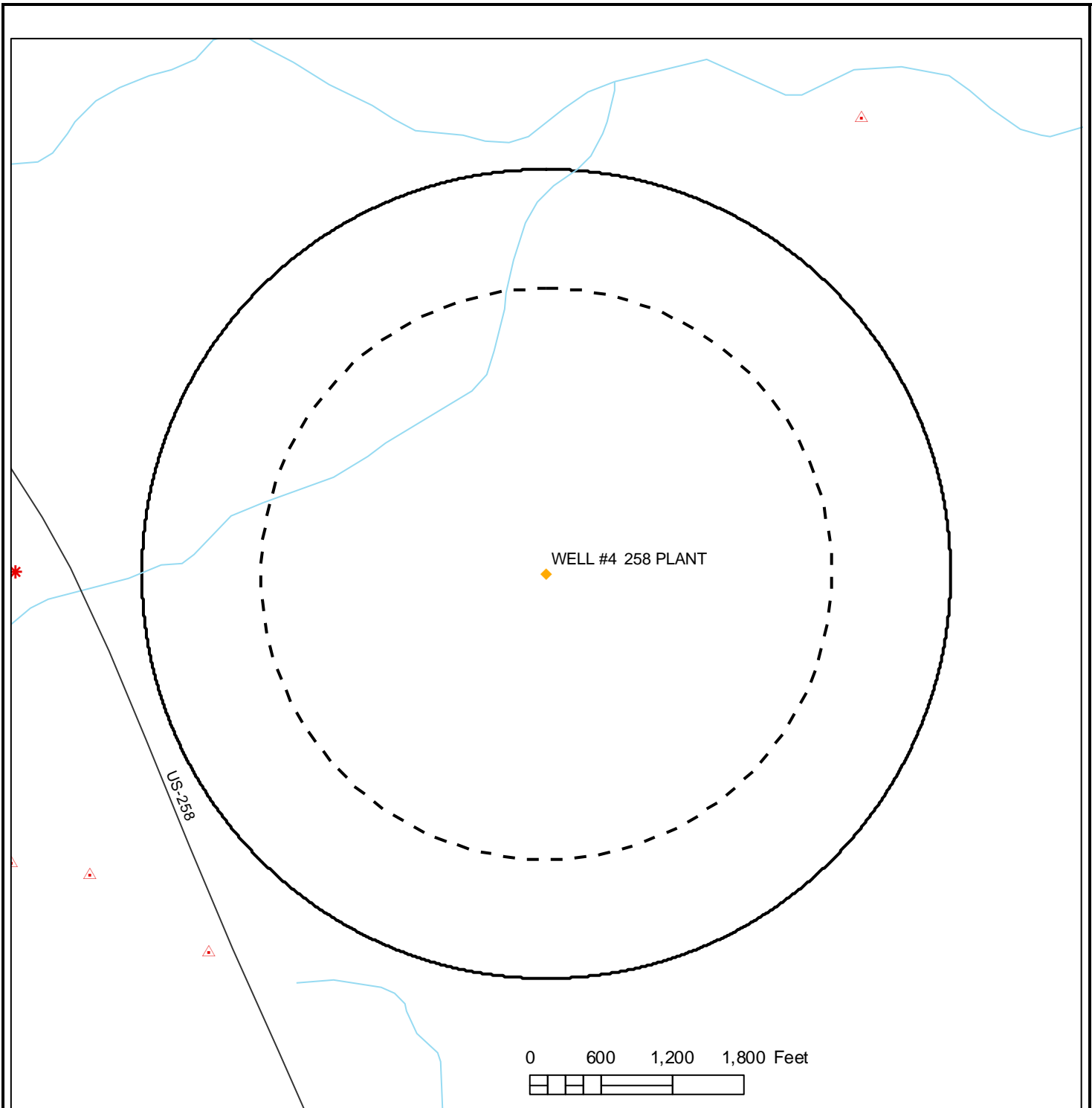
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

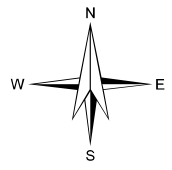




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #4 258 PLANT**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #4 258 PLANT**

Unique Attributes

PCS Name	PCS ID	Attribute	Value

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #4 258 PLANT**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #4 258 PLANT**

Unsaturated Zone Rating	58.9
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

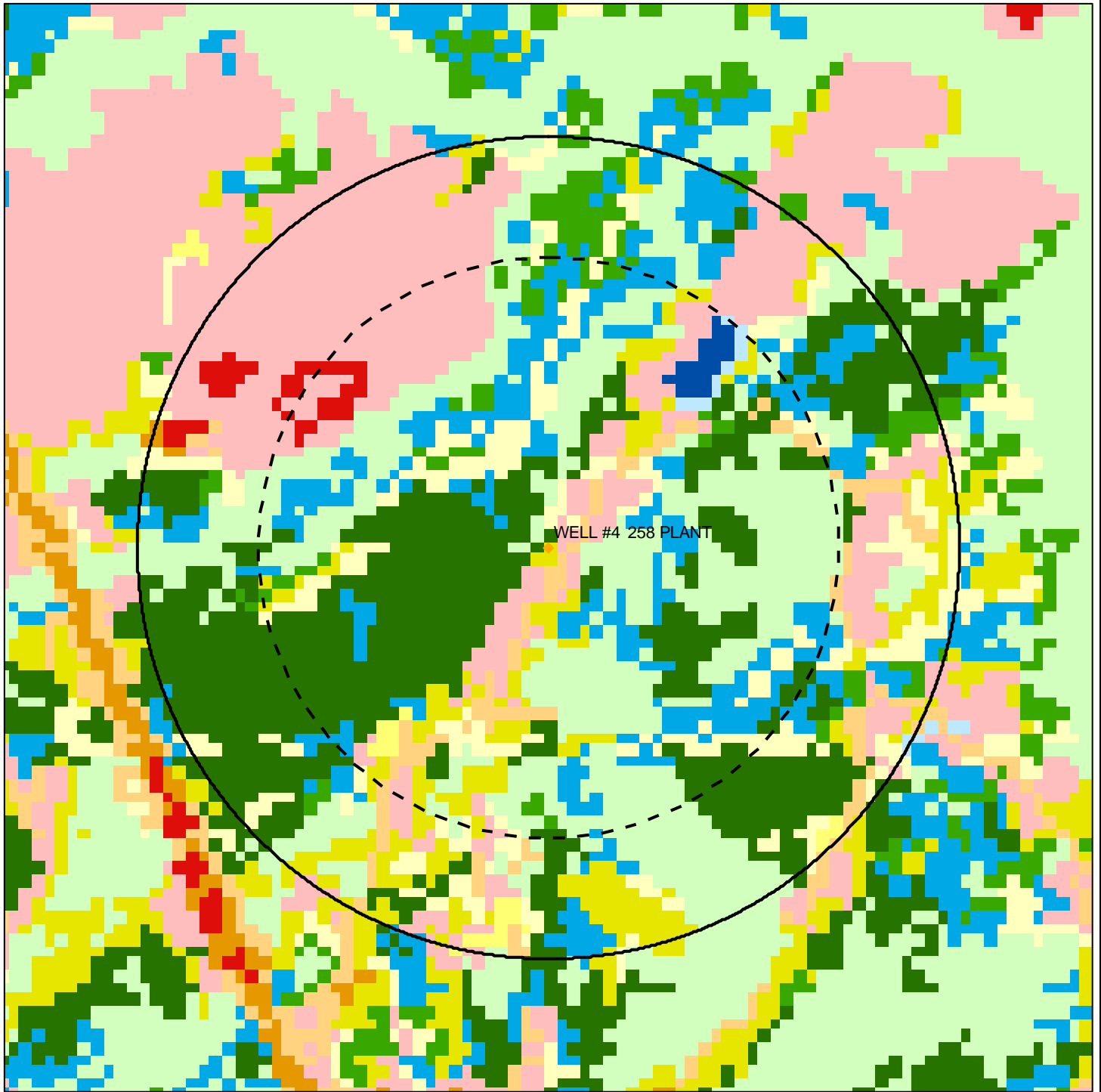
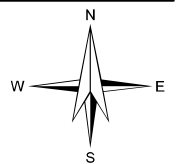


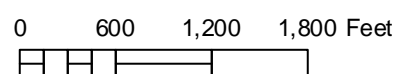
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



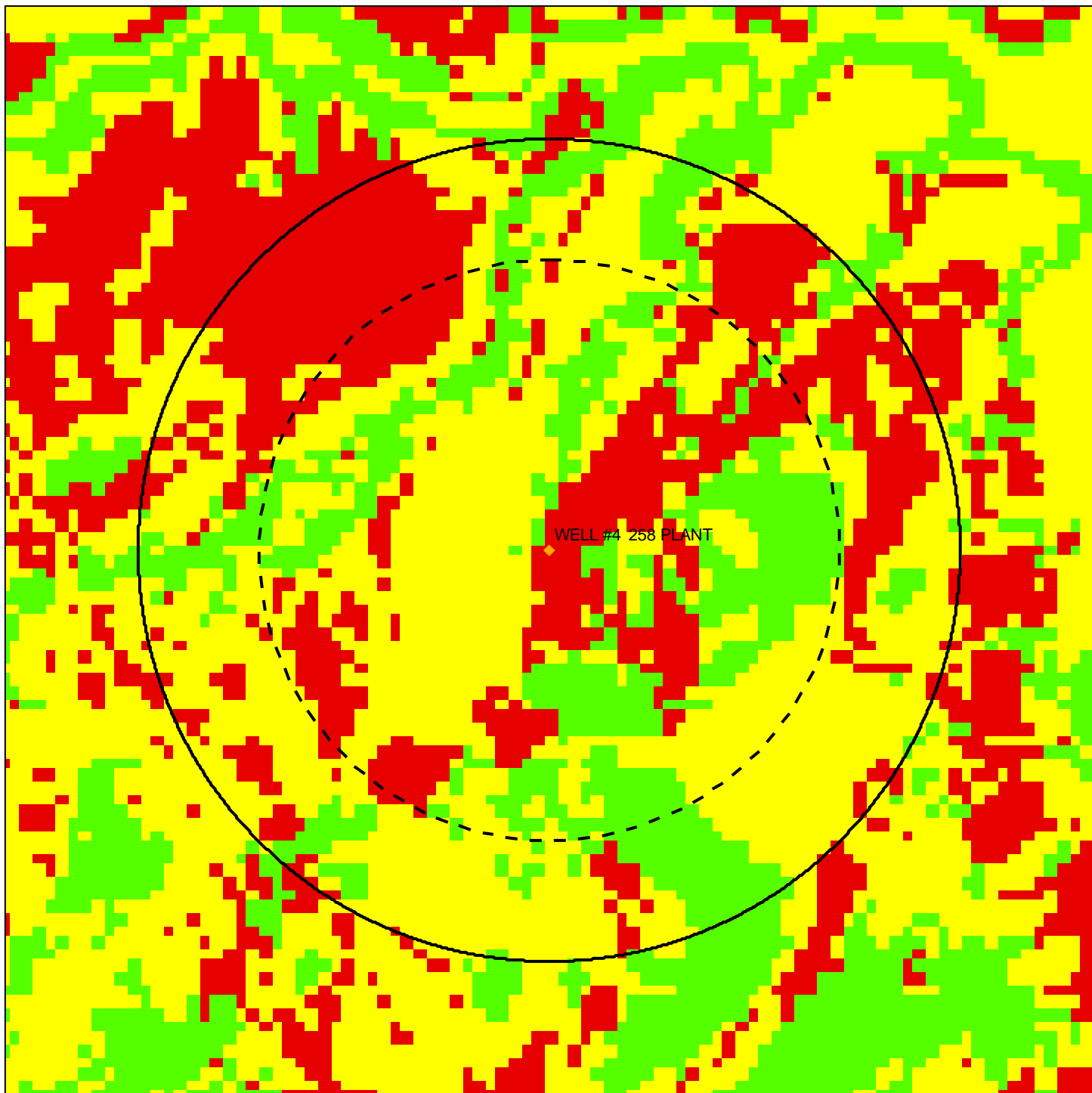
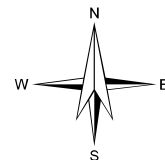


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT

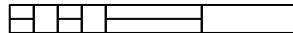


- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 600 1,200 1,800 Feet



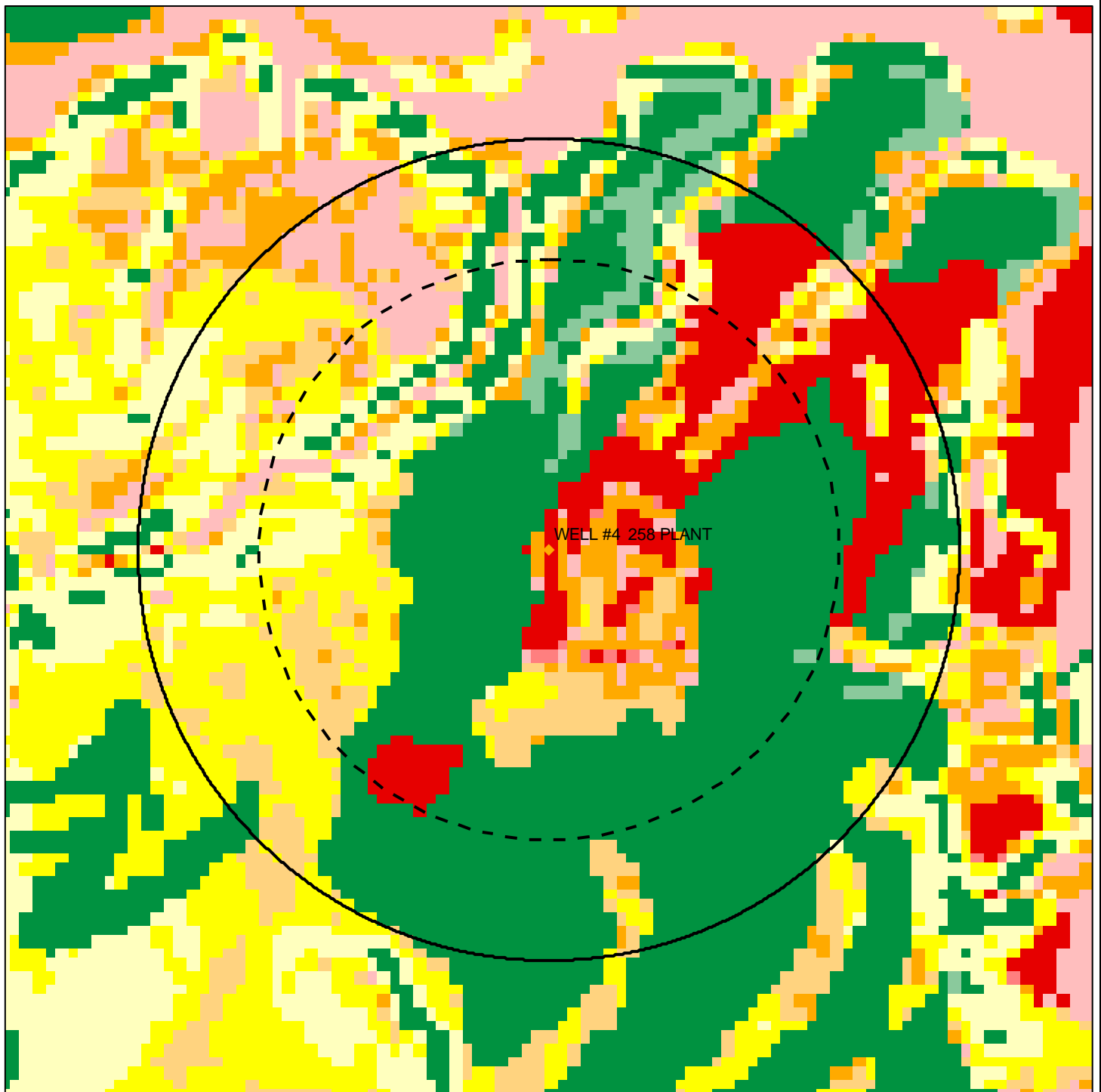
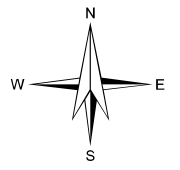
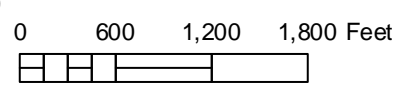


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



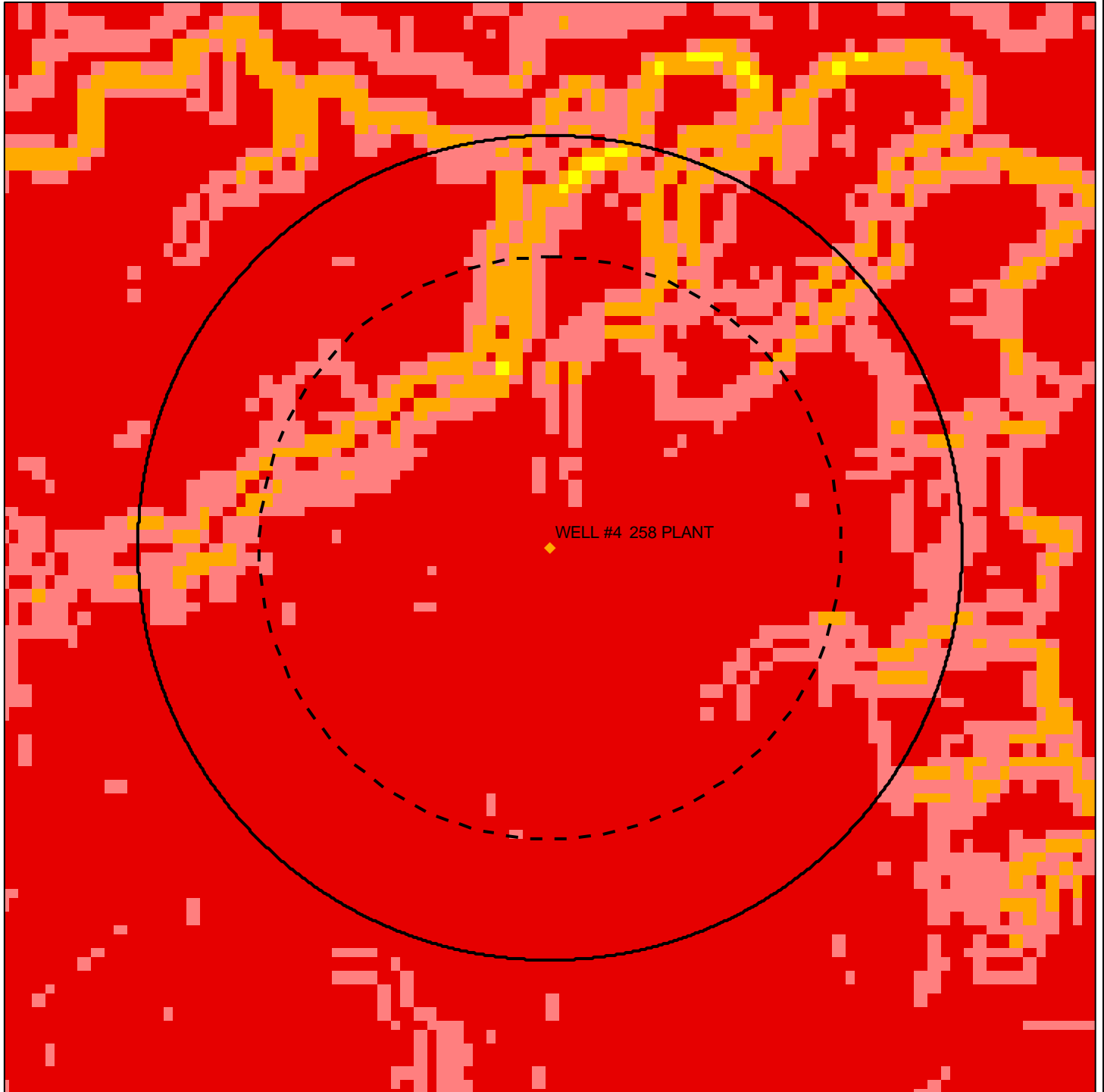
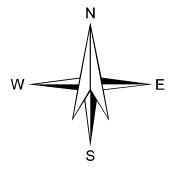








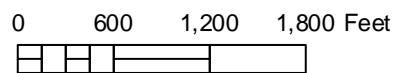


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



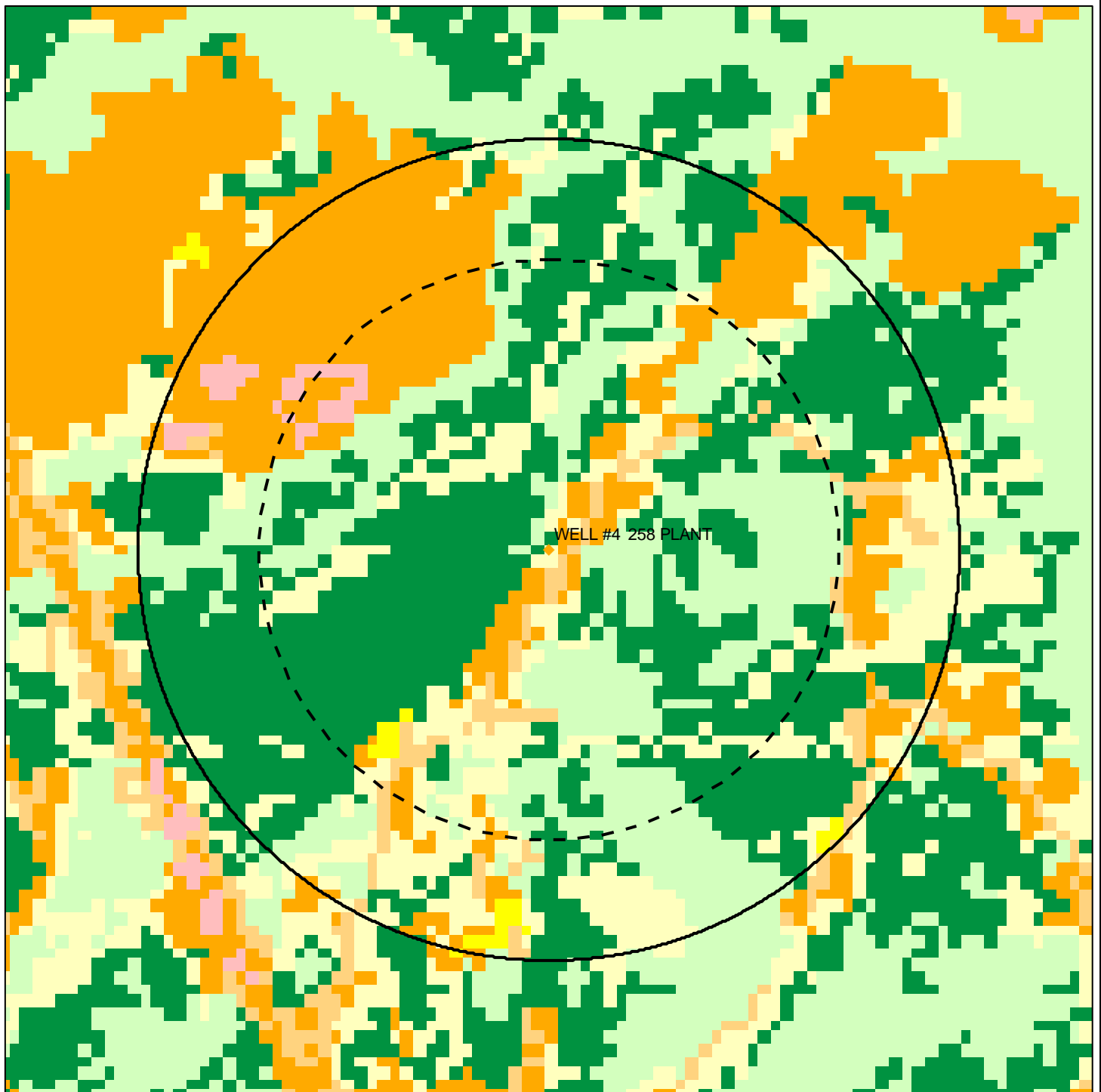
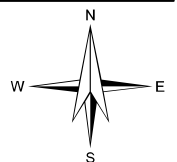








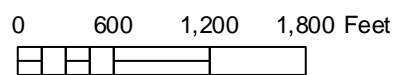


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



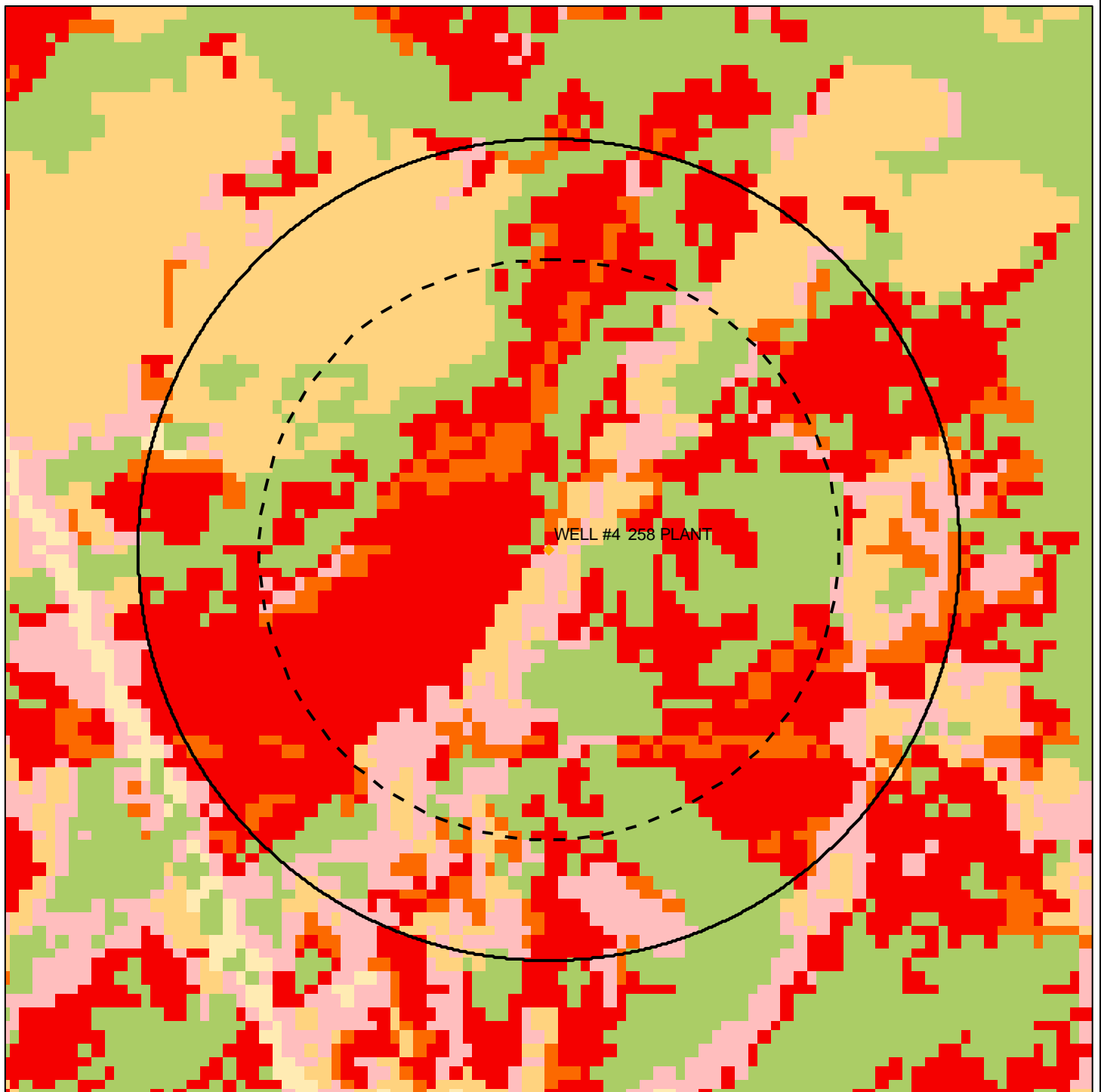
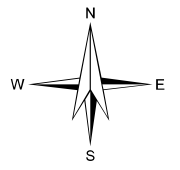
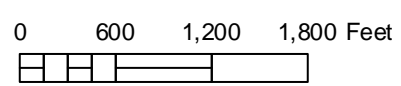


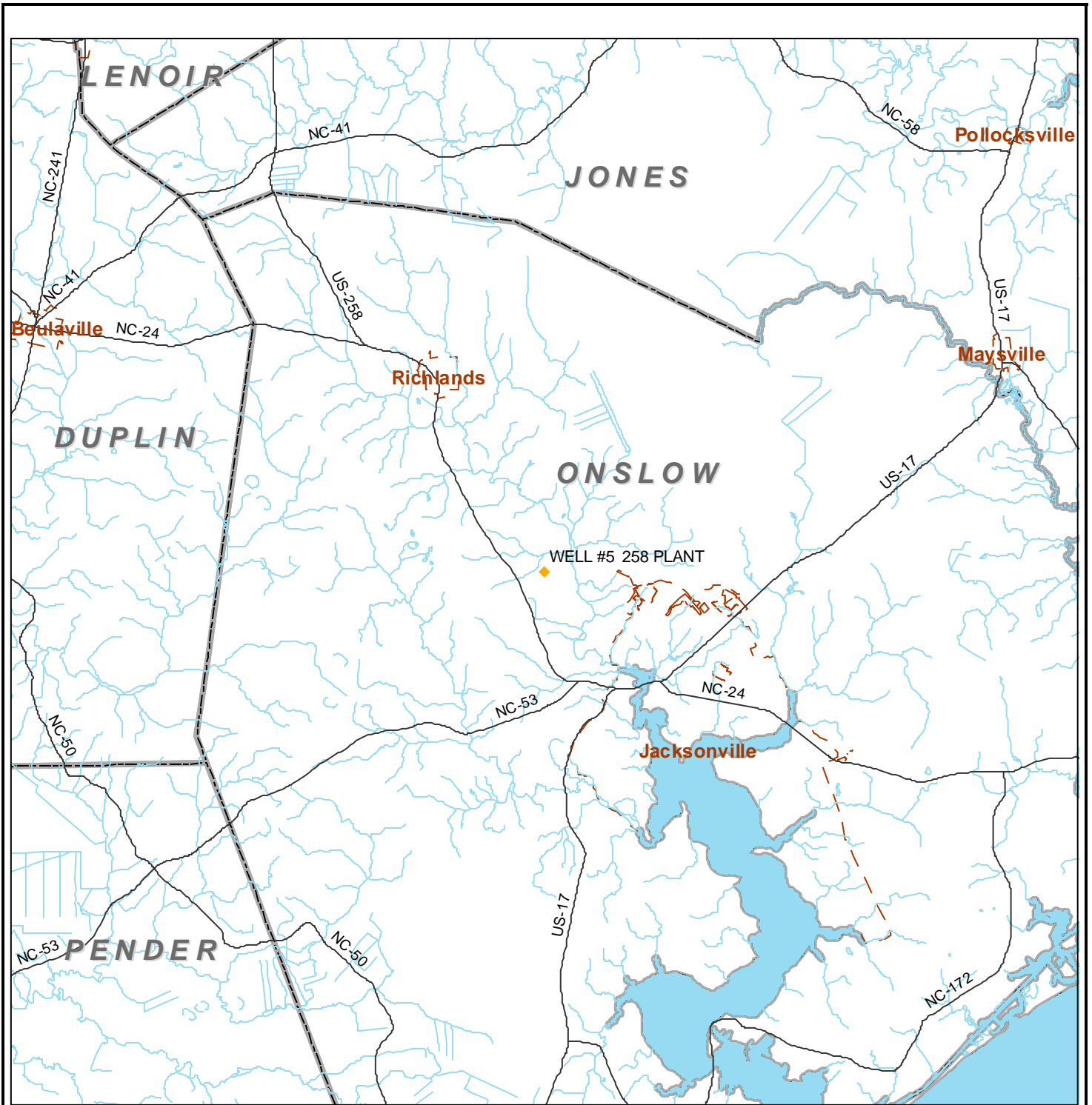
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #4 258 PLANT



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

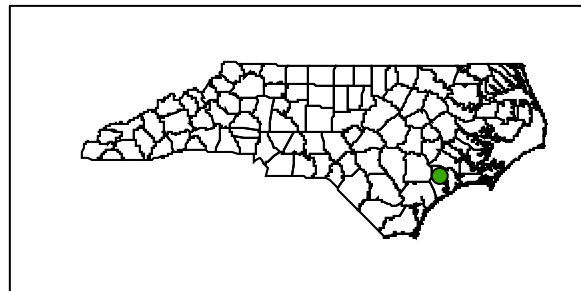
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



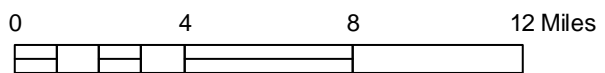
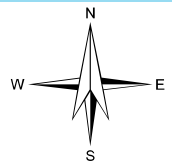


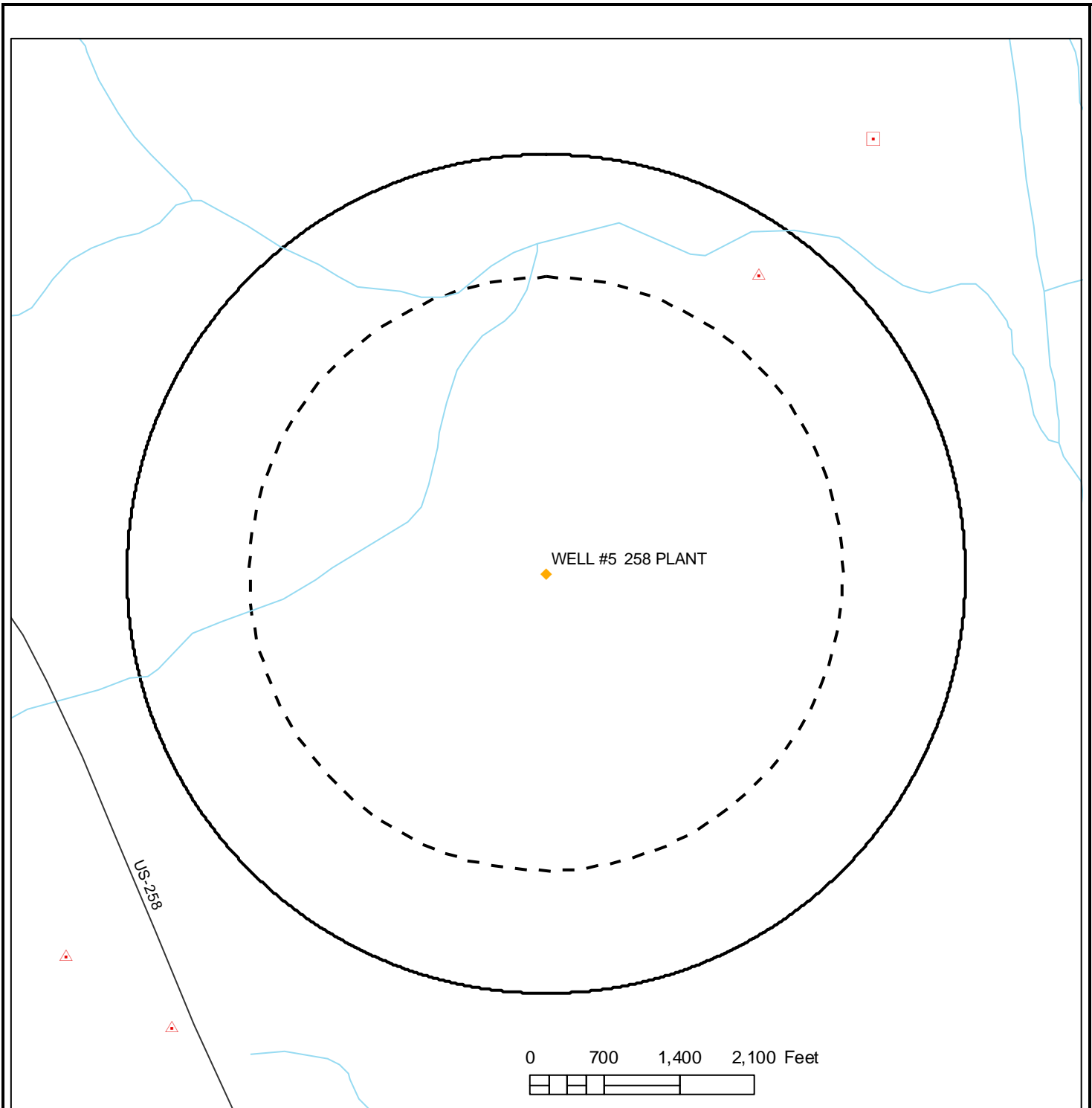
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- - - County Boundaries

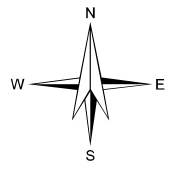




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #5 258 PLANT**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Equine Country	SW8001128	NPDES Permits	L	Hines Farm Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #5 258 PLANT**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Equine Country	SW8001128	Permit Type	State Stormwater
Equine Country	SW8001128	Permit Issued Date	10/22/2002

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #5 258 PLANT**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #5 258 PLANT

Unsaturated Zone Rating	58.8
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

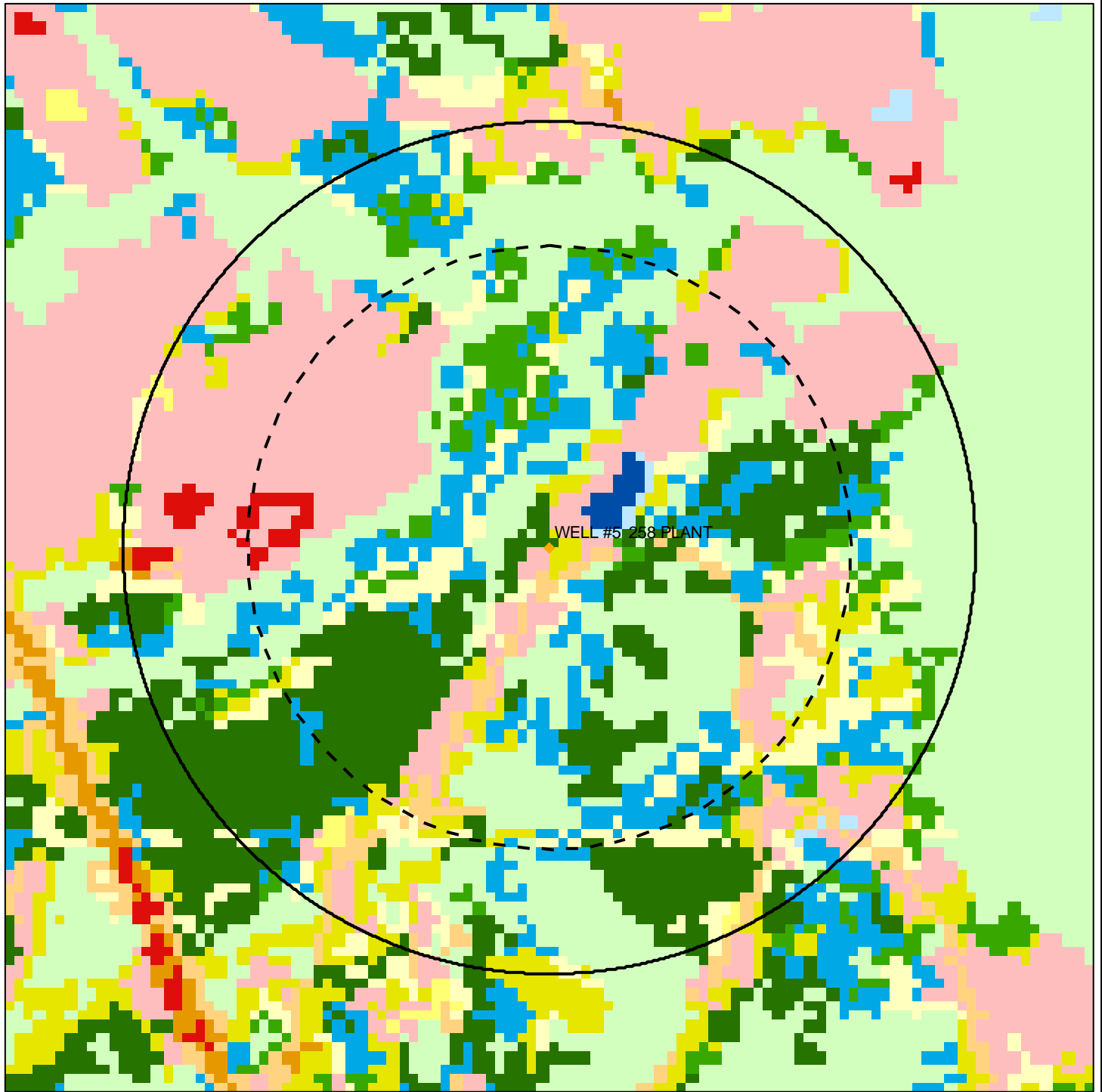
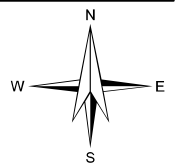


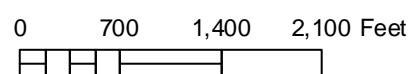
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



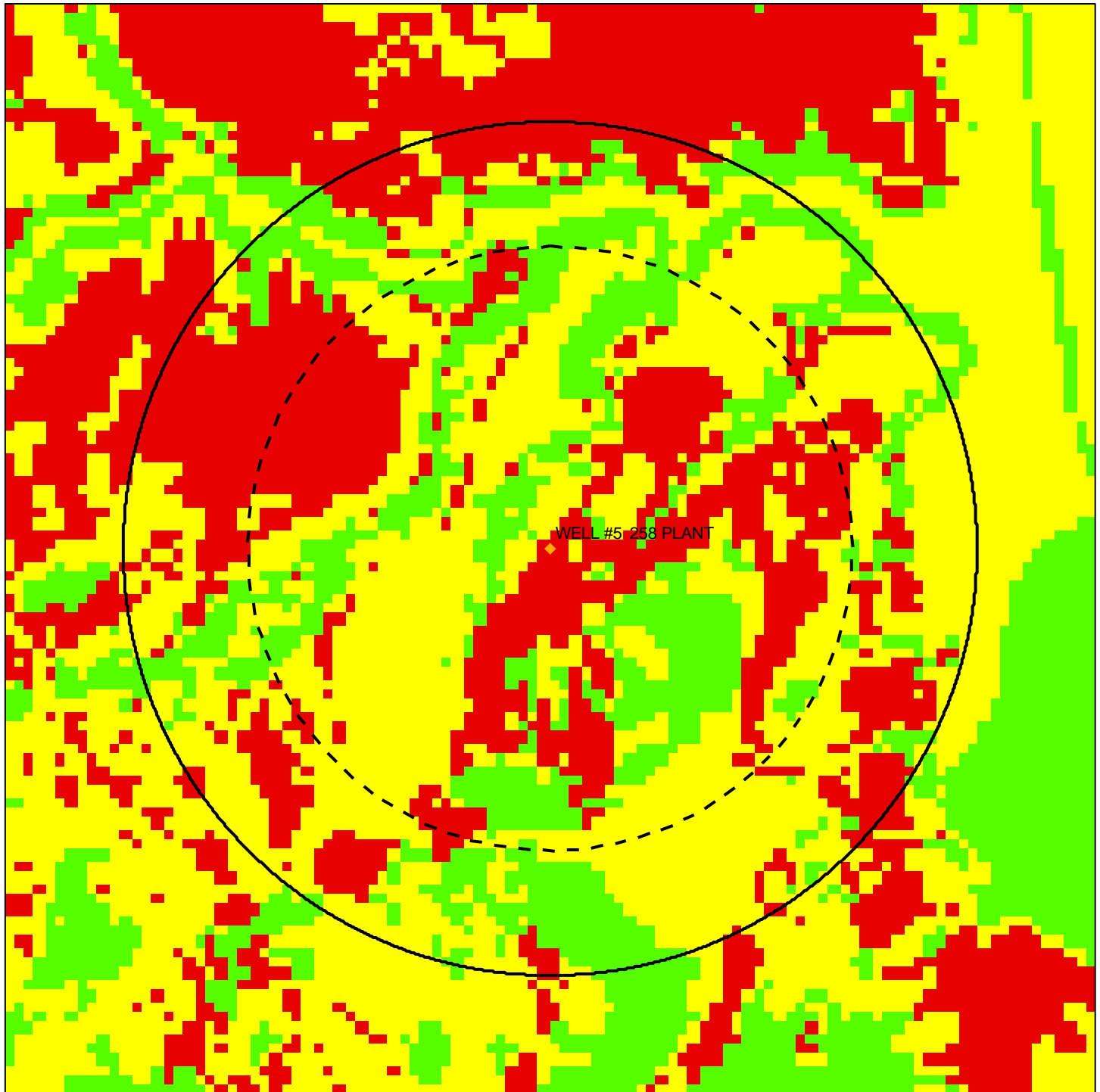
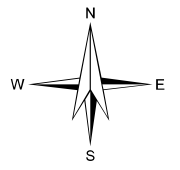
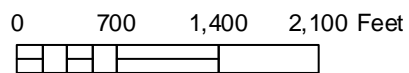


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



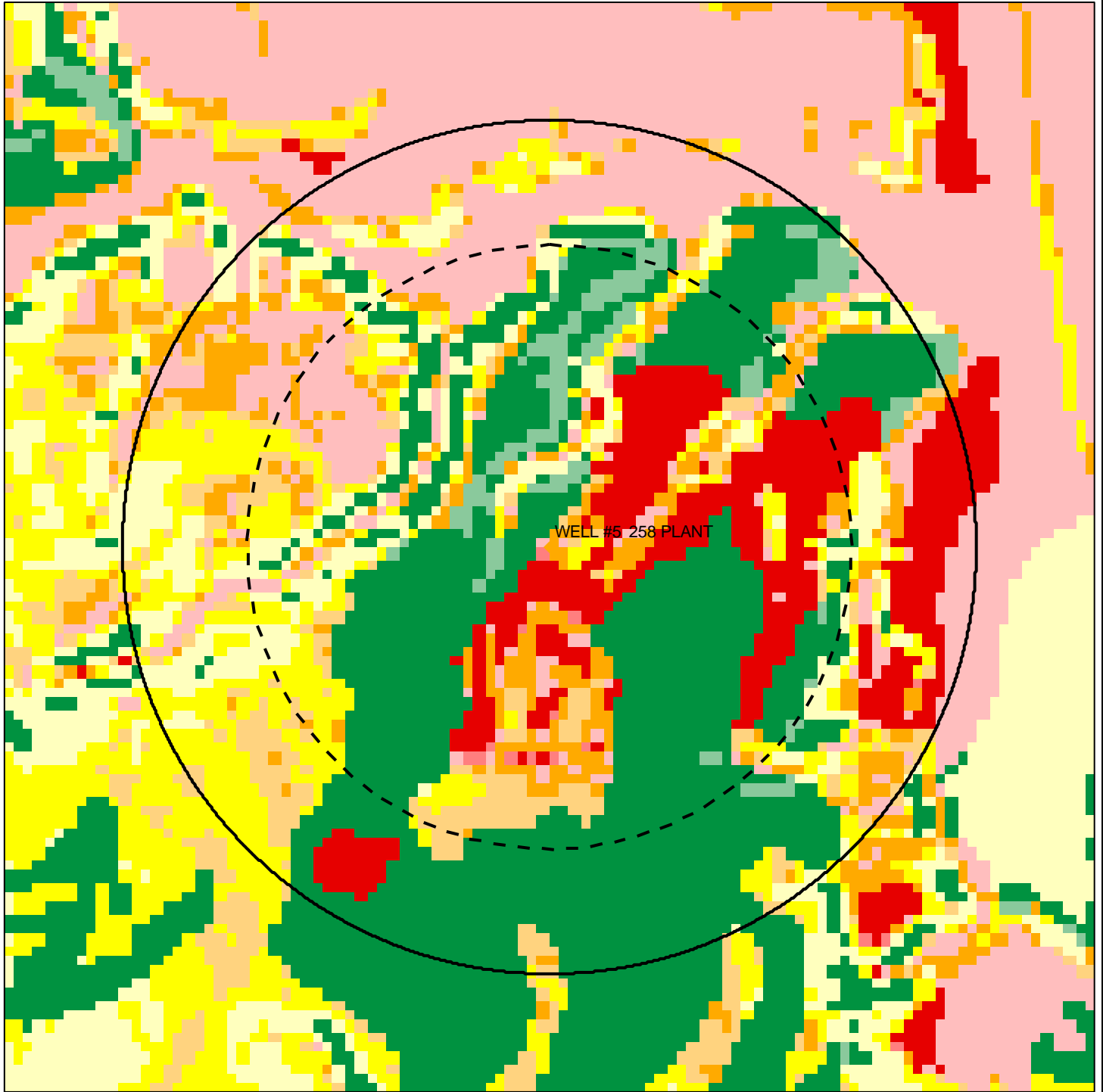
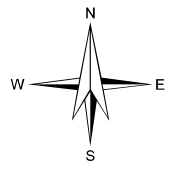
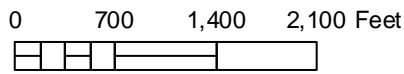


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



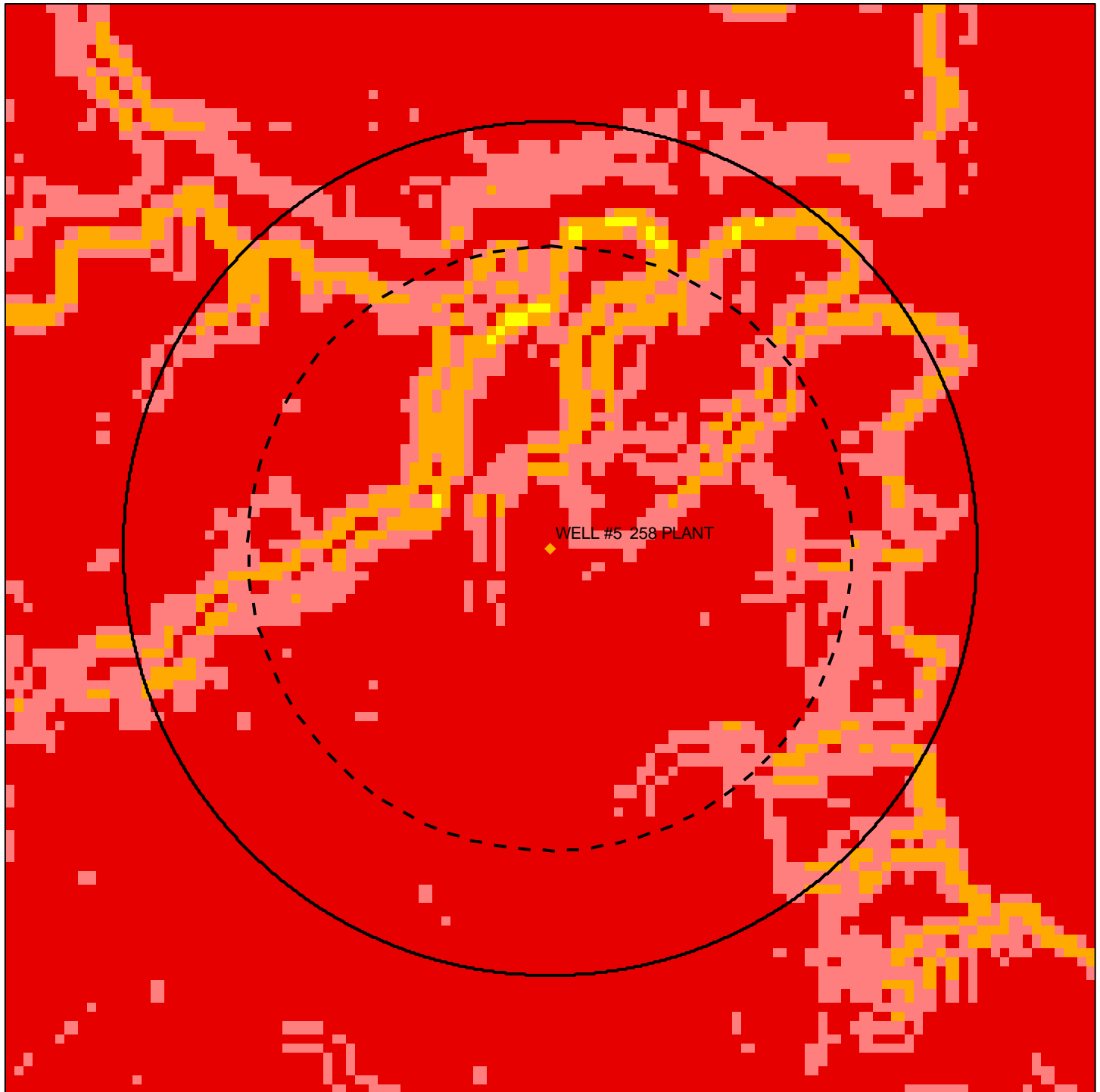
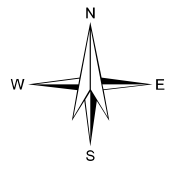








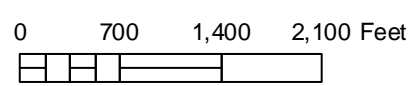


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



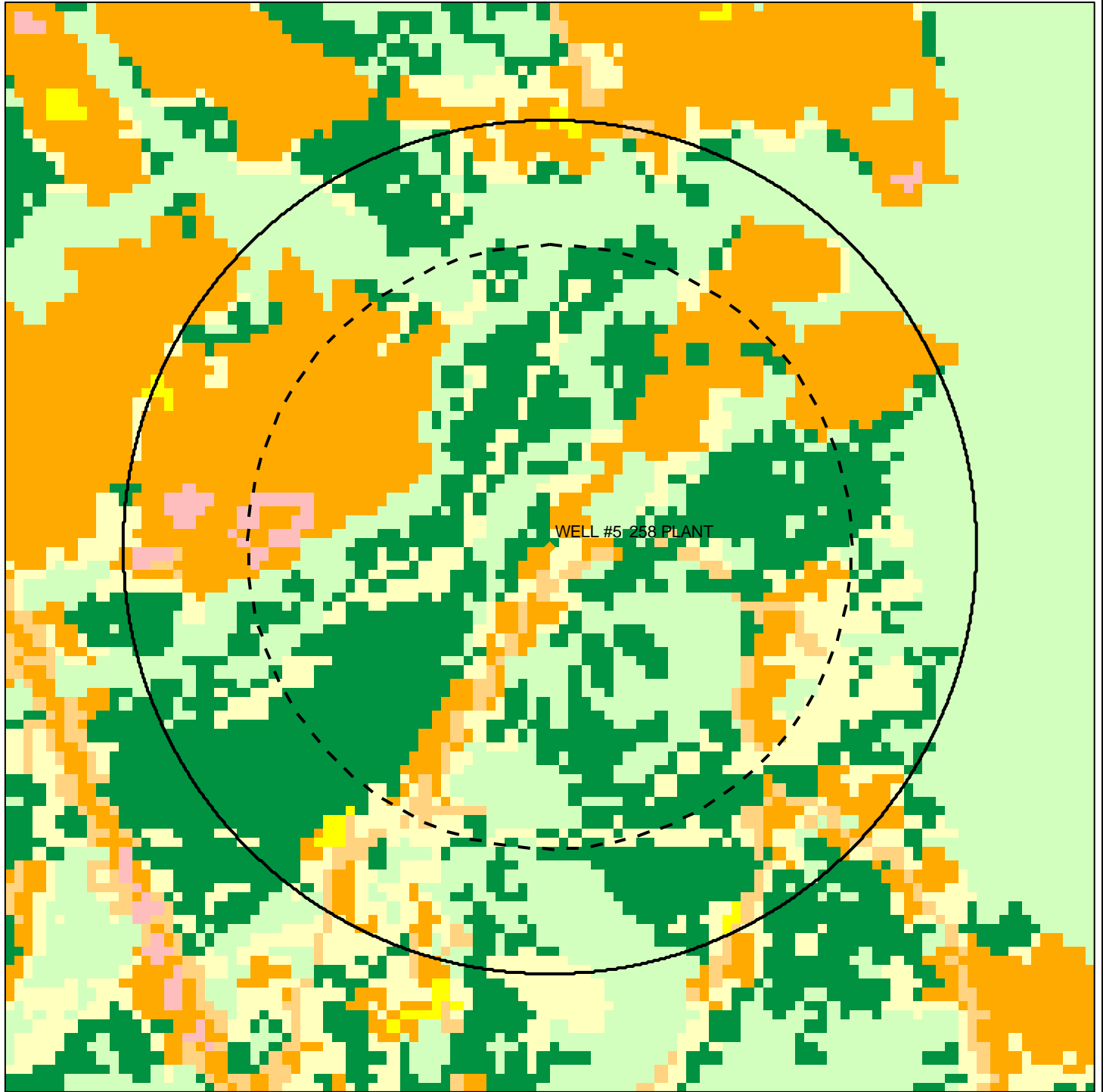
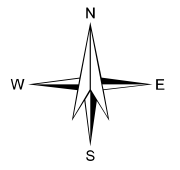


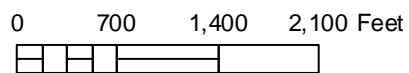


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



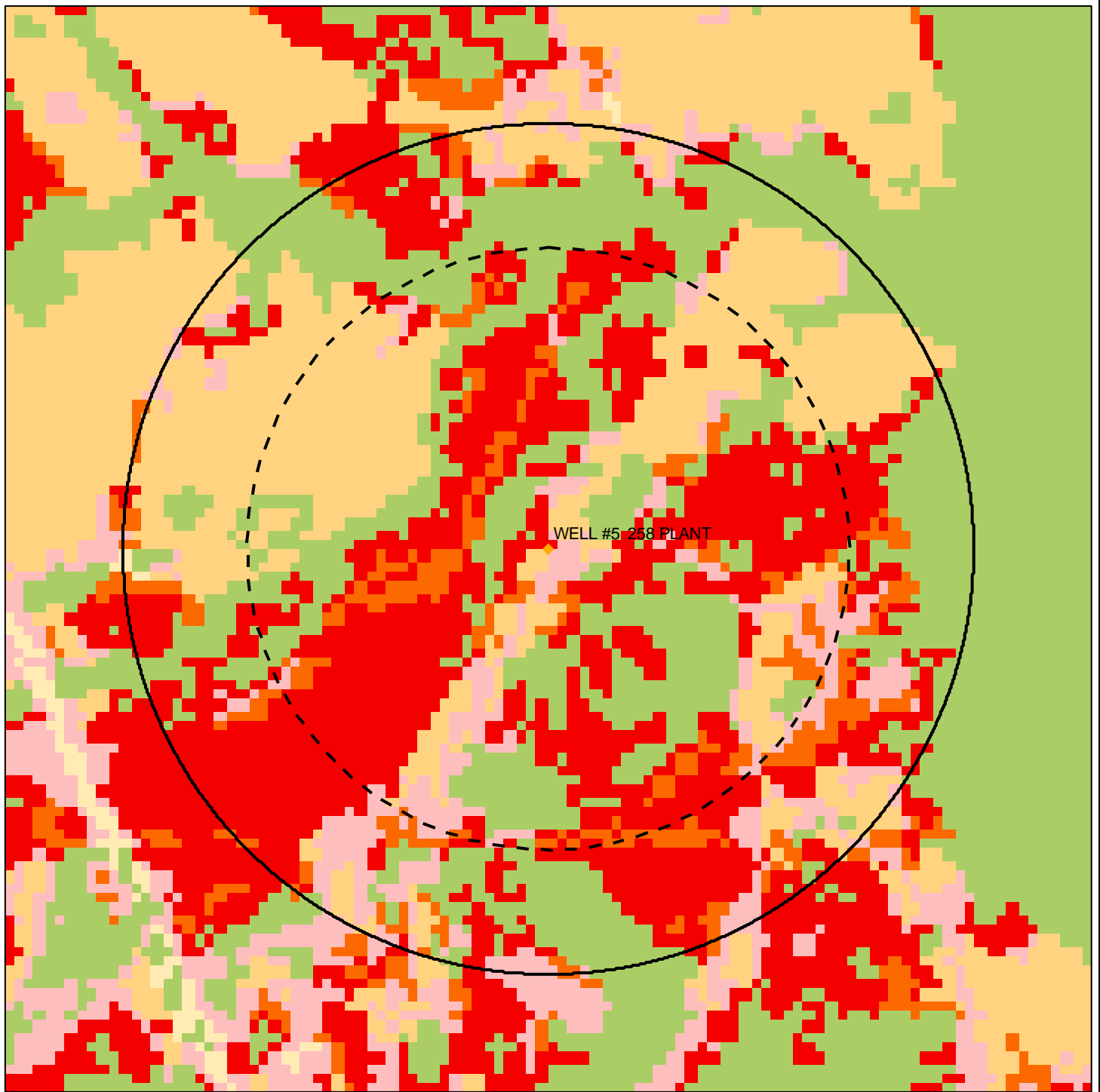
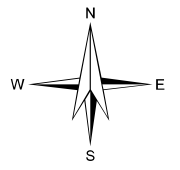
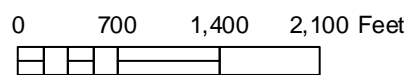


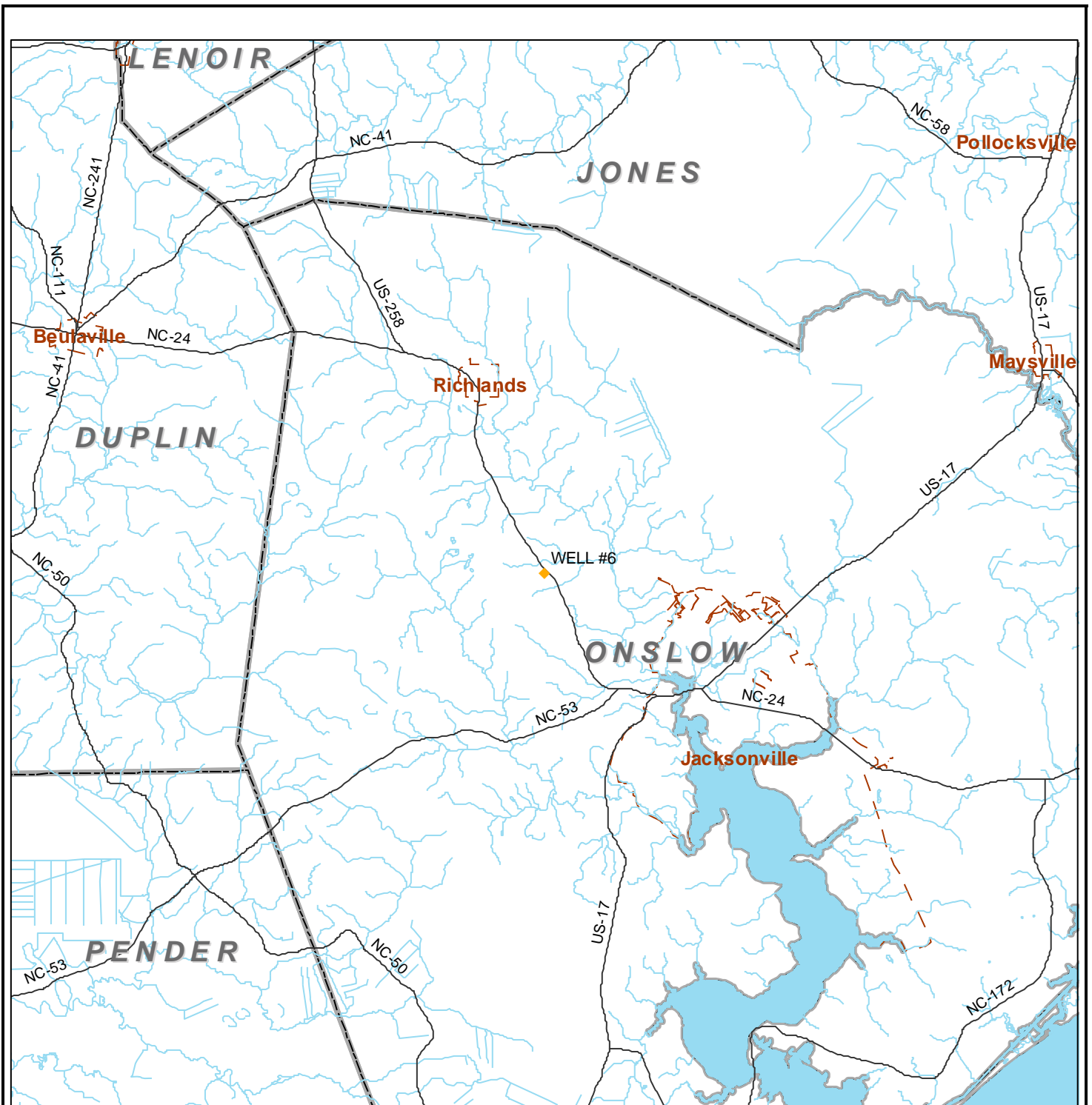
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #5 258 PLANT



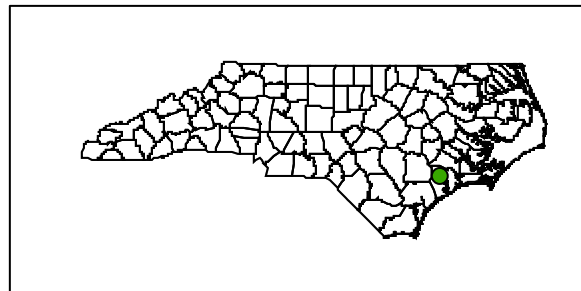
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

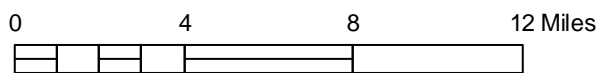
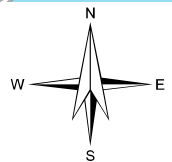


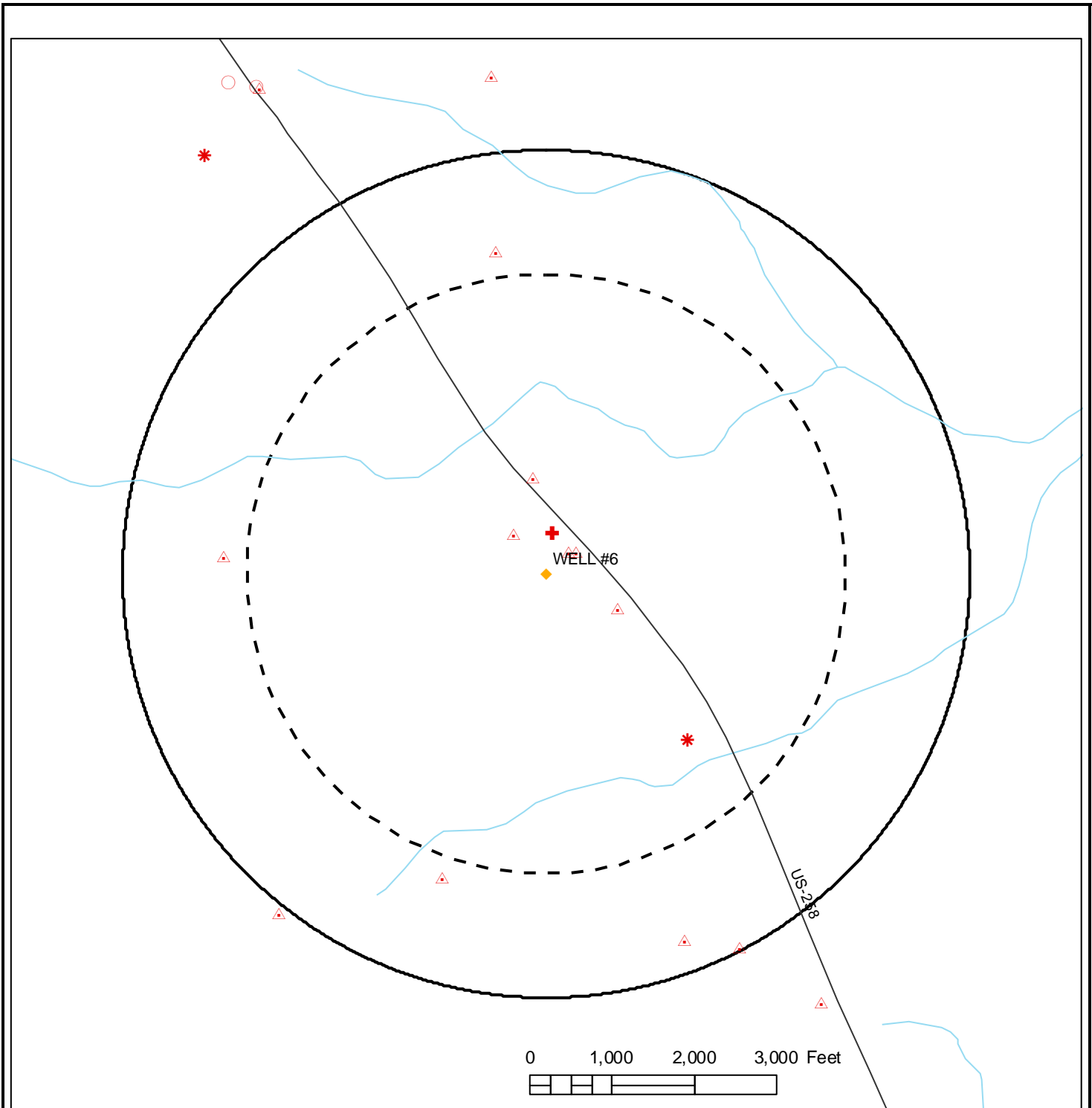


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



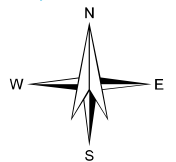


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #6**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Water Well #6	4026175	Tier II Sites	H	4963 Richlands Highway	Jacksonville	Unkno wn	Onslow
FRIENDLY MART 24	00-0-0000038121	UST Sites	H	4981 RICHLANDS HWY	JACKSONVILLE	Unkno wn	ONSLOW
Liberty Park Townhomes	SW8120401	NPDES Permits	L	Liberty Park Rd	Jacksonville	Unkno wn	ONSLOW
Liberty Tree Crossing Section 3	SW8031010	NPDES Permits	L	NCSR 1226 Liberty Park Rd	Jacksonville	Unkno wn	ONSLOW
Live Oak Estates, Section III-A	SW8021018	NPDES Permits	L	Hwy 111	Richlands	Unkno wn	ONSLOW
Bryan Farms	SW8060244	NPDES Permits	L	US 258 And NC 24	Jacksonville	Unkno wn	ONSLOW
Live Oak Estates Section III-B	SW8050522	NPDES Permits	L	Hwy 111	Richlands	Unkno wn	ONSLOW
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	NPDES Permits	L	4981 Highway 258	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Family Dollar Jacksonville	SW8140807	NPDES Permits	L	4955 Richlands Hwy	Jacksonville	Unknown	ONSLOW
Northridge Subdivision	SW8120313	NPDES Permits	L	US 258	Jacksonville	Unknown	ONSLOW
Dollar General Onslow County	SW8140909	NPDES Permits	L	5086 Richlands Hwy	Richlands	Unknown	ONSLOW
Harvest Ridge Subdivision	SW8040842	NPDES Permits	L	5320 Richlands Hwy Us258 nc 24	Richlands	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #6**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
Liberty Park Townhomes	SW8120401	Permit Type	State Stormwater
Liberty Park Townhomes	SW8120401	Permit Issued Date	4/20/2012
Liberty Tree Crossing Section 3	SW8031010	Permit Type	State Stormwater
Liberty Tree Crossing Section 3	SW8031010	Permit Issued Date	3/1/2004
Live Oak Estates, Section III-A	SW8021018	Permit Type	State Stormwater
Live Oak Estates, Section III-A	SW8021018	Permit Issued Date	1/17/2003
Bryan Farms	SW8060244	Permit Type	State Stormwater
Bryan Farms	SW8060244	Permit Issued Date	8/22/2006
Live Oak Estates Section III-B	SW8050522	Permit Type	State Stormwater
Live Oak Estates Section III-B	SW8050522	Permit Issued Date	7/29/2005
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Type	State Stormwater
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Issued Date	7/26/2012
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Expiration Date	7/26/2020
Family Dollar Jacksonville	SW8140807	Permit Type	State Stormwater
Family Dollar Jacksonville	SW8140807	Permit Issued Date	9/15/2014
Family Dollar Jacksonville	SW8140807	Permit Expiration Date	9/15/2022

PCS Name	PCS ID	Attribute	Value
Northridge Subdivision	SW8120313	Permit Type	State Stormwater
Northridge Subdivision	SW8120313	Permit Issued Date	7/25/2012
Dollar General Onslow County	SW8140909	Permit Type	State Stormwater
Dollar General Onslow County	SW8140909	Permit Issued Date	3/5/2015
Dollar General Onslow County	SW8140909	Permit Expiration Date	10/10/2022
Harvest Ridge Subdivision	SW8040842	Permit Type	State Stormwater
Harvest Ridge Subdivision	SW8040842	Permit Issued Date	11/12/2004

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #6**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #6**

Unsaturated Zone Rating	58.0
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

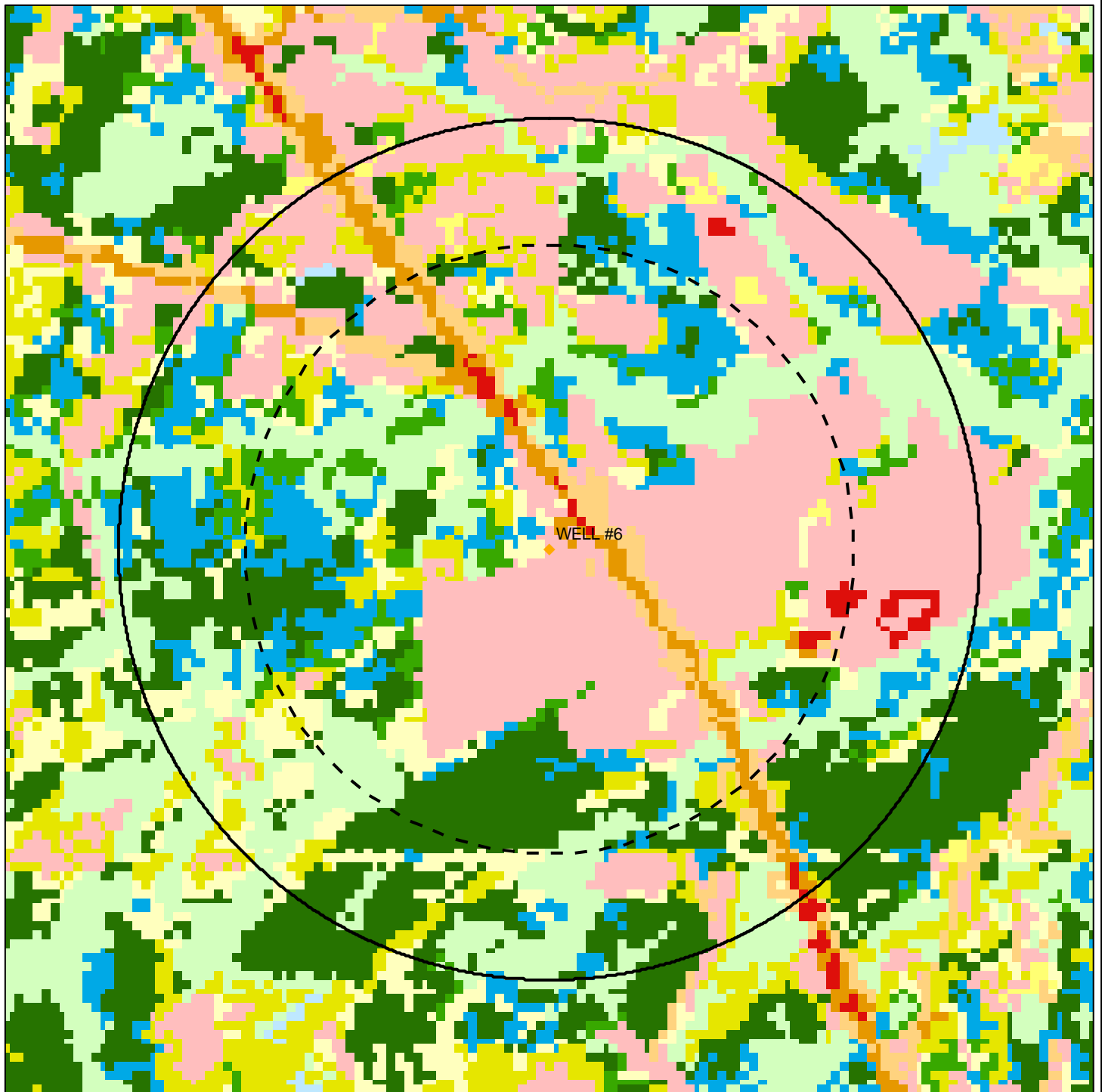
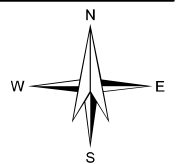


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6

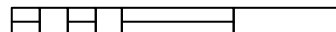


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



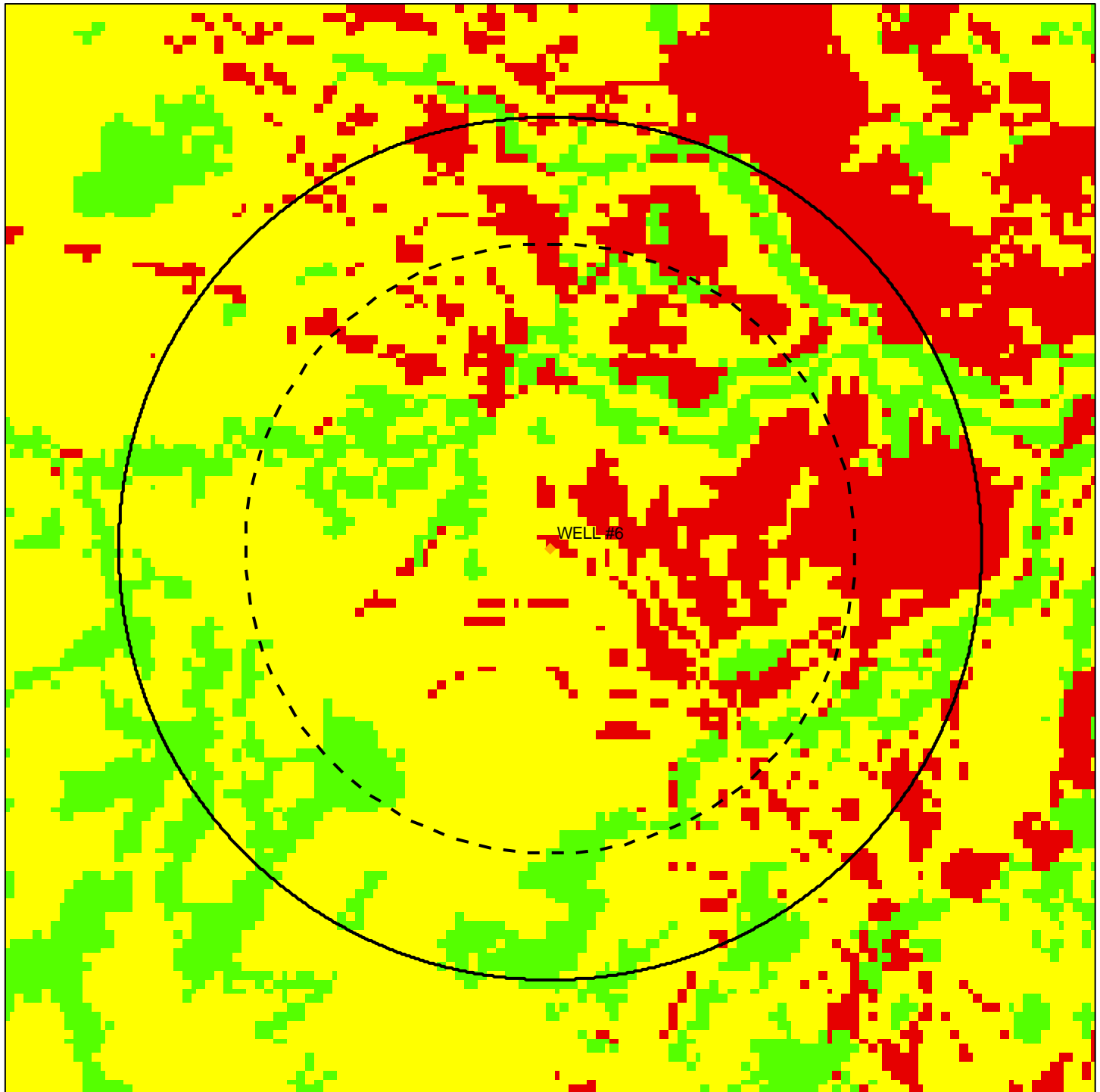
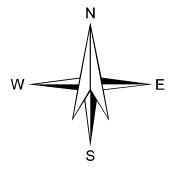
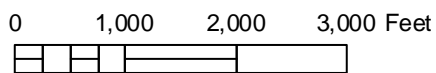


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



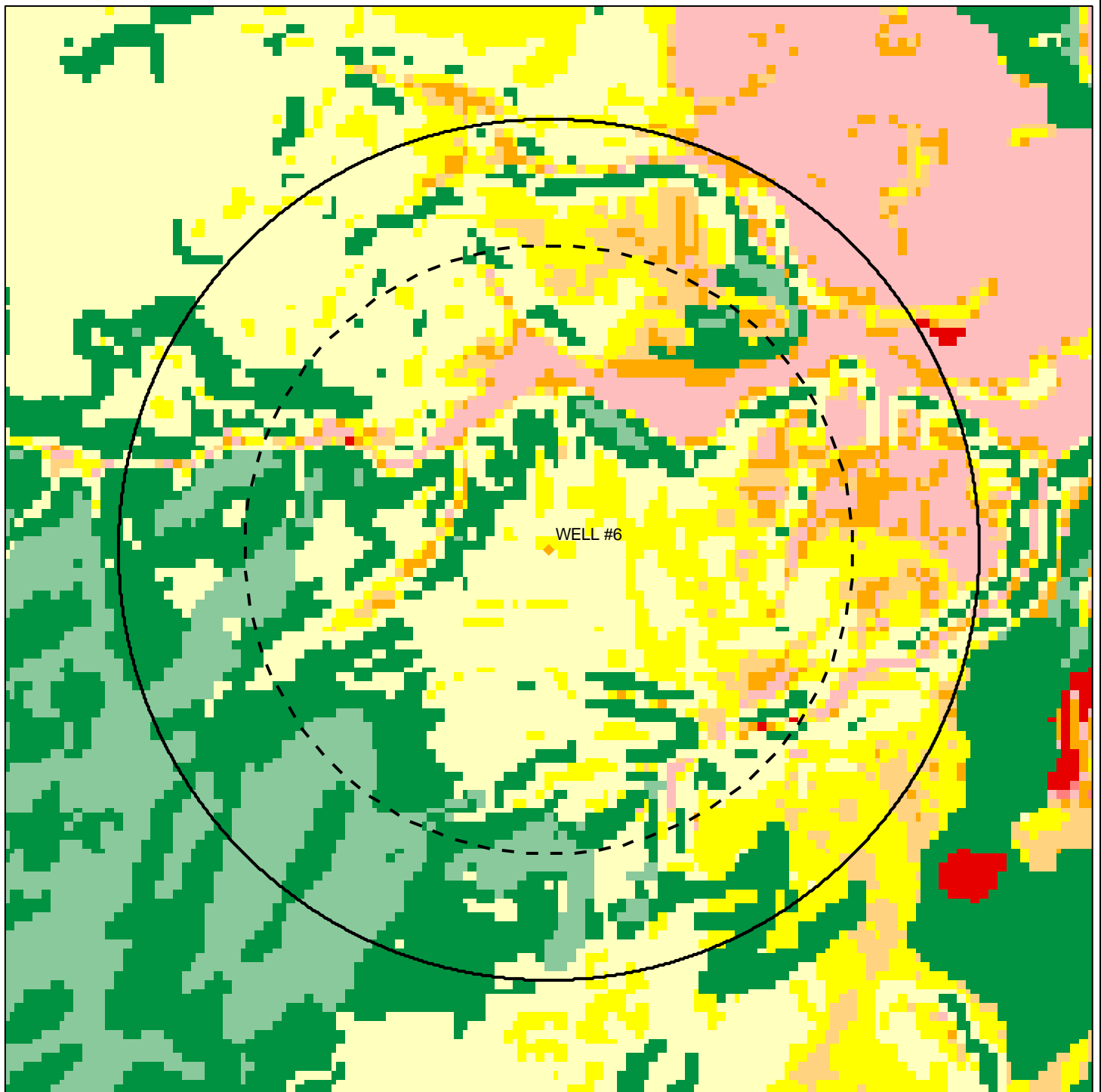
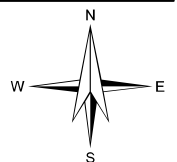
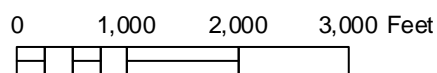


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



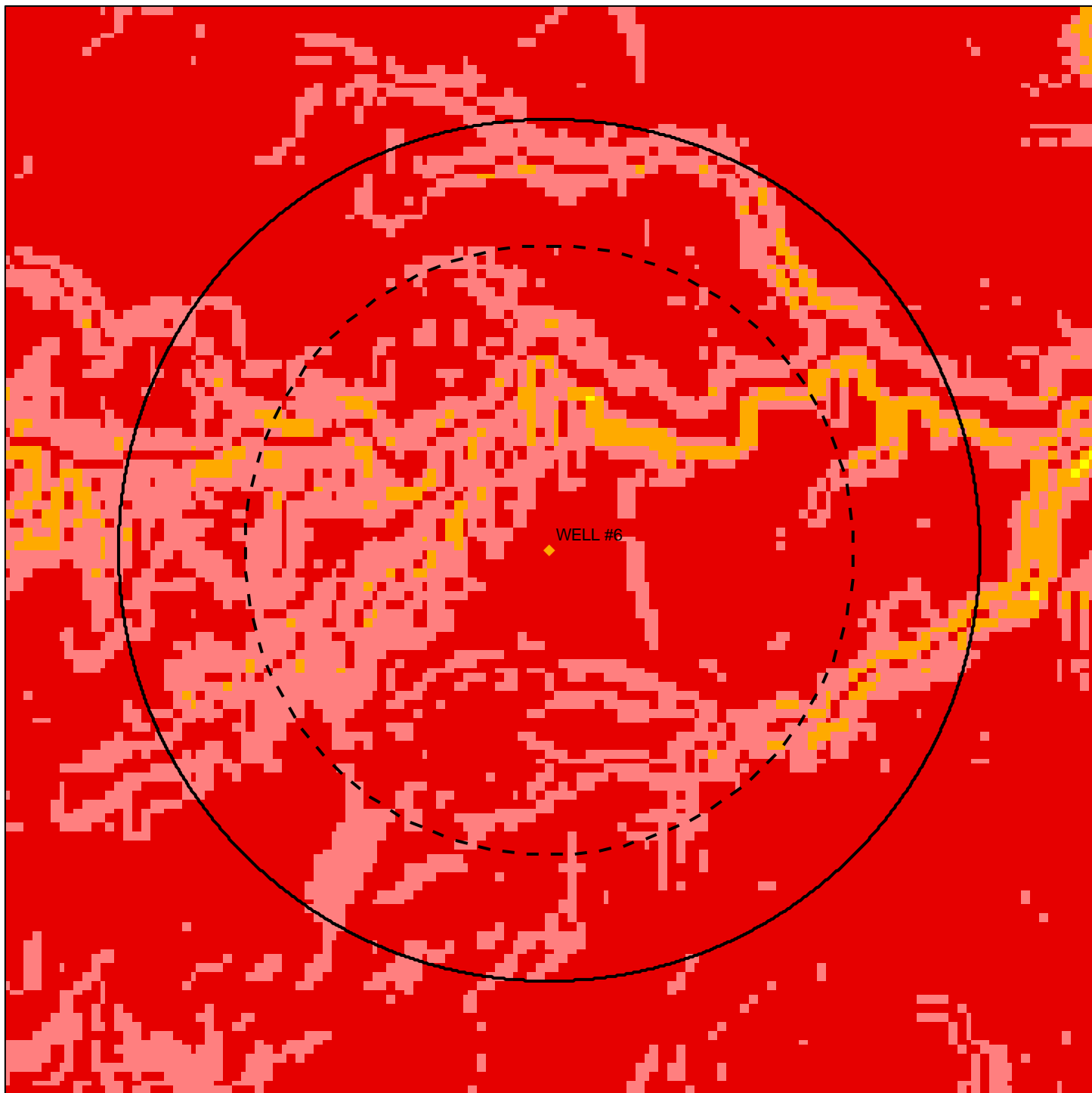
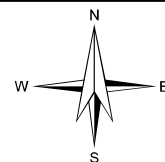










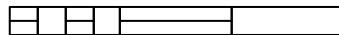
FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |

0 1,000 2,000 3,000 Feet



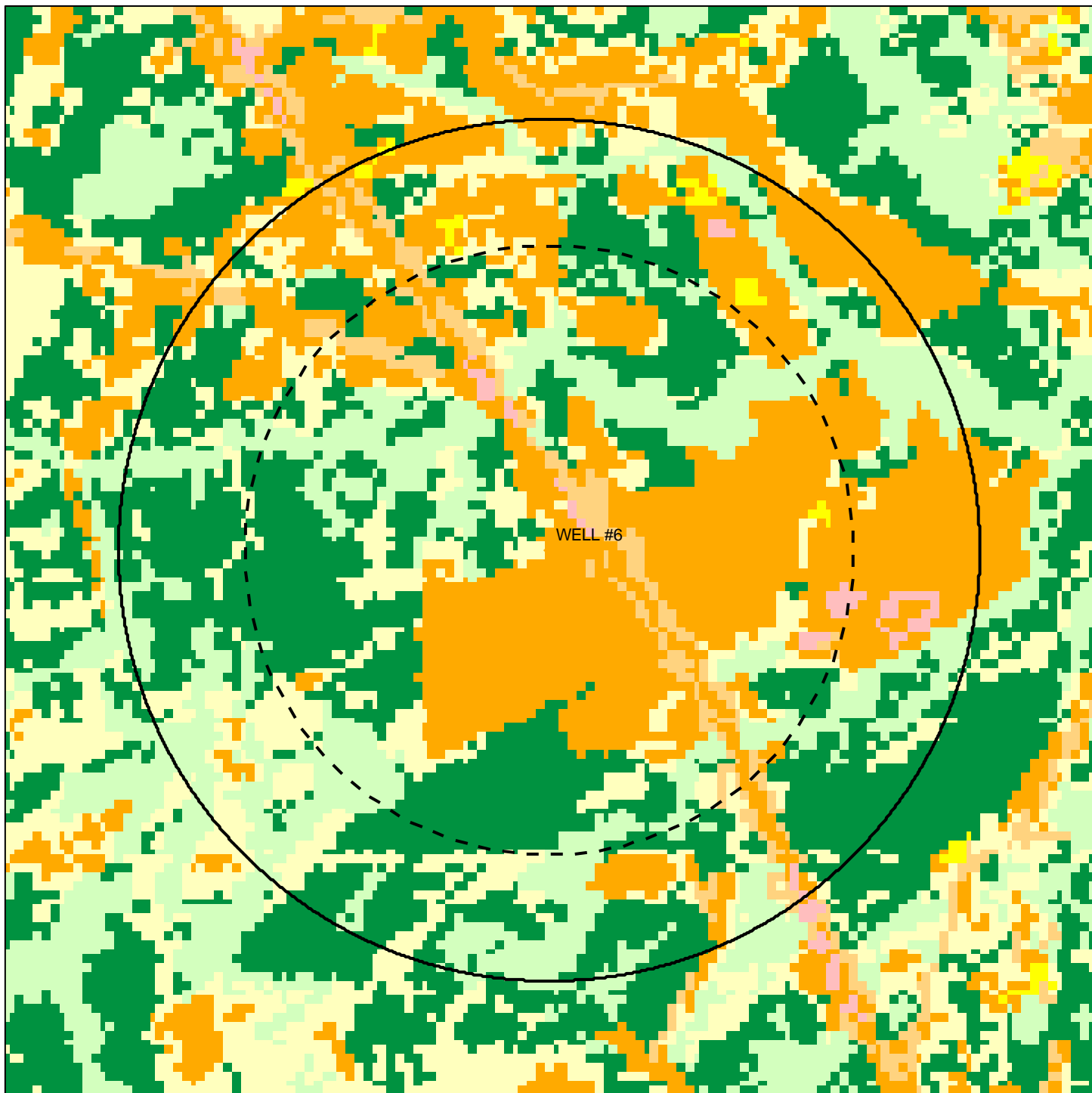











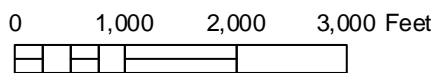
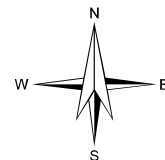


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



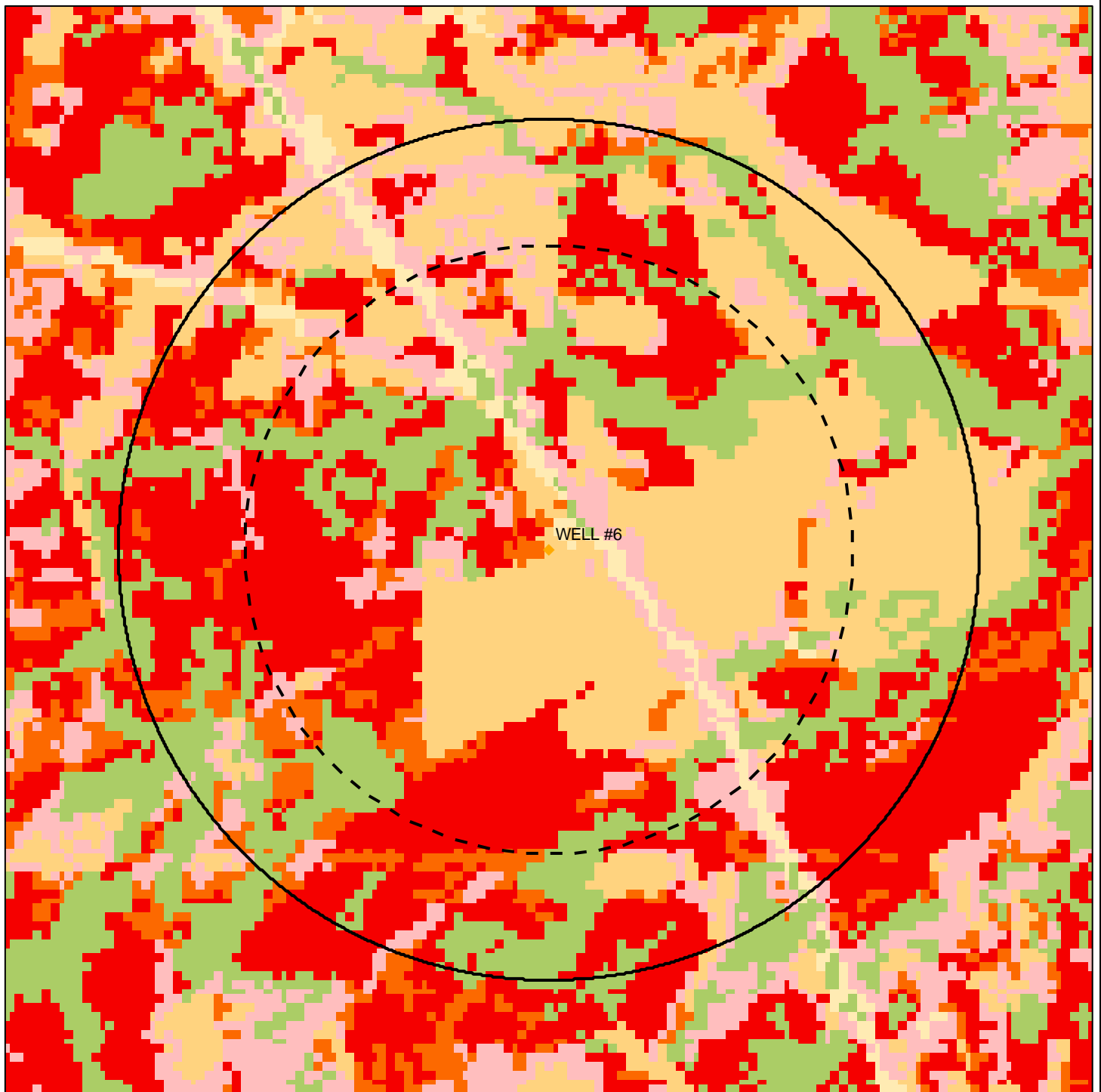
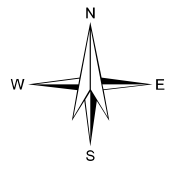
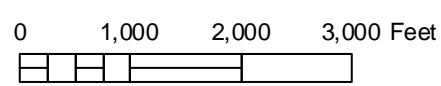


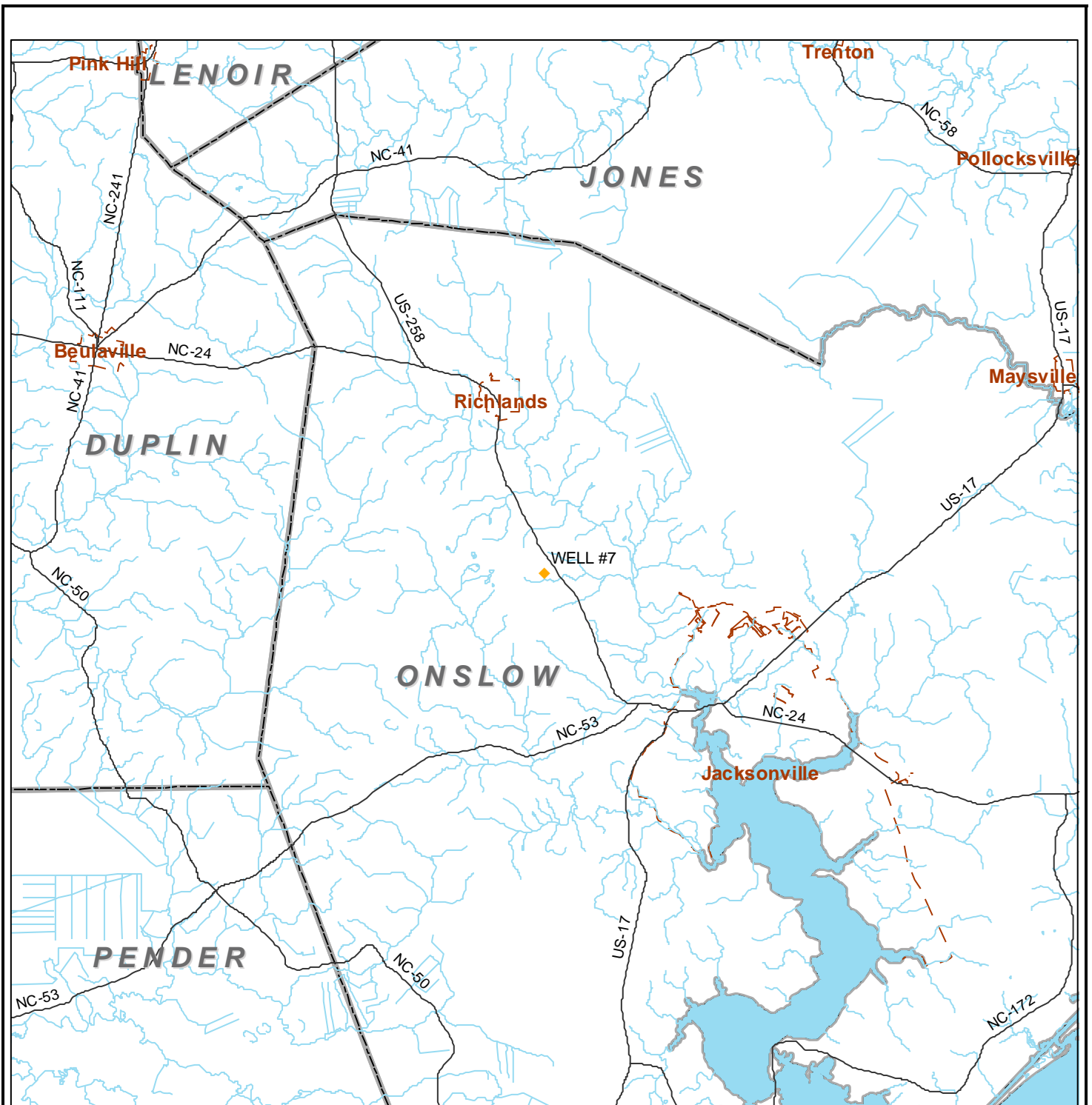
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #6



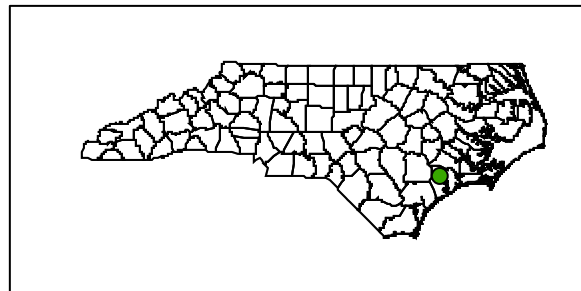
- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

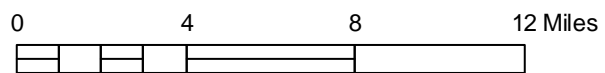
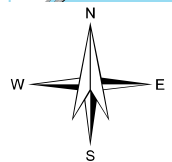


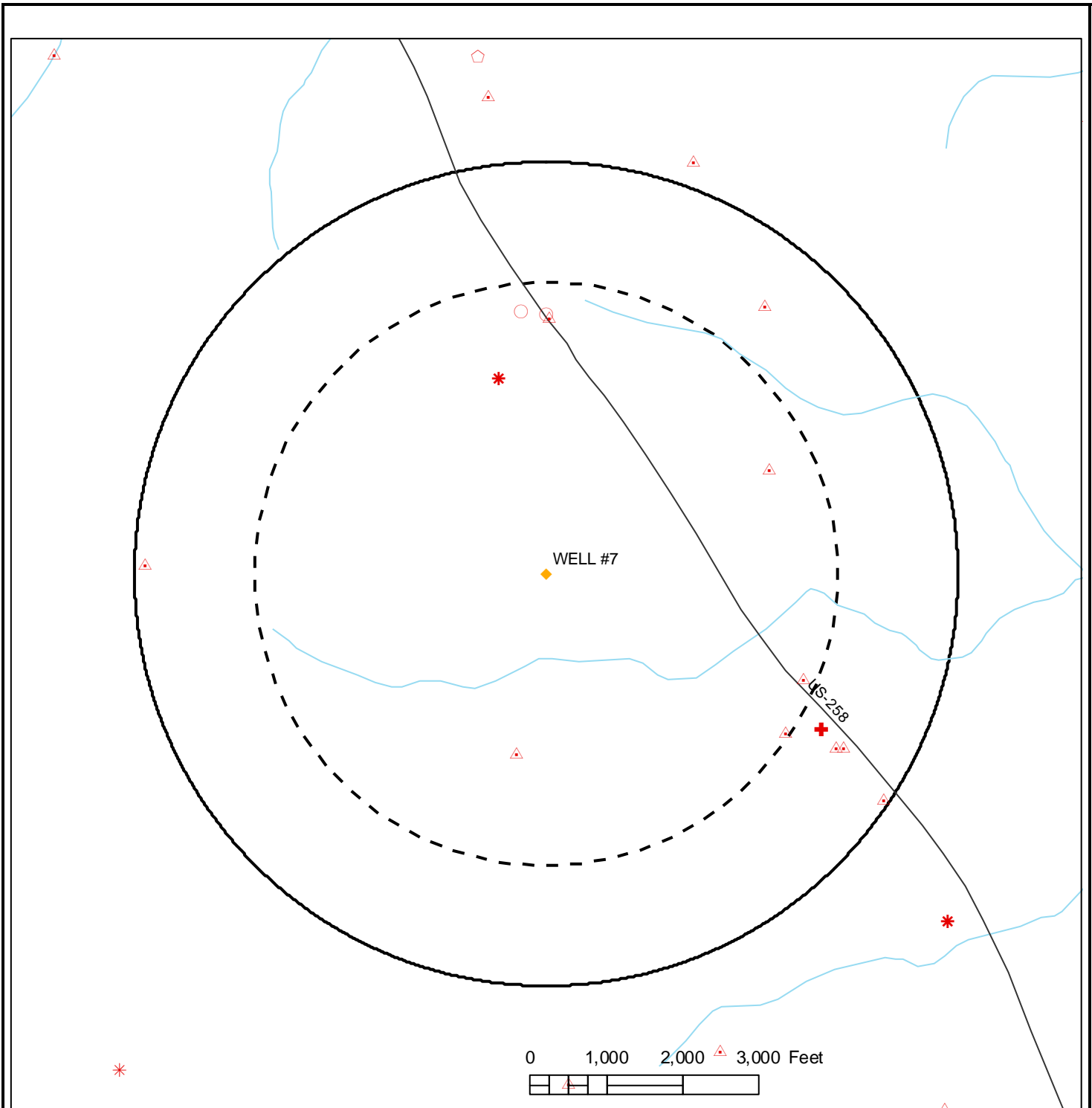


MAP 1. LOCATION MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



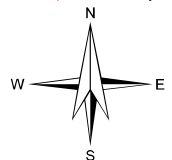


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #7**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
MOORE'S MINI MART # 2	12754	Pollution Incidents	H	5527 richlands highway	JACKSONVILLE	Unkno wn	ONSLO
RHODEST OWN GROCER Y	24531	Pollution Incidents	H	5506 Richlands Highway	RICHLANDS	Unkno wn	ONSLO
Water Well #7	4026176	Tier II Sites	H	1613 Catherine Lake Road	Jacksonville	Unkno wn	Onslow
FRIENDLY MART 24	00-0-0000038121	UST Sites	H	4981 RICHLANDS HWY	JACKSONVILLE	Unkno wn	ONSLOW
Bryan Farms	SW8060244	NPDES Permits	L	US 258 And NC 24	Jacksonville	Unkno wn	ONSLOW
Live Oak Estates Section III-B	SW8050522	NPDES Permits	L	Hwy 111	Richlands	Unkno wn	ONSLOW
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	NPDES Permits	L	4981 Highway 258	Jacksonville	Unkno wn	ONSLOW
Family Dollar Jacksonville	SW8140807	NPDES Permits	L	4955 Richlands Hwy	Jacksonville	Unkno wn	ONSLOW
Northridge Subdivision	SW8120313	NPDES Permits	L	US 258	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Dollar General Onslow County	SW8140909	NPDES Permits	L	5086 Richlands Hwy	Richlands	Unknown	ONSLOW
Harvest Ridge Subdivision	SW8040842	NPDES Permits	L	5320 Richlands Hwy Us258 nc 24	Richlands	Unknown	ONSLOW
Handy Mart Rhodestown	SW8130405	NPDES Permits	L	Rhodestown Fire Dept Rd	Jacksonville	Unknown	ONSLOW
Lawrence W Petteway	SW8050806	NPDES Permits	L	NCSR 1319	Jacksonville	Unknown	ONSLOW
Venters Pit - Catherine Lake	NCG020523	NPDES Permits	L	Hwy 301 N	Pleasant Hill	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, WELL #7**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
MOORE'S MINI MART # 2	12754	Pollutant Type	GASOLINE/DIESEL/KEROSENE
MOORE'S MINI MART # 2	12754	Site Risk	H
RHODESTOWN GROCERY	24531	Pollutant Type	GASOLINE/DIESEL/KEROSENE
RHODESTOWN GROCERY	24531	Site Risk	H
Bryan Farms	SW8060244	Permit Type	State Stormwater
Bryan Farms	SW8060244	Permit Issued Date	8/22/2006
Live Oak Estates Section III-B	SW8050522	Permit Type	State Stormwater
Live Oak Estates Section III-B	SW8050522	Permit Issued Date	7/29/2005
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Type	State Stormwater
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Issued Date	7/26/2012
Friendly Mart Highway 258 at Northridge Subdivision	SW8120607	Permit Expiration Date	7/26/2020
Family Dollar Jacksonville	SW8140807	Permit Type	State Stormwater
Family Dollar Jacksonville	SW8140807	Permit Issued Date	9/15/2014
Family Dollar Jacksonville	SW8140807	Permit Expiration Date	9/15/2022
Northridge Subdivision	SW8120313	Permit Type	State Stormwater
Northridge Subdivision	SW8120313	Permit Issued Date	7/25/2012

PCS Name	PCS ID	Attribute	Value
Dollar General Onslow County	SW8140909	Permit Type	State Stormwater
Dollar General Onslow County	SW8140909	Permit Issued Date	3/5/2015
Dollar General Onslow County	SW8140909	Permit Expiration Date	10/10/2022
Harvest Ridge Subdivision	SW8040842	Permit Type	State Stormwater
Harvest Ridge Subdivision	SW8040842	Permit Issued Date	11/12/2004
Handy Mart Rhodestown	SW8130405	Permit Type	State Stormwater
Handy Mart Rhodestown	SW8130405	Permit Issued Date	4/17/2013
Handy Mart Rhodestown	SW8130405	Permit Expiration Date	4/17/2021
Lawrence W Petteway	SW8050806	Permit Type	State Stormwater
Lawrence W Petteway	SW8050806	Permit Issued Date	11/3/2005
Venters Pit - Catherine Lake	NCG020523	Permit Type	Mining Activities Stormwater Discharge COC
Venters Pit - Catherine Lake	NCG020523	Permit Issued Date	1/1/2010
Venters Pit - Catherine Lake	NCG020523	Permit Expiration Date	12/31/2014
Venters Pit - Catherine Lake	NCG020523	Receiving Stream	Unnamed Tributary to New River (Rufus Creek)

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, WELL #7**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , WELL #7**

Unsaturated Zone Rating	57.4
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

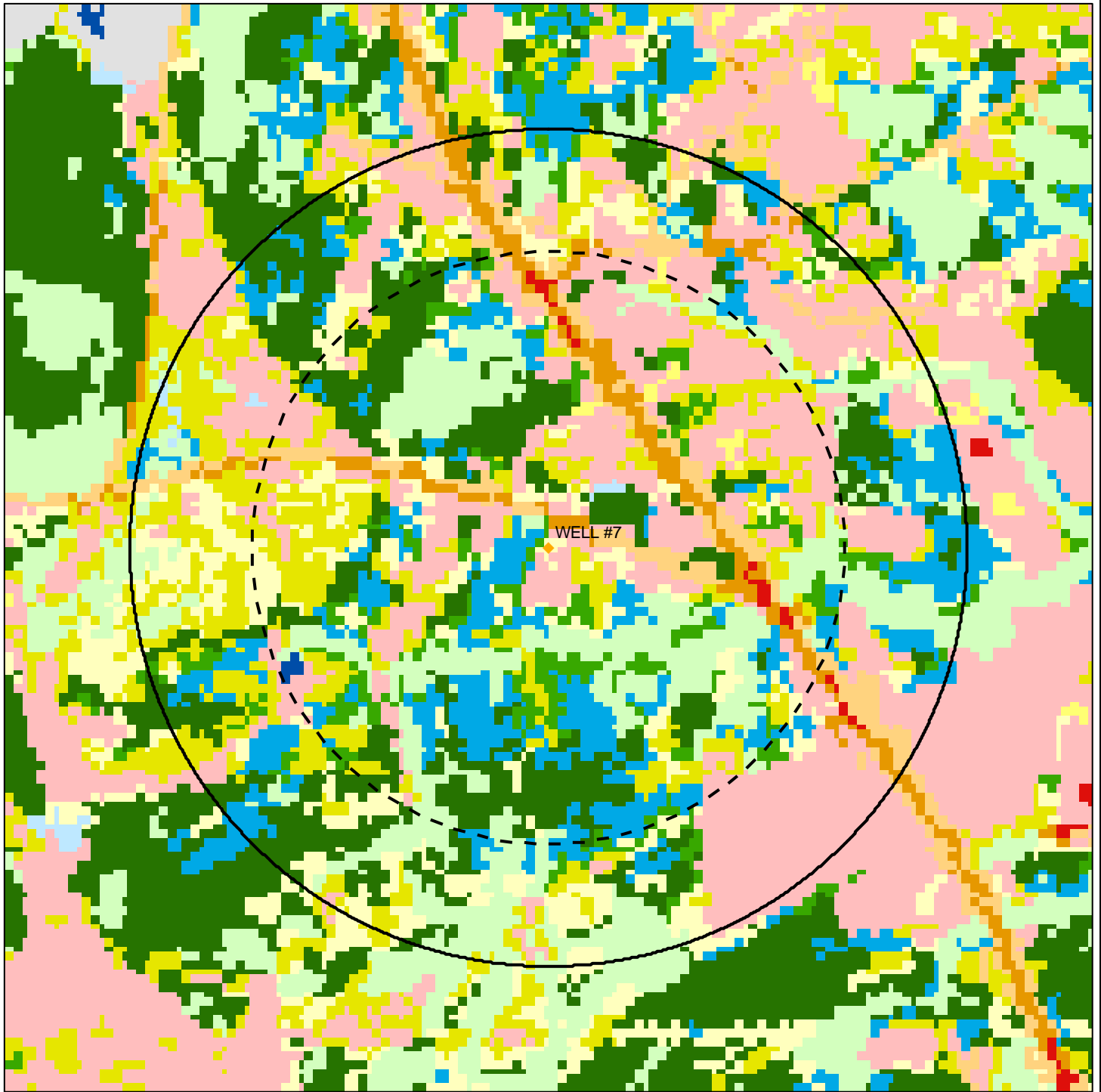
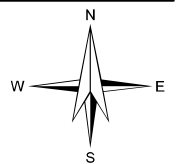


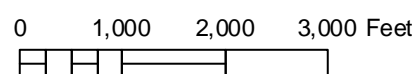
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



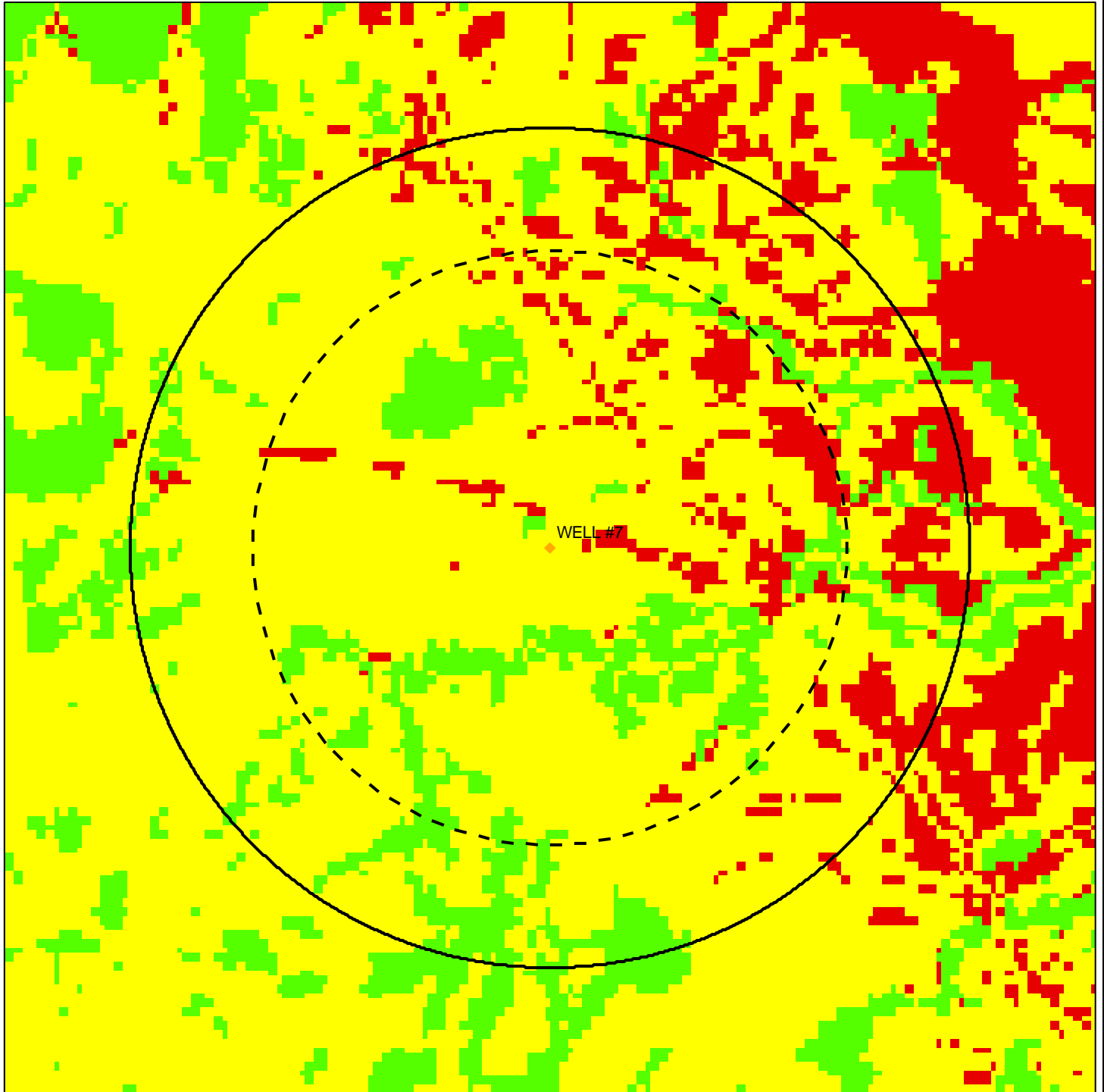
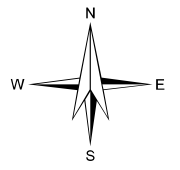
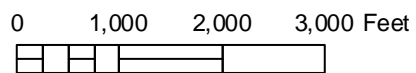


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



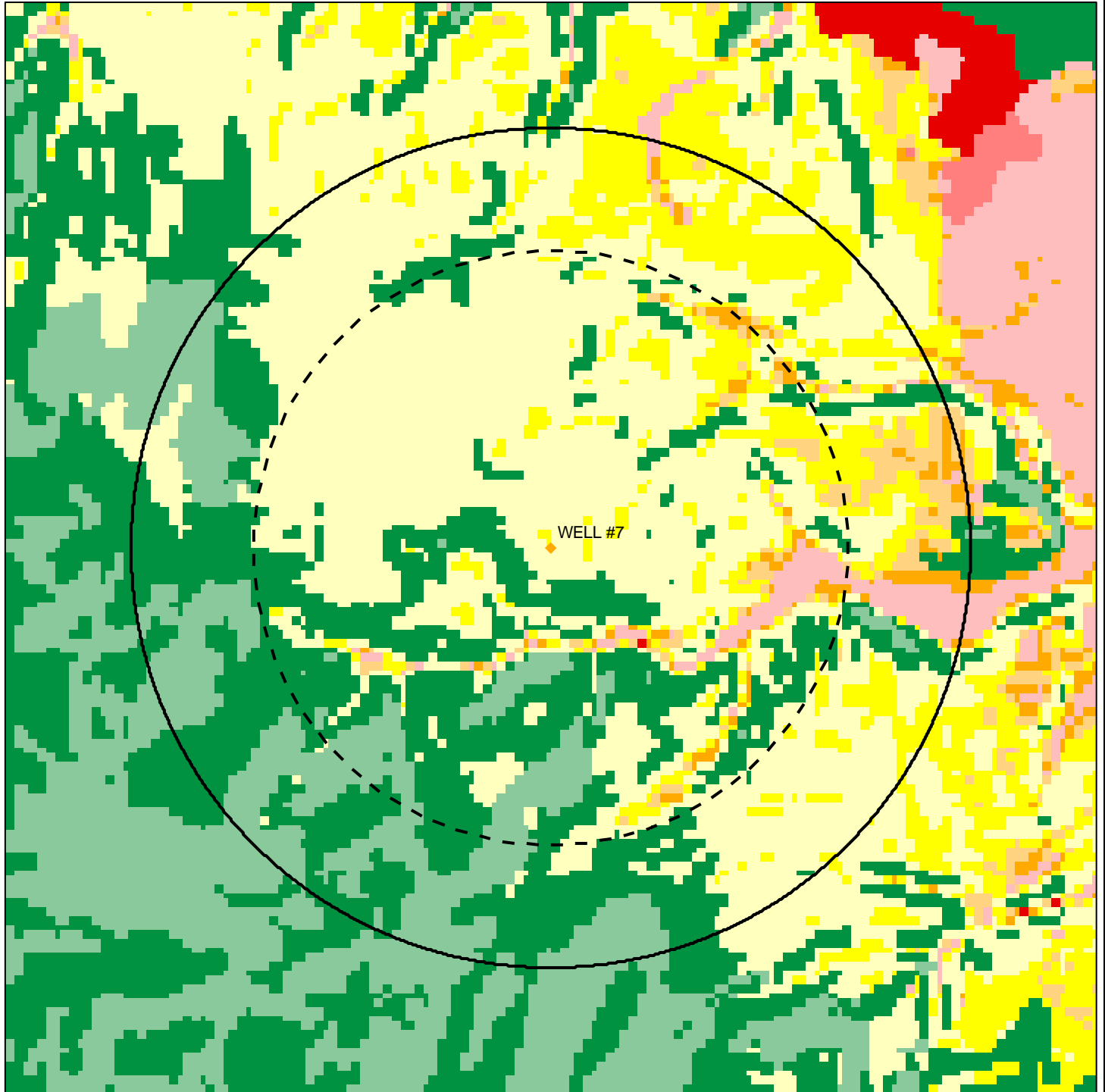
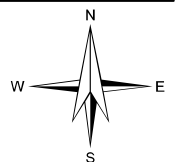












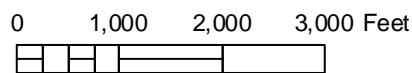


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- | | | |
|--|---|--|
|  1 (≤ 5 sq. ft./day) |  6 (> 80 to 160 sq. ft./day) |  Ground Water Assessment Area - Delineated Area |
|  2 (>5 to 10 sq. ft./day) |  7 (> 160 to 320 sq. ft./day) |  Ground Water Assessment Area - Zone A |
|  3 (>10 to 20 sq. ft./day) |  8 (> 320 to 640 sq. ft./day) | |
|  4 (> 20 to 40 sq. ft./day) |  9 (> 640 to 1,280 sq. ft./day) | |
|  5 (> 40 to 80 sq. ft./day) |  10 ($> 1,280$ sq. ft./day) | |



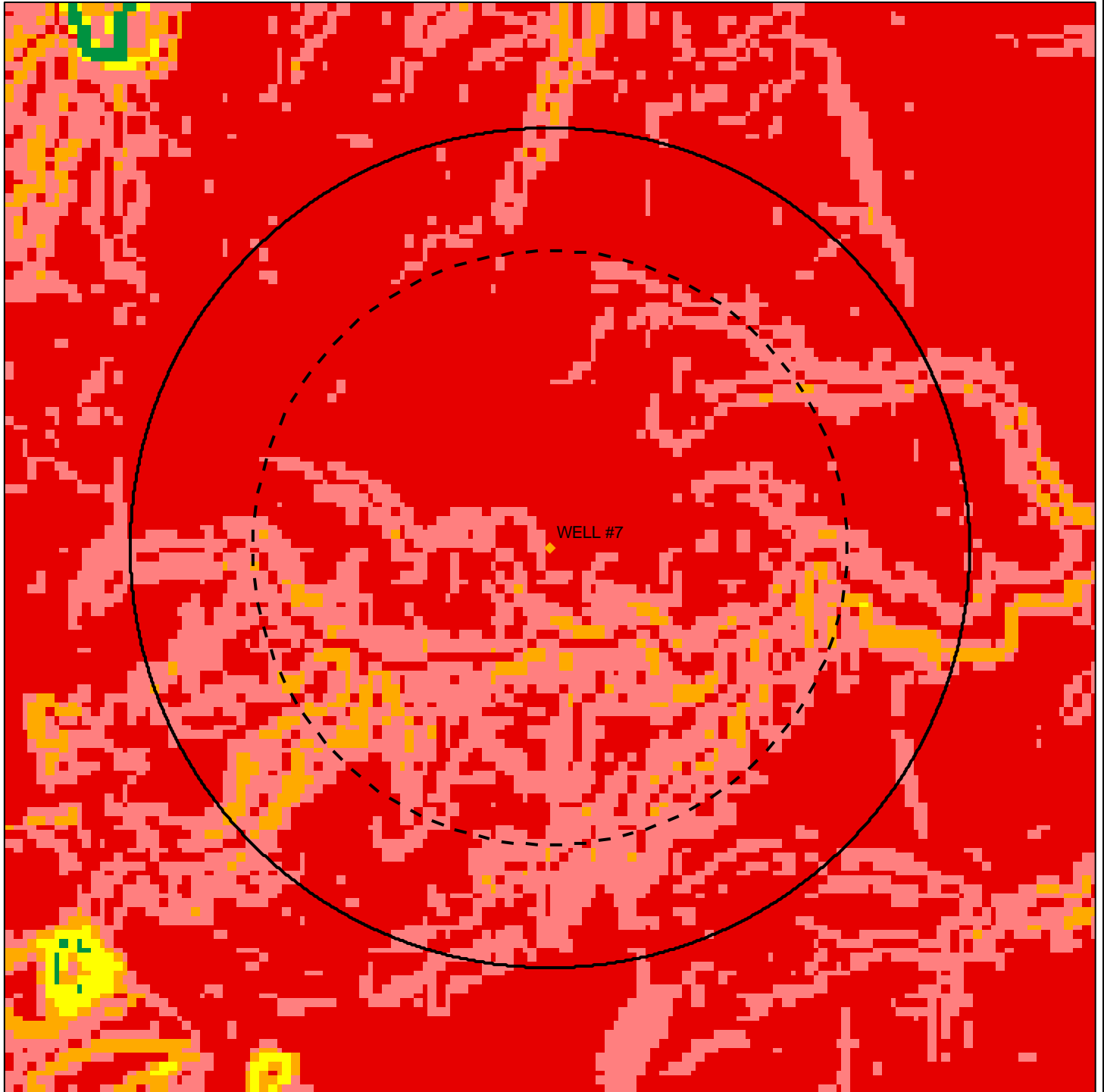
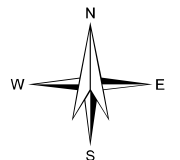










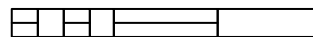
FIGURE 4. LAND SURFACE SLOPE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |

0 1,000 2,000 3,000 Feet



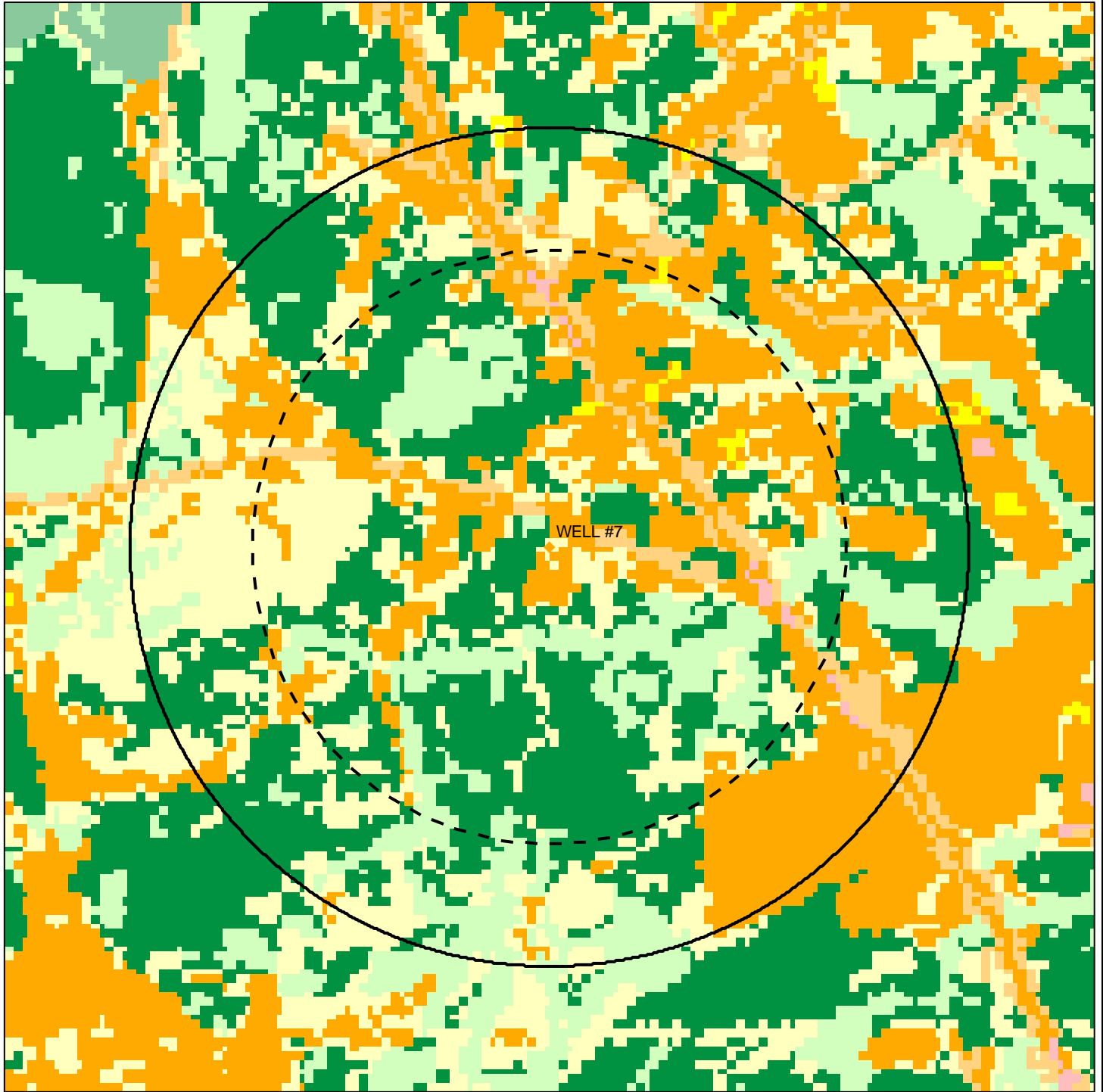











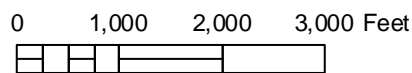
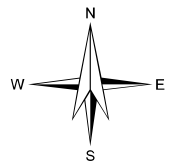


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



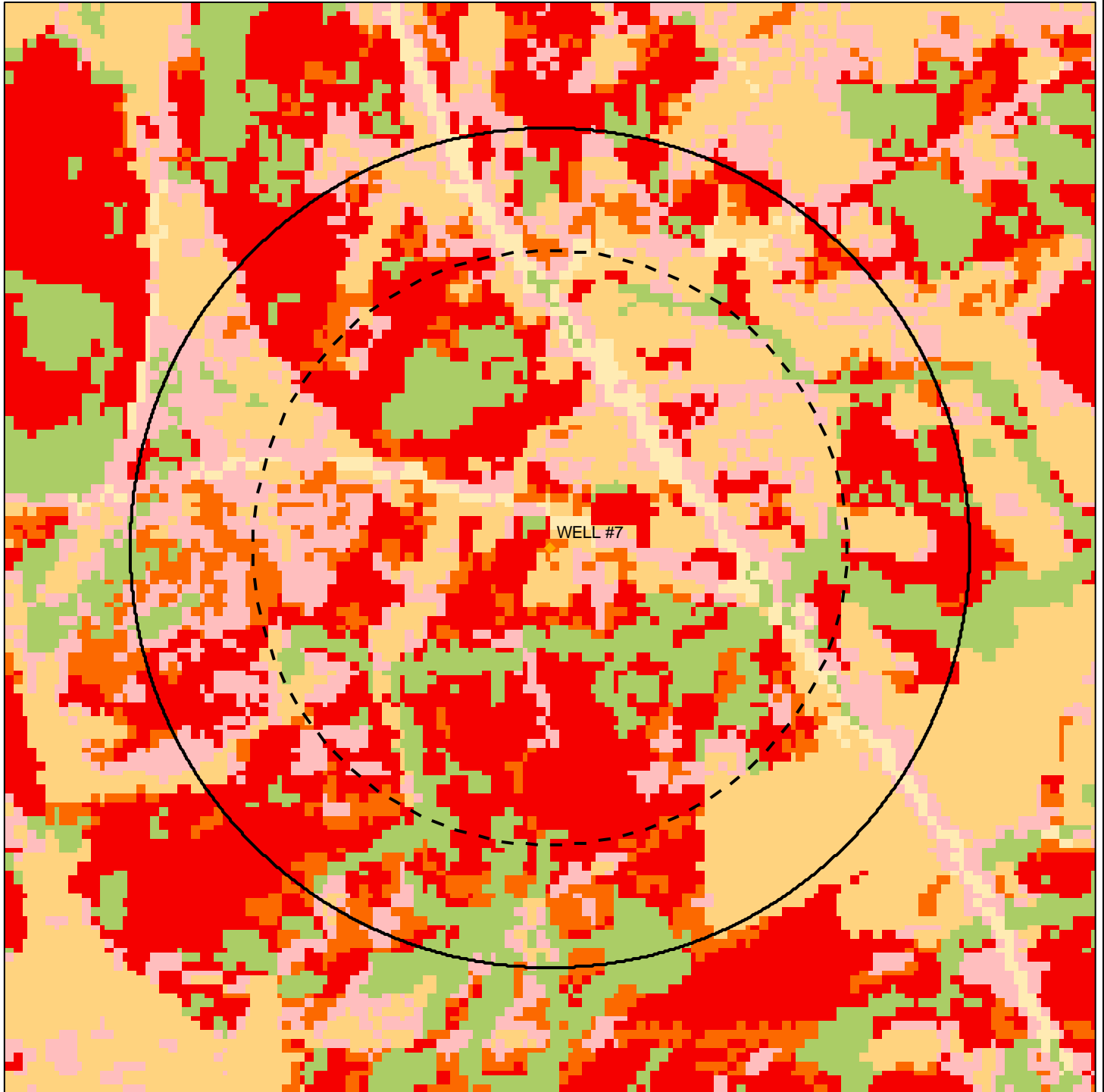
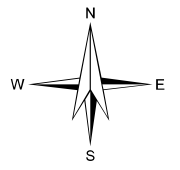
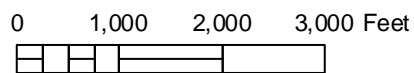


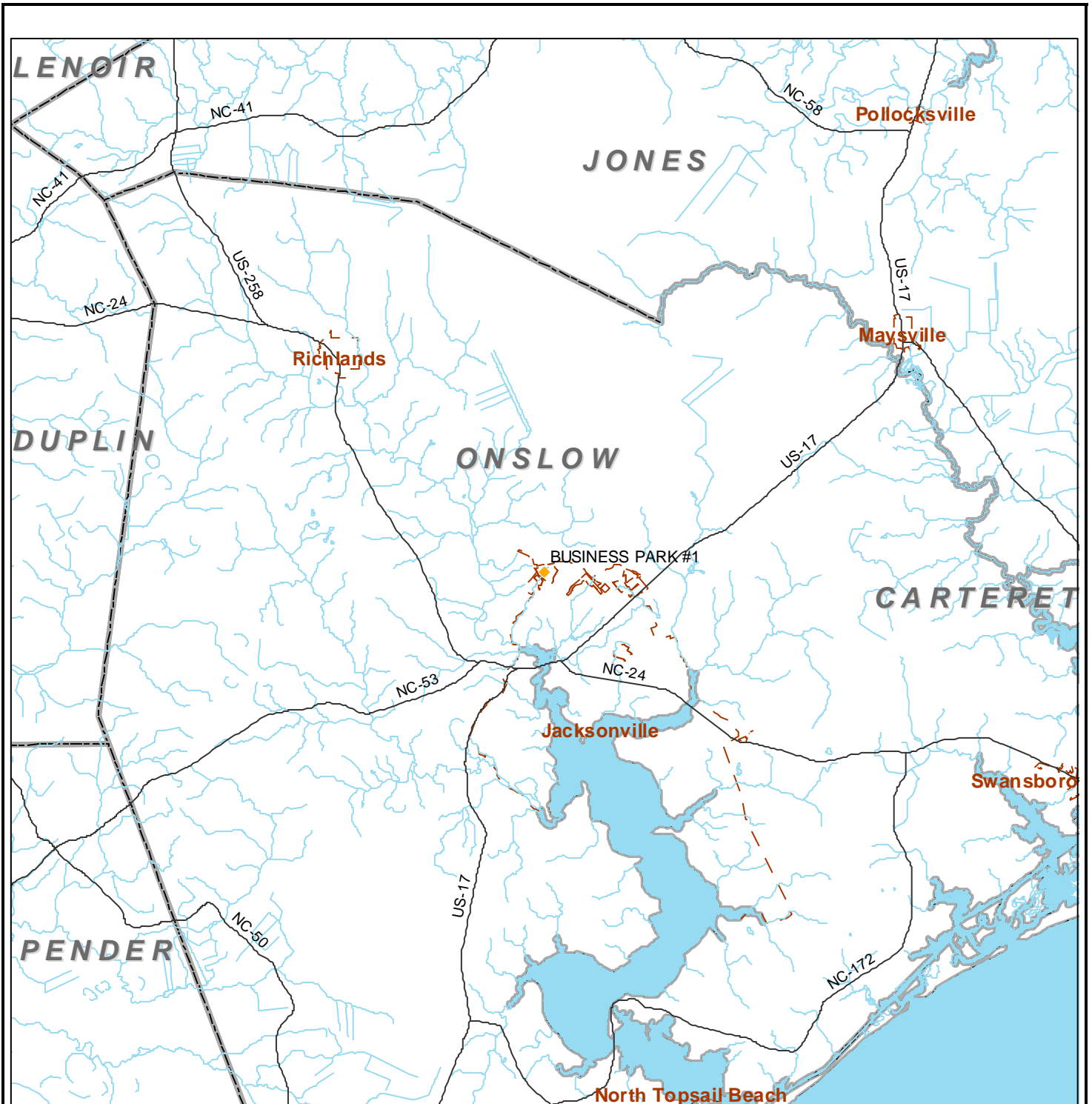
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, WELL #7



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

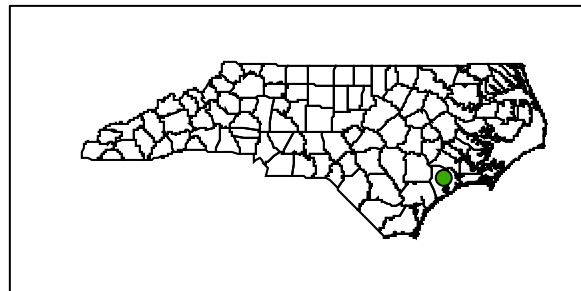
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



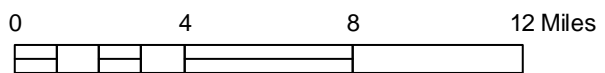
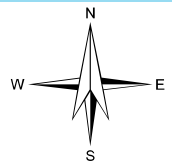


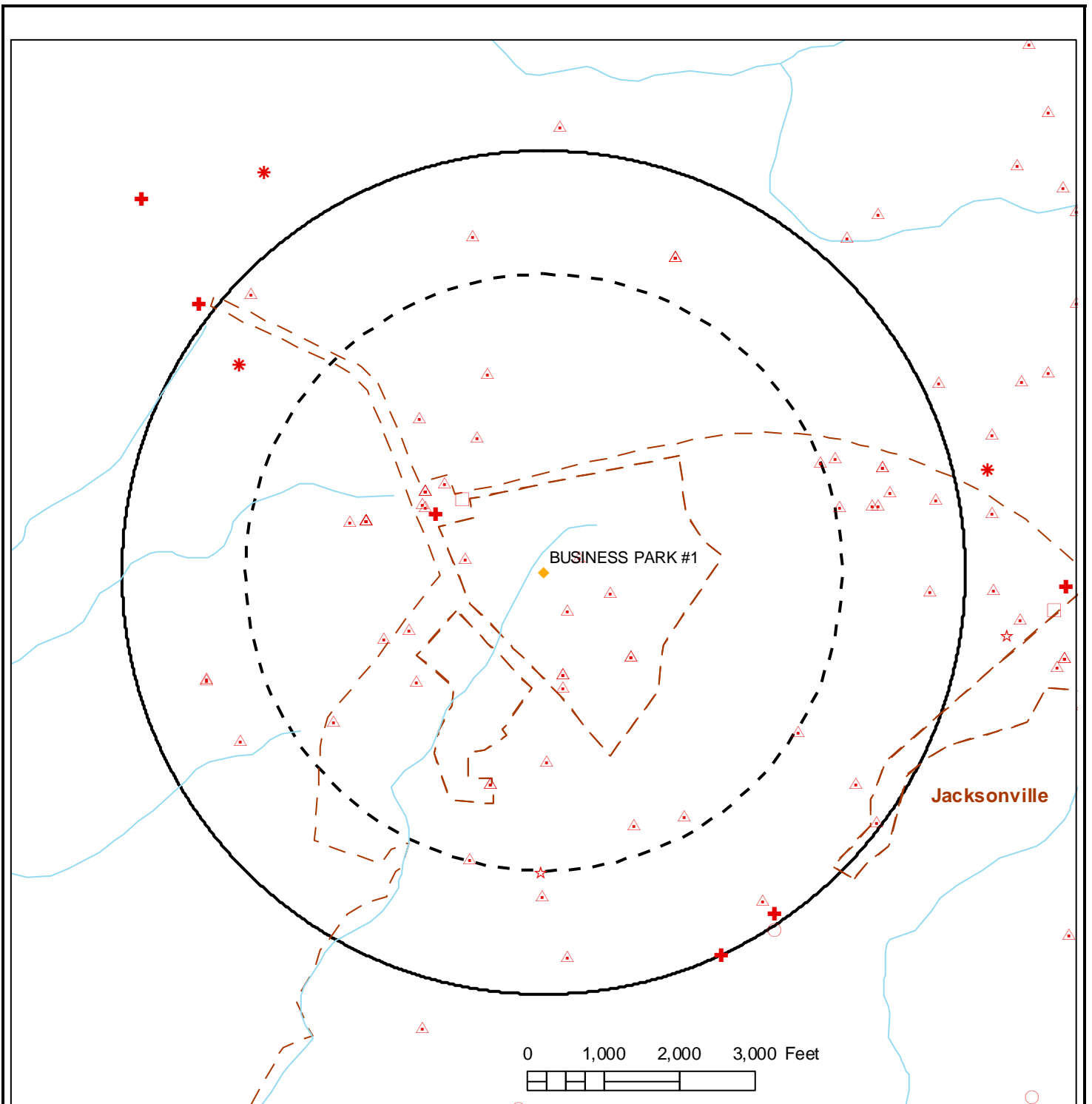
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



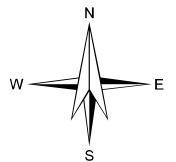


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BUSINESS PARK #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL CAROLINA COLLEGE	NCD982115883	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unknown	ONSLOW
LEVEL 3 COMMUNICATIONS - JACKSONVILLE-JCVLNCAU	4091512	Tier II Sites	H	2629 Gum Branch Rd	Jacksonville	Unknown	Onslow
HANDY MART 48	00-0-0000020193	UST Sites	H	1180 HENDERSON DRIVE	JACKSONVILLE	Unknown	ONSLOW
WILCO 389	00-0-0000035383	UST Sites	H	6995 WESTERN BLVD	JACKSONVILLE	Unknown	ONSLOW
White Oak Congregation of Jehovahs Witnesses	SW8050534	NPDES Permits	L	Henderson Drive And Doris Ave	Jacksonville	Unknown	ONSLOW
Walgreen's Drugstore-Jacksonville, NC	SW8041130	NPDES Permits	L	1600 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Kensington Park at Williamsburg Plantation	SW8050629	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Evansbrook, Phase II	SW8040329	NPDES Permits	L	Iverleigh Ln	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
South Hall Subdivision	SW8051130	NPDES Permits	L	End Of Indian Dr	Jacksonville	Unknown	ONSLOW
Grantown Subdivision	SW8070905	NPDES Permits	L	1819 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Fire Station 2 Jacksonville	SW8121011	NPDES Permits	L	1800 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Northgate Center	SW8960816	NPDES Permits	L	Intersection Of Henderson Dr Ext And Indian Dr	Jacksonville	Unknown	ONSLOW
Woodlands Phase IIIA	SW8891007	NPDES Permits	L	Plantation Blvd At Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Woodlands III	SW8961101	NPDES Permits	L	Plantation Boulevard Iverleigh Ln	Jacksonville	Unknown	ONSLOW
Covenant Presbyterian Church ARP	SW8071227	NPDES Permits	L	106 Plantation Blvd	Jacksonville	Unknown	ONSLOW
River Of Life Inc.	SW8980420	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Williamsburg Plantation Parkway	SW8960327	NPDES Permits	L	Williamsburg Plantation Pkwy	Jacksonville	Unknown	ONSLOW
First Baptist Church Of Jacksonville Inc	SW8000414	NPDES Permits	L	1985 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Regency Park Section I at Williamsburg Plantation	SW8001114	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Phoenix Park (Phase I and II)	SW8010425	NPDES Permits	L	Gum Branch Road Henderson Dr Western Blvd Ext	Jacksonville	Unknown	ONSLOW
Fox Hollow Apartments	SW8051123	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Regency Park Section II at Williamsburg Plantation	SW8020919	NPDES Permits	L	S Of Intersection Of Williamsburg Pky	Jacksonville	Unknown	ONSLOW
New Frontier Way Nanofiltration WTP	SW8070306	NPDES Permits	L	177 New Frontier Way	Jacksonville	Unknown	ONSLOW
New Frontier Way Nanofiltration WTP	SW8071110	NPDES Permits	L	177 New Frontier Way	Jacksonville	Unknown	ONSLOW
Kensington Park II at Williamsburg Plantation	SW8070422	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
Huntington Park at Williamsburg Plantation	SW8040733	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Jacksonville Builders Supply	SW8011017	NPDES Permits	L	200 Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Eastgate Subdivision	SW8060547	NPDES Permits	L	Cardinal Dr	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Royal Creek Commercial Industrial Park	SW8000308	NPDES Permits	L	New Frontier Way	Jacksonville	Unknown	ONSLOW
Miller Motte College Facility	SW8110504	NPDES Permits	L	105 New Frontier Way	Jacksonville	Unknown	ONSLOW
Williamsburg Crossing Shopping Center	SW8971031	NPDES Permits	L	2200 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	NPDES Permits	L	Western Blvd Intersection Of Gum Branch	Jacksonville	Unknown	ONSLOW
Western Parkway NCDOT Project U4007B	SW8100216	NPDES Permits	L	Western Pkwy	Jacksonville	Unknown	ONSLOW
City of Jacksonville Water System Improvements Phase II	SW8100518	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
Hampton Inn Jacksonville	SW8880309	NPDES Permits	L	Western Blvd Hwy 17	Jacksonville	Unknown	ONSLOW
Kentucky Fried Chicken	SW8900619	NPDES Permits	L	Western Blvd Brynn Marr Rd	Jacksonville	Unknown	ONSLOW
Goodwill Industries	SW8970133	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	NPDES Permits	L	NW Dr	Jacksonville	Unknwn	ONSLOW
Lot 14 Northwest Business Park	SW8060639	NPDES Permits	L	Dennis Rd	Jacksonville	Unknwn	ONSLOW
Northwest Business Park	SW8970517	NPDES Permits	L	Western Blvd	Jacksonville	Unknwn	ONSLOW
State Employees Credit Union Western Boulevard Office	SW8110701	NPDES Permits	L	114 N Plain Rd	Jacksonville	Unknwn	ONSLOW
A.T. Williams Oil Company / Wendy's	SW8961233	NPDES Permits	L	6995 Western Blvd	Jacksonville	Unknwn	ONSLOW
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	NPDES Permits	L	Western Blvd At Gum Branch Rd	Jacksonville	Unknwn	ONSLOW
Splash N Dash Carwash	SW8141212	NPDES Permits	L	4245 Western Blvd	Jacksonville	Unknwn	ONSLOW
CVS Pharmacy 5594 Gum Branch Road	SW8070804	NPDES Permits	L	2400 Gum Branch Rd	Jacksonville	Unknwn	ONSLOW
FCW&P Properties	SW8110712	NPDES Permits	L	Int Of Gum Branch Rd Western Blvd	Jacksonville	Unknwn	ONSLOW
Jones Car Wash	SW8110713	NPDES Permits	L	6974 Western Blvd	Jacksonville	Unknwn	ONSLOW
Coastal Equipment	SW8020206	NPDES Permits	L	Western Blvd gum branch rd	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Ward Farm Village	SW8120811	NPDES Permits	L	Adj To Ward Road And Deer Island Rd	Swansboro	Unknwn	ONSLOW
Lot 4 Northwest Business Park	SW8120812	NPDES Permits	L	4275 Western Blvd	Jacksonville	Unknwn	ONSLOW
Lot 6 Northwest Business Park	SW8000428	NPDES Permits	L	Lot 6 NW Business Park	Jacksonville	Unknwn	ONSLOW
Convergys Site	SW8950714	NPDES Permits	L	4329 Western Blvd	Jacksonville	Unknwn	ONSLOW
Noland Properties, Inc.	SW8051012	NPDES Permits	L	Williamsburg Pkwy New Frontier Way	Jacksonville	Unknwn	ONSLOW
River of Life Clear and Grade	SWG030026	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknwn	ONSLOW
Mike Choate Tract	SW8060142	NPDES Permits	L	Williamsburg Pkwy Western Blvd	Jacksonville	Unknwn	ONSLOW
Calvary Assembly of God Church	SW8051110	NPDES Permits	L	3980 Gum Branch Rd	Jacksonville	Unknwn	ONSLOW
Arlington West	SW8080814	NPDES Permits	L	Western Blvd	Jacksonville	Unknwn	ONSLOW
Meadows Gate Apartments	SW8081022	NPDES Permits	L	Westernboulevard	Jacksonville	Unknwn	ONSLOW
Compass Pointe at Meadows Gate	SW8141107	NPDES Permits	L	1026 Arlington Meadows Dr	Jacksonville	Unknwn	ONSLOW
Carriage Run at Carolina Forest	SW8031119	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unknwn	ONSLOW
Glen Spradling and Wanda Spradling SFR	WI0800192	UIC Permits	M	104 Sussex Ct	Jacksonville	Unknwn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BUSINESS PARK #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL CAROLINA COLLEGE	NCD982115883	GENERATOR	SQG
COASTAL CAROLINA COLLEGE	NCD982115883	TRANSPORTER	N
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Type	State Stormwater
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Issued Date	11/21/2005
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Expiration Date	11/21/2019
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Type	State Stormwater
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Issued Date	8/19/2005
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Expiration Date	8/19/2019
Kensington Park at Williamsburg Plantation	SW8050629	Permit Type	State Stormwater
Kensington Park at Williamsburg Plantation	SW8050629	Permit Issued Date	9/19/2012
Kensington Park at Williamsburg Plantation	SW8050629	Permit Expiration Date	7/17/2020
Evansbrook, Phase II	SW8040329	Permit Type	State Stormwater
Evansbrook, Phase II	SW8040329	Permit Issued Date	5/26/2004
South Hall Subdivision	SW8051130	Permit Type	State Stormwater
South Hall Subdivision	SW8051130	Permit Issued Date	2/21/2011
Grantown Subdivision	SW8070905	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Grantown Subdivision	SW8070905	Permit Issued Date	11/6/2007
Grantown Subdivision	SW8070905	Permit Expiration Date	11/6/2021
Fire Station 2 Jacksonville	SW8121011	Permit Type	State Stormwater
Fire Station 2 Jacksonville	SW8121011	Permit Issued Date	8/15/2013
Fire Station 2 Jacksonville	SW8121011	Permit Expiration Date	1/27/2020
Northgate Center	SW8960816	Permit Type	State Stormwater
Northgate Center	SW8960816	Permit Issued Date	1/5/2009
Northgate Center	SW8960816	Permit Expiration Date	10/4/2020
Woodlands Phase IIIA	SW8891007	Permit Type	State Stormwater
Woodlands Phase IIIA	SW8891007	Permit Issued Date	3/2/1990
Woodlands III	SW8961101	Permit Type	State Stormwater
Woodlands III	SW8961101	Permit Issued Date	2/13/1997
Covenant Presbyterian Church ARP	SW8071227	Permit Type	State Stormwater
Covenant Presbyterian Church ARP	SW8071227	Permit Issued Date	5/14/2008
River Of Life Inc.	SW8980420	Permit Type	State Stormwater
River Of Life Inc.	SW8980420	Permit Issued Date	8/22/2008
River Of Life Inc.	SW8980420	Permit Expiration Date	8/22/2022
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Type	State Stormwater
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Issued Date	11/22/2013
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Expiration Date	11/23/2021
Williamsburg Plantation Parkway	SW8960327	Permit Type	State Stormwater
Williamsburg Plantation Parkway	SW8960327	Permit Issued Date	7/19/1996
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Type	State Stormwater
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Issued Date	11/14/2014

PCS Name	PCS ID	Attribute	Value
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Expiration Date	1/17/2020
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Type	State Stormwater
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Issued Date	9/20/2012
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Expiration Date	10/21/2021
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Type	State Stormwater
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Issued Date	3/30/2015
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Expiration Date	3/27/2023
Phoenix Park (Phase I and II)	SW8010425	Permit Type	State Stormwater
Phoenix Park (Phase I and II)	SW8010425	Permit Issued Date	8/4/2005
Phoenix Park (Phase I and II)	SW8010425	Permit Expiration Date	8/4/2019
Fox Hollow Apartments	SW8051123	Permit Type	State Stormwater
Fox Hollow Apartments	SW8051123	Permit Issued Date	2/8/2006
Fox Hollow Apartments	SW8051123	Permit Expiration Date	2/8/2020
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Type	State Stormwater
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Issued Date	9/14/2012
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Expiration Date	8/26/2017
New Frontier Way Nanofiltration WTP	SW8070306	Permit Type	State Stormwater
New Frontier Way Nanofiltration WTP	SW8070306	Permit Issued Date	6/14/2007
New Frontier Way Nanofiltration WTP	SW8071110	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
New Frontier Way Nanofiltration WTP	SW8071110	Permit Issued Date	1/10/2008
New Frontier Way Nanofiltration WTP	SW8071110	Permit Expiration Date	12/31/2021
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Type	State Stormwater
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Issued Date	10/1/2012
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Expiration Date	9/6/2021
Huntington Park at Williamsburg Plantation	SW8040733	Permit Type	State Stormwater
Huntington Park at Williamsburg Plantation	SW8040733	Permit Issued Date	10/2/2012
Huntington Park at Williamsburg Plantation	SW8040733	Permit Expiration Date	7/17/2020
Jacksonville Builders Supply	SW8011017	Permit Type	State Stormwater
Jacksonville Builders Supply	SW8011017	Permit Issued Date	11/18/2011
Jacksonville Builders Supply	SW8011017	Permit Expiration Date	4/10/2026
Eastgate Subdivision	SW8060547	Permit Type	State Stormwater
Eastgate Subdivision	SW8060547	Permit Issued Date	5/13/2013
Royal Creek Commercial Industrial Park	SW8000308	Permit Type	State Stormwater
Royal Creek Commercial Industrial Park	SW8000308	Permit Issued Date	3/15/2010
Royal Creek Commercial Industrial Park	SW8000308	Permit Expiration Date	7/24/2027
Miller Motte College Facility	SW8110504	Permit Type	State Stormwater
Miller Motte College Facility	SW8110504	Permit Issued Date	2/2/2015
Miller Motte College Facility	SW8110504	Permit Expiration Date	5/19/2021
Williamsburg Crossing Shopping Center	SW8971031	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Williamsburg Crossing Shopping Center	SW8971031	Permit Issued Date	7/8/2009
Williamsburg Crossing Shopping Center	SW8971031	Permit Expiration Date	4/28/2022
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Type	State Stormwater
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Issued Date	10/12/2012
Western Parkway NCDOT Project U4007B	SW8100216	Permit Type	State Stormwater
Western Parkway NCDOT Project U4007B	SW8100216	Permit Issued Date	6/10/2010
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Type	State Stormwater
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Issued Date	6/23/2010
Hampton Inn Jacksonville	SW8880309	Permit Type	State Stormwater
Hampton Inn Jacksonville	SW8880309	Permit Issued Date	5/10/1988
Kentucky Fried Chicken	SW8900619	Permit Type	State Stormwater
Kentucky Fried Chicken	SW8900619	Permit Issued Date	6/21/1990
Goodwill Industries	SW8970133	Permit Type	State Stormwater
Goodwill Industries	SW8970133	Permit Issued Date	1/24/1997
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	Permit Type	State Stormwater
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	Permit Issued Date	8/4/2006
Lot 14 Northwest Business Park	SW8060639	Permit Type	State Stormwater
Lot 14 Northwest Business Park	SW8060639	Permit Issued Date	8/21/2006
Northwest Business Park	SW8970517	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Northwest Business Park	SW8970517	Permit Issued Date	8/2/2011
Northwest Business Park	SW8970517	Permit Expiration Date	6/26/2021
State Employees Credit Union Western Boulevard Office	SW8110701	Permit Type	State Stormwater
State Employees Credit Union Western Boulevard Office	SW8110701	Permit Issued Date	8/2/2011
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Type	State Stormwater
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Issued Date	1/12/2009
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Expiration Date	10/5/2022
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Type	State Stormwater
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Issued Date	7/6/1998
Splash N Dash Carwash	SW8141212	Permit Type	State Stormwater
Splash N Dash Carwash	SW8141212	Permit Issued Date	2/6/2015
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Type	State Stormwater
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Issued Date	9/30/2011
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Expiration Date	9/30/2025
FCW&P Properties	SW8110712	Permit Type	State Stormwater
FCW&P Properties	SW8110712	Permit Issued Date	5/29/2014
FCW&P Properties	SW8110712	Permit Expiration Date	12/30/2021
Jones Car Wash	SW8110713	Permit Type	State Stormwater
Jones Car Wash	SW8110713	Permit Issued Date	9/30/2011
Coastal Equipment	SW8020206	Permit Type	State Stormwater
Coastal Equipment	SW8020206	Permit Issued Date	8/15/2002
Coastal Equipment	SW8020206	Permit Expiration Date	8/15/2016
Ward Farm Village	SW8120811	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Ward Farm Village	SW8120811	Permit Issued Date	10/8/2012
Lot 4 Northwest Business Park	SW8120812	Permit Type	State Stormwater
Lot 4 Northwest Business Park	SW8120812	Permit Issued Date	9/28/2012
Lot 6 Northwest Business Park	SW8000428	Permit Type	State Stormwater
Lot 6 Northwest Business Park	SW8000428	Permit Issued Date	3/1/2013
Convergys Site	SW8950714	Permit Type	State Stormwater
Convergys Site	SW8950714	Permit Issued Date	5/16/2001
Convergys Site	SW8950714	Permit Expiration Date	5/16/2015
Noland Properties, Inc.	SW8051012	Permit Type	State Stormwater
Noland Properties, Inc.	SW8051012	Permit Issued Date	5/4/2006
Noland Properties, Inc.	SW8051012	Permit Expiration Date	5/4/2020
River of Life Clear and Grade	SWG030026	Permit Type	State Stormwater, Clearing and Grading COC
River of Life Clear and Grade	SWG030026	Permit Issued Date	4/10/2014
Mike Choate Tract	SW8060142	Permit Type	State Stormwater
Mike Choate Tract	SW8060142	Permit Issued Date	5/16/2008
Mike Choate Tract	SW8060142	Permit Expiration Date	12/30/2021
Calvary Assembly of God Church	SW8051110	Permit Type	State Stormwater
Calvary Assembly of God Church	SW8051110	Permit Issued Date	3/1/2012
Calvary Assembly of God Church	SW8051110	Permit Expiration Date	4/11/2016
Arlington West	SW8080814	Permit Type	State Stormwater
Arlington West	SW8080814	Permit Issued Date	9/29/2008
Arlington West	SW8080814	Permit Expiration Date	12/30/2021
Meadows Gate Apartments	SW8081022	Permit Type	State Stormwater
Meadows Gate Apartments	SW8081022	Permit Issued Date	1/23/2015

PCS Name	PCS ID	Attribute	Value
Meadows Gate Apartments	SW8081022	Permit Expiration Date	12/30/2021
Compass Pointe at Meadows Gate	SW8141107	Permit Type	State Stormwater
Compass Pointe at Meadows Gate	SW8141107	Permit Issued Date	1/23/2015
Carriage Run at Carolina Forest	SW8031119	Permit Type	State Stormwater
Carriage Run at Carolina Forest	SW8031119	Permit Issued Date	10/30/2012
Glen Spradling and Wanda Spradling SFR	WI0800192	Permit Type	Injection Water Only GSHP Well System

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, BUSINESS PARK #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , BUSINESS PARK #1**

Unsaturated Zone Rating	63.1
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

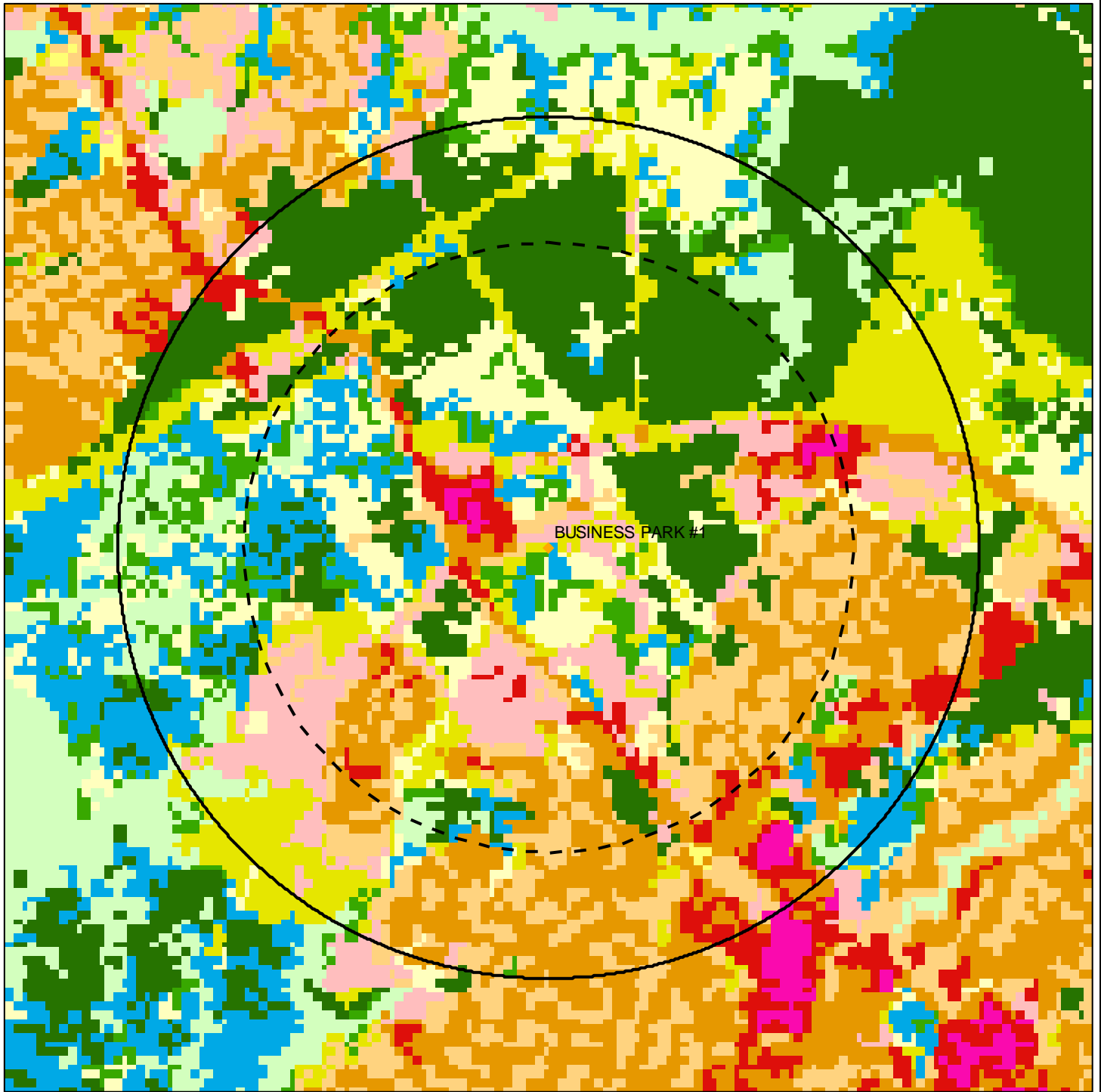
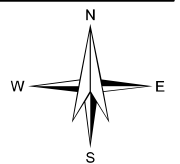


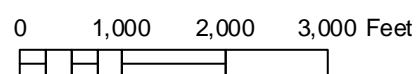
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



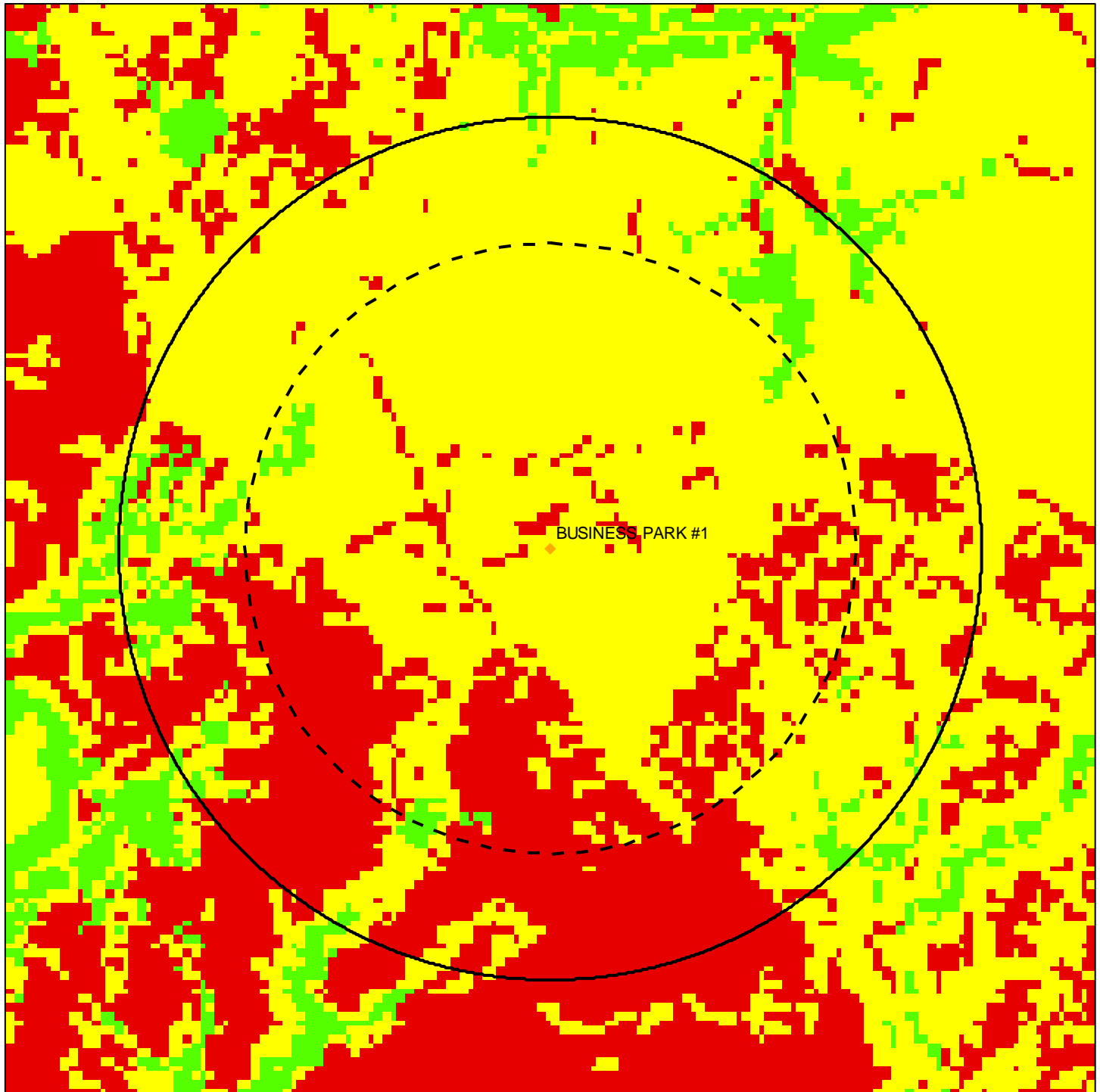
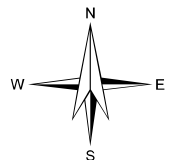
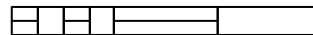


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



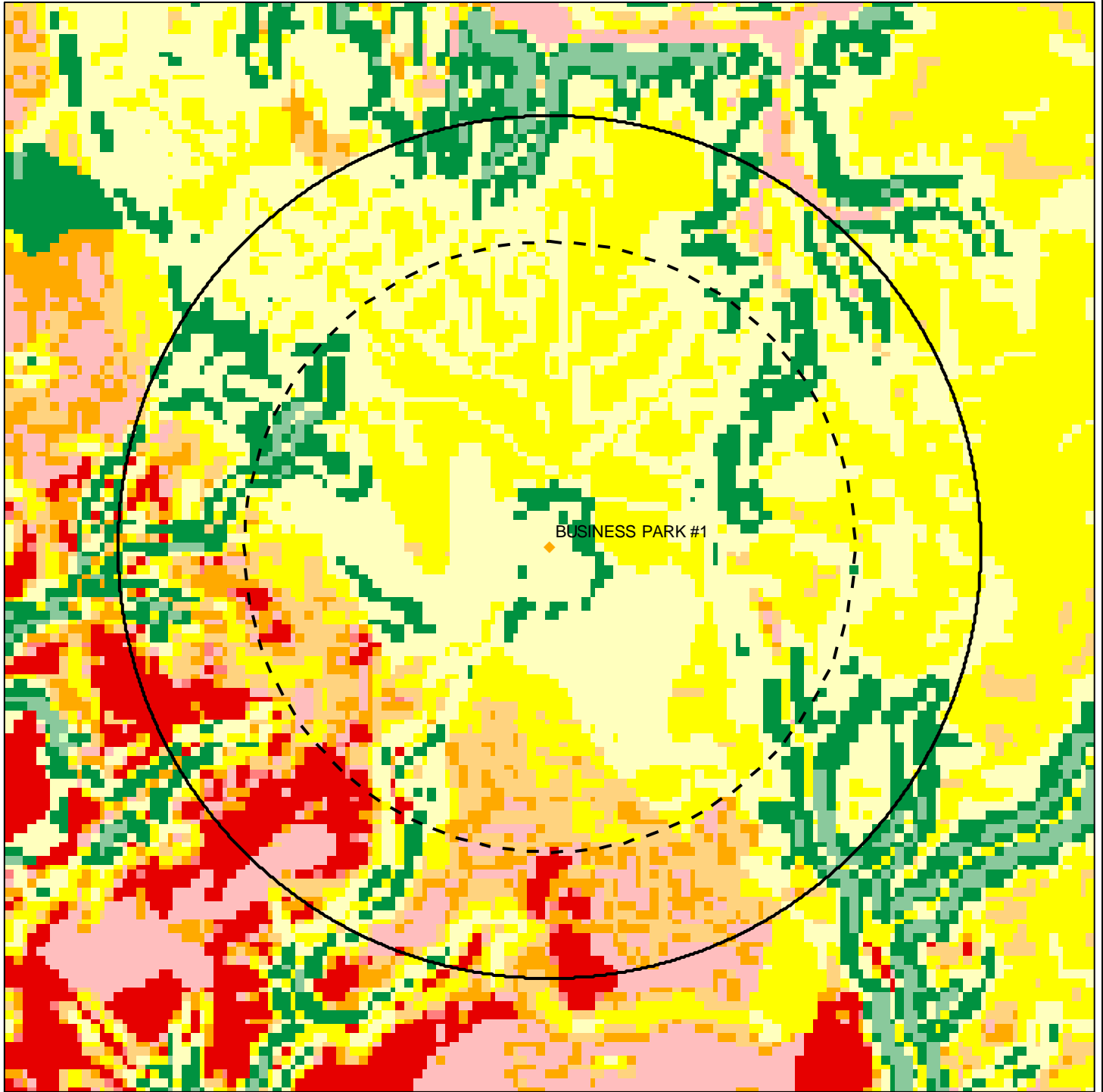
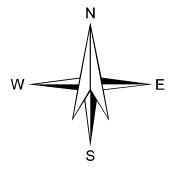
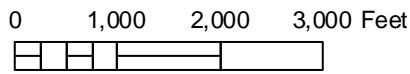


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



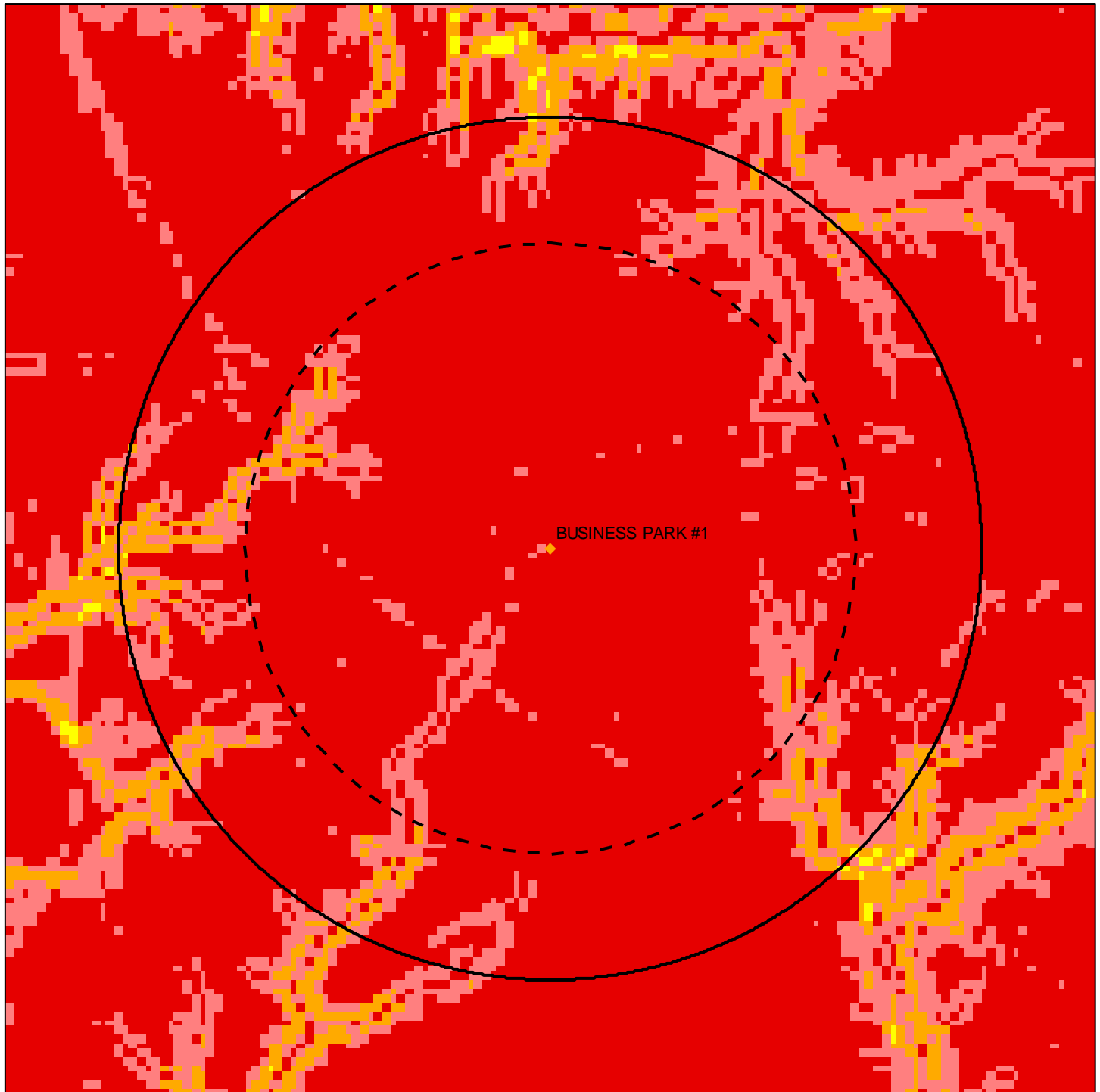
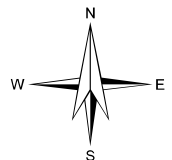








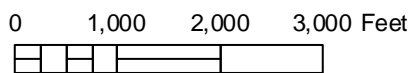


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



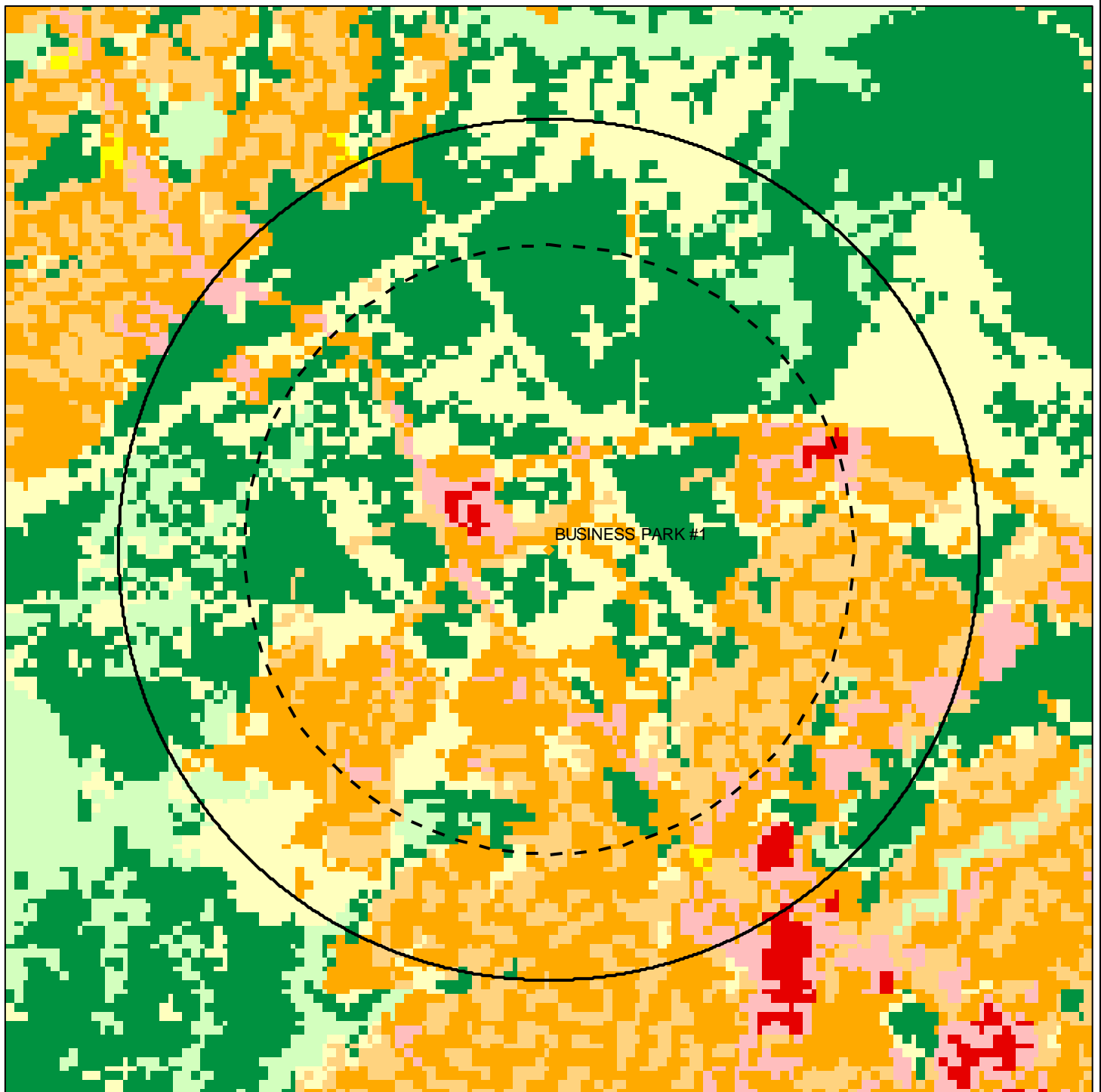
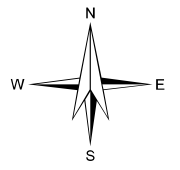


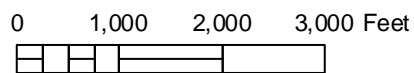


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



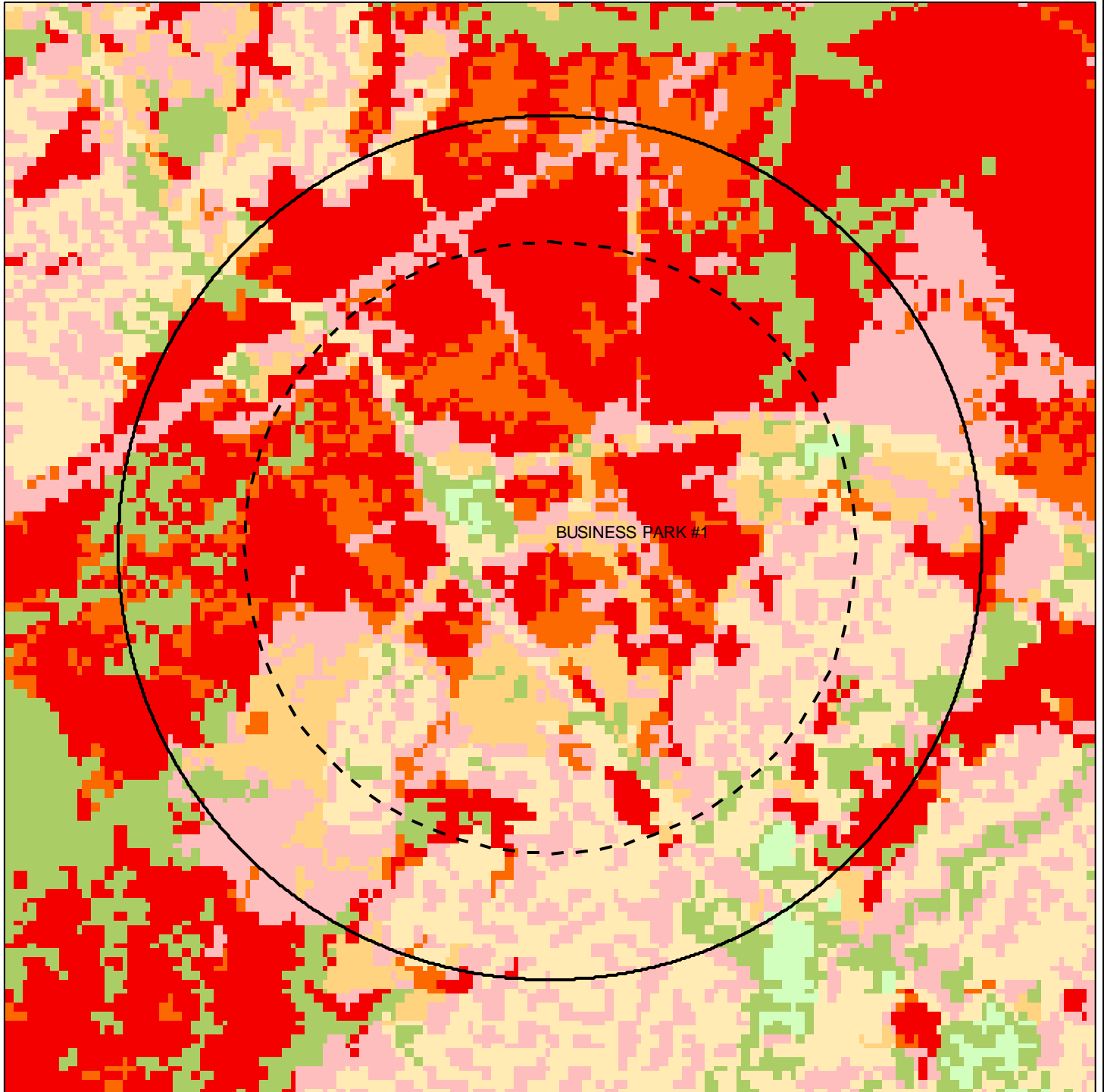
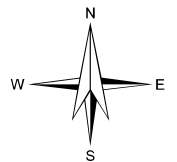
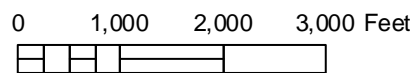


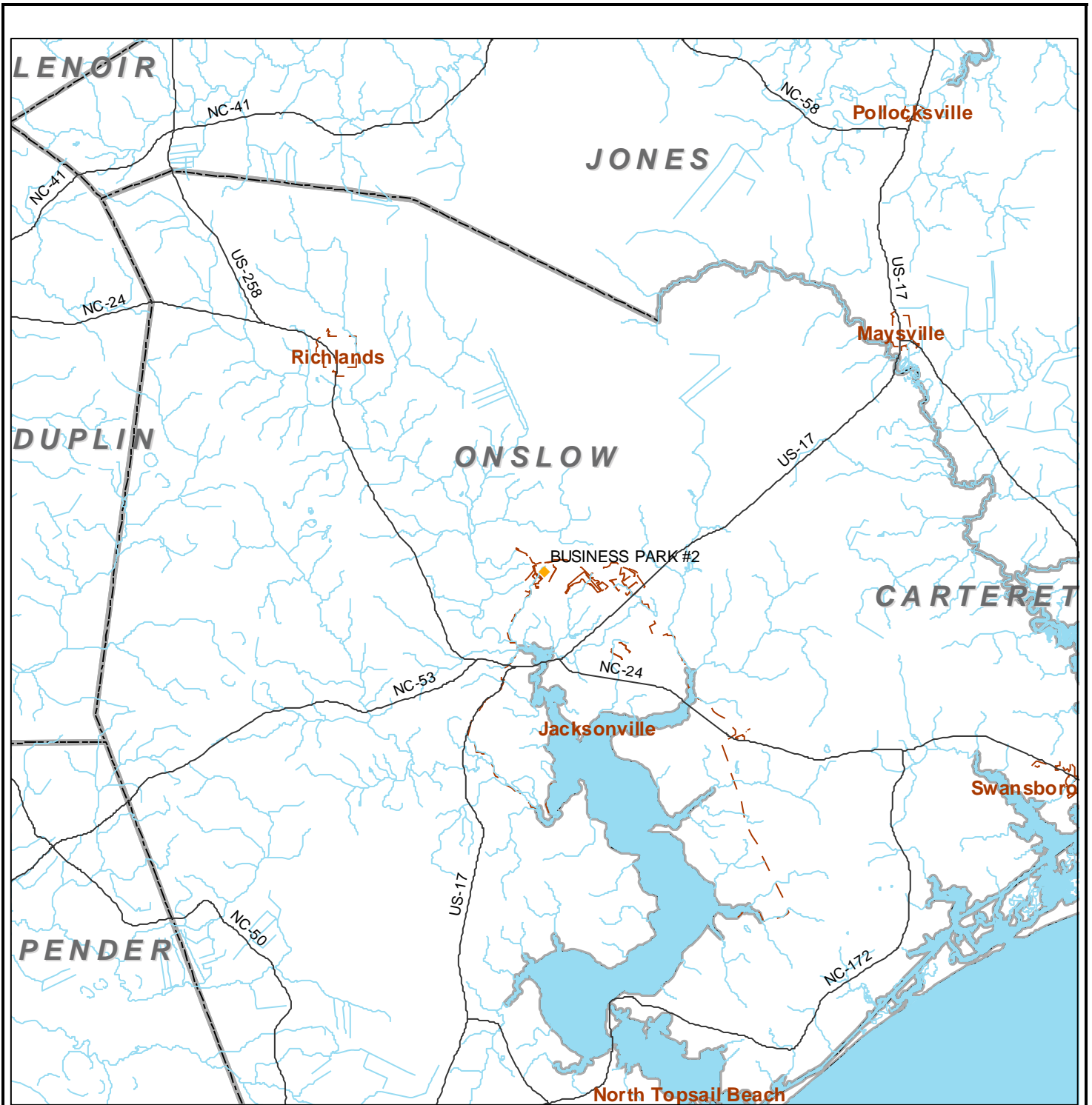
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

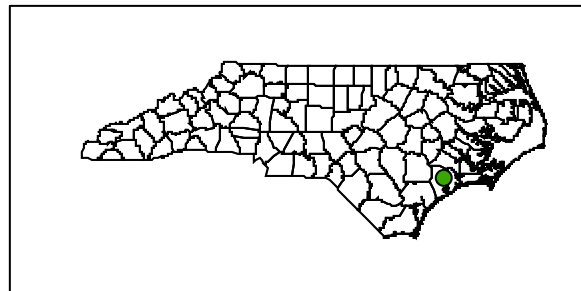
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



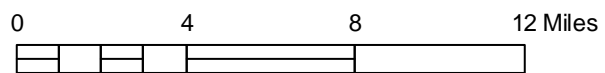
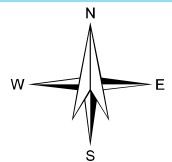


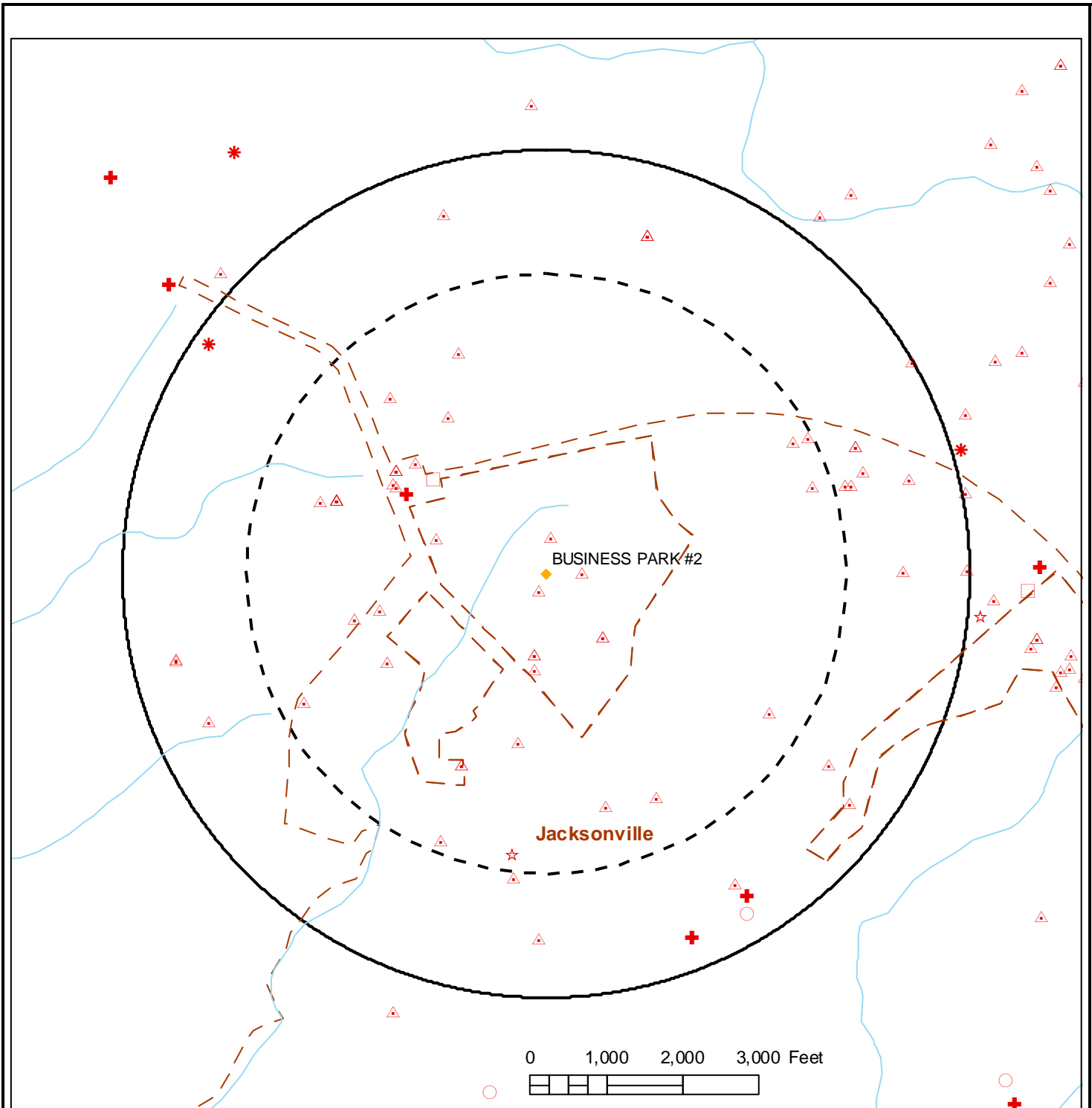
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



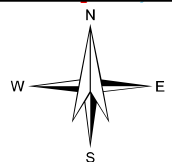


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BUSINESS PARK #2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL CAROLINA COLLEGE	NCD982115883	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unknown	ONSLOW
Coastal Dry Cleaners	670004	Pollution Incidents	H	1170 Henderson Dr	Jacksonville	Unknown	ONSLOW
LEVEL 3 COMMUNICATIONS - JACKSONVILLE-JCVLNCAU	4091512	Tier II Sites	H	2629 Gum Branch Rd	Jacksonville	Unknown	Onslow
JACKSONVILLE HIGH SCHOOL	00-0-0000027719	UST Sites	H	1021 HENDERSON DRIVE	JACKSONVILLE	Unknown	ONSLOW
HANDY MART 48	00-0-0000020193	UST Sites	H	1180 HENDERSON DRIVE	JACKSONVILLE	Unknown	ONSLOW
WILCO 389	00-0-0000035383	UST Sites	H	6995 WESTERN BLVD	JACKSONVILLE	Unknown	ONSLOW
White Oak Congregation of Jehovahs Witnesses	SW8050534	NPDES Permits	L	Henderson Drive And Doris Ave	Jacksonville	Unknown	ONSLOW
Walgreen's Drugstore-Jacksonville, NC	SW8041130	NPDES Permits	L	1600 Gum Branch Rd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Kensington Park at Williamsburg Plantation	SW8050629	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Evansbrook, Phase II	SW8040329	NPDES Permits	L	Iverleigh Ln	Jacksonville	Unknown	ONSLOW
South Hall Subdivision	SW8051130	NPDES Permits	L	End Of Indian Dr	Jacksonville	Unknown	ONSLOW
Grantown Subdivision	SW8070905	NPDES Permits	L	1819 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Fire Station 2 Jacksonville	SW8121011	NPDES Permits	L	1800 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Northgate Center	SW8960816	NPDES Permits	L	Intersection Of Henderson Dr Ext And Indian Dr	Jacksonville	Unknown	ONSLOW
Woodlands Phase IIIA	SW8891007	NPDES Permits	L	Plantation Blvd At Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Woodlands III	SW8961101	NPDES Permits	L	Plantation Boulevard Iverleigh Ln	Jacksonville	Unknown	ONSLOW
Covenant Presbyterian Church ARP	SW8071227	NPDES Permits	L	106 Plantation Blvd	Jacksonville	Unknown	ONSLOW
River Of Life Inc.	SW8980420	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Williamsburg Plantation Parkway	SW8960327	NPDES Permits	L	Williamsburg Plantation Pkwy	Jacksonville	Unknown	ONSLOW
First Baptist Church Of Jacksonville Inc	SW8000414	NPDES Permits	L	1985 Gum Branch Rd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Regency Park Section I at Williamsburg Plantation	SW8001114	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Phoenix Park (Phase I and II)	SW8010425	NPDES Permits	L	Gum Branch Road Henderson Dr Western Blvd Ext	Jacksonville	Unknown	ONSLOW
Fox Hollow Apartments	SW8051123	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Regency Park Section II at Williamsburg Plantation	SW8020919	NPDES Permits	L	S Of Intersection Of Williamsburg Pky	Jacksonville	Unknown	ONSLOW
New Frontier Way Nanofiltration WTP	SW8070306	NPDES Permits	L	177 New Frontier Way	Jacksonville	Unknown	ONSLOW
New Frontier Way Nanofiltration WTP	SW8071110	NPDES Permits	L	177 New Frontier Way	Jacksonville	Unknown	ONSLOW
Kensington Park II at Williamsburg Plantation	SW8070422	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
Huntington Park at Williamsburg Plantation	SW8040733	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Jacksonville Builders Supply	SW8011017	NPDES Permits	L	200 Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Eastgate Subdivision	SW8060547	NPDES Permits	L	Cardinal Dr	Jacksonville	Unknown	ONSLOW
RBC Centura - Lot 12B HDX Subdivision	SW8071114	NPDES Permits	L	2885 Western Blvd	Jacksonville	Unknown	ONSLOW
Royal Creek Commercial Industrial Park	SW8000308	NPDES Permits	L	New Frontier Way	Jacksonville	Unknown	ONSLOW
Miller Motte College Facility	SW8110504	NPDES Permits	L	105 New Frontier Way	Jacksonville	Unknown	ONSLOW
Williamsburg Crossing Shopping Center	SW8971031	NPDES Permits	L	2200 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	NPDES Permits	L	Western Blvd Intersection Of Gum Branch	Jacksonville	Unknown	ONSLOW
Western Parkway NCDOT Project U4007B	SW8100216	NPDES Permits	L	Western Pkwy	Jacksonville	Unknown	ONSLOW
City of Jacksonville Water System Improvements Phase II	SW8100518	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Hampton Inn Jacksonville	SW8880309	NPDES Permits	L	Western Blvd Hwy 17	Jacksonville	Unknown	ONSLOW
Kentucky Fried Chicken	SW8900619	NPDES Permits	L	Western Blvd Brynn Marr Rd	Jacksonville	Unknown	ONSLOW
Goodwill Industries	SW8970133	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	NPDES Permits	L	NW Dr	Jacksonville	Unknown	ONSLOW
Lot 14 Northwest Business Park	SW8060639	NPDES Permits	L	Dennis Rd	Jacksonville	Unknown	ONSLOW
Northwest Business Park	SW8970517	NPDES Permits	L	Western Blvd	Jacksonville	Unknown	ONSLOW
State Employees Credit Union Western Boulevard Office	SW8110701	NPDES Permits	L	114 N Plain Rd	Jacksonville	Unknown	ONSLOW
A.T. Williams Oil Company / Wendy's	SW8961233	NPDES Permits	L	6995 Western Blvd	Jacksonville	Unknown	ONSLOW
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	NPDES Permits	L	Western Blvd At Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Splash N Dash Carwash	SW8141212	NPDES Permits	L	4245 Western Blvd	Jacksonville	Unknown	ONSLOW
CVS Pharmacy 5594 Gum Branch Road	SW8070804	NPDES Permits	L	2400 Gum Branch Rd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
FCW&P Properties	SW8110712	NPDES Permits	L	Int Of Gum Branch Rd Western Blvd	Jacksonville	Unkno wn	ONSLOW
Jones Car Wash	SW8110713	NPDES Permits	L	6974 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Coastal Equipment	SW8020206	NPDES Permits	L	Western Blvd gum branch rd	Jacksonville	Unkno wn	ONSLOW
Ward Farm Village	SW8120811	NPDES Permits	L	Adj To Ward Road And Deer Island Rd	Swansboro	Unkno wn	ONSLOW
Lot 4 Northwest Business Park	SW8120812	NPDES Permits	L	4275 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lot 6 Northwest Business Park	SW8000428	NPDES Permits	L	Lot 6 NW Business Park	Jacksonville	Unkno wn	ONSLOW
Convergys Site	SW8950714	NPDES Permits	L	4329 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Noland Properties, Inc.	SW8051012	NPDES Permits	L	Williamsburg Pkwy New Frontier Way	Jacksonville	Unkno wn	ONSLOW
River of Life Clear and Grade	SWG030026	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Carolina Forest Entrance Road	SW8011104	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Mike Choate Tract	SW8060142	NPDES Permits	L	Williamsburg Pkwy Western Blvd	Jacksonville	Unkno wn	ONSLOW
Arlington West	SW8080814	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Meadows Gate Apartments	SW8081022	NPDES Permits	L	Westernboulevard	Jacksonville	Unkno wn	ONSLOW
Compass Pointe at Meadows Gate	SW8141107	NPDES Permits	L	1026 Arlington Meadows Dr	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Carriage Run at Carolina Forest	SW8031119	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Glen Spradling and Wanda Spradling SFR	WI0800192	UIC Permits	M	104 Sussex Ct	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BUSINESS PARK #2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL CAROLINA COLLEGE	NCD982115883	GENERATOR	SQG
COASTAL CAROLINA COLLEGE	NCD982115883	TRANSPORTER	N
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Type	State Stormwater
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Issued Date	11/21/2005
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Expiration Date	11/21/2019
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Type	State Stormwater
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Issued Date	8/19/2005
Walgreen's Drugstore-Jacksonville, NC	SW8041130	Permit Expiration Date	8/19/2019
Kensington Park at Williamsburg Plantation	SW8050629	Permit Type	State Stormwater
Kensington Park at Williamsburg Plantation	SW8050629	Permit Issued Date	9/19/2012
Kensington Park at Williamsburg Plantation	SW8050629	Permit Expiration Date	7/17/2020
Evansbrook, Phase II	SW8040329	Permit Type	State Stormwater
Evansbrook, Phase II	SW8040329	Permit Issued Date	5/26/2004
South Hall Subdivision	SW8051130	Permit Type	State Stormwater
South Hall Subdivision	SW8051130	Permit Issued Date	2/21/2011
Grantown Subdivision	SW8070905	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Grantown Subdivision	SW8070905	Permit Issued Date	11/6/2007
Grantown Subdivision	SW8070905	Permit Expiration Date	11/6/2021
Fire Station 2 Jacksonville	SW8121011	Permit Type	State Stormwater
Fire Station 2 Jacksonville	SW8121011	Permit Issued Date	8/15/2013
Fire Station 2 Jacksonville	SW8121011	Permit Expiration Date	1/27/2020
Northgate Center	SW8960816	Permit Type	State Stormwater
Northgate Center	SW8960816	Permit Issued Date	1/5/2009
Northgate Center	SW8960816	Permit Expiration Date	10/4/2020
Woodlands Phase IIIA	SW8891007	Permit Type	State Stormwater
Woodlands Phase IIIA	SW8891007	Permit Issued Date	3/2/1990
Woodlands III	SW8961101	Permit Type	State Stormwater
Woodlands III	SW8961101	Permit Issued Date	2/13/1997
Covenant Presbyterian Church ARP	SW8071227	Permit Type	State Stormwater
Covenant Presbyterian Church ARP	SW8071227	Permit Issued Date	5/14/2008
River Of Life Inc.	SW8980420	Permit Type	State Stormwater
River Of Life Inc.	SW8980420	Permit Issued Date	8/22/2008
River Of Life Inc.	SW8980420	Permit Expiration Date	8/22/2022
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Type	State Stormwater
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Issued Date	11/22/2013
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Expiration Date	11/23/2021
Williamsburg Plantation Parkway	SW8960327	Permit Type	State Stormwater
Williamsburg Plantation Parkway	SW8960327	Permit Issued Date	7/19/1996
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Type	State Stormwater
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Issued Date	11/14/2014

PCS Name	PCS ID	Attribute	Value
First Baptist Church Of Jacksonville Inc	SW8000414	Permit Expiration Date	1/17/2020
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Type	State Stormwater
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Issued Date	9/20/2012
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Expiration Date	10/21/2021
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Type	State Stormwater
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Issued Date	3/30/2015
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Expiration Date	3/27/2023
Phoenix Park (Phase I and II)	SW8010425	Permit Type	State Stormwater
Phoenix Park (Phase I and II)	SW8010425	Permit Issued Date	8/4/2005
Phoenix Park (Phase I and II)	SW8010425	Permit Expiration Date	8/4/2019
Fox Hollow Apartments	SW8051123	Permit Type	State Stormwater
Fox Hollow Apartments	SW8051123	Permit Issued Date	2/8/2006
Fox Hollow Apartments	SW8051123	Permit Expiration Date	2/8/2020
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Type	State Stormwater
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Issued Date	9/14/2012
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Expiration Date	8/26/2017
New Frontier Way Nanofiltration WTP	SW8070306	Permit Type	State Stormwater
New Frontier Way Nanofiltration WTP	SW8070306	Permit Issued Date	6/14/2007
New Frontier Way Nanofiltration WTP	SW8071110	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
New Frontier Way Nanofiltration WTP	SW8071110	Permit Issued Date	1/10/2008
New Frontier Way Nanofiltration WTP	SW8071110	Permit Expiration Date	12/31/2021
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Type	State Stormwater
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Issued Date	10/1/2012
Kensington Park II at Williamsburg Plantation	SW8070422	Permit Expiration Date	9/6/2021
Huntington Park at Williamsburg Plantation	SW8040733	Permit Type	State Stormwater
Huntington Park at Williamsburg Plantation	SW8040733	Permit Issued Date	10/2/2012
Huntington Park at Williamsburg Plantation	SW8040733	Permit Expiration Date	7/17/2020
Jacksonville Builders Supply	SW8011017	Permit Type	State Stormwater
Jacksonville Builders Supply	SW8011017	Permit Issued Date	11/18/2011
Jacksonville Builders Supply	SW8011017	Permit Expiration Date	4/10/2026
Eastgate Subdivision	SW8060547	Permit Type	State Stormwater
Eastgate Subdivision	SW8060547	Permit Issued Date	5/13/2013
RBC Centura - Lot 12B HDX Subdivision	SW8071114	Permit Type	State Stormwater
RBC Centura - Lot 12B HDX Subdivision	SW8071114	Permit Issued Date	12/11/2007
Royal Creek Commercial Industrial Park	SW8000308	Permit Type	State Stormwater
Royal Creek Commercial Industrial Park	SW8000308	Permit Issued Date	3/15/2010
Royal Creek Commercial Industrial Park	SW8000308	Permit Expiration Date	7/24/2027
Miller Motte College Facility	SW8110504	Permit Type	State Stormwater
Miller Motte College Facility	SW8110504	Permit Issued Date	2/2/2015

PCS Name	PCS ID	Attribute	Value
Miller Motte College Facility	SW8110504	Permit Expiration Date	5/19/2021
Williamsburg Crossing Shopping Center	SW8971031	Permit Type	State Stormwater
Williamsburg Crossing Shopping Center	SW8971031	Permit Issued Date	7/8/2009
Williamsburg Crossing Shopping Center	SW8971031	Permit Expiration Date	4/28/2022
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Type	State Stormwater
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Issued Date	10/12/2012
Western Parkway NCDOT Project U4007B	SW8100216	Permit Type	State Stormwater
Western Parkway NCDOT Project U4007B	SW8100216	Permit Issued Date	6/10/2010
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Type	State Stormwater
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Issued Date	6/23/2010
Hampton Inn Jacksonville	SW8880309	Permit Type	State Stormwater
Hampton Inn Jacksonville	SW8880309	Permit Issued Date	5/10/1988
Kentucky Fried Chicken	SW8900619	Permit Type	State Stormwater
Kentucky Fried Chicken	SW8900619	Permit Issued Date	6/21/1990
Goodwill Industries	SW8970133	Permit Type	State Stormwater
Goodwill Industries	SW8970133	Permit Issued Date	1/24/1997
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	Permit Type	State Stormwater
TownPlace Suites (Lots 11&13 Northwest Business Park	SW8060536	Permit Issued Date	8/4/2006

PCS Name	PCS ID	Attribute	Value
Lot 14 Northwest Business Park	SW8060639	Permit Type	State Stormwater
Lot 14 Northwest Business Park	SW8060639	Permit Issued Date	8/21/2006
Northwest Business Park	SW8970517	Permit Type	State Stormwater
Northwest Business Park	SW8970517	Permit Issued Date	8/2/2011
Northwest Business Park	SW8970517	Permit Expiration Date	6/26/2021
State Employees Credit Union Western Boulevard Office	SW8110701	Permit Type	State Stormwater
State Employees Credit Union Western Boulevard Office	SW8110701	Permit Issued Date	8/2/2011
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Type	State Stormwater
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Issued Date	1/12/2009
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Expiration Date	10/5/2022
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Type	State Stormwater
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Issued Date	7/6/1998
Splash N Dash Carwash	SW8141212	Permit Type	State Stormwater
Splash N Dash Carwash	SW8141212	Permit Issued Date	2/6/2015
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Type	State Stormwater
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Issued Date	9/30/2011
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Expiration Date	9/30/2025
FCW&P Properties	SW8110712	Permit Type	State Stormwater
FCW&P Properties	SW8110712	Permit Issued Date	5/29/2014
FCW&P Properties	SW8110712	Permit Expiration Date	12/30/2021
Jones Car Wash	SW8110713	Permit Type	State Stormwater
Jones Car Wash	SW8110713	Permit Issued Date	9/30/2011

PCS Name	PCS ID	Attribute	Value
Coastal Equipment	SW8020206	Permit Type	State Stormwater
Coastal Equipment	SW8020206	Permit Issued Date	8/15/2002
Coastal Equipment	SW8020206	Permit Expiration Date	8/15/2016
Ward Farm Village	SW8120811	Permit Type	State Stormwater
Ward Farm Village	SW8120811	Permit Issued Date	10/8/2012
Lot 4 Northwest Business Park	SW8120812	Permit Type	State Stormwater
Lot 4 Northwest Business Park	SW8120812	Permit Issued Date	9/28/2012
Lot 6 Northwest Business Park	SW8000428	Permit Type	State Stormwater
Lot 6 Northwest Business Park	SW8000428	Permit Issued Date	3/1/2013
Convergys Site	SW8950714	Permit Type	State Stormwater
Convergys Site	SW8950714	Permit Issued Date	5/16/2001
Convergys Site	SW8950714	Permit Expiration Date	5/16/2015
Noland Properties, Inc.	SW8051012	Permit Type	State Stormwater
Noland Properties, Inc.	SW8051012	Permit Issued Date	5/4/2006
Noland Properties, Inc.	SW8051012	Permit Expiration Date	5/4/2020
River of Life Clear and Grade	SWG030026	Permit Type	State Stormwater, Clearing and Grading COC
River of Life Clear and Grade	SWG030026	Permit Issued Date	4/10/2014
Carolina Forest Entrance Road	SW8011104	Permit Type	State Stormwater
Carolina Forest Entrance Road	SW8011104	Permit Issued Date	10/16/2014
Mike Choate Tract	SW8060142	Permit Type	State Stormwater
Mike Choate Tract	SW8060142	Permit Issued Date	5/16/2008
Mike Choate Tract	SW8060142	Permit Expiration Date	12/30/2021
Arlington West	SW8080814	Permit Type	State Stormwater
Arlington West	SW8080814	Permit Issued Date	9/29/2008
Arlington West	SW8080814	Permit Expiration Date	12/30/2021

PCS Name	PCS ID	Attribute	Value
Meadows Gate Apartments	SW8081022	Permit Type	State Stormwater
Meadows Gate Apartments	SW8081022	Permit Issued Date	1/23/2015
Meadows Gate Apartments	SW8081022	Permit Expiration Date	12/30/2021
Compass Pointe at Meadows Gate	SW8141107	Permit Type	State Stormwater
Compass Pointe at Meadows Gate	SW8141107	Permit Issued Date	1/23/2015
Carriage Run at Carolina Forest	SW8031119	Permit Type	State Stormwater
Carriage Run at Carolina Forest	SW8031119	Permit Issued Date	10/30/2012
Glen Spradling and Wanda Spradling SFR	WI0800192	Permit Type	Injection Water Only GSHP Well System

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, BUSINESS PARK #2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , BUSINESS PARK #2**

Unsaturated Zone Rating	63.3
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

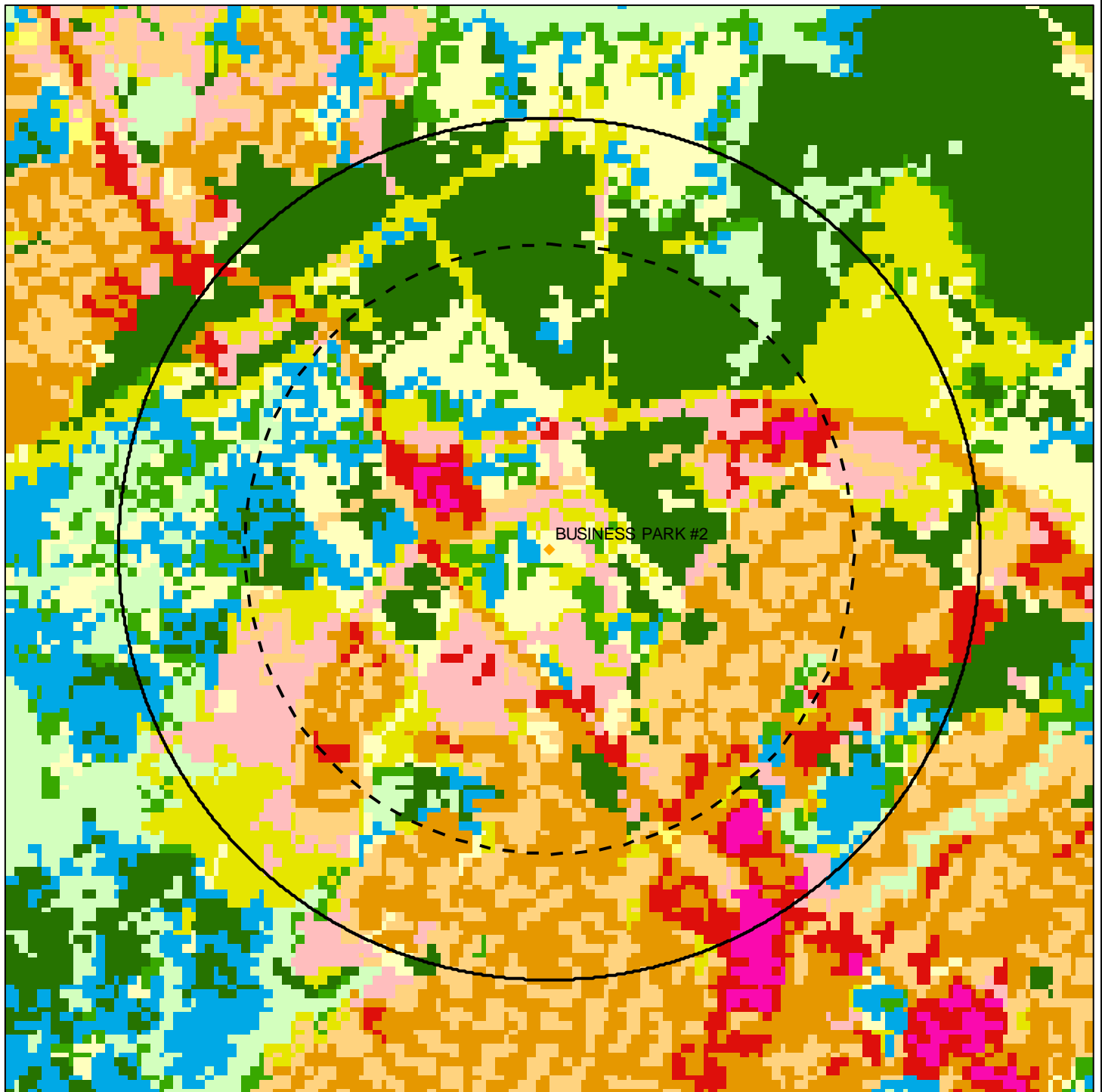
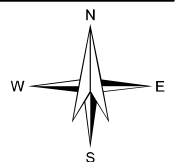


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2

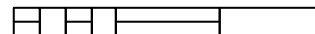


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



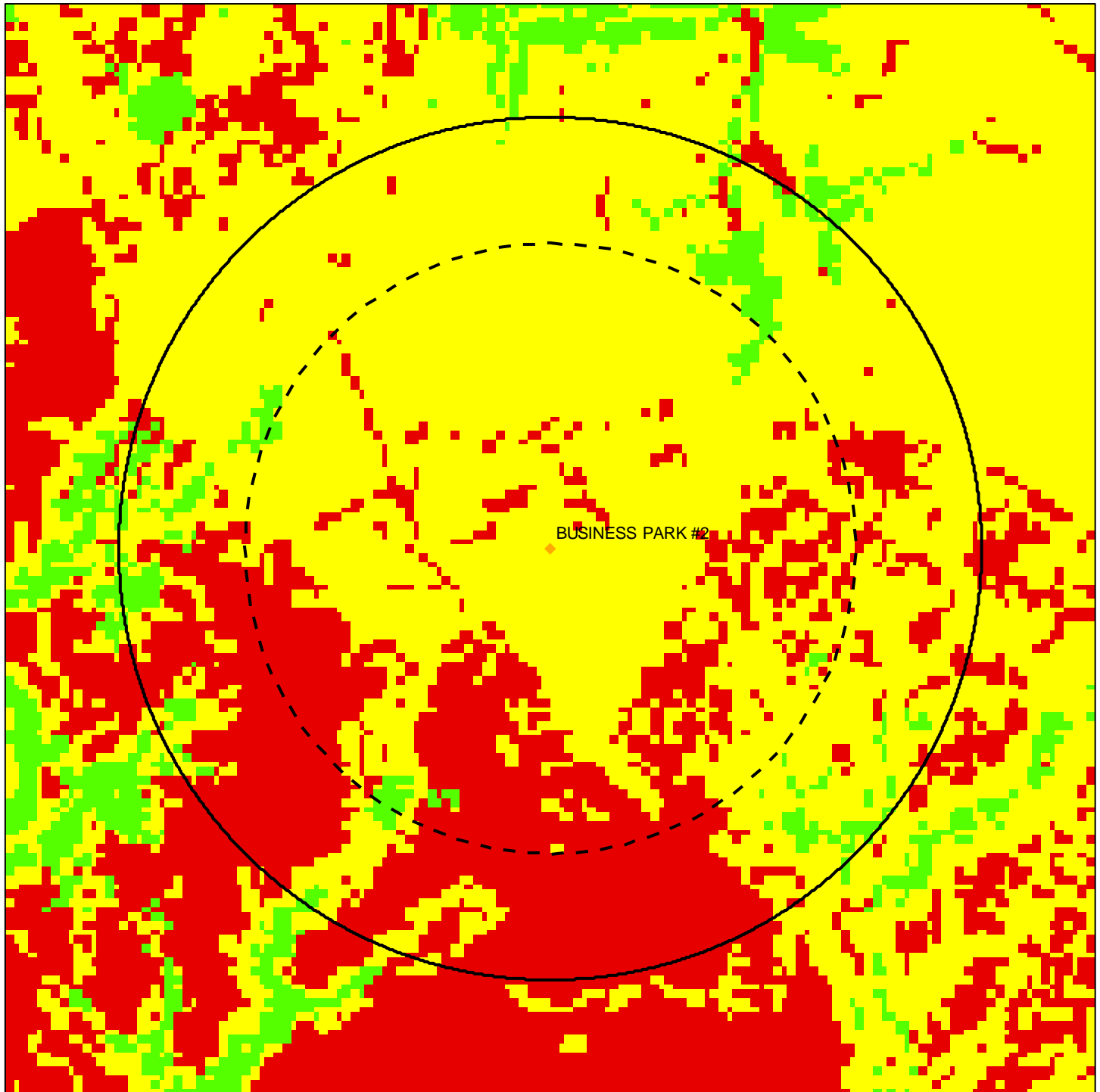
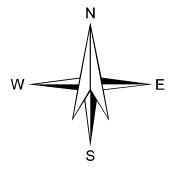
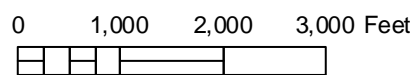


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



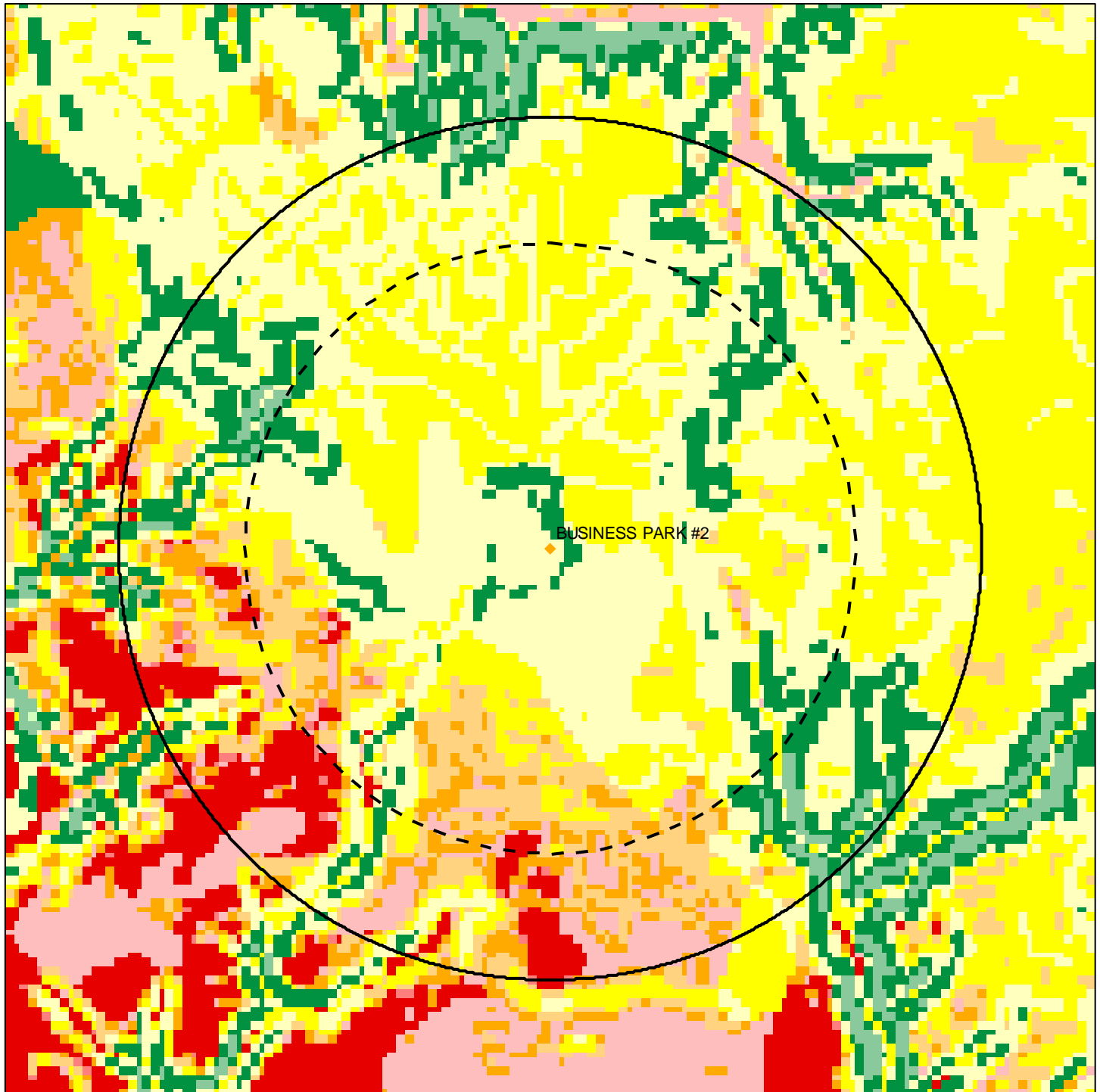
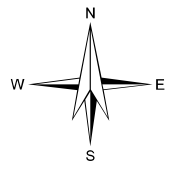
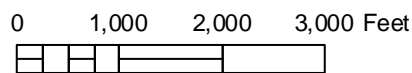


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



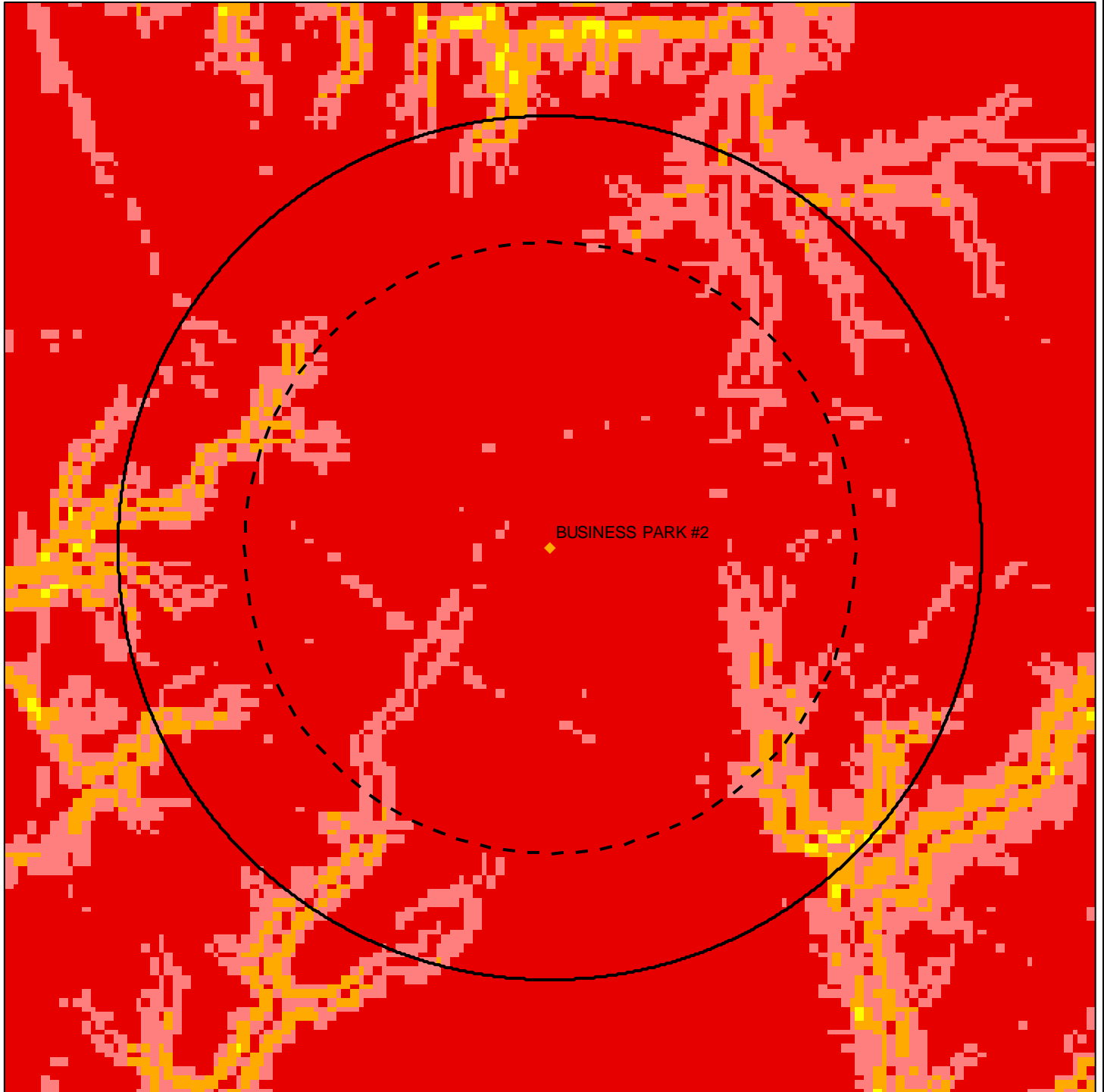
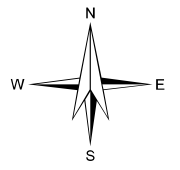








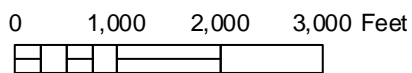


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



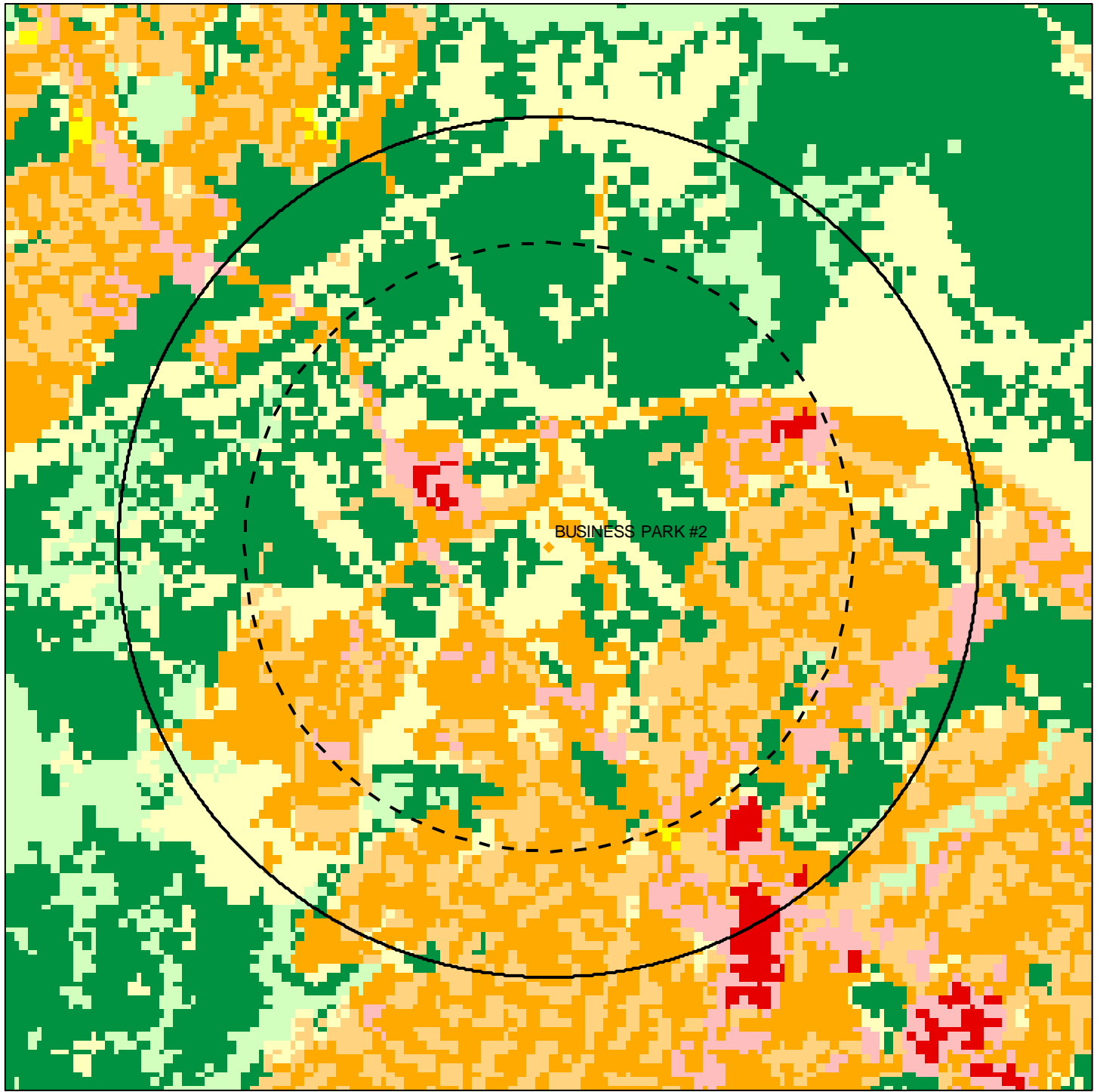
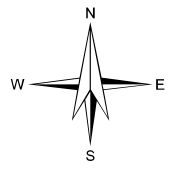











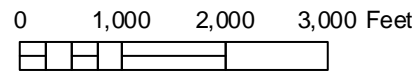


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



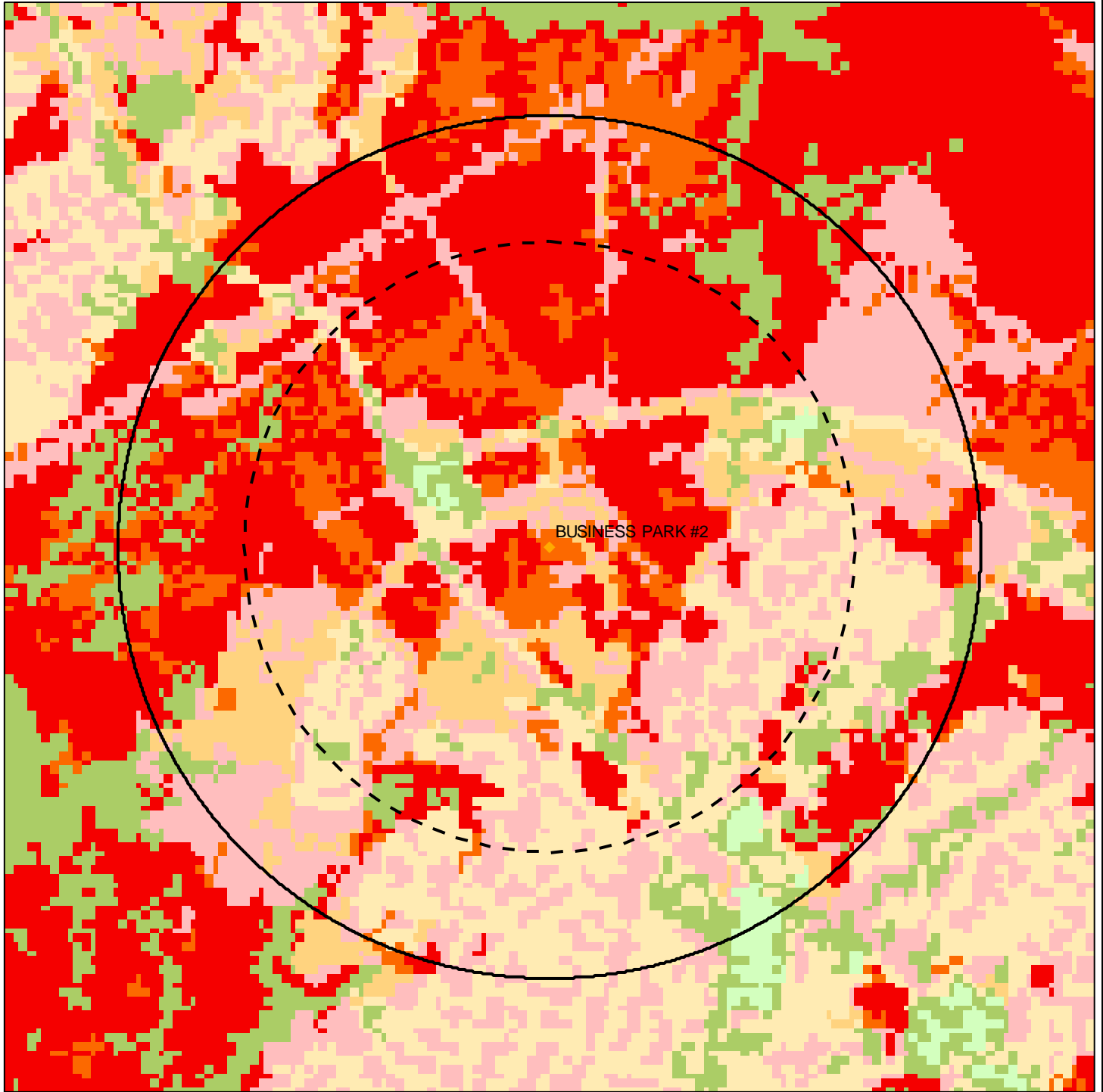
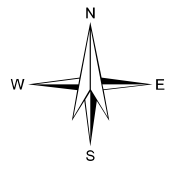
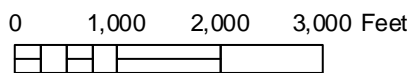


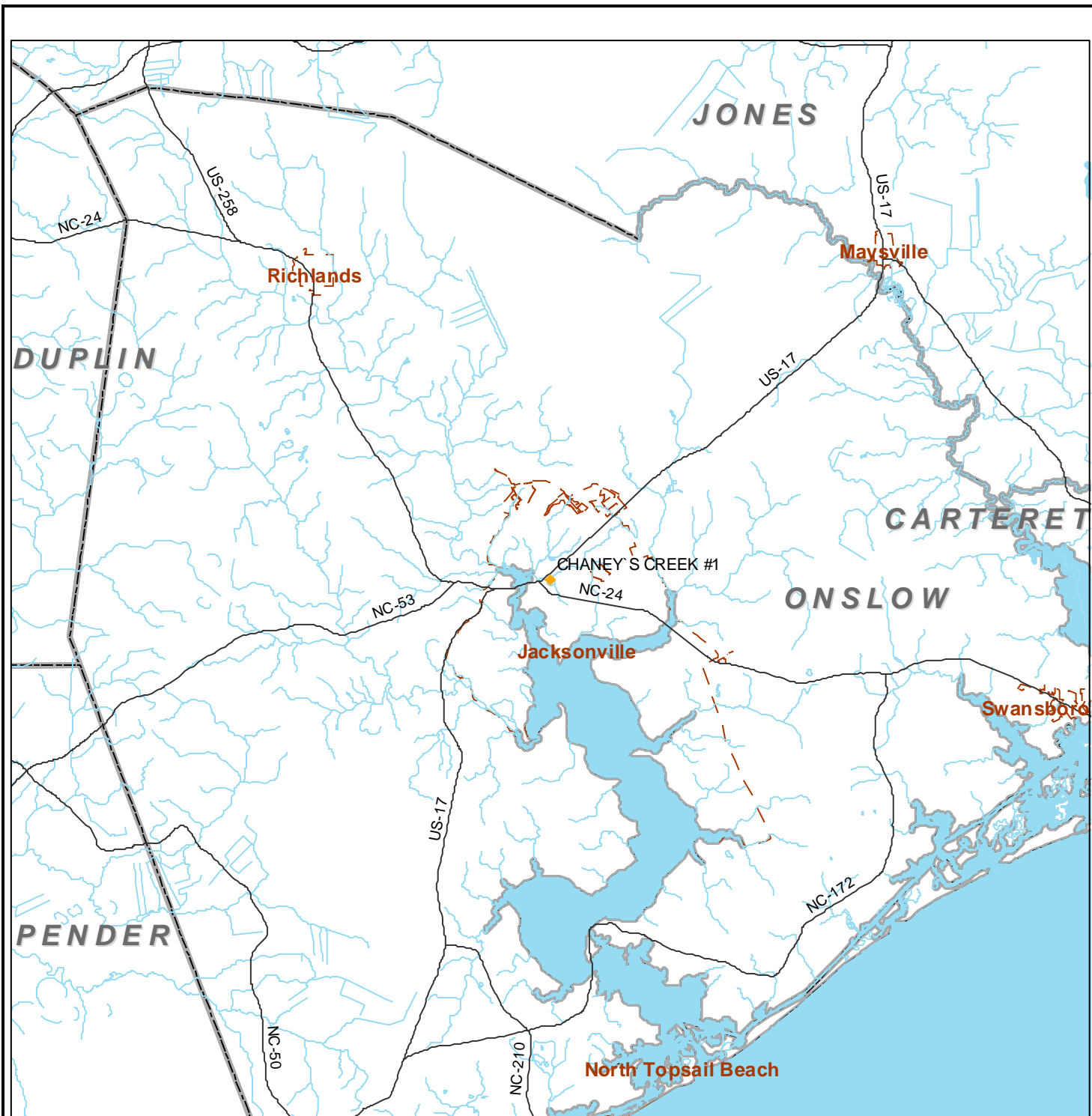
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BUSINESS PARK #2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

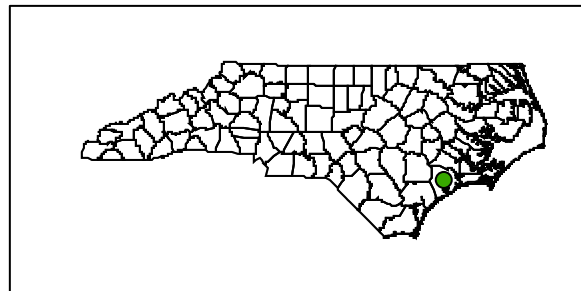
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



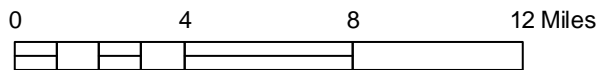
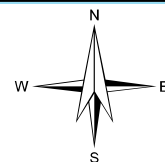


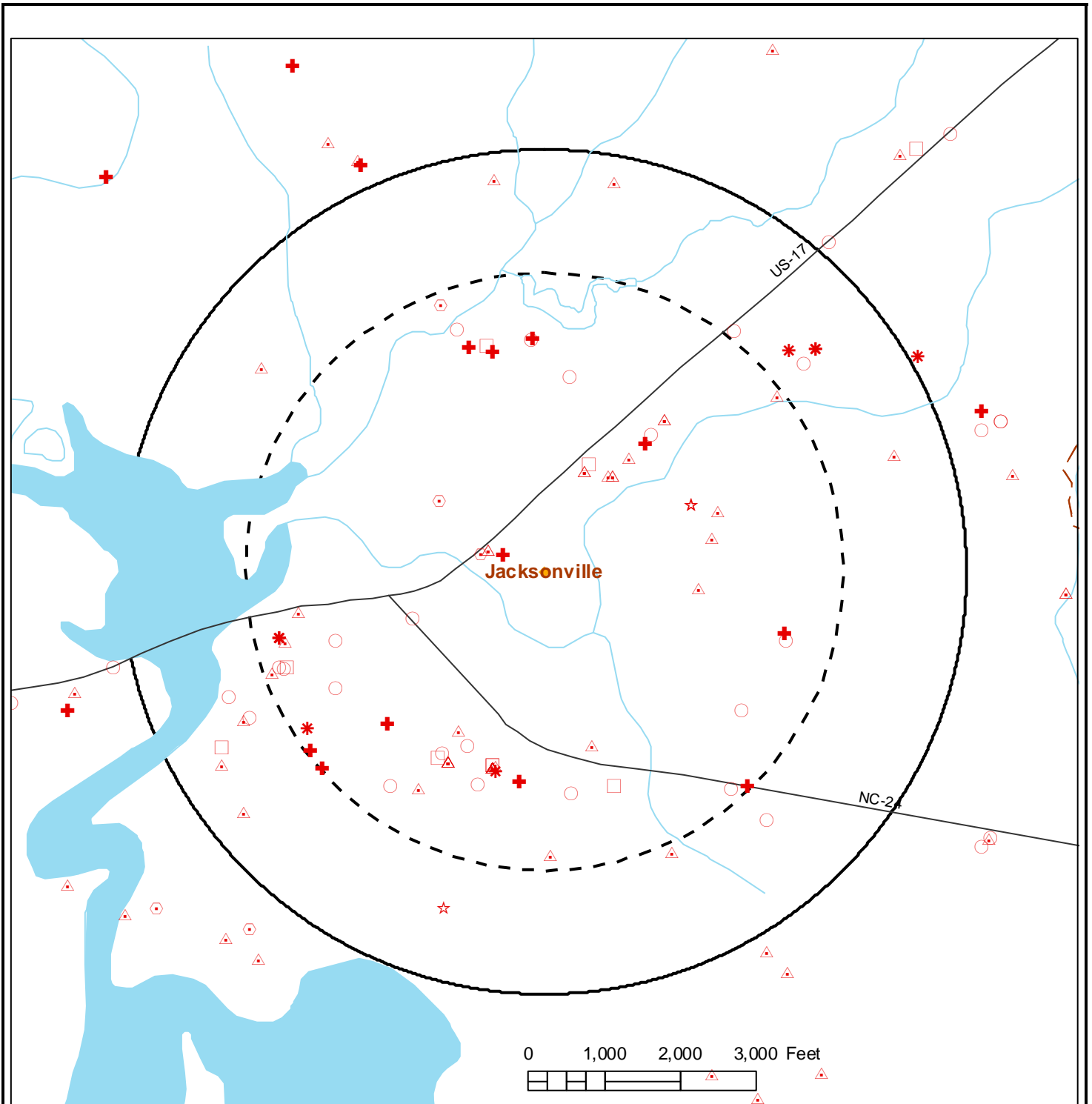
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

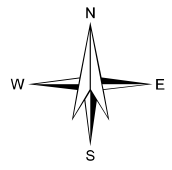




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1

PCS Types

- | | | |
|---|--|---|
| <ul style="list-style-type: none"> □ Animal Operations △ CERCLIS Sites □ RCRA Gen. / Trans. Facilities ● Non Discharge Permits △ NPDES Permits ★ National Priority List Sites ⊕ PCB Sites ○ Pollution Incidents | <ul style="list-style-type: none"> ◇ Septage Disposal Sites ◇ Soil Remediation Sites * Solid Waste Facilities * Tier II Sites ◇ RCRA TSD Facilities ◇ Old Landfill Sites ☆ UIC Permits ⊕ UST Permits | <ul style="list-style-type: none"> — Roads — Rivers and Streams ■ Major Hydrology — Municipal Boundaries ⊠ Ground Water Assessment Area - Delineated Area - - - Ground Water Assessment Area - Zone A |
|---|--|---|



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, CHANEY'S CREEK #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
CVS PHARMACY #5585	NCR000154336	RCRA Gen. / Trans. Facilities	H	COLLEGE PLAZA	JACKSONVILLE	Unkown	ONSLOW
EXCEL BODY WORKS	NCR000000091	RCRA Gen. / Trans. Facilities	H	LEJEUNE BLVD	JACKSONVILLE	Unkown	ONSLOW
KMART #7090	NCR000147546	RCRA Gen. / Trans. Facilities	H	NEW MARKET SQUARE MALL	JACKSONVILLE	Unkown	ONSLOW
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	RCRA Gen. / Trans. Facilities	H	PSC BOX 21001	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	RCRA Gen. / Trans. Facilities	H	COURT ST, STE 100	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
NCDSCA 067-0007 (QUALITY CLEANERS)	NCR000146 126	RCRA Gen. / Trans. Facilities	H	NEW BRIDGE ST, STE 100	JACKSON VILLE	Unkno wn	ONSLOW
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollution Incidents	H	910 N. MARINE BLVD.	JACKSON VILLE	Unkno wn	ONSLO
SUBURB AN PROPANE	94193	Pollution Incidents	H	1103 N. MARINE BLVD	JACKSON VILLE	Unkno wn	ONSLO
LENOIR AUTO PARTS	13124	Pollution Incidents	H	804 NEW BRIDGE ST.	JACKSON VILLE	Unkno wn	ONSLO
SOUTHER N UNIFORM RENTALS	11609	Pollution Incidents	H	818 COURT ST.	JACKSON VILLE	Unkno wn	ONSLO
NORTHW OODS EXXON	11651	Pollution Incidents	H	2502 ONSLOW DR.	JACKSON VILLE	Unkno wn	ONSLO
DAUGHT RY'S EXXON	11754	Pollution Incidents	H	203 NEW RIVER DR.	JACKSON VILLE	Unkno wn	ONSLO
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Pollution Incidents	H	719 NEW BRIDGE ST.	JACKSON VILLE	Unkno wn	ONSLO
ALL PRO PAINT STORE	14564	Pollution Incidents	H	425 S. MARINE BLVD.	JACKSON VILLE	Unkno wn	ONSLO
S & W READY MIX- JACKSON VILLE	15407	Pollution Incidents	H	24 East THOMPSON ST.	JACKSON VILLE	Unkno wn	ONSLO
INFANT OF PRAGUE CATHOLI C CHURCH	15578	Pollution Incidents	H	214 MARINE BOULEVARD	JACKSON VILLE	Unkno wn	ONSLO

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
J & B AUTO	17778	Pollution Incidents	H	943 LEJEUNE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
SCOTCH MAN # 46	19794	Pollution Incidents	H	2560 ONSLOW DR.	JACKSONVILLE	Unkno wn	ONSLO
SCOTCH MAN # 70	20583	Pollution Incidents	H	1000 NEW BRIDGE ST.	JACKSONVILLE	Unkno wn	ONSLO
DASH N #10	32406	Pollution Incidents	H	1316 Hargett Street	Jacksonville	Unkno wn	ONSLO
Onslow County Health Dept.	7154	Pollution Incidents	H	612 College Street	Jacksonville	Unkno wn	ONSLO
highway 24/17 bypass bridge	32882	Pollution Incidents	H	17 sbnd lane & 24 estbnd	jacksonville	Unkno wn	ONSLO
Chaney Ave-159	32919	Pollution Incidents	H	159 chaney ave	Jacksonville	Unkno wn	ONSLO
Mill Ave-701 (onslow Jail)	32954	Pollution Incidents	H	701 Mill AVE	Jacksonville	Unkno wn	ONSLO
Southern Cleaners And Laundry	670002	Pollution Incidents	H	820 Court St	Jacksonville	Unkno wn	ONSLOW
A1 Cleaners	670006	Pollution Incidents	H	327 Henderson Dr	Jacksonville	Unkno wn	ONSLOW
Quality Cleaners and Laundry	670007	Pollution Incidents	H	701 New Bridge St	Jacksonville	Unkno wn	ONSLOW
Southern Cleaners and Laundry	670009	Pollution Incidents	H	415 Chaney Ave	Jacksonville	Unkno wn	ONSLOW
JACKSONVILLE, NC BOULEVARD STATE ROUTE 1425	4033935	Tier II Sites	H	(BOULEVARD) STATE ROUTE 1425	JACKSONVILLE	Unkno wn	Onslow

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
JACKSON VILLE, NC BRIDGE ST CENTRAL OFFICE	4033936	Tier II Sites	H	300 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	Onslow
Waste Industries, Jacksonville	4035054	Tier II Sites	H	21 E. Thompson St.	Jacksonville	Unkno wn	Onslow
THE HOME DEPOT STORE #3655	4038544	Tier II Sites	H	479 WESTERN BLVD HWY 17	JACKSON VILLE	Unkno wn	Onslow
Inergy Propane, LLC	4039804	Tier II Sites	H	25 East Thompson St	Jacksonville	Unkno wn	Onslow
Inergy Propane, LLC	4039855	Tier II Sites	H	1103 N Marine Blvd	Jacksonville	Unkno wn	Onslow
Sanders Ford	4040553	Tier II Sites	H	1135 Le Jeune Blvd	Jacksonville	Unkno wn	Onslow
Trade Wilco #1825	4055057	Tier II Sites	H	830 New Bridge Street	Jacksonville	Unkno wn	Onslow
Henderson Drive & River Street	UDS257	Old Landfill Sites	H	Henderson Drive & River Street	Jacksonville	Unkno wn	ONSLOW
US 17 and Chaney Creek	UDS287	Old Landfill Sites	H	US 17 and Chaney Creek	Jacksonville	Unkno wn	ONSLOW
Highway 17 North and Chaney Creek	UDS461	Old Landfill Sites	H	Highway 17 North and Chaney Creek	Jacksonville	Unkno wn	ONSLOW
DASH N 10	00-0-0000021378	UST Sites	H	1316 HARGETT ST	JACKSON VILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
PHILLIPS 66 CO #023225 (DUPL SITE) ORIGINA L: 0- 020163	00-0- 0000022278	UST Sites	H	2560 ONSLOW DR	JACKSON VILLE	Unkno wn	ONSLOW
THE PANTRY 825	00-0- 0000031259	UST Sites	H	2561 ONSLOW DRIVE	JACKSON VILLE	Unkno wn	ONSLOW
JACKSON VILLE EXCHAN GE	00-0- 0000002488	UST Sites	H	300 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
UNION 76 STATION/ LES' AUTO	00-2- 0000020246	UST Sites	H	337 HENDERSON DRIVE	JACKSON VILLE	Unkno wn	ONSLOW
NEW BRIDGE MIDDLE SCHOOL	00-0- 0000000278	UST Sites	H	401 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
MAIN PUMPING STATION	00-0- 0000035685	UST Sites	H	44 N MARINE BLVD	JACKSON VILLE	Unkno wn	ONSLOW
THOMPS ON ELEMENT ARY	00-0- 0000027713	UST Sites	H	440 COLLEGE STREET	JACKSON VILLE	Unkno wn	ONSLOW
0- 022060LA UNDROM AT & CLEANER S	00-0- 0000022606	UST Sites	H	55 NEW RIVER ROAD	JACKSON VILLE	Unkno wn	ONSLOW
WILCO/T RADE 1825	00-0- 0000020811	UST Sites	H	830 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
WHIZZ MART 4	00-0- 0000034491	UST Sites	H	908 NORTH MARINE BOULEVARD	JACKSON VILLE	Unkno wn	ONSLOW
Lejeune Memorial Gardens	SW8060145	NPDES Permits	L	Montford Landing Rd	Camp Lejeune	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Coastal Carolina Veterans Cemetery Phase II	SW8080958	NPDES Permits	L	Montford Landing Rd	Jacksonville	Unkno wn	ONSLOW
Osprey Point Subdivisio n	SW8080635	NPDES Permits	L	Court St	Jacksonville	Unkno wn	ONSLOW
Halsey Building Demolition	SW8140911	NPDES Permits	L	612 College Rd	Jacksonville	Unkno wn	ONSLOW
Country Club Acres Wastewater Intercepto	SW8000206	NPDES Permits	L			Unkno wn	ONSLOW
Ashcroft At The Commons	SW8000505	NPDES Permits	L	Commons Dr S Fairway Rd	Jacksonville	Unkno wn	ONSLOW
City Of Jacksonville Sewer Extensions To	SW8000543	NPDES Permits	L			Unkno wn	ONSLOW
Wetland Restoration Phase I	SW8000902	NPDES Permits	L			Unkno wn	ONSLOW
Wetland Restoration Phase I	SW8000939	NPDES Permits	L			Unkno wn	ONSLOW
Onslow County Leachate Pump Station and Force Main	SW8010103	NPDES Permits	L	Int Of Pony Farm Rd And Meadowview Rd	Jacksonville	Unkno wn	ONSLOW
The Linear Park	SW8010111	NPDES Permits	L			Unkno wn	ONSLOW
US Hwy 17US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	NPDES Permits	L	US Hwy 17 24 And Sr 1676	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Drainage Improvements for Jacksonville Senior High School	SW8010309	NPDES Permits	L	Int Of Henderson Drive Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Wilson Bay Wetland Restoration Phase I	SW8010408	NPDES Permits	L	Loyola Drive And Bay View Dr	Jacksonville	Unknown	ONSLOW
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	NPDES Permits	L	Lyman Rd McB C L	Jacksonville	Unknown	ONSLOW
APEC Fiber Optic Conduit Phase 3A	SW8030309	NPDES Permits	L	Several Counties Including Pitt Onslow	Jacksonville	Unknown	ONSLOW
Onslow County Water System Expansion	SW8030319	NPDES Permits	L	US Hwy 17 NC 24 Sr1744 Sr 1437	Jacksonville	Unknown	ONSLOW
Onslow County 2002-2004 Waterline Extensions	SW8050219	NPDES Permits	L	Various Roads Throughout Onslow County	Jacksonville	Unknown	ONSLOW
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	NPDES Permits	L	Stones Creek On NC 210	Jacksonville	Unknown	ONSLOW
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	NPDES Permits	L	Tlz Gull Access Rd Tlz Jaybird Access Rd	Jacksonville	Unknown	ONSLOW
Sanctuary of Faith Church	SW8070930	NPDES Permits	L	Piney Green Road Walnut Dr	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Lesan Dental Office	SW8070938	NPDES Permits	L	Cobia Ct Lot 7 Schilsky Office Park	Jacksonville	Unknwn	ONSLOW
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	NPDES Permits	L	Gateway S Lots 1-4 6 7	Jacksonville	Unknwn	ONSLOW
Braddix Tract	SW8090333	NPDES Permits	L	Intersection Of NCSR 1105 Hwy 53	Jacksonville	Unknwn	ONSLOW
Quaker Bridge Road Improvements	SW8100811	NPDES Permits	L	Int Of Gum Branch Quaker Bridge Roads	Jacksonville	Unknwn	ONSLOW
Repair FRP Pipeline MCAS New River	SW8110417	NPDES Permits	L	MCAS New River Air Sta	Jacksonville	Unknwn	ONSLOW
City Of Jacksonville 36 Force Main	SW8920701	NPDES Permits	L			Unknwn	ONSLOW
Jacksonville Assisted Living Facility	SW8960422	NPDES Permits	L	Intersection Of Henderson Indian Dr	Jacksonville	Unknwn	ONSLOW
HDX Subdivision Lot 12A 12B 12C 12D	SW8960520	NPDES Permits	L	Se Corner Of Western Blvd Henderson Dr	Jacksonville	Unknwn	ONSLOW
Williamsburg Parkway Extension	SW8981245	NPDES Permits	L			Unknwn	ONSLOW
Highway 258 Individual Tracts	SWG030023	NPDES Permits	L	Int Hwy 258 And Country Squire Ln	Jacksonville	Unknwn	ONSLOW
City Of Jacksonville	SW8880512	NPDES Permits	L	815 New Bridge St	Jacksonville	Unknwn	ONSLOW
David Schilling Property	SWG010005	NPDES Permits	L	Nine Mile Rd	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Country Club Acres Wastewater Collection	SW8010821	NPDES Permits	L	S Of Country Club Rd	Jacksonville	Unknown	ONSLOW
Wilson Bay Aerators	SW8010916	NPDES Permits	L	Wilson Bay	Jacksonville	Unknown	ONSLOW
Borrow Pit No. 1001	SW8030333	NPDES Permits	L	Sr 1243 1287-	Jacksonville	Unknown	ONSLOW
French Creek Dredging and Disposal Area	SW8050707	NPDES Permits	L	Camp Lejeune	Jacksonville	Unknown	ONSLOW
Replace Water Distribution System @ CP Geiger Area	SW8060908	NPDES Permits	L	Camp Geiger	Jacksonville	Unknown	ONSLOW
North Carolina Veterans Cemetery	SW8910409	NPDES Permits	L	110 Montford Point Rd	Jacksonville	Unknown	ONSLOW
Onslow County Justice Complex	SW8080122	NPDES Permits	L	Intersection Of Court Street And Tallman Ave	Jacksonville	Unknown	ONSLOW
Administrative Office Complex	SW8080519	NPDES Permits	L	Corner Of Johnson Blvd And Huerth St	Jacksonville	Unknown	ONSLOW
Onslow County Jail Demolition	SW8140402	NPDES Permits	L	109 Old Bridge St	Jacksonville	Unknown	ONSLOW
Onslow County Detention Center Parking Lot	SW8071010	NPDES Permits	L	Jct Of Court Street And Tallman Ave	Jacksonville	Unknown	ONSLOW
Center for Public Safety	SW8120209	NPDES Permits	L	850 Court St	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Jacksonville Civic Complex Site Demolition	SW8050221	NPDES Permits	L	US 17 NC Hwy 24	Jacksonville	Unknown	ONSLOW
Clyde Erwin Elementary School	SW8060327	NPDES Permits	L	323 New River Dr	Jacksonville	Unknown	ONSLOW
Glenn Hargett-Phillips Park Restoration	SW8060931	NPDES Permits	L	150 Phillips Rd	Jacksonville	Unknown	ONSLOW
Chaney Creek Phillips Park Restoration Project	SW8070339	NPDES Permits	L	150 Phillips Rd	Jacksonville	Unknown	ONSLOW
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	NPDES Permits	L	Onslow	Jacksonville	Unknown	ONSLOW
New River Artificial Reef AR398	SW8100921	NPDES Permits	L	New River	Jacksonville	Unknown	ONSLOW
Bojangles Jacksonville N Marine Blvd	SW8101019	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unknown	ONSLOW
Advance Auto Parts Marine Boulevard	SW8130713	NPDES Permits	L	Int Of N Marine Blvd And Onslow Dr	Jacksonville	Unknown	ONSLOW
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
502 N Marine Boulevard Project	SW8080636	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unknwn	ONSLOW
Bailey Driveway Marine Boulevard	SW8110618	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unknwn	ONSLOW
Msa Jacksonville Ph I	SW8970538	NPDES Permits	L	1711 Hargett St	Jacksonville	Unknwn	ONSLOW
Rite Aid Jacksonville	SW8101116	NPDES Permits	L	2347 Onslow Dr	Jacksonville	Unknwn	ONSLOW
The Gasperson Inc Subdivision	SW8070407	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unknwn	ONSLOW
Oreilly Auto Parts Jacksonville	SW8110110	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unknwn	ONSLOW
NW Jacksonville Sanitary Sewer Facility	SW8880711	NPDES Permits	L	Maple St	Jacksonville	Unknwn	ONSLOW
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	NPDES Permits	L	Dewitt St Collins Branch Sewer	Jacksonville	Unknwn	ONSLOW
SR 1702 NCDOT Project No U4007A	SW8090904	NPDES Permits	L	White Street Extension	Jacksonville	Unknwn	ONSLOW
Grady Campbell SFR	WI0800231	UIC Permits	M	32e Bayshore Blvd	Jacksonville	Unknwn	ONSLOW
Bradley and Donna Kuegel SFR	WI0800258	UIC Permits	M	402 Nelson Dr	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Gerald and JoAnn Skinner Sr. SFR	WI0800259	UIC Permits	M	400 Nelson Dr	Jacksonville	Unknown	ONSLOW
Jacksonville - East Thompson Street Facility	NCG140027	NPDES Permits	L	24 E Thompson St	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, CHANEY'S CREEK #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
CVS PHARMACY #5585	NCR000154336	GENERATOR	LQG
CVS PHARMACY #5585	NCR000154336	TRANSPORTER	N
EXCEL BODY WORKS	NCR000000091	GENERATOR	SQG
EXCEL BODY WORKS	NCR000000091	TRANSPORTER	N
KMART #7090	NCR000147546	GENERATOR	LQG
KMART #7090	NCR000147546	TRANSPORTER	N
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	GENERATOR	LQG
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	TRANSPORTER	N
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	GENERATOR	SQG
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	TRANSPORTER	N
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	GENERATOR	SQG
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	TRANSPORTER	N
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	GENERATOR	SQG
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	TRANSPORTER	N
NCDSCA 067-0007 (QUALITY CLEANERS)	NCR000146126	GENERATOR	SQG

PCS Name	PCS ID	Attribute	Value
NCDECA 067-0007 (QUALITY CLEANERS)	NCR000146126	TRANSPORTER	N
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollutant Type	GASOLINE/DIESEL/KEROSENE
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Risk	I
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Priority Code	240
SUBURBAN PROPANE	94193	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SUBURBAN PROPANE	94193	Site Risk	H
LENOIR AUTO PARTS	13124	Pollutant Type	OTHER PETROLEUM PROD.
LENOIR AUTO PARTS	13124	Site Priority Code	0
SOUTHERN UNIFORM RENTALS	11609	Pollutant Type	OTHER ORGANICS
SOUTHERN UNIFORM RENTALS	11609	Site Risk	L
SOUTHERN UNIFORM RENTALS	11609	Site Priority Code	70E
NORTHWOODS EXXON	11651	Pollutant Type	GASOLINE/DIESEL/KEROSENE
NORTHWOODS EXXON	11651	Site Risk	L
NORTHWOODS EXXON	11651	Site Priority Code	80E
DAUGHTRY'S EXXON	11754	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DAUGHTRY'S EXXON	11754	Site Risk	L
DAUGHTRY'S EXXON	11754	Site Priority Code	20E
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Pollutant Type	GASOLINE/DIESEL/KEROSENE
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Site Risk	L
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Site Priority Code	20E
ALL PRO PAINT STORE	14564	Pollutant Type	GASOLINE/DIESEL/KEROSENE
ALL PRO PAINT STORE	14564	Site Risk	L

PCS Name	PCS ID	Attribute	Value
ALL PRO PAINT STORE	14564	Site Priority Code	40E
S & W READY MIX-JACKSONVILLE	15407	Pollutant Type	GASOLINE/DIESEL/KEROSENE
S & W READY MIX-JACKSONVILLE	15407	Site Risk	L
S & W READY MIX-JACKSONVILLE	15407	Site Priority Code	30D
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Pollutant Type	GASOLINE/DIESEL/KEROSENE
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Site Risk	L
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Site Priority Code	80E
J & B AUTO	17778	Pollutant Type	GASOLINE/DIESEL/KEROSENE
J & B AUTO	17778	Site Risk	L
J & B AUTO	17778	Site Priority Code	20E
SCOTCHMAN # 46	19794	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SCOTCHMAN # 46	19794	Site Risk	I
SCOTCHMAN # 46	19794	Site Priority Code	90
SCOTCHMAN # 70	20583	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SCOTCHMAN # 70	20583	Site Priority Code	80I
DASH N #10	32406	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DASH N #10	32406	Site Risk	U
Onslow County Health Dept.	7154	Pollutant Type	HEATING OIL
highway 24/17 bypass bridge	32882	Pollutant Type	GASOLINE/DIESEL/KEROSENE
Chaney Ave-159	32919	Pollutant Type	HEATING OIL
Chaney Ave-159	32919	Site Risk	L
Mill Ave-701 (onslow Jail)	32954	Pollutant Type	OTHER PETROLEUM PROD.
Lejeune Memorial Gardens	SW8060145	Permit Type	State Stormwater
Lejeune Memorial Gardens	SW8060145	Permit Issued Date	5/18/2012

PCS Name	PCS ID	Attribute	Value
Coastal Carolina Veterans Cemetery Phase II	SW8080958	Permit Type	State Stormwater
Coastal Carolina Veterans Cemetery Phase II	SW8080958	Permit Issued Date	11/17/2008
Osprey Point Subdivision	SW8080635	Permit Type	State Stormwater
Osprey Point Subdivision	SW8080635	Permit Issued Date	1/7/2010
Osprey Point Subdivision	SW8080635	Permit Expiration Date	3/11/2021
Halsey Building Demolition	SW8140911	Permit Type	State Stormwater
Halsey Building Demolition	SW8140911	Permit Issued Date	10/1/2014
Country Club Acres Wastewater Intercepto	SW8000206	Permit Type	State Stormwater
Country Club Acres Wastewater Intercepto	SW8000206	Permit Issued Date	4/10/2000
Ashcroft At The Commons	SW8000505	Permit Type	State Stormwater
Ashcroft At The Commons	SW8000505	Permit Issued Date	4/9/2008
Ashcroft At The Commons	SW8000505	Permit Expiration Date	8/16/2014
City Of Jacksonville Sewer Extensions To	SW8000543	Permit Type	State Stormwater
City Of Jacksonville Sewer Extensions To	SW8000543	Permit Issued Date	5/23/2000
Wetland Restoration Phase I	SW8000902	Permit Type	State Stormwater
Wetland Restoration Phase I	SW8000902	Permit Issued Date	9/5/2000
Wetland Restoration Phase I	SW8000939	Permit Type	State Stormwater
Wetland Restoration Phase I	SW8000939	Permit Issued Date	9/29/2000
Onslow County Leachate Pump Station and Force Main	SW8010103	Permit Type	State Stormwater
Onslow County Leachate Pump Station and Force Main	SW8010103	Permit Issued Date	1/23/2001
The Linear Park	SW8010111	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
The Linear Park	SW8010111	Permit Issued Date	4/19/2001
The Linear Park	SW8010111	Permit Expiration Date	4/19/2015
US Hwy 17US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	Permit Type	State Stormwater
US Hwy 17US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	Permit Issued Date	1/23/2001
Drainage Improvements for Jacksonville Senior High School	SW8010309	Permit Type	State Stormwater
Drainage Improvements for Jacksonville Senior High School	SW8010309	Permit Issued Date	3/14/2001
Wilson Bay Wetland Restoration Phase I	SW8010408	Permit Type	State Stormwater
Wilson Bay Wetland Restoration Phase I	SW8010408	Permit Issued Date	4/20/2001
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	Permit Type	State Stormwater
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	Permit Issued Date	7/27/2001
APEC Fiber Optic Conduit Phase 3A	SW8030309	Permit Type	State Stormwater
APEC Fiber Optic Conduit Phase 3A	SW8030309	Permit Issued Date	3/17/2003
Onslow County Water System Expansion	SW8030319	Permit Type	State Stormwater
Onslow County Water System Expansion	SW8030319	Permit Issued Date	6/27/2003
Onslow County 2002-2004 Waterline Extensions	SW8050219	Permit Type	State Stormwater
Onslow County 2002-2004 Waterline Extensions	SW8050219	Permit Issued Date	2/15/2005
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	Permit Type	State Stormwater
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	Permit Issued Date	6/27/2008
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	Permit Issued Date	1/2/2008
Sanctuary of Faith Church	SW8070930	Permit Type	State Stormwater
Sanctuary of Faith Church	SW8070930	Permit Issued Date	3/14/2008
Sanctuary of Faith Church	SW8070930	Permit Expiration Date	12/30/2021
Lesan Dental Office	SW8070938	Permit Type	State Stormwater
Lesan Dental Office	SW8070938	Permit Issued Date	1/24/2008
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	Permit Type	State Stormwater
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	Permit Issued Date	2/25/2009
Braddix Tract	SW8090333	Permit Type	State Stormwater
Braddix Tract	SW8090333	Permit Issued Date	5/21/2009
Quaker Bridge Road Improvements	SW8100811	Permit Type	State Stormwater
Quaker Bridge Road Improvements	SW8100811	Permit Issued Date	11/10/2010
Repair FRP Pipeline MCAS New River	SW8110417	Permit Type	State Stormwater
Repair FRP Pipeline MCAS New River	SW8110417	Permit Issued Date	5/3/2011
City Of Jacksonville 36 Force Main	SW8920701	Permit Type	State Stormwater
City Of Jacksonville 36 Force Main	SW8920701	Permit Issued Date	9/16/1992
Jacksonville Assisted Living Facility	SW8960422	Permit Type	State Stormwater
Jacksonville Assisted Living Facility	SW8960422	Permit Issued Date	4/14/2008
Jacksonville Assisted Living Facility	SW8960422	Permit Expiration Date	4/14/2022
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Type	State Stormwater
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Issued Date	11/26/2012

PCS Name	PCS ID	Attribute	Value
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Expiration Date	8/23/2020
Williamsburg Parkway Extension	SW8981245	Permit Type	State Stormwater
Williamsburg Parkway Extension	SW8981245	Permit Issued Date	6/10/1999
Highway 258 Individual Tracts	SWG030023	Permit Type	State Stormwater, Clearing and Grading COC
Highway 258 Individual Tracts	SWG030023	Permit Issued Date	6/26/2013
City Of Jacksonville	SW8880512	Permit Type	State Stormwater
City Of Jacksonville	SW8880512	Permit Issued Date	5/17/1988
David Schilling Property	SWG010005	Permit Type	State Stormwater, Single Family Residence COC
David Schilling Property	SWG010005	Permit Issued Date	10/11/2010
Country Club Acres Wastewater Collection	SW8010821	Permit Type	State Stormwater
Country Club Acres Wastewater Collection	SW8010821	Permit Issued Date	8/22/2001
Wilson Bay Aerators	SW8010916	Permit Type	State Stormwater
Wilson Bay Aerators	SW8010916	Permit Issued Date	9/24/2001
Borrow Pit No. 1001	SW8030333	Permit Type	State Stormwater
Borrow Pit No. 1001	SW8030333	Permit Issued Date	5/29/2003
French Creek Dredging and Disposal Area	SW8050707	Permit Type	State Stormwater
French Creek Dredging and Disposal Area	SW8050707	Permit Issued Date	7/13/2005
Replace Water Distribution System @ CP Geiger Area	SW8060908	Permit Type	State Stormwater
Replace Water Distribution System @ CP Geiger Area	SW8060908	Permit Issued Date	9/15/2006
North Carolina Veterans Cemetery	SW8910409	Permit Type	State Stormwater
North Carolina Veterans Cemetery	SW8910409	Permit Issued Date	4/24/1991

PCS Name	PCS ID	Attribute	Value
Onslow County Justice Complex	SW8080122	Permit Type	State Stormwater
Onslow County Justice Complex	SW8080122	Permit Issued Date	2/3/2009
Onslow County Justice Complex	SW8080122	Permit Expiration Date	1/24/2021
Administrative Office Complex	SW8080519	Permit Type	State Stormwater
Administrative Office Complex	SW8080519	Permit Issued Date	7/9/2008
Administrative Office Complex	SW8080519	Permit Expiration Date	12/30/2021
Onslow County Jail Demolition	SW8140402	Permit Type	State Stormwater
Onslow County Jail Demolition	SW8140402	Permit Issued Date	6/4/2014
Onslow County Detention Center Parking Lot	SW8071010	Permit Type	State Stormwater
Onslow County Detention Center Parking Lot	SW8071010	Permit Issued Date	10/16/2007
Onslow County Detention Center Parking Lot	SW8071010	Permit Expiration Date	10/16/2021
Center for Public Safety	SW8120209	Permit Type	State Stormwater
Center for Public Safety	SW8120209	Permit Issued Date	4/4/2012
Center for Public Safety	SW8120209	Permit Expiration Date	4/4/2020
Jacksonville Civic Complex Site Demolition	SW8050221	Permit Type	State Stormwater
Jacksonville Civic Complex Site Demolition	SW8050221	Permit Issued Date	4/14/2005
Clyde Erwin Elementary School	SW8060327	Permit Type	State Stormwater
Clyde Erwin Elementary School	SW8060327	Permit Issued Date	11/25/2013
Glenn Hargett-Phillips Park Restoration	SW8060931	Permit Type	State Stormwater
Glenn Hargett-Phillips Park Restoration	SW8060931	Permit Issued Date	10/19/2006

PCS Name	PCS ID	Attribute	Value
Chaney Creek Phillips Park Restoration Project	SW8070339	Permit Type	State Stormwater
Chaney Creek Phillips Park Restoration Project	SW8070339	Permit Issued Date	5/3/2007
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Type	State Stormwater
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Issued Date	1/28/1999
New River Artificial Reef AR398	SW8100921	Permit Type	State Stormwater
New River Artificial Reef AR398	SW8100921	Permit Issued Date	10/21/2010
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Type	State Stormwater
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Issued Date	4/12/2011
Advance Auto Parts Marine Boulevard	SW8130713	Permit Type	State Stormwater
Advance Auto Parts Marine Boulevard	SW8130713	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Type	State Stormwater
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Expiration Date	1/27/2020
502 N Marine Boulevard Project	SW8080636	Permit Type	State Stormwater
502 N Marine Boulevard Project	SW8080636	Permit Issued Date	10/1/2008
Bailey Driveway Marine Boulevard	SW8110618	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Bailey Driveway Marine Boulevard	SW8110618	Permit Issued Date	7/27/2011
Msaa Jacksonville Ph I	SW8970538	Permit Type	State Stormwater
Msaa Jacksonville Ph I	SW8970538	Permit Issued Date	7/25/1997
Msaa Jacksonville Ph I	SW8970538	Permit Expiration Date	7/25/2007
Rite Aid Jacksonville	SW8101116	Permit Type	State Stormwater
Rite Aid Jacksonville	SW8101116	Permit Issued Date	12/9/2010
The Gasperson Inc Subdivision	SW8070407	Permit Type	State Stormwater
The Gasperson Inc Subdivision	SW8070407	Permit Issued Date	10/28/2010
The Gasperson Inc Subdivision	SW8070407	Permit Expiration Date	4/13/2021
Oreilly Auto Parts Jacksonville	SW8110110	Permit Type	State Stormwater
Oreilly Auto Parts Jacksonville	SW8110110	Permit Issued Date	2/7/2011
NW Jacksonville Sanitary Sewer Facility	SW8880711	Permit Type	State Stormwater
NW Jacksonville Sanitary Sewer Facility	SW8880711	Permit Issued Date	7/25/1988
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	Permit Type	State Stormwater
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	Permit Issued Date	8/10/2010
SR 1702 NCDOT Project No U4007A	SW8090904	Permit Type	State Stormwater
SR 1702 NCDOT Project No U4007A	SW8090904	Permit Issued Date	1/29/2010
Grady Campbell SFR	WI0800231	Permit Type	Injection Water Only GSHP Well System
Bradley and Donna Kuegel SFR	WI0800258	Permit Type	Injection Heating/Cooling Water Return Well
Gerald and JoAnn Skinner Sr. SFR	WI0800259	Permit Type	Injection Heating/Cooling Water Return Well

PCS Name	PCS ID	Attribute	Value
Jacksonville - East Thompson Street Facility	NCG140027	Permit Type	Ready Mix Concrete Stormwater/Wastewater Discharge COC
Jacksonville - East Thompson Street Facility	NCG140027	Permit Issued Date	7/1/2011
Jacksonville - East Thompson Street Facility	NCG140027	Permit Expiration Date	6/30/2016
Jacksonville - East Thompson Street Facility	NCG140027	Receiving Stream	NEW RIVER

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, CHANEY'S CREEK #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , CHANEY`S CREEK #1

Unsaturated Zone Rating	68.5
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication "Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina," by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

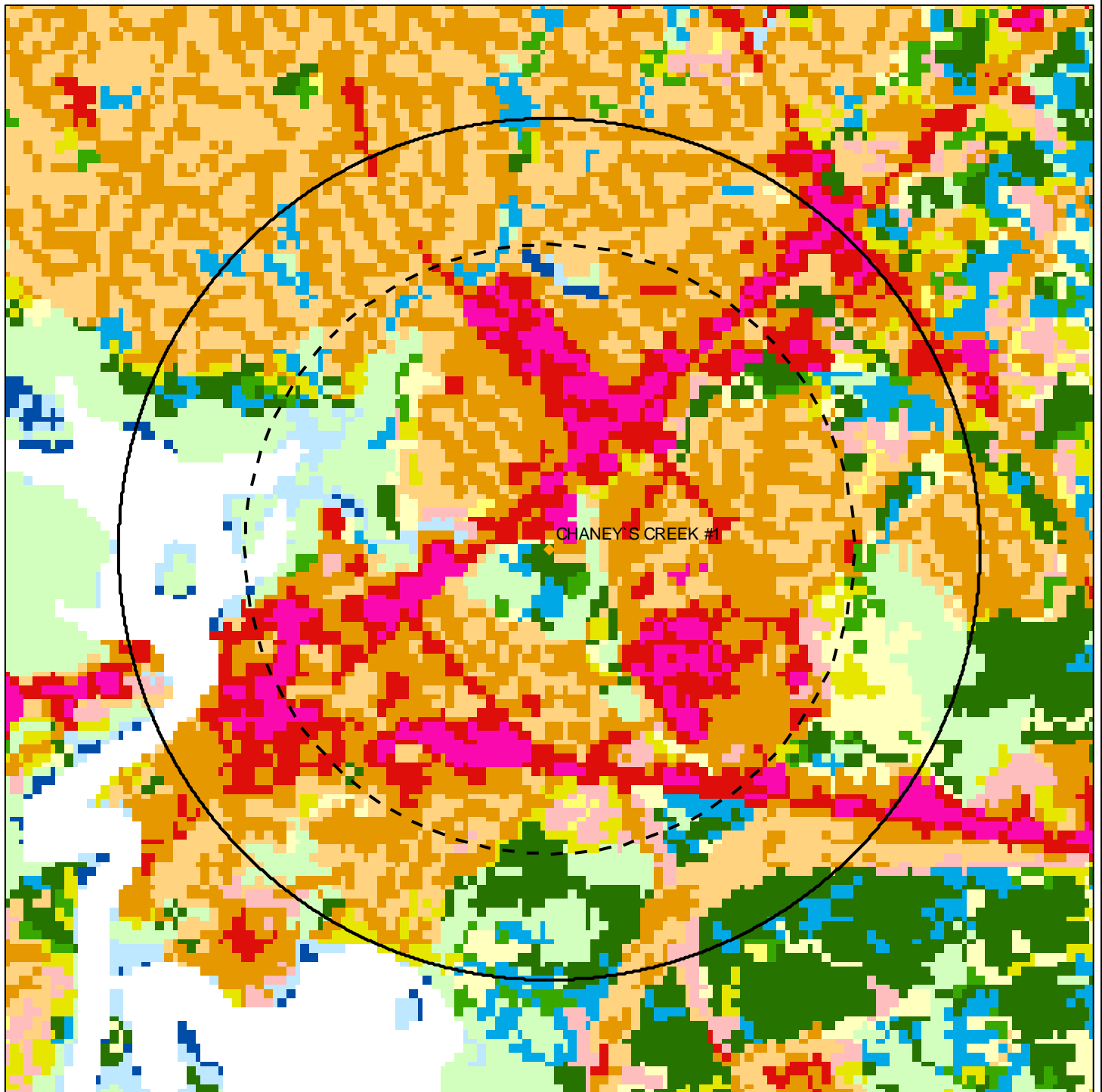
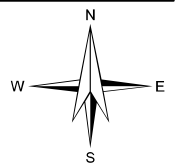


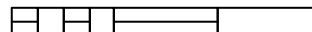
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- | | | |
|--|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |
| Ground Water Assessment Area - Delineated Area | | |
| Ground Water Assessment Area - Zone A | | |

0 1,000 2,000 3,000 Feet



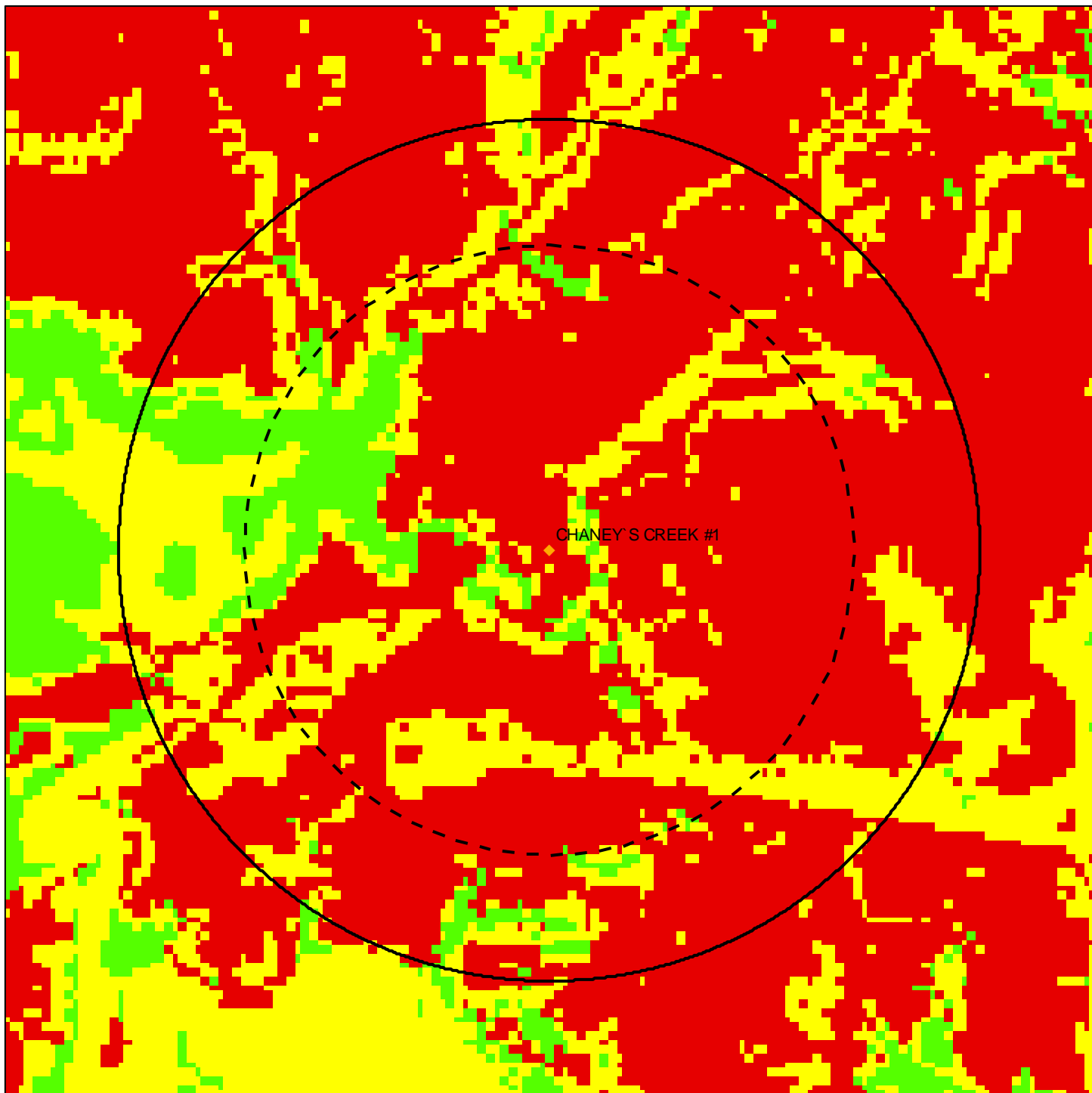
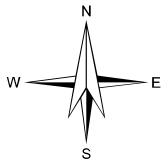
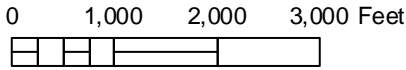


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



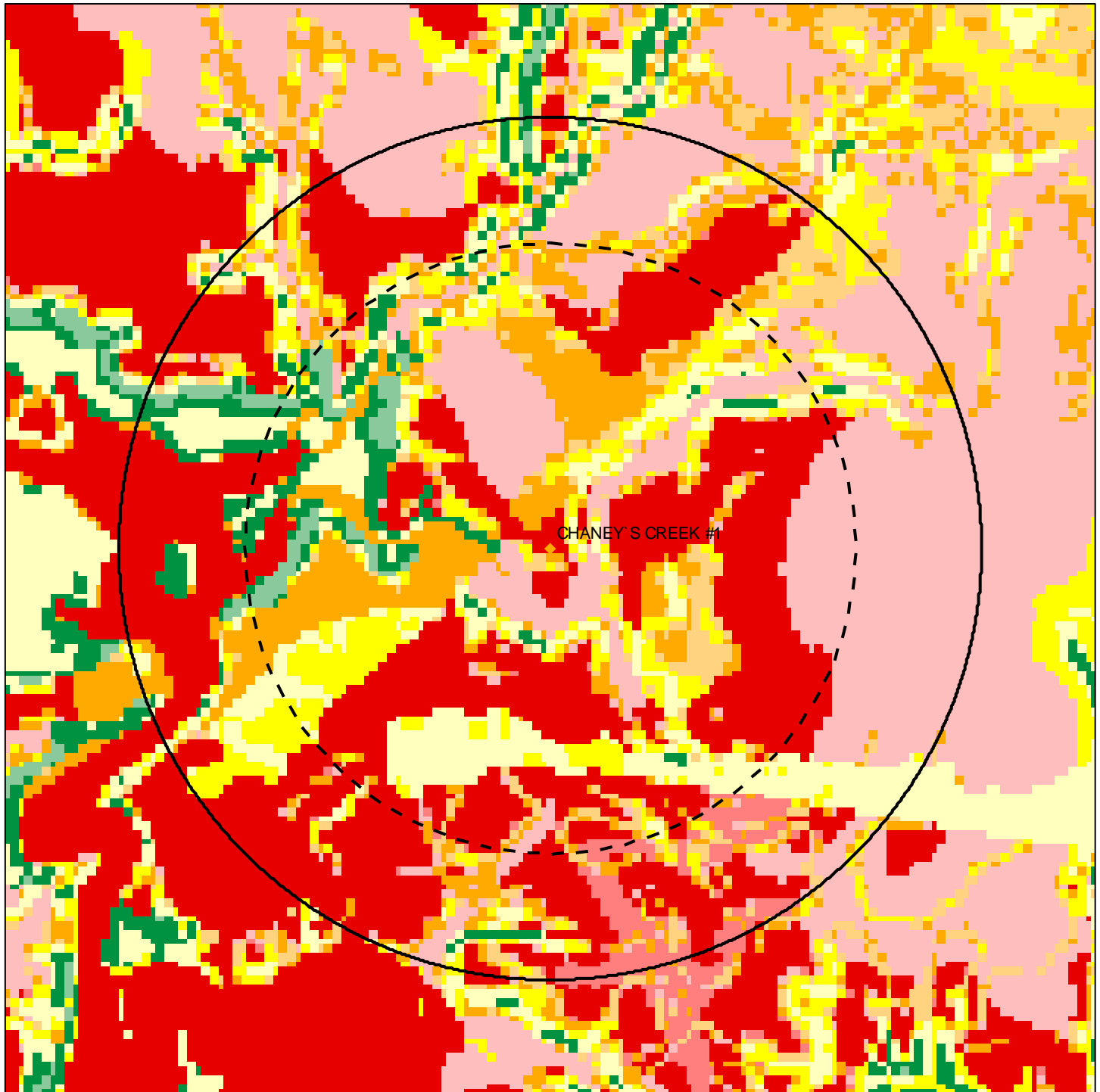
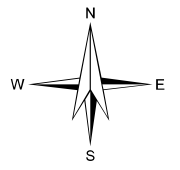
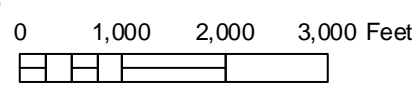


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



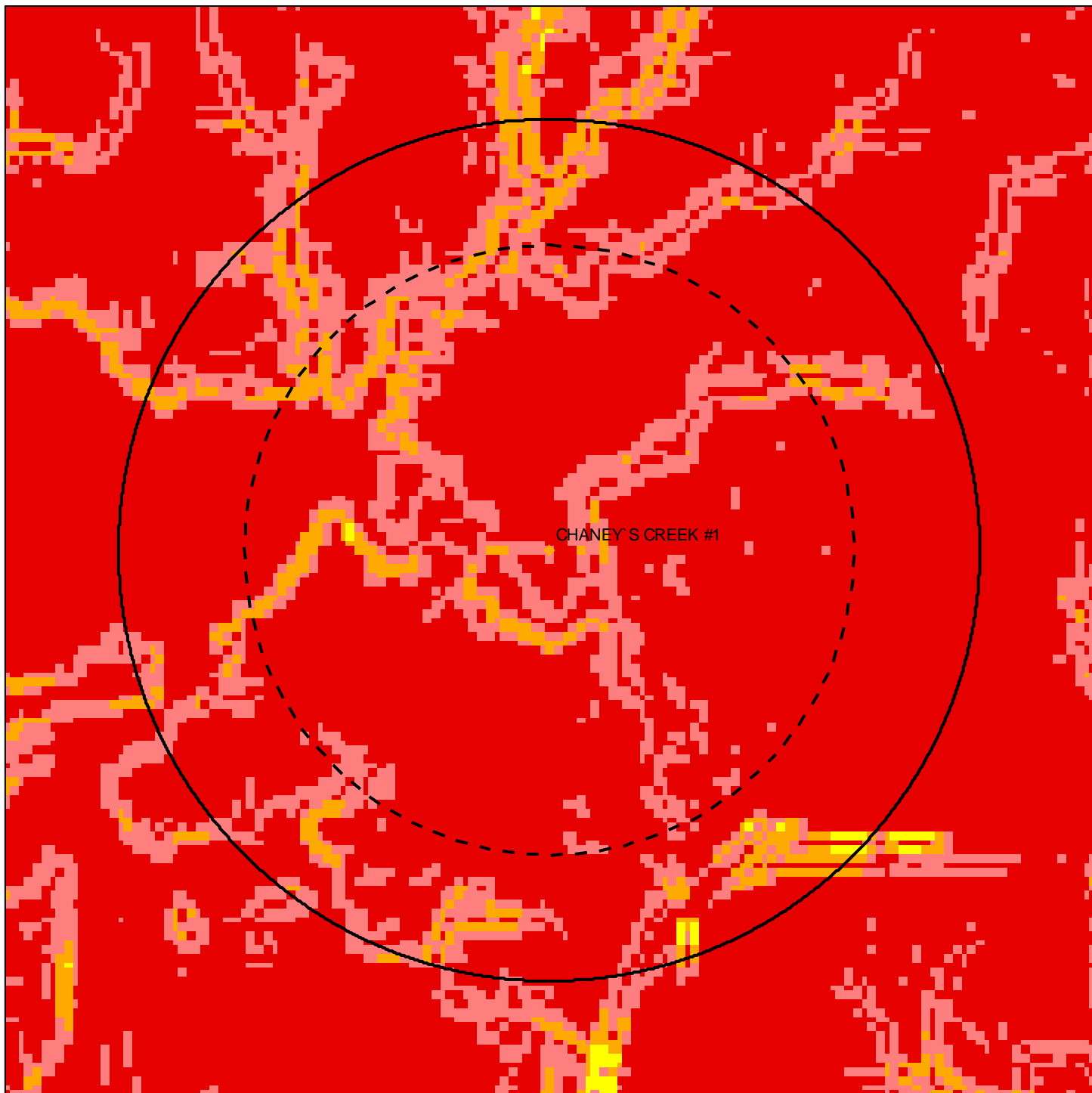
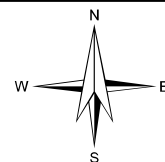
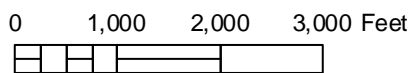


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- | | | |
|------------------------|-----------------------|--|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



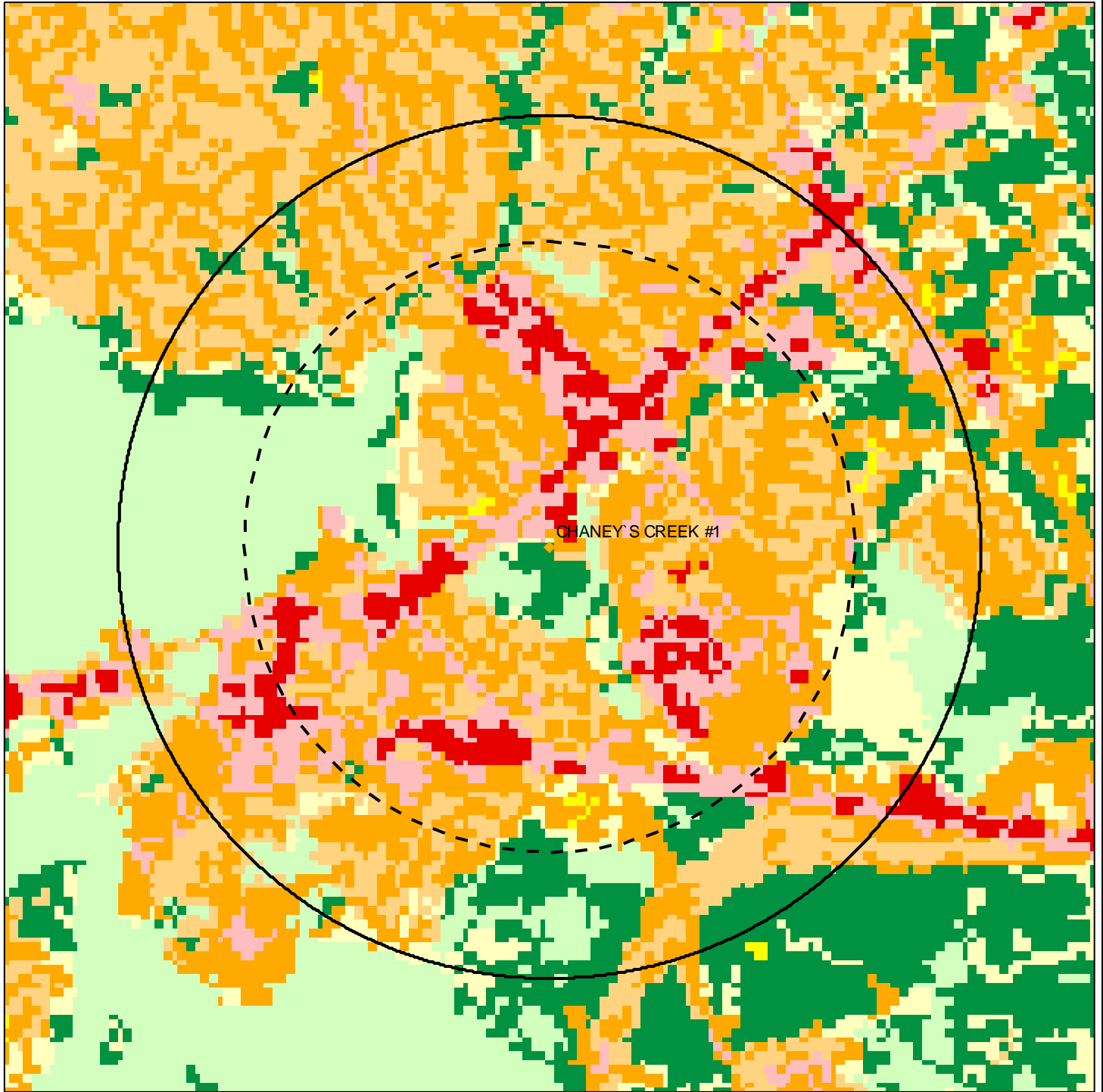
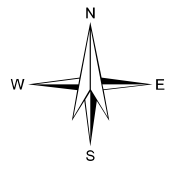







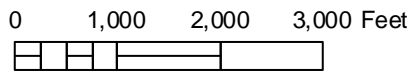


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



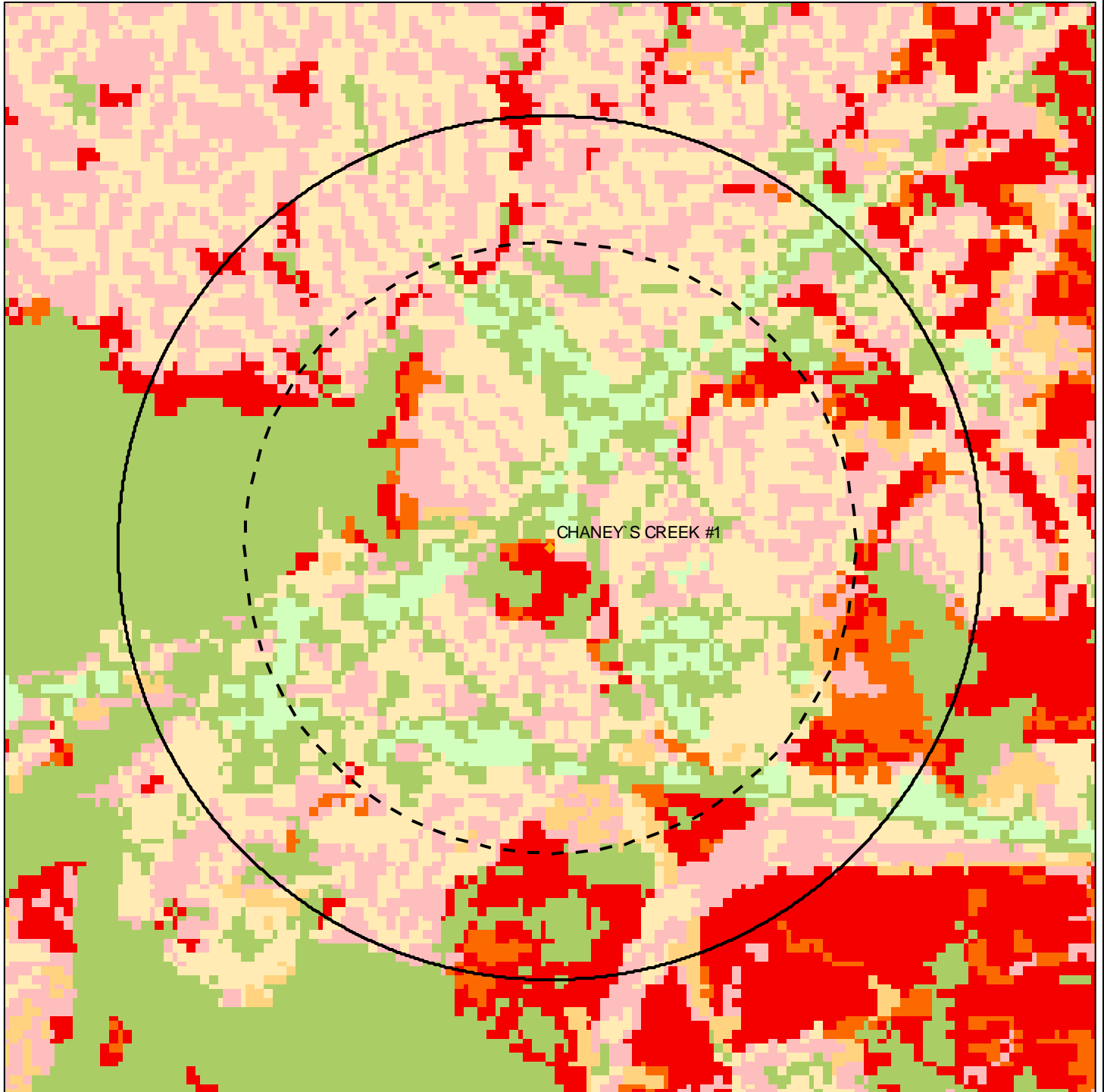
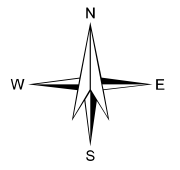
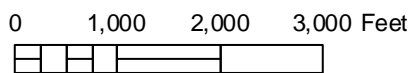


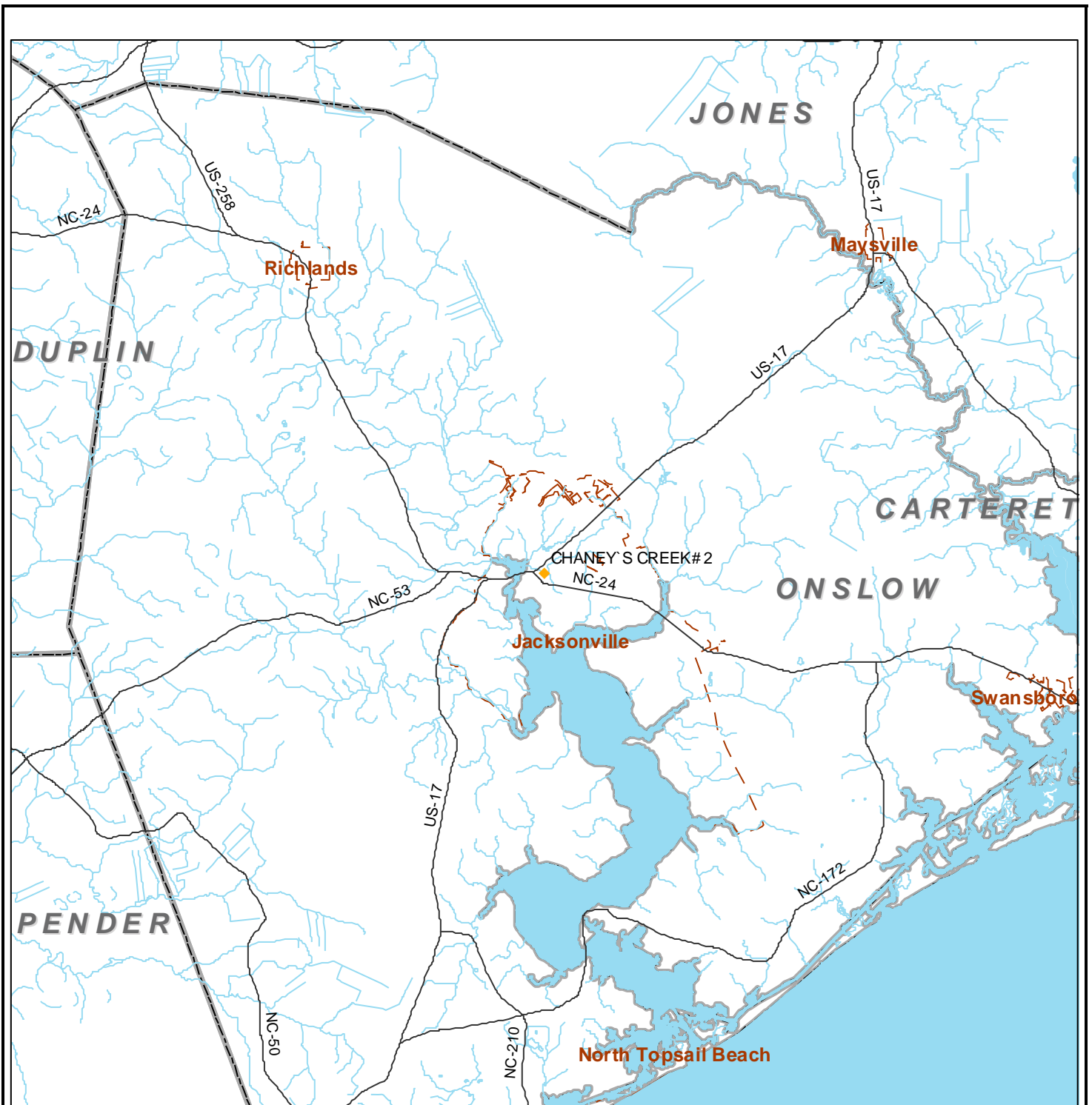
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

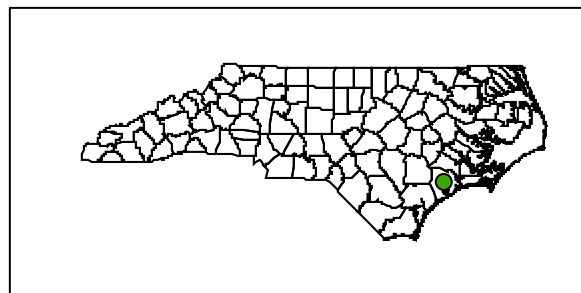
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



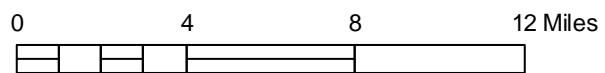
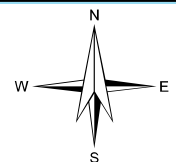


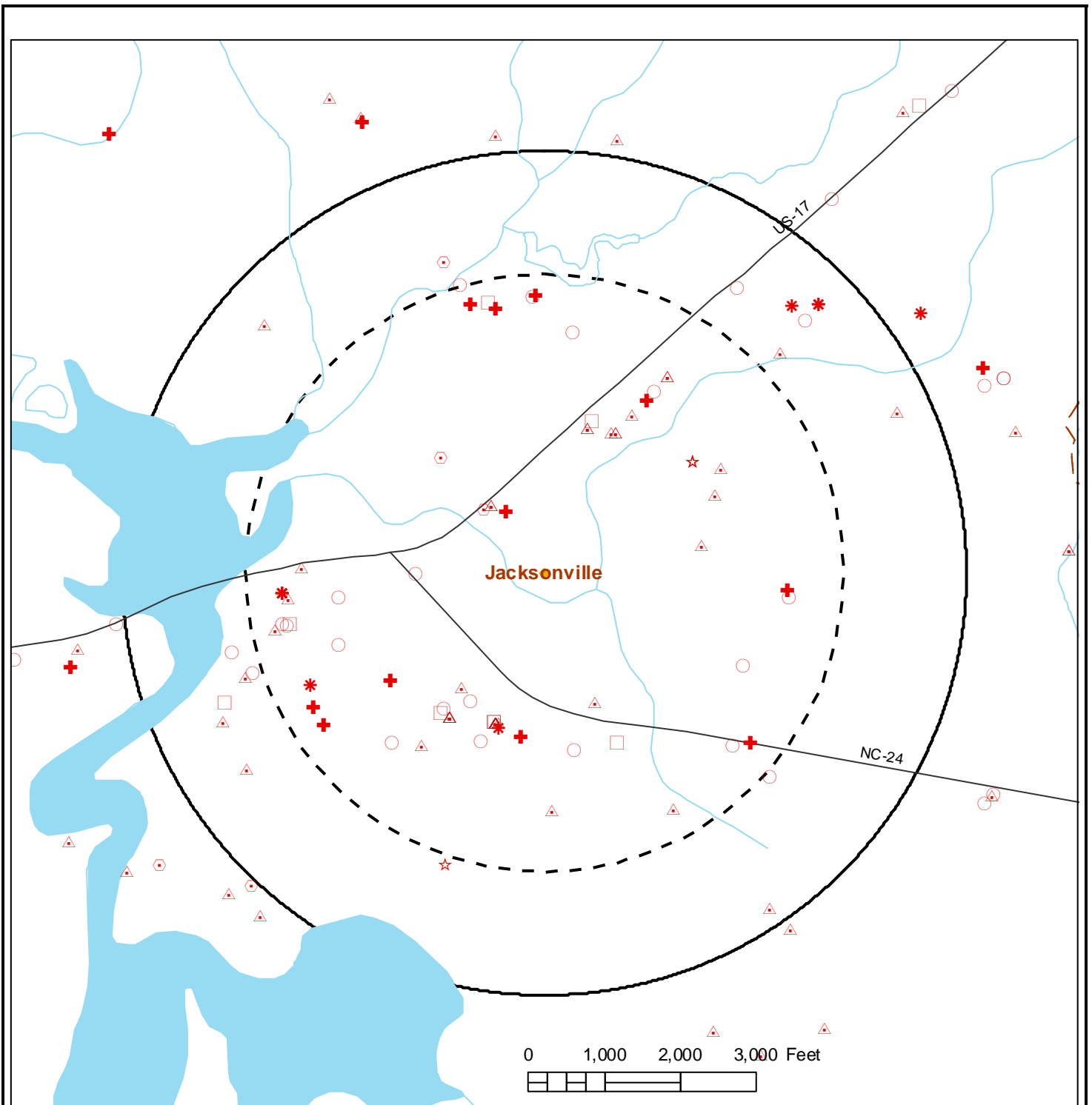
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

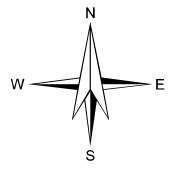




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, CHANEY'S CREEK# 2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
CVS PHARMACY #5585	NCR000154336	RCRA Gen. / Trans. Facilities	H	COLLEGE PLAZA	JACKSONVILLE	Unkown	ONSLOW
EXCEL BODY WORKS	NCR000000091	RCRA Gen. / Trans. Facilities	H	LEJEUNE BLVD	JACKSONVILLE	Unkown	ONSLOW
KMART #7090	NCR000147546	RCRA Gen. / Trans. Facilities	H	NEW MARKET SQUARE MALL	JACKSONVILLE	Unkown	ONSLOW
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	RCRA Gen. / Trans. Facilities	H	PSC BOX 21001	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	RCRA Gen. / Trans. Facilities	H	COURT ST, STE 100	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkown	ONSLOW
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
NCDSCA 067-0007 (QUALITY CLEANERS)	NCR000146 126	RCRA Gen. / Trans. Facilities	H	NEW BRIDGE ST, STE 100	JACKSON VILLE	Unkno wn	ONSLOW
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollution Incidents	H	910 N. MARINE BLVD.	JACKSON VILLE	Unkno wn	ONSLO
SUBURB AN PROPANE	94193	Pollution Incidents	H	1103 N. MARINE BLVD	JACKSON VILLE	Unkno wn	ONSLO
LENOIR AUTO PARTS	13124	Pollution Incidents	H	804 NEW BRIDGE ST.	JACKSON VILLE	Unkno wn	ONSLO
SOUTHER N UNIFORM RENTALS	11609	Pollution Incidents	H	818 COURT ST.	JACKSON VILLE	Unkno wn	ONSLO
NORTHW OODS EXXON	11651	Pollution Incidents	H	2502 ONSLOW DR.	JACKSON VILLE	Unkno wn	ONSLO
DAUGHT RY'S EXXON	11754	Pollution Incidents	H	203 NEW RIVER DR.	JACKSON VILLE	Unkno wn	ONSLO
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Pollution Incidents	H	719 NEW BRIDGE ST.	JACKSON VILLE	Unkno wn	ONSLO
ALL PRO PAINT STORE	14564	Pollution Incidents	H	425 S. MARINE BLVD.	JACKSON VILLE	Unkno wn	ONSLO
S & W READY MIX- JACKSON VILLE	15407	Pollution Incidents	H	24 East THOMPSON ST.	JACKSON VILLE	Unkno wn	ONSLO
INFANT OF PRAGUE CATHOLI C CHURCH	15578	Pollution Incidents	H	214 MARINE BOULEVARD	JACKSON VILLE	Unkno wn	ONSLO

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
J & B AUTO	17778	Pollution Incidents	H	943 LEJEUNE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
SCOTCH MAN # 46	19794	Pollution Incidents	H	2560 ONSLOW DR.	JACKSONVILLE	Unkno wn	ONSLO
SCOTCH MAN # 70	20583	Pollution Incidents	H	1000 NEW BRIDGE ST.	JACKSONVILLE	Unkno wn	ONSLO
DASH N #10	32406	Pollution Incidents	H	1316 Hargett Street	Jacksonville	Unkno wn	ONSLO
Onslow County Health Dept.	7154	Pollution Incidents	H	612 College Street	Jacksonville	Unkno wn	ONSLO
highway 24/17 bypass bridge	32882	Pollution Incidents	H	17 sbnd lane & 24 estbnd	jacksonville	Unkno wn	ONSLO
Chaney Ave-159	32919	Pollution Incidents	H	159 chaney ave	Jacksonville	Unkno wn	ONSLO
Mill Ave-701 (onslow Jail)	32954	Pollution Incidents	H	701 Mill AVE	Jacksonville	Unkno wn	ONSLO
Southern Cleaners And Laundry	670002	Pollution Incidents	H	820 Court St	Jacksonville	Unkno wn	ONSLOW
A1 Cleaners	670006	Pollution Incidents	H	327 Henderson Dr	Jacksonville	Unkno wn	ONSLOW
Quality Cleaners and Laundry	670007	Pollution Incidents	H	701 New Bridge St	Jacksonville	Unkno wn	ONSLOW
Southern Cleaners and Laundry	670009	Pollution Incidents	H	415 Chaney Ave	Jacksonville	Unkno wn	ONSLOW
JACKSONVILLE, NC BOULEVARD STATE ROUTE 1425	4033935	Tier II Sites	H	(BOULEVARD) STATE ROUTE 1425	JACKSONVILLE	Unkno wn	Onslow

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
JACKSON VILLE, NC BRIDGE ST CENTRAL OFFICE	4033936	Tier II Sites	H	300 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	Onslow
Waste Industries, Jacksonville	4035054	Tier II Sites	H	21 E. Thompson St.	Jacksonville	Unkno wn	Onslow
THE HOME DEPOT STORE #3655	4038544	Tier II Sites	H	479 WESTERN BLVD HWY 17	JACKSON VILLE	Unkno wn	Onslow
Inergy Propane, LLC	4039804	Tier II Sites	H	25 East Thompson St	Jacksonville	Unkno wn	Onslow
Inergy Propane, LLC	4039855	Tier II Sites	H	1103 N Marine Blvd	Jacksonville	Unkno wn	Onslow
Sanders Ford	4040553	Tier II Sites	H	1135 Le Jeune Blvd	Jacksonville	Unkno wn	Onslow
Trade Wilco #1825	4055057	Tier II Sites	H	830 New Bridge Street	Jacksonville	Unkno wn	Onslow
Henderson Drive & River Street	UDS257	Old Landfill Sites	H	Henderson Drive & River Street	Jacksonville	Unkno wn	ONSLOW
US 17 and Chaney Creek	UDS287	Old Landfill Sites	H	US 17 and Chaney Creek	Jacksonville	Unkno wn	ONSLOW
Highway 17 North and Chaney Creek	UDS461	Old Landfill Sites	H	Highway 17 North and Chaney Creek	Jacksonville	Unkno wn	ONSLOW
DASH N 10	00-0-0000021378	UST Sites	H	1316 HARGETT ST	JACKSON VILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
PHILLIPS 66 CO #023225 (DUPL SITE) ORIGINA L: 0- 020163	00-0- 0000022278	UST Sites	H	2560 ONSLOW DR	JACKSON VILLE	Unkno wn	ONSLOW
THE PANTRY 825	00-0- 0000031259	UST Sites	H	2561 ONSLOW DRIVE	JACKSON VILLE	Unkno wn	ONSLOW
JACKSON VILLE EXCHAN GE	00-0- 0000002488	UST Sites	H	300 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
UNION 76 STATION/ LES' AUTO	00-2- 0000020246	UST Sites	H	337 HENDERSON DRIVE	JACKSON VILLE	Unkno wn	ONSLOW
NEW BRIDGE MIDDLE SCHOOL	00-0- 0000000278	UST Sites	H	401 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
MAIN PUMPING STATION	00-0- 0000035685	UST Sites	H	44 N MARINE BLVD	JACKSON VILLE	Unkno wn	ONSLOW
THOMPS ON ELEMENT ARY	00-0- 0000027713	UST Sites	H	440 COLLEGE STREET	JACKSON VILLE	Unkno wn	ONSLOW
0- 022060LA UNDROM AT & CLEANER S	00-0- 0000022606	UST Sites	H	55 NEW RIVER ROAD	JACKSON VILLE	Unkno wn	ONSLOW
WILCO/T RADE 1825	00-0- 0000020811	UST Sites	H	830 NEW BRIDGE ST	JACKSON VILLE	Unkno wn	ONSLOW
WHIZZ MART 4	00-0- 0000034491	UST Sites	H	908 NORTH MARINE BOULEVARD	JACKSON VILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Browning and White Building Lot 3 Schilsky Chiropractic Center	SW8101017	NPDES Permits	L	326 Dolphin Dr	Jacksonville	Unkno wn	ONSLOW
Lejeune Memorial Gardens	SW8060145	NPDES Permits	L	Montford Landing Rd	Camp Lejeune	Unkno wn	ONSLOW
Coastal Carolina Veterans Cemetery Phase II	SW8080958	NPDES Permits	L	Montford Landing Rd	Jacksonville	Unkno wn	ONSLOW
Osprey Point Subdivision	SW8080635	NPDES Permits	L	Court St	Jacksonville	Unkno wn	ONSLOW
Halsey Building Demolition	SW8140911	NPDES Permits	L	612 College Rd	Jacksonville	Unkno wn	ONSLOW
Country Club Acres Wastewater Interceptor	SW8000206	NPDES Permits	L			Unkno wn	ONSLOW
Ashcroft At The Commons	SW8000505	NPDES Permits	L	Commons Dr S Fairway Rd	Jacksonville	Unkno wn	ONSLOW
City Of Jacksonville Sewer Extensions To	SW8000543	NPDES Permits	L			Unkno wn	ONSLOW
Wetland Restoration Phase I	SW8000902	NPDES Permits	L			Unkno wn	ONSLOW
Wetland Restoration Phase I	SW8000939	NPDES Permits	L			Unkno wn	ONSLOW
Onslow County Leachate Pump Station and Force Main	SW8010103	NPDES Permits	L	Int Of Pony Farm Rd And Meadowview Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
The Linear Park	SW8010111	NPDES Permits	L			Unknown	ONSLOW
US Hwy 17 US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	NPDES Permits	L	US Hwy 17 24 And Sr 1676	Jacksonville	Unknown	ONSLOW
Drainage Improvements for Jacksonville Senior High School	SW8010309	NPDES Permits	L	Int Of Henderson Drive Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Wilson Bay Wetland Restoration Phase I	SW8010408	NPDES Permits	L	Loyola Drive And Bay View Dr	Jacksonville	Unknown	ONSLOW
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	NPDES Permits	L	Lyman Rd MCB C L	Jacksonville	Unknown	ONSLOW
APEC Fiber Optic Conduit Phase 3A	SW8030309	NPDES Permits	L	Several Counties Including Pitt Onslow	Jacksonville	Unknown	ONSLOW
Onslow County Water System Expansion	SW8030319	NPDES Permits	L	US Hwy 17 NC 24 Sr1744 Sr 1437	Jacksonville	Unknown	ONSLOW
Onslow County 2002-2004 Waterline Extensions	SW8050219	NPDES Permits	L	Various Roads Throughout Onslow County	Jacksonville	Unknown	ONSLOW
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	NPDES Permits	L	Stones Creek On NC 210	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	NPDES Permits	L	Tlz Gull Access Rd Tlz Jaybird Access Rd	Jacksonville	Unkno wn	ONSLOW
Sanctuary of Faith Church	SW8070930	NPDES Permits	L	Piney Green Road Walnut Dr	Jacksonville	Unkno wn	ONSLOW
Lesan Dental Office	SW8070938	NPDES Permits	L	Cobia Ct Lot 7 Schilsky Office Park	Jacksonville	Unkno wn	ONSLOW
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	NPDES Permits	L	Gateway S Lots 1- 4 6 7	Jacksonville	Unkno wn	ONSLOW
Braddix Tract	SW8090333	NPDES Permits	L	Intersection Of NCSR 1105 Hwy 53	Jacksonville	Unkno wn	ONSLOW
Quaker Bridge Road Improvements	SW8100811	NPDES Permits	L	Int Of Gum Branch Quaker Bridge Roads	Jacksonville	Unkno wn	ONSLOW
Repair FRP Pipeline MCAS New River	SW8110417	NPDES Permits	L	MCAS New River Air Sta	Jacksonville	Unkno wn	ONSLOW
City Of Jacksonville 36 Force Main	SW8920701	NPDES Permits	L			Unkno wn	ONSLOW
Jacksonville Assisted Living Facility	SW8960422	NPDES Permits	L	Intersection Of Henderson Indian Dr	Jacksonville	Unkno wn	ONSLOW
HDX Subdivision Lot 12A 12B 12C 12D	SW8960520	NPDES Permits	L	Se Corner Of Western Blvd Henderson Dr	Jacksonville	Unkno wn	ONSLOW
Williamsburg Parkway Extension	SW8981245	NPDES Permits	L			Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Highway 258 Individual Tracts	SWG030023	NPDES Permits	L	Int Hwy 258 And Country Squire Ln	Jacksonville	Unknown	ONSLOW
City Of Jacksonville	SW8880512	NPDES Permits	L	815 New Bridge St	Jacksonville	Unknown	ONSLOW
David Schilling Property	SWG010005	NPDES Permits	L	Nine Mile Rd	Jacksonville	Unknown	ONSLOW
Country Club Acres Wastewater Collection	SW8010821	NPDES Permits	L	S Of Country Club Rd	Jacksonville	Unknown	ONSLOW
Wilson Bay Aerators	SW8010916	NPDES Permits	L	Wilson Bay	Jacksonville	Unknown	ONSLOW
Borrow Pit No. 1001	SW8030333	NPDES Permits	L	Sr 1243 1287-	Jacksonville	Unknown	ONSLOW
French Creek Dredging and Disposal Area	SW8050707	NPDES Permits	L	Camp Lejeune	Jacksonville	Unknown	ONSLOW
Replace Water Distribution System @ CP Geiger Area	SW8060908	NPDES Permits	L	Camp Geiger	Jacksonville	Unknown	ONSLOW
North Carolina Veterans Cemetery	SW8910409	NPDES Permits	L	110 Montford Point Rd	Jacksonville	Unknown	ONSLOW
Onslow County Justice Complex	SW8080122	NPDES Permits	L	Intersection Of Court Street And Tallman Ave	Jacksonville	Unknown	ONSLOW
Administrative Office Complex	SW8080519	NPDES Permits	L	Corner Of Johnson Blvd And Huerth St	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Onslow County Jail Demolition	SW8140402	NPDES Permits	L	109 Old Bridge St	Jacksonville	Unkno wn	ONSLOW
Onslow County Detention Center Parking Lot	SW8071010	NPDES Permits	L	Jct Of Court Street And Tallman Ave	Jacksonville	Unkno wn	ONSLOW
Center for Public Safety	SW8120209	NPDES Permits	L	850 Court St	Jacksonville	Unkno wn	ONSLOW
Jacksonville Civic Complex Site Demolition	SW8050221	NPDES Permits	L	US 17 NC Hwy 24	Jacksonville	Unkno wn	ONSLOW
Clyde Erwin Elementary School	SW8060327	NPDES Permits	L	323 New River Dr	Jacksonville	Unkno wn	ONSLOW
Glenn Hargett-Phillips Park Restoration	SW8060931	NPDES Permits	L	150 Phillips Rd	Jacksonville	Unkno wn	ONSLOW
Chaney Creek Phillips Park Restoration Project	SW8070339	NPDES Permits	L	150 Phillips Rd	Jacksonville	Unkno wn	ONSLOW
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	NPDES Permits	L	Onslow	Jacksonville	Unkno wn	ONSLOW
New River Artificial Reef AR398	SW8100921	NPDES Permits	L	New River	Jacksonville	Unkno wn	ONSLOW
Bojangles Jacksonville N Marine Blvd	SW8101019	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Advance Auto Parts Marine Boulevard	SW8130713	NPDES Permits	L	Int Of N Marine Blvd And Onslow Dr	Jacksonville	Unkno wn	ONSLOW
Bailey Subdivisio n US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unkno wn	ONSLOW
502 N Marine Boulevard Project	SW8080636	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unkno wn	ONSLOW
Bailey Driveway Marine Boulevard	SW8110618	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unkno wn	ONSLOW
Msa a Jacksonvill e Ph I	SW8970538	NPDES Permits	L	1711 Hargett St	Jacksonville	Unkno wn	ONSLOW
Rite Aid Jacksonvill e	SW8101116	NPDES Permits	L	2347 Onslow Dr	Jacksonville	Unkno wn	ONSLOW
The Gasperson Inc Subdivisio n	SW8070407	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unkno wn	ONSLOW
Oreilly Auto Parts Jacksonvill e	SW8110110	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unkno wn	ONSLOW
NW Jacksonvill e Sanitary Sewer Facility	SW8880711	NPDES Permits	L	Maple St	Jacksonville	Unkno wn	ONSLOW
Grady Campbell SFR	WI0800231	UIC Permits	M	32e Bayshore Blvd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Bradley and Donna Kuegel SFR	WI0800258	UIC Permits	M	402 Nelson Dr	Jacksonville	Unknown	ONSLOW
Gerald and JoAnn Skinner Sr. SFR	WI0800259	UIC Permits	M	400 Nelson Dr	Jacksonville	Unknown	ONSLOW
Jacksonville - East Thompson Street Facility	NCG140027	NPDES Permits	L	24 E Thompson St	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, CHANEY'S CREEK# 2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
CVS PHARMACY #5585	NCR000154336	GENERATOR	LQG
CVS PHARMACY #5585	NCR000154336	TRANSPORTER	N
EXCEL BODY WORKS	NCR000000091	GENERATOR	SQG
EXCEL BODY WORKS	NCR000000091	TRANSPORTER	N
KMART #7090	NCR000147546	GENERATOR	LQG
KMART #7090	NCR000147546	TRANSPORTER	N
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	GENERATOR	LQG
MARINE CORPS AIR STATION NEW RIVER	NC8170022570	TRANSPORTER	N
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	GENERATOR	SQG
NCDSCA 067-0002 (SOUTHERN CLEANERS)	NC0991302927	TRANSPORTER	N
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	GENERATOR	SQG
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	TRANSPORTER	N
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	GENERATOR	SQG
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	TRANSPORTER	N
NCDSCA 067-0007 (QUALITY CLEANERS)	NCR000146126	GENERATOR	SQG

PCS Name	PCS ID	Attribute	Value
NCDECA 067-0007 (QUALITY CLEANERS)	NCR000146126	TRANSPORTER	N
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollutant Type	GASOLINE/DIESEL/KEROSENE
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Risk	I
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Priority Code	240
SUBURBAN PROPANE	94193	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SUBURBAN PROPANE	94193	Site Risk	H
LENOIR AUTO PARTS	13124	Pollutant Type	OTHER PETROLEUM PROD.
LENOIR AUTO PARTS	13124	Site Priority Code	0
SOUTHERN UNIFORM RENTALS	11609	Pollutant Type	OTHER ORGANICS
SOUTHERN UNIFORM RENTALS	11609	Site Risk	L
SOUTHERN UNIFORM RENTALS	11609	Site Priority Code	70E
NORTHWOODS EXXON	11651	Pollutant Type	GASOLINE/DIESEL/KEROSENE
NORTHWOODS EXXON	11651	Site Risk	L
NORTHWOODS EXXON	11651	Site Priority Code	80E
DAUGHTRY'S EXXON	11754	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DAUGHTRY'S EXXON	11754	Site Risk	L
DAUGHTRY'S EXXON	11754	Site Priority Code	20E
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Pollutant Type	GASOLINE/DIESEL/KEROSENE
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Site Risk	L
UNITED STATES POSTAL SERVICE- J'VILLE	13637	Site Priority Code	20E
ALL PRO PAINT STORE	14564	Pollutant Type	GASOLINE/DIESEL/KEROSENE
ALL PRO PAINT STORE	14564	Site Risk	L

PCS Name	PCS ID	Attribute	Value
ALL PRO PAINT STORE	14564	Site Priority Code	40E
S & W READY MIX-JACKSONVILLE	15407	Pollutant Type	GASOLINE/DIESEL/KEROSENE
S & W READY MIX-JACKSONVILLE	15407	Site Risk	L
S & W READY MIX-JACKSONVILLE	15407	Site Priority Code	30D
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Pollutant Type	GASOLINE/DIESEL/KEROSENE
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Site Risk	L
INFANT OF PRAGUE CATHOLIC CHURCH	15578	Site Priority Code	80E
J & B AUTO	17778	Pollutant Type	GASOLINE/DIESEL/KEROSENE
J & B AUTO	17778	Site Risk	L
J & B AUTO	17778	Site Priority Code	20E
SCOTCHMAN # 46	19794	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SCOTCHMAN # 46	19794	Site Risk	I
SCOTCHMAN # 46	19794	Site Priority Code	90
SCOTCHMAN # 70	20583	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SCOTCHMAN # 70	20583	Site Priority Code	80I
DASH N #10	32406	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DASH N #10	32406	Site Risk	U
Onslow County Health Dept.	7154	Pollutant Type	HEATING OIL
highway 24/17 bypass bridge	32882	Pollutant Type	GASOLINE/DIESEL/KEROSENE
Chaney Ave-159	32919	Pollutant Type	HEATING OIL
Chaney Ave-159	32919	Site Risk	L
Mill Ave-701 (onslow Jail)	32954	Pollutant Type	OTHER PETROLEUM PROD.
Browning and White Building Lot 3 Schilsky Chiropractic Center	SW8101017	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Browning and White Building Lot 3 Schilsky Chiropractic Center	SW8101017	Permit Issued Date	3/10/2011
Lejeune Memorial Gardens	SW8060145	Permit Type	State Stormwater
Lejeune Memorial Gardens	SW8060145	Permit Issued Date	5/18/2012
Coastal Carolina Veterans Cemetery Phase II	SW8080958	Permit Type	State Stormwater
Coastal Carolina Veterans Cemetery Phase II	SW8080958	Permit Issued Date	11/17/2008
Osprey Point Subdivision	SW8080635	Permit Type	State Stormwater
Osprey Point Subdivision	SW8080635	Permit Issued Date	1/7/2010
Osprey Point Subdivision	SW8080635	Permit Expiration Date	3/11/2021
Halsey Building Demolition	SW8140911	Permit Type	State Stormwater
Halsey Building Demolition	SW8140911	Permit Issued Date	10/1/2014
Country Club Acres Wastewater Intercepto	SW8000206	Permit Type	State Stormwater
Country Club Acres Wastewater Intercepto	SW8000206	Permit Issued Date	4/10/2000
Ashcroft At The Commons	SW8000505	Permit Type	State Stormwater
Ashcroft At The Commons	SW8000505	Permit Issued Date	4/9/2008
Ashcroft At The Commons	SW8000505	Permit Expiration Date	8/16/2014
City Of Jacksonville Sewer Extensions To	SW8000543	Permit Type	State Stormwater
City Of Jacksonville Sewer Extensions To	SW8000543	Permit Issued Date	5/23/2000
Wetland Restoration Phase I	SW8000902	Permit Type	State Stormwater
Wetland Restoration Phase I	SW8000902	Permit Issued Date	9/5/2000
Wetland Restoration Phase I	SW8000939	Permit Type	State Stormwater
Wetland Restoration Phase I	SW8000939	Permit Issued Date	9/29/2000

PCS Name	PCS ID	Attribute	Value
Onslow County Leachate Pump Station and Force Main	SW8010103	Permit Type	State Stormwater
Onslow County Leachate Pump Station and Force Main	SW8010103	Permit Issued Date	1/23/2001
The Linear Park	SW8010111	Permit Type	State Stormwater
The Linear Park	SW8010111	Permit Issued Date	4/19/2001
The Linear Park	SW8010111	Permit Expiration Date	4/19/2015
US Hwy 17US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	Permit Type	State Stormwater
US Hwy 17US Hwy 24 & Sr 1676 Plastic Gas	SW8010116	Permit Issued Date	1/23/2001
Drainage Improvements for Jacksonville Senior High School	SW8010309	Permit Type	State Stormwater
Drainage Improvements for Jacksonville Senior High School	SW8010309	Permit Issued Date	3/14/2001
Wilson Bay Wetland Restoration Phase I	SW8010408	Permit Type	State Stormwater
Wilson Bay Wetland Restoration Phase I	SW8010408	Permit Issued Date	4/20/2001
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	Permit Type	State Stormwater
OP-3 Observation Mound, MCB Camp Lejeune	SW8010652	Permit Issued Date	7/27/2001
APEC Fiber Optic Conduit Phase 3A	SW8030309	Permit Type	State Stormwater
APEC Fiber Optic Conduit Phase 3A	SW8030309	Permit Issued Date	3/17/2003
Onslow County Water System Expansion	SW8030319	Permit Type	State Stormwater
Onslow County Water System Expansion	SW8030319	Permit Issued Date	6/27/2003
Onslow County 2002-2004 Waterline Extensions	SW8050219	Permit Type	State Stormwater
Onslow County 2002-2004 Waterline Extensions	SW8050219	Permit Issued Date	2/15/2005

PCS Name	PCS ID	Attribute	Value
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	Permit Type	State Stormwater
Replacement of Bridge No. 19 TIP No. 4215	SW8050917	Permit Issued Date	6/27/2008
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	Permit Type	State Stormwater
Camp Lejeune Repair Erosion Sites NW Quadrant	SW8070849	Permit Issued Date	1/2/2008
Sanctuary of Faith Church	SW8070930	Permit Type	State Stormwater
Sanctuary of Faith Church	SW8070930	Permit Issued Date	3/14/2008
Sanctuary of Faith Church	SW8070930	Permit Expiration Date	12/30/2021
Lesan Dental Office	SW8070938	Permit Type	State Stormwater
Lesan Dental Office	SW8070938	Permit Issued Date	1/24/2008
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	Permit Type	State Stormwater
Kenneth P Whichard Lots 1-4 6 and 7	SW8090209	Permit Issued Date	2/25/2009
Braddix Tract	SW8090333	Permit Type	State Stormwater
Braddix Tract	SW8090333	Permit Issued Date	5/21/2009
Quaker Bridge Road Improvements	SW8100811	Permit Type	State Stormwater
Quaker Bridge Road Improvements	SW8100811	Permit Issued Date	11/10/2010
Repair FRP Pipeline MCAS New River	SW8110417	Permit Type	State Stormwater
Repair FRP Pipeline MCAS New River	SW8110417	Permit Issued Date	5/3/2011
City Of Jacksonville 36 Force Main	SW8920701	Permit Type	State Stormwater
City Of Jacksonville 36 Force Main	SW8920701	Permit Issued Date	9/16/1992
Jacksonville Assisted Living Facility	SW8960422	Permit Type	State Stormwater
Jacksonville Assisted Living Facility	SW8960422	Permit Issued Date	4/14/2008

PCS Name	PCS ID	Attribute	Value
Jacksonville Assisted Living Facility	SW8960422	Permit Expiration Date	4/14/2022
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Type	State Stormwater
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Issued Date	11/26/2012
HDX Subdiivson Lot 12A 12B 12C 12D	SW8960520	Permit Expiration Date	8/23/2020
Williamsburg Parkway Extension	SW8981245	Permit Type	State Stormwater
Williamsburg Parkway Extension	SW8981245	Permit Issued Date	6/10/1999
Highway 258 Individual Tracts	SWG030023	Permit Type	State Stormwater, Clearing and Grading COC
Highway 258 Individual Tracts	SWG030023	Permit Issued Date	6/26/2013
City Of Jacksonville	SW8880512	Permit Type	State Stormwater
City Of Jacksonville	SW8880512	Permit Issued Date	5/17/1988
David Schilling Property	SWG010005	Permit Type	State Stormwater, Single Family Residence COC
David Schilling Property	SWG010005	Permit Issued Date	10/11/2010
Country Club Acres Wastewater Collection	SW8010821	Permit Type	State Stormwater
Country Club Acres Wastewater Collection	SW8010821	Permit Issued Date	8/22/2001
Wilson Bay Aerators	SW8010916	Permit Type	State Stormwater
Wilson Bay Aerators	SW8010916	Permit Issued Date	9/24/2001
Borrow Pit No. 1001	SW8030333	Permit Type	State Stormwater
Borrow Pit No. 1001	SW8030333	Permit Issued Date	5/29/2003
French Creek Dredging and Disposal Area	SW8050707	Permit Type	State Stormwater
French Creek Dredging and Disposal Area	SW8050707	Permit Issued Date	7/13/2005
Replace Water Distribution System @ CP Geiger Area	SW8060908	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Replace Water Distribution System @ CP Geiger Area	SW8060908	Permit Issued Date	9/15/2006
North Carolina Veterans Cemetery	SW8910409	Permit Type	State Stormwater
North Carolina Veterans Cemetery	SW8910409	Permit Issued Date	4/24/1991
Onslow County Justice Complex	SW8080122	Permit Type	State Stormwater
Onslow County Justice Complex	SW8080122	Permit Issued Date	2/3/2009
Onslow County Justice Complex	SW8080122	Permit Expiration Date	1/24/2021
Administrative Office Complex	SW8080519	Permit Type	State Stormwater
Administrative Office Complex	SW8080519	Permit Issued Date	7/9/2008
Administrative Office Complex	SW8080519	Permit Expiration Date	12/30/2021
Onslow County Jail Demolition	SW8140402	Permit Type	State Stormwater
Onslow County Jail Demolition	SW8140402	Permit Issued Date	6/4/2014
Onslow County Detention Center Parking Lot	SW8071010	Permit Type	State Stormwater
Onslow County Detention Center Parking Lot	SW8071010	Permit Issued Date	10/16/2007
Onslow County Detention Center Parking Lot	SW8071010	Permit Expiration Date	10/16/2021
Center for Public Safety	SW8120209	Permit Type	State Stormwater
Center for Public Safety	SW8120209	Permit Issued Date	4/4/2012
Center for Public Safety	SW8120209	Permit Expiration Date	4/4/2020
Jacksonville Civic Complex Site Demolition	SW8050221	Permit Type	State Stormwater
Jacksonville Civic Complex Site Demolition	SW8050221	Permit Issued Date	4/14/2005
Clyde Erwin Elementary School	SW8060327	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Clyde Erwin Elementary School	SW8060327	Permit Issued Date	11/25/2013
Glenn Hargett-Phillips Park Restoration	SW8060931	Permit Type	State Stormwater
Glenn Hargett-Phillips Park Restoration	SW8060931	Permit Issued Date	10/19/2006
Chaney Creek Phillips Park Restoration Project	SW8070339	Permit Type	State Stormwater
Chaney Creek Phillips Park Restoration Project	SW8070339	Permit Issued Date	5/3/2007
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Type	State Stormwater
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Issued Date	1/28/1999
New River Artificial Reef AR398	SW8100921	Permit Type	State Stormwater
New River Artificial Reef AR398	SW8100921	Permit Issued Date	10/21/2010
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Type	State Stormwater
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Issued Date	4/12/2011
Advance Auto Parts Marine Boulevard	SW8130713	Permit Type	State Stormwater
Advance Auto Parts Marine Boulevard	SW8130713	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Type	State Stormwater
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Expiration Date	1/27/2020

PCS Name	PCS ID	Attribute	Value
502 N Marine Boulevard Project	SW8080636	Permit Type	State Stormwater
502 N Marine Boulevard Project	SW8080636	Permit Issued Date	10/1/2008
Bailey Driveway Marine Boulevard	SW8110618	Permit Type	State Stormwater
Bailey Driveway Marine Boulevard	SW8110618	Permit Issued Date	7/27/2011
Msaa Jacksonville Ph I	SW8970538	Permit Type	State Stormwater
Msaa Jacksonville Ph I	SW8970538	Permit Issued Date	7/25/1997
Msaa Jacksonville Ph I	SW8970538	Permit Expiration Date	7/25/2007
Rite Aid Jacksonville	SW8101116	Permit Type	State Stormwater
Rite Aid Jacksonville	SW8101116	Permit Issued Date	12/9/2010
The Gasperson Inc Subdivision	SW8070407	Permit Type	State Stormwater
The Gasperson Inc Subdivision	SW8070407	Permit Issued Date	10/28/2010
The Gasperson Inc Subdivision	SW8070407	Permit Expiration Date	4/13/2021
Oreilly Auto Parts Jacksonville	SW8110110	Permit Type	State Stormwater
Oreilly Auto Parts Jacksonville	SW8110110	Permit Issued Date	2/7/2011
NW Jacksonville Sanitary Sewer Facility	SW8880711	Permit Type	State Stormwater
NW Jacksonville Sanitary Sewer Facility	SW8880711	Permit Issued Date	7/25/1988
Grady Campbell SFR	WI0800231	Permit Type	Injection Water Only GSHP Well System
Bradley and Donna Kuegel SFR	WI0800258	Permit Type	Injection Heating/Cooling Water Return Well
Gerald and JoAnn Skinner Sr. SFR	WI0800259	Permit Type	Injection Heating/Cooling Water Return Well
Jacksonville - East Thompson Street Facility	NCG140027	Permit Type	Ready Mix Concrete Stormwater/Wastewater Discharge COC

PCS Name	PCS ID	Attribute	Value
Jacksonville - East Thompson Street Facility	NCG140027	Permit Issued Date	7/1/2011
Jacksonville - East Thompson Street Facility	NCG140027	Permit Expiration Date	6/30/2016
Jacksonville - East Thompson Street Facility	NCG140027	Receiving Stream	NEW RIVER

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, CHANEY'S CREEK# 2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010 , CHANEY`S CREEK# 2**

Unsaturated Zone Rating	68.3
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$CR = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum CR) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

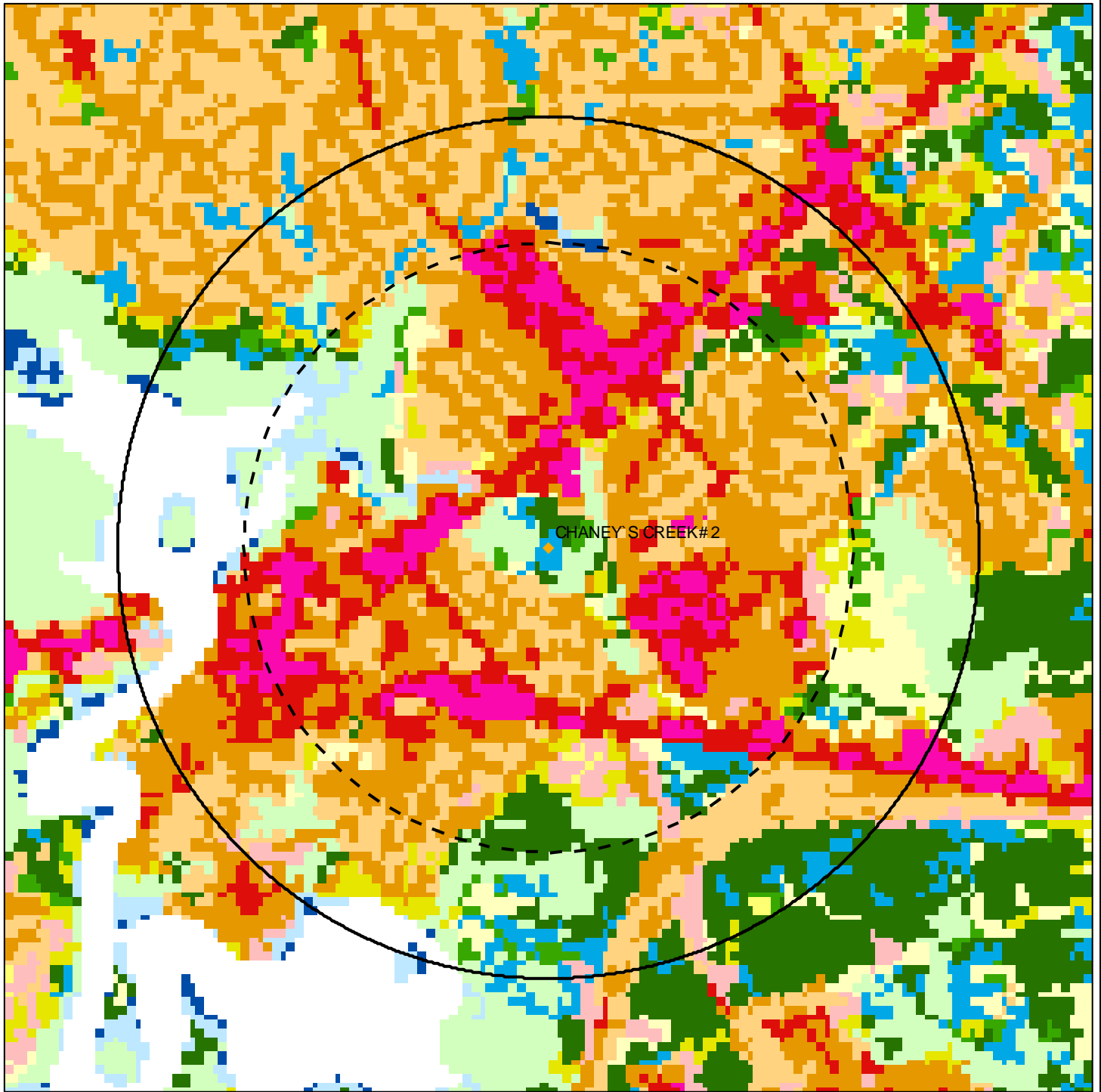
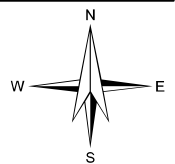


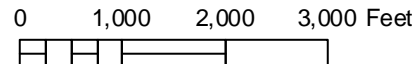
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



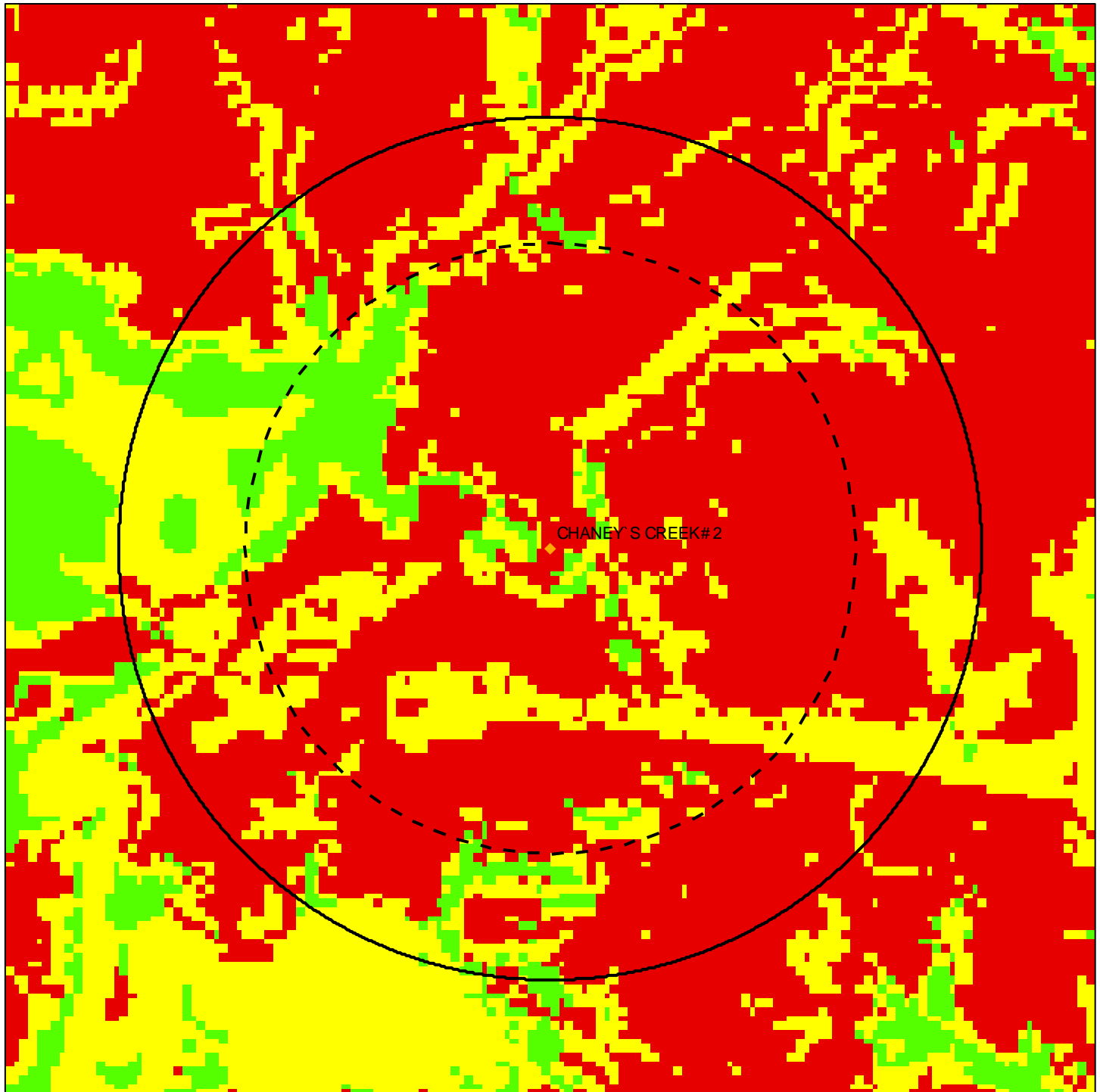
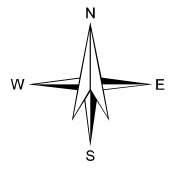
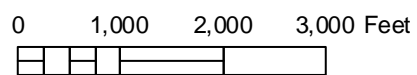


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



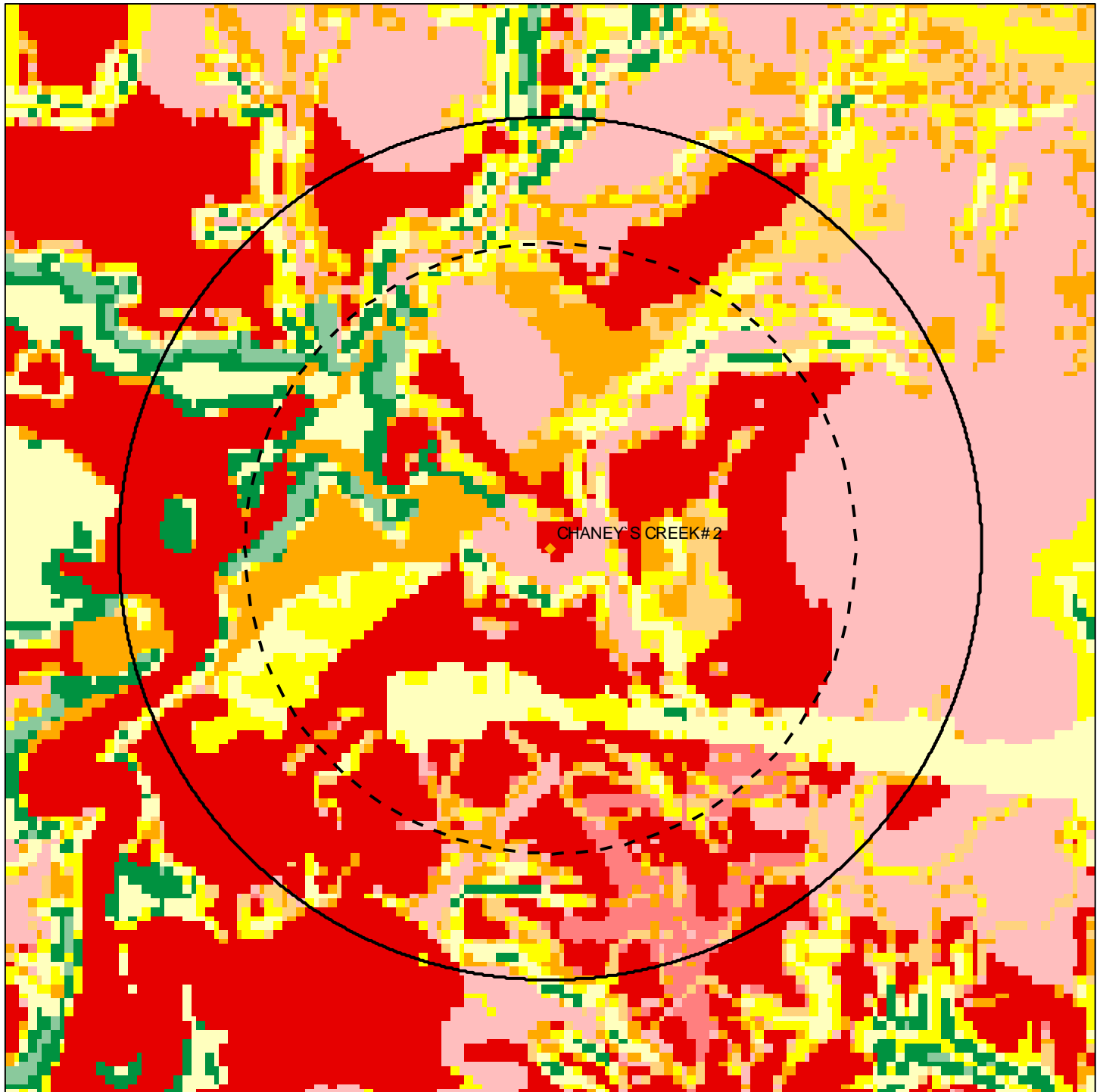
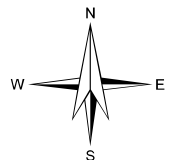
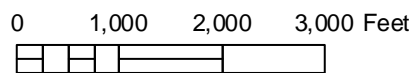


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



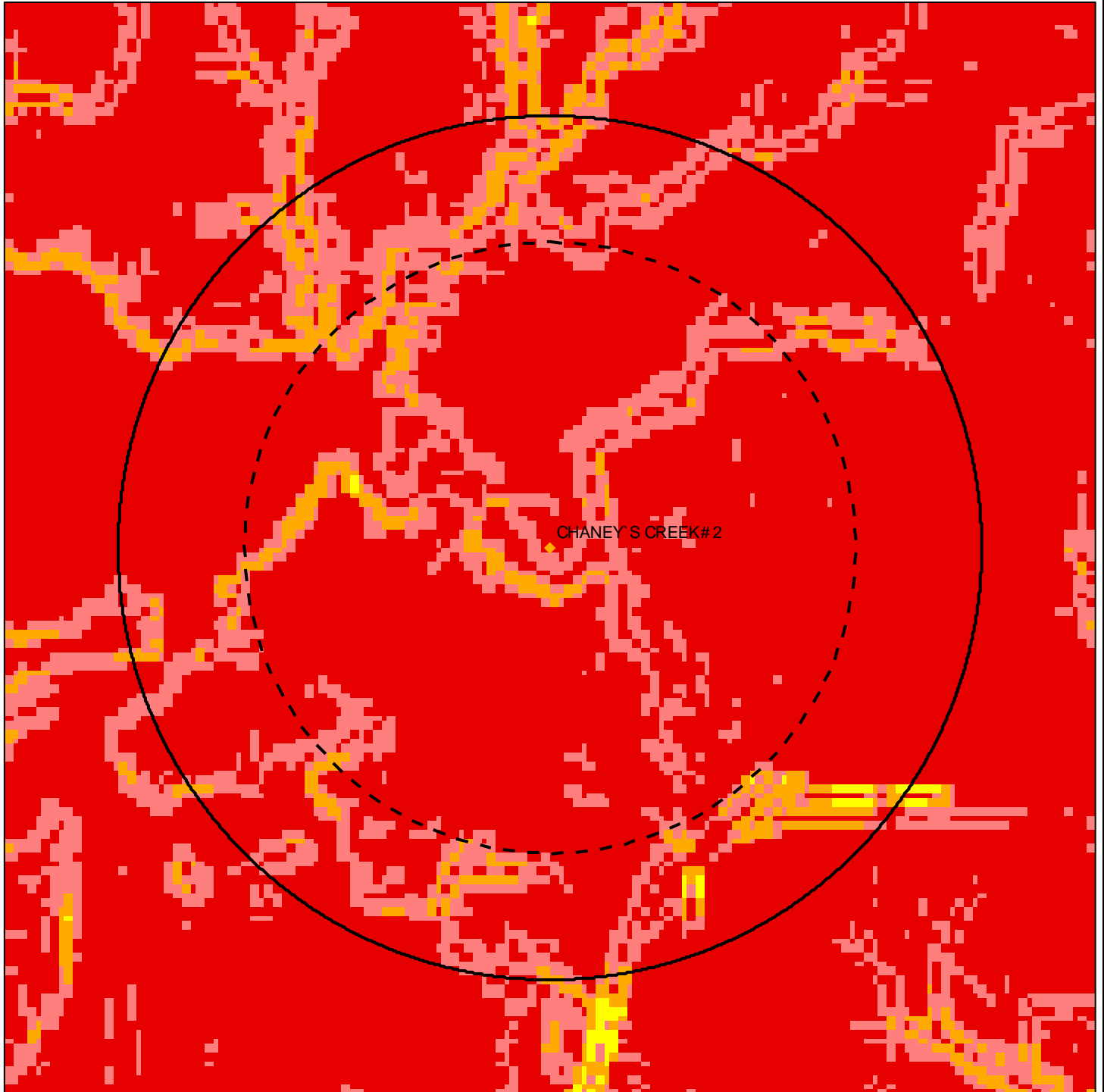
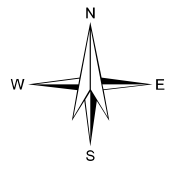








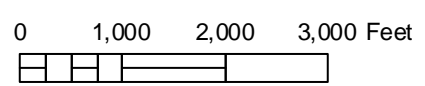


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



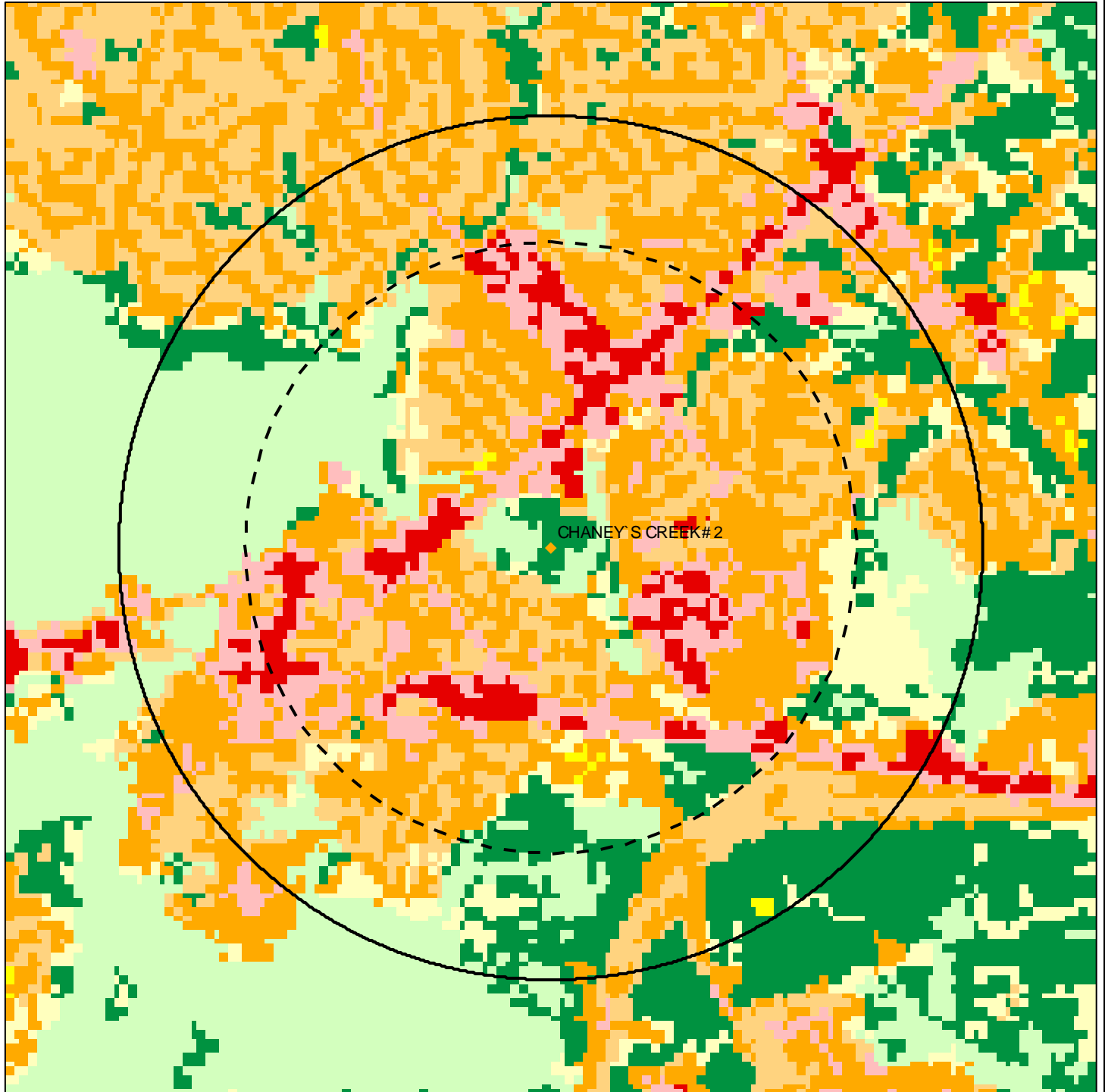











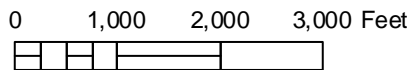
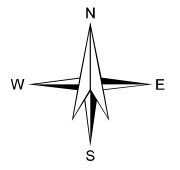


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



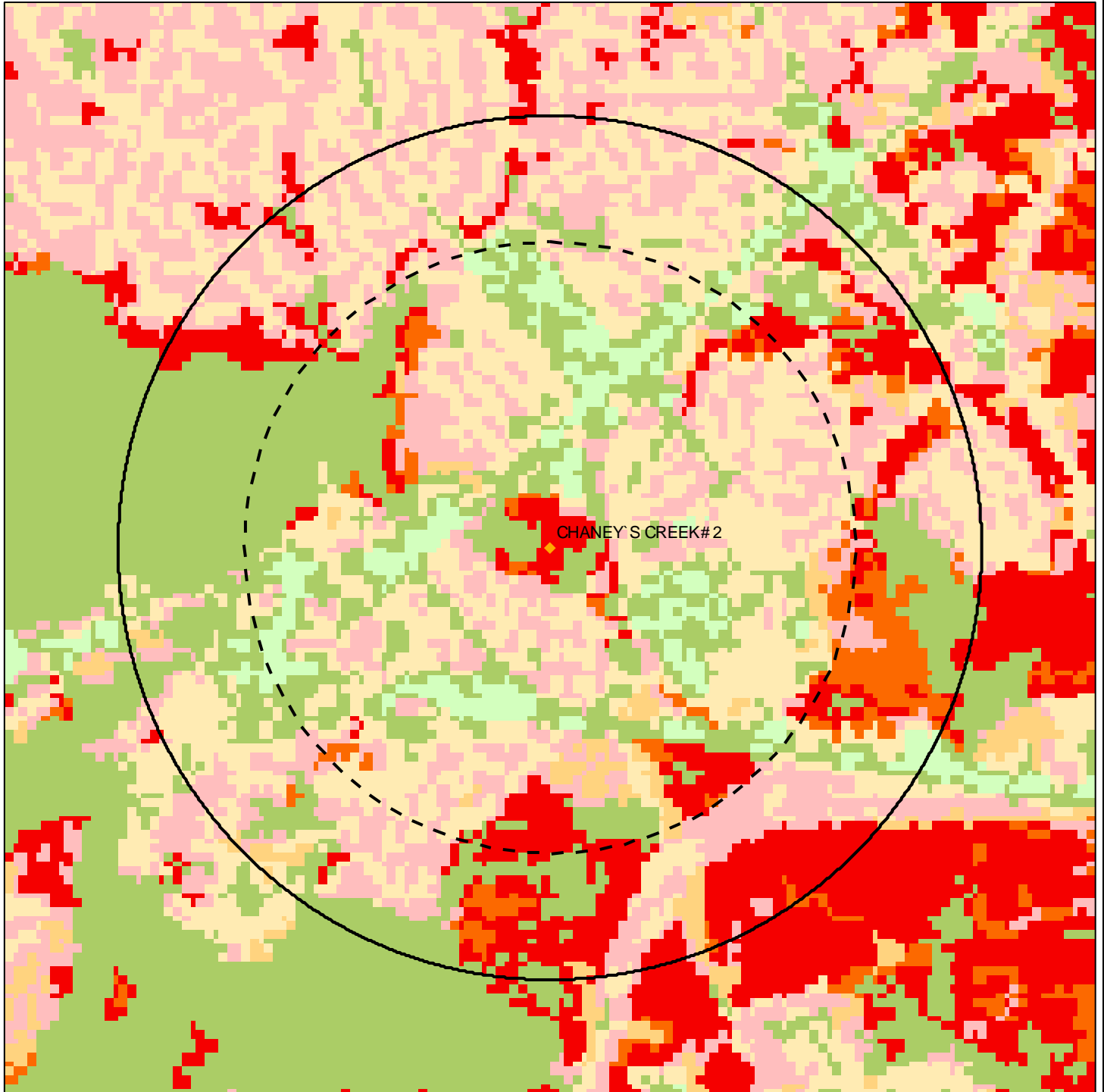
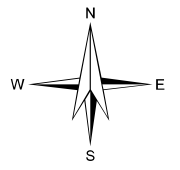
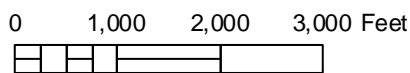


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, CHANEY'S CREEK# 2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

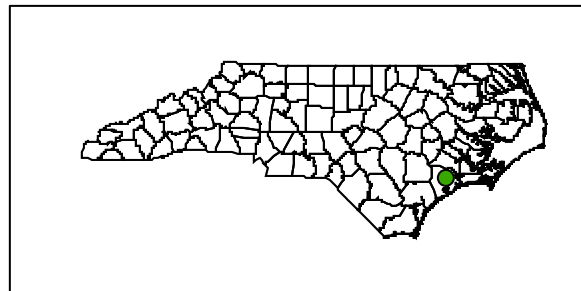
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



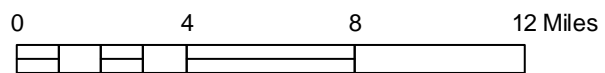
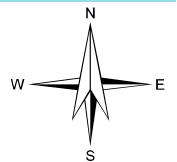


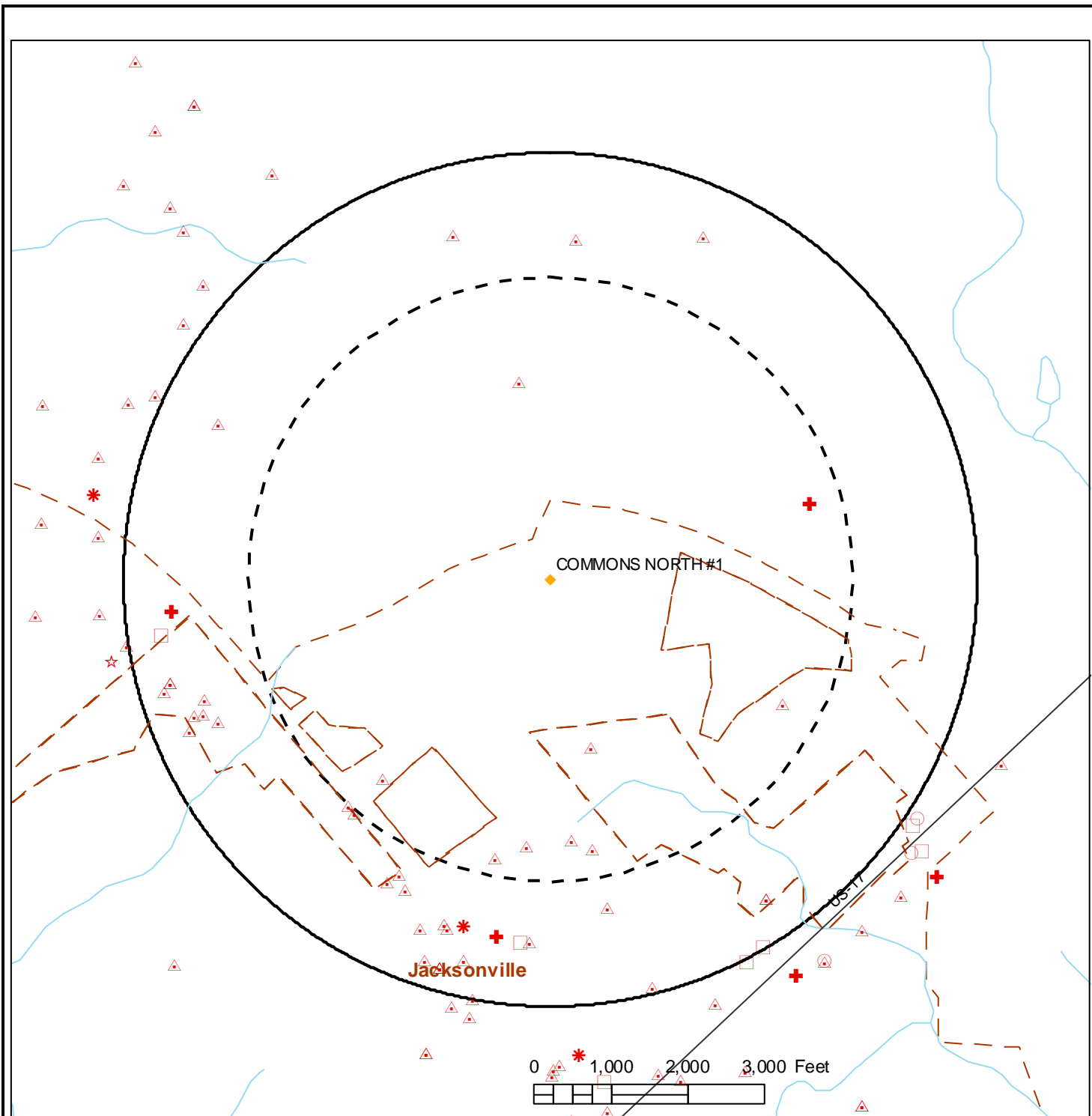
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

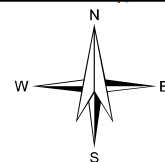




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS NORTH #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL GARMEN T CARE CENTER	NCR000143511	RCRA Gen. / Trans. Facilities	H	HENDERSON DR	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
SAM'S CLUB #6573	NCR000005314	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
LOWE'S OF JACKSONVILLE, NC (STORE # 0556)	4042721	Tier II Sites	H	1255 WESTERN BLVD	JACKSONVILLE	Unkno wn	Onslow
SAMS CLUB GAS STATION 6573	00-0-0000037067	UST Sites	H	1170 WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
HANDY MART 56	00-0-0000035042	UST Sites	H	3495 WESTERN BOULEVARD	JACKSONVILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	NPDES Permits	L	1171 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Affordable Suites	SW8080112	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Palmetto Park Subdivisio n	SW8051147	NPDES Permits	L	King Richard Ct	Jacksonville	Unkno wn	ONSLOW
The Dail Center-Lot 2, Northwest Business Park	SW8030105	NPDES Permits	L	Jacksonvill NC	Jacksonville	Unkno wn	ONSLOW
City of Jacksonville Elevated Water Storage Tank and Water System Improveme nts	SW8030735	NPDES Permits	L	Commons Dr N	Jacksonville	Unkno wn	ONSLOW
Logan's Roadhouse Restaurant	SW8990310	NPDES Permits	L	1177 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lowe's Home Center	SW8970415	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Sams Club Jacksonville Store 6573-04	SW8931222	NPDES Permits	L	1170 Western Blvd	Jacksonville	Unkno wn	ONSLOW
O'Charley's Restaurant & Bar	SW8020209	NPDES Permits	L	1270 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Cross Pointe Centre	SW8960624	NPDES Permits	L	1250 Western Blvd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	NPDES Permits	L	1260 Western Blvd	Jacksonville	Unknwn	ONSLOW
Candlewood Suites	SW8061125	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
Gateway Plaza Shopping Center	SW8980817	NPDES Permits	L	1335 Western Blvd	Jacksonville	Unknwn	ONSLOW
Western Blvd Retail	SW8130710	NPDES Permits	L	1345 Western Blvd	Jacksonville	Unknwn	ONSLOW
Lot 2-- Cross Pointe Centre	SW8020631	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unknwn	ONSLOW
The Legacy at Abbingon Place	SW8030514	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknwn	ONSLOW
Autumn Ridge Apartments	SW8010122	NPDES Permits	L	300 Autumn Ridge Dr	Jacksonville	Unknwn	ONSLOW
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	NPDES Permits	L	500 Talon Cir	Jacksonville	Unknwn	ONSLOW
Charleston Place	SW8060704	NPDES Permits	L	McDaniel Drive Extension	Jacksonville	Unknwn	ONSLOW
Windsor Place	SW8000202	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unknwn	ONSLOW
Marine Chevrolet	SW8960705	NPDES Permits	L	1408 Western Blvd	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Olive Garden Restaurant Jacksonville	SW8070137	NPDES Permits	L	1415 Western Blvd	Jacksonville	Unknown	ONSLOW
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unknown	ONSLOW
Staybridge Hotel Jacksonville	SW8120207	NPDES Permits	L	110 Cobia Ct	Jacksonville	Unknown	ONSLOW
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	NPDES Permits	L	Intersection Of Dolphin Marlin Dr	Jacksonville	Unknown	ONSLOW
Cobia Court Lot 11 Schilsky Office Park	SW8070937	NPDES Permits	L	Cobia Ct Lot 11	Jacksonville	Unknown	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section VIII	Jacksonville	Unknown	ONSLOW
Schilsky Office Park	SW8070211	NPDES Permits	L	Marlin Dr	Jacksonville	Unknown	ONSLOW
Schilsky Chiropractic Center	SW8020502	NPDES Permits	L	Western Blvd NCSR 1470-Dolphin Dr	Jacksonville	Unknown	ONSLOW
Desuyo Medical Facility	SW8110501	NPDES Permits	L	123 Pompano Dr	Jacksonville	Unknown	ONSLOW
BB&T Jacksonville Property ID# 155007	SW8990523	NPDES Permits	L	2676 Western Blvd	Jacksonville	Unknown	ONSLOW
Golds Gym Jacksonville	SW8990613	NPDES Permits	L	Henderson Dr	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
The Legacy at Carolina Forest	SW8090104	NPDES Permits	L	339 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unknown	ONSLOW
The Village at The Glen	SW8080520	NPDES Permits	L	Ramsey Rd	Jacksonville	Unknown	ONSLOW
Ivy Glen at Carolina Forest	SW8080227	NPDES Permits	L	Terry Lee Lanier Dr	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS NORTH #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL GARMENT CARE CENTER	NCR000143511	GENERATOR	SQG
COASTAL GARMENT CARE CENTER	NCR000143511	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
SAM'S CLUB #6573	NCR000005314	GENERATOR	SQG
SAM'S CLUB #6573	NCR000005314	TRANSPORTER	N
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Type	State Stormwater
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Issued Date	10/8/2010
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Expiration Date	10/8/2024
Affordable Suites	SW8080112	Permit Type	State Stormwater
Affordable Suites	SW8080112	Permit Issued Date	2/6/2008
Affordable Suites	SW8080112	Permit Expiration Date	12/31/2021
Palmetto Park Subdivision	SW8051147	Permit Type	State Stormwater
Palmetto Park Subdivision	SW8051147	Permit Issued Date	1/13/2006
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Issued Date	4/14/2003
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Type	State Stormwater
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Issued Date	9/15/2003
Logan's Roadhouse Restaurant	SW8990310	Permit Type	State Stormwater
Logan's Roadhouse Restaurant	SW8990310	Permit Issued Date	5/12/2009
Logan's Roadhouse Restaurant	SW8990310	Permit Expiration Date	8/30/2023
Lowes Home Center	SW8970415	Permit Type	State Stormwater
Lowes Home Center	SW8970415	Permit Issued Date	9/3/1997
Lowes Home Center	SW8970415	Permit Expiration Date	9/3/2007
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Type	State Stormwater
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Issued Date	11/1/2010
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Expiration Date	12/5/2022
O'Charley's Restaurant & Bar	SW8020209	Permit Type	State Stormwater
O'Charley's Restaurant & Bar	SW8020209	Permit Issued Date	4/23/2002
Cross Pointe Centre	SW8960624	Permit Type	State Stormwater
Cross Pointe Centre	SW8960624	Permit Issued Date	11/2/2009
Cross Pointe Centre	SW8960624	Permit Expiration Date	11/18/2026
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Type	State Stormwater
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Issued Date	11/21/2000
Candlewood Suites	SW8061125	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Candlewood Suites	SW8061125	Permit Issued Date	5/9/2007
Candlewood Suites	SW8061125	Permit Expiration Date	5/9/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Gateway Plaza Shopping Center	SW8980817	Permit Type	State Stormwater
Gateway Plaza Shopping Center	SW8980817	Permit Issued Date	5/3/2013
Gateway Plaza Shopping Center	SW8980817	Permit Expiration Date	9/8/2021
Western Blvd Retail	SW8130710	Permit Type	State Stormwater
Western Blvd Retail	SW8130710	Permit Issued Date	9/5/2013
Lot 2--Cross Pointe Centre	SW8020631	Permit Type	State Stormwater
Lot 2--Cross Pointe Centre	SW8020631	Permit Issued Date	7/29/2002
The Legacy at Abbington Place	SW8030514	Permit Type	State Stormwater
The Legacy at Abbington Place	SW8030514	Permit Issued Date	9/23/2009
The Legacy at Abbington Place	SW8030514	Permit Expiration Date	8/13/2017
Autumn Ridge Apartments	SW8010122	Permit Type	State Stormwater
Autumn Ridge Apartments	SW8010122	Permit Issued Date	8/30/2010
Autumn Ridge Apartments	SW8010122	Permit Expiration Date	5/18/2025
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Type	State Stormwater
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Issued Date	8/31/2009

PCS Name	PCS ID	Attribute	Value
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Expiration Date	11/8/2023
Charleston Place	SW8060704	Permit Type	State Stormwater
Charleston Place	SW8060704	Permit Issued Date	7/21/2006
Charleston Place	SW8060704	Permit Expiration Date	7/21/2020
Windsor Place	SW8000202	Permit Type	State Stormwater
Windsor Place	SW8000202	Permit Issued Date	1/27/2005
Windsor Place	SW8000202	Permit Expiration Date	5/25/2014
Marine Chevrolet	SW8960705	Permit Type	State Stormwater
Marine Chevrolet	SW8960705	Permit Issued Date	5/9/2008
Marine Chevrolet	SW8960705	Permit Expiration Date	5/9/2022
Olive Garden Restaurant Jacksonville	SW8070137	Permit Type	State Stormwater
Olive Garden Restaurant Jacksonville	SW8070137	Permit Issued Date	7/30/2012
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Staybridge Hotel Jacksonville	SW8120207	Permit Type	State Stormwater
Staybridge Hotel Jacksonville	SW8120207	Permit Issued Date	3/15/2012
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Type	State Stormwater
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Issued Date	4/4/2008
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Type	State Stormwater
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Issued Date	1/24/2008
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Issued Date	12/15/2005
Schilsky Office Park	SW8070211	Permit Type	State Stormwater
Schilsky Office Park	SW8070211	Permit Issued Date	6/14/2007
Schilsky Office Park	SW8070211	Permit Expiration Date	6/14/2021
Schilsky Chiropractic Center	SW8020502	Permit Type	State Stormwater
Schilsky Chiropractic Center	SW8020502	Permit Issued Date	4/4/2008
Schilsky Chiropractic Center	SW8020502	Permit Expiration Date	10/18/2016
Desuyo Medical Facility	SW8110501	Permit Type	State Stormwater
Desuyo Medical Facility	SW8110501	Permit Issued Date	5/24/2011
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Type	State Stormwater
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Issued Date	7/9/2013
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Expiration Date	9/29/2021
Golds Gym Jacksonville	SW8990613	Permit Type	State Stormwater
Golds Gym Jacksonville	SW8990613	Permit Issued Date	10/14/2013
Golds Gym Jacksonville	SW8990613	Permit Expiration Date	9/8/2023
The Legacy at Carolina Forest	SW8090104	Permit Type	State Stormwater
The Legacy at Carolina Forest	SW8090104	Permit Issued Date	4/3/2009
The Legacy at Carolina Forest	SW8090104	Permit Expiration Date	12/30/2021
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005

PCS Name	PCS ID	Attribute	Value
The Village at The Glen	SW8080520	Permit Type	State Stormwater
The Village at The Glen	SW8080520	Permit Issued Date	11/28/2012
The Village at The Glen	SW8080520	Permit Expiration Date	9/9/2019
Ivy Glen at Carolina Forest	SW8080227	Permit Type	State Stormwater
Ivy Glen at Carolina Forest	SW8080227	Permit Issued Date	11/13/2012

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, COMMONS NORTH #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , COMMONS NORTH #1**

Unsaturated Zone Rating	62.7
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

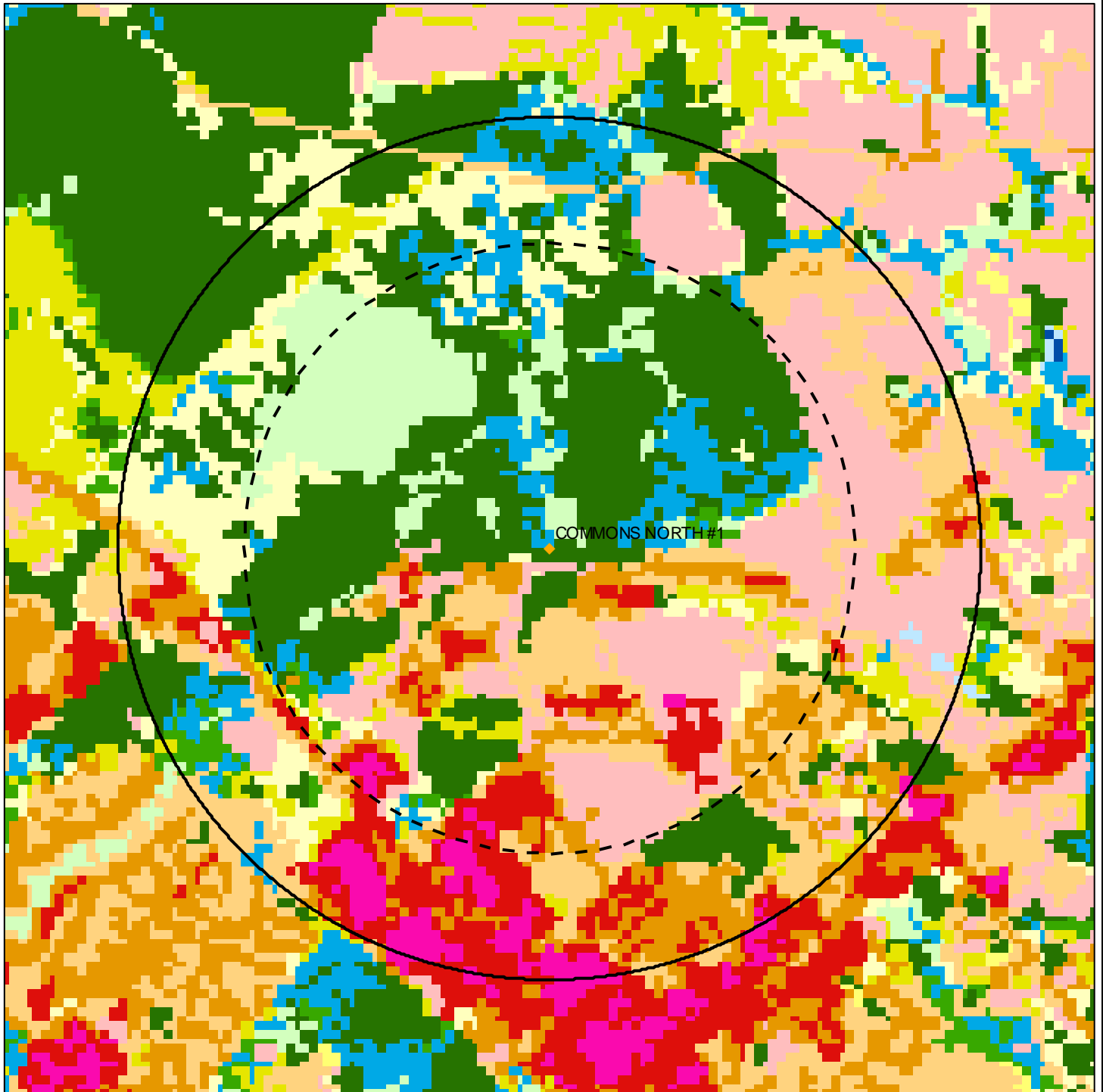
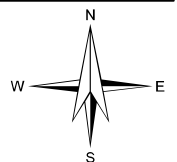


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1

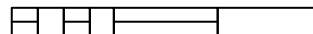


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



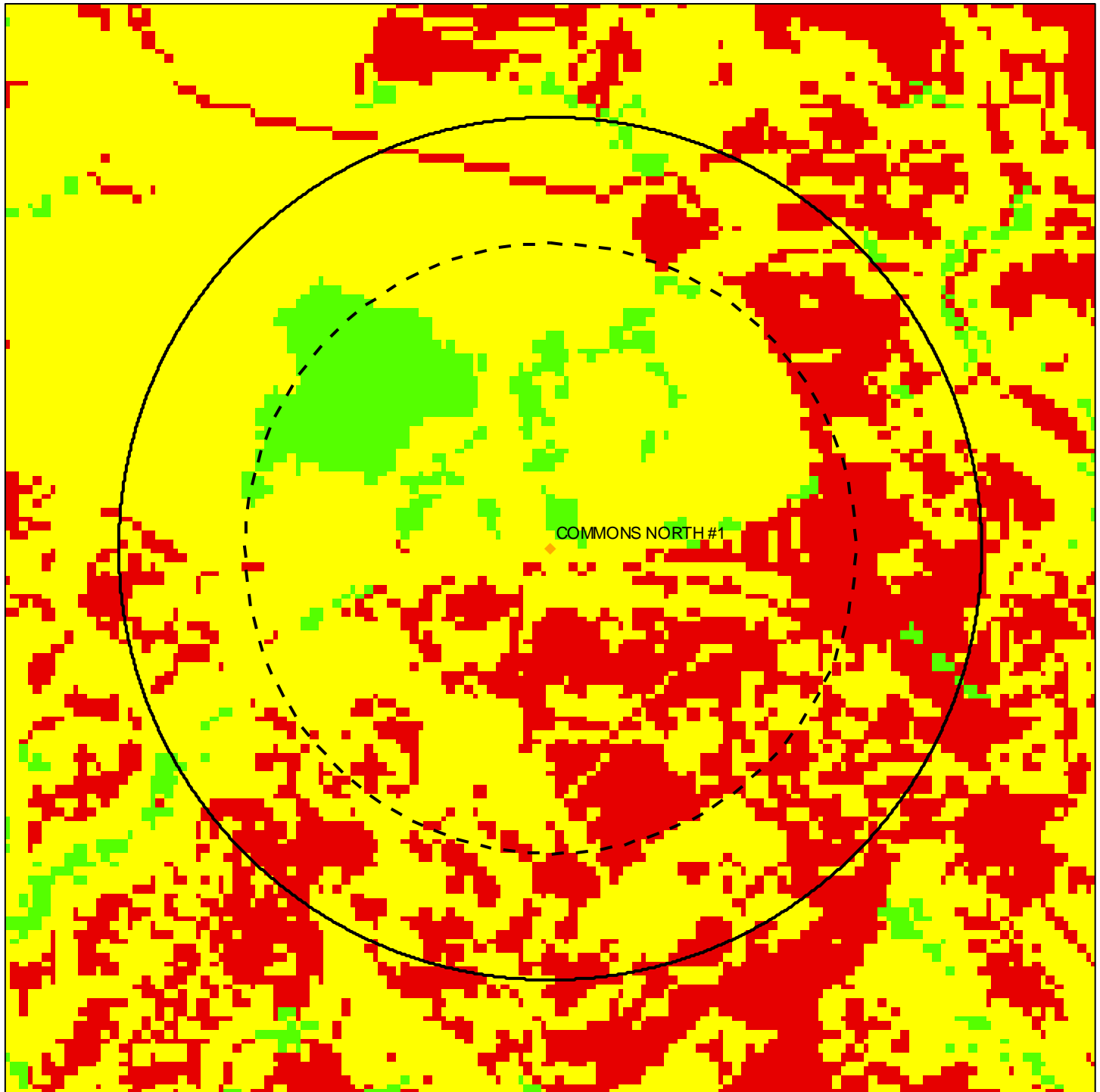
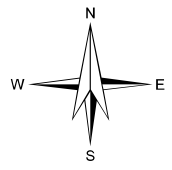
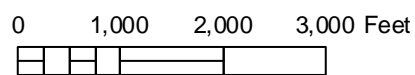


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



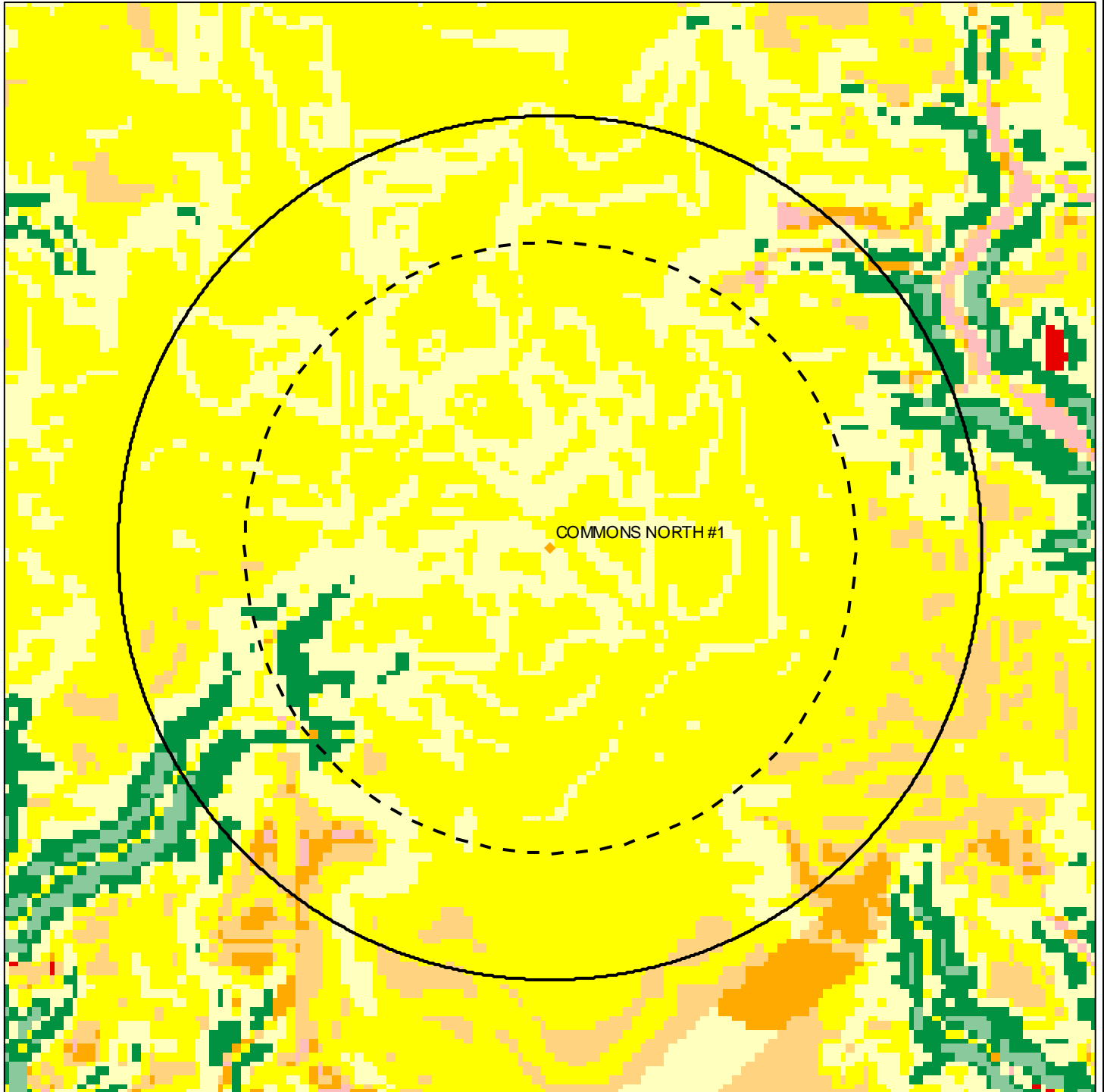
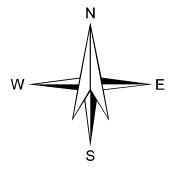
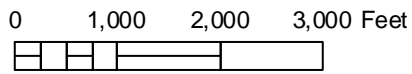


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



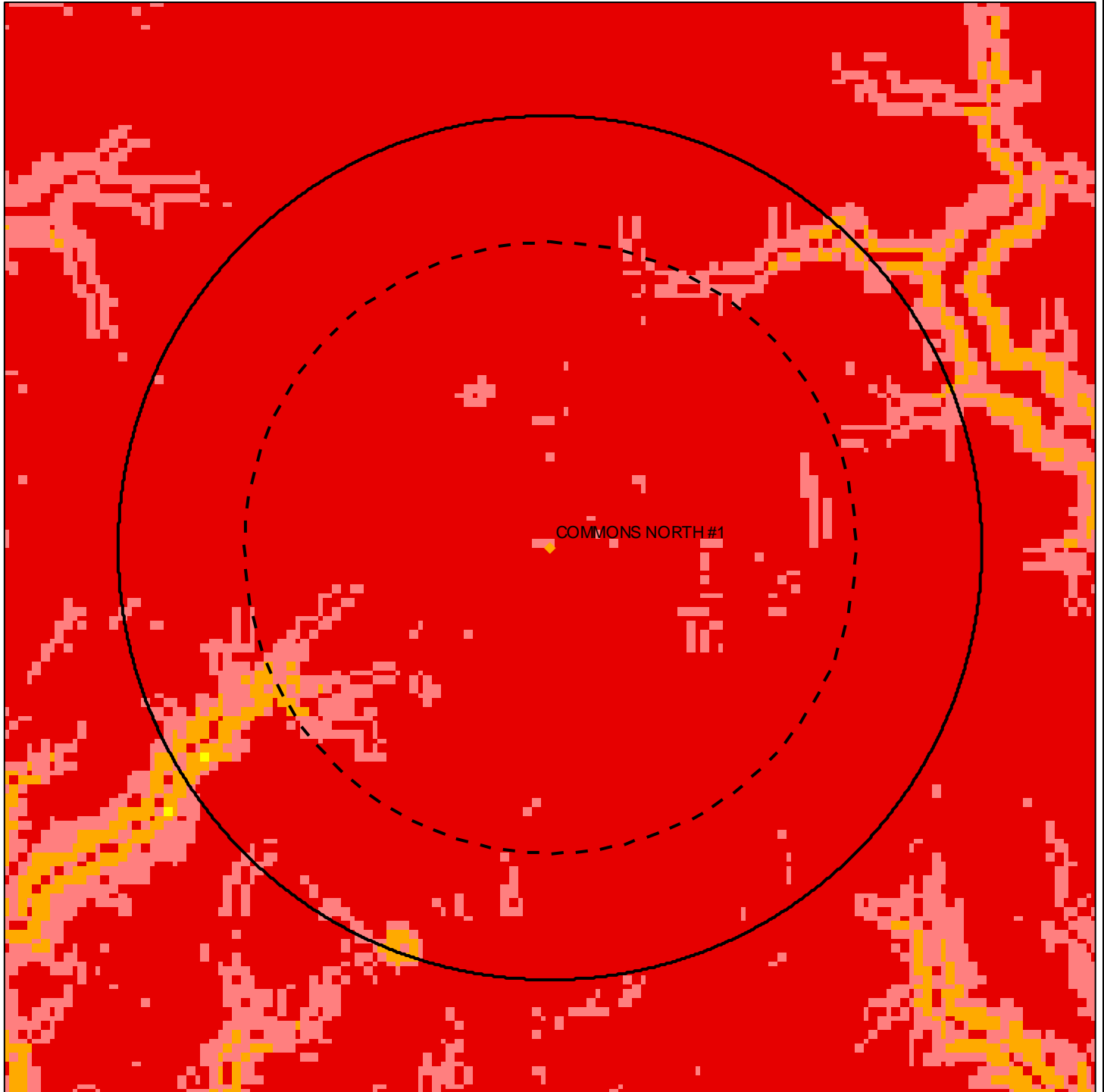
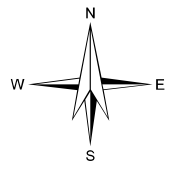
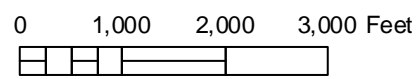


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- | | | |
|------------------------|-----------------------|--|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



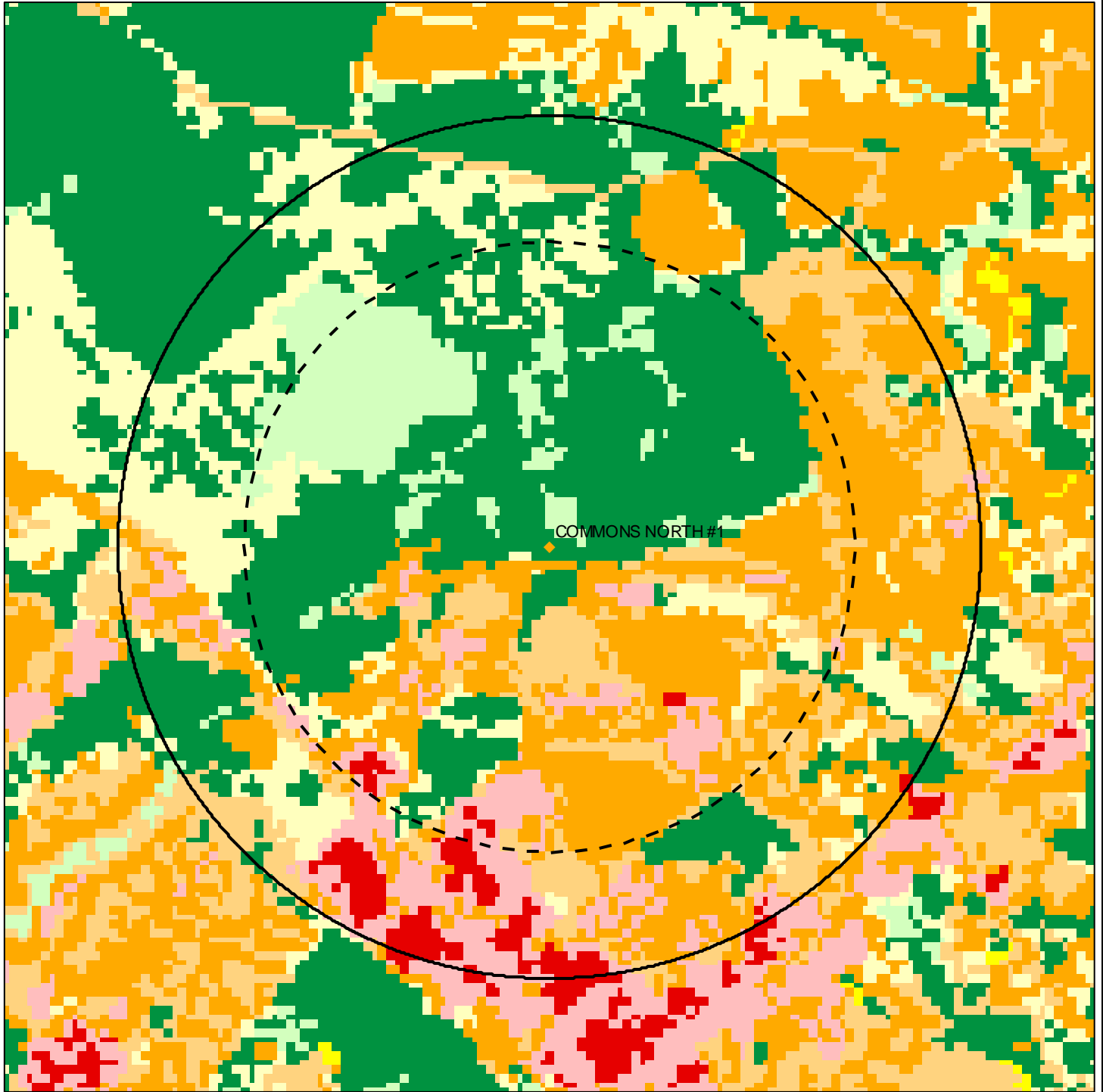
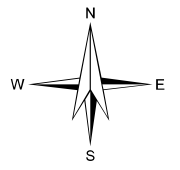











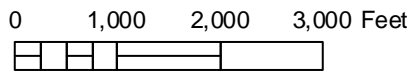


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



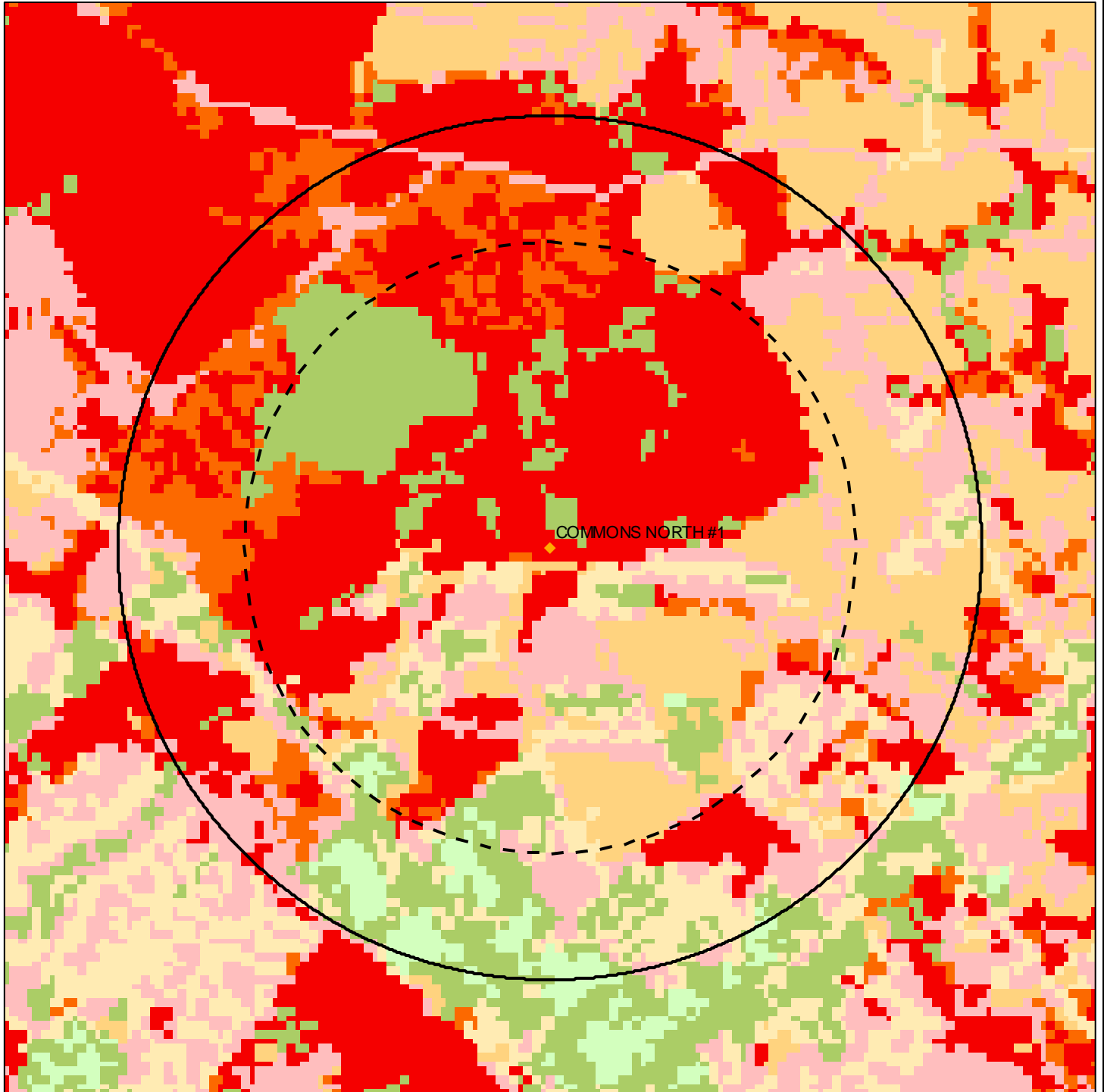
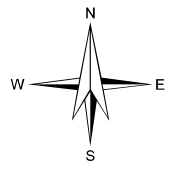
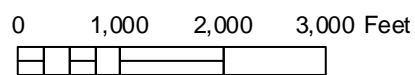


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

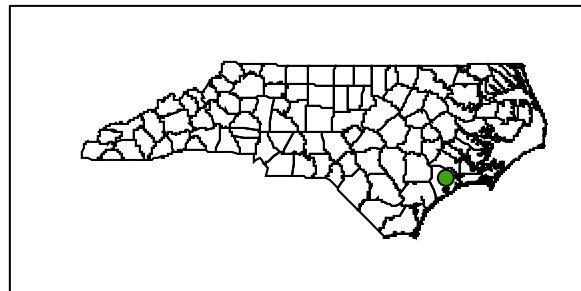
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



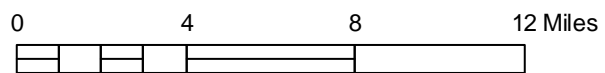
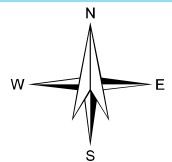


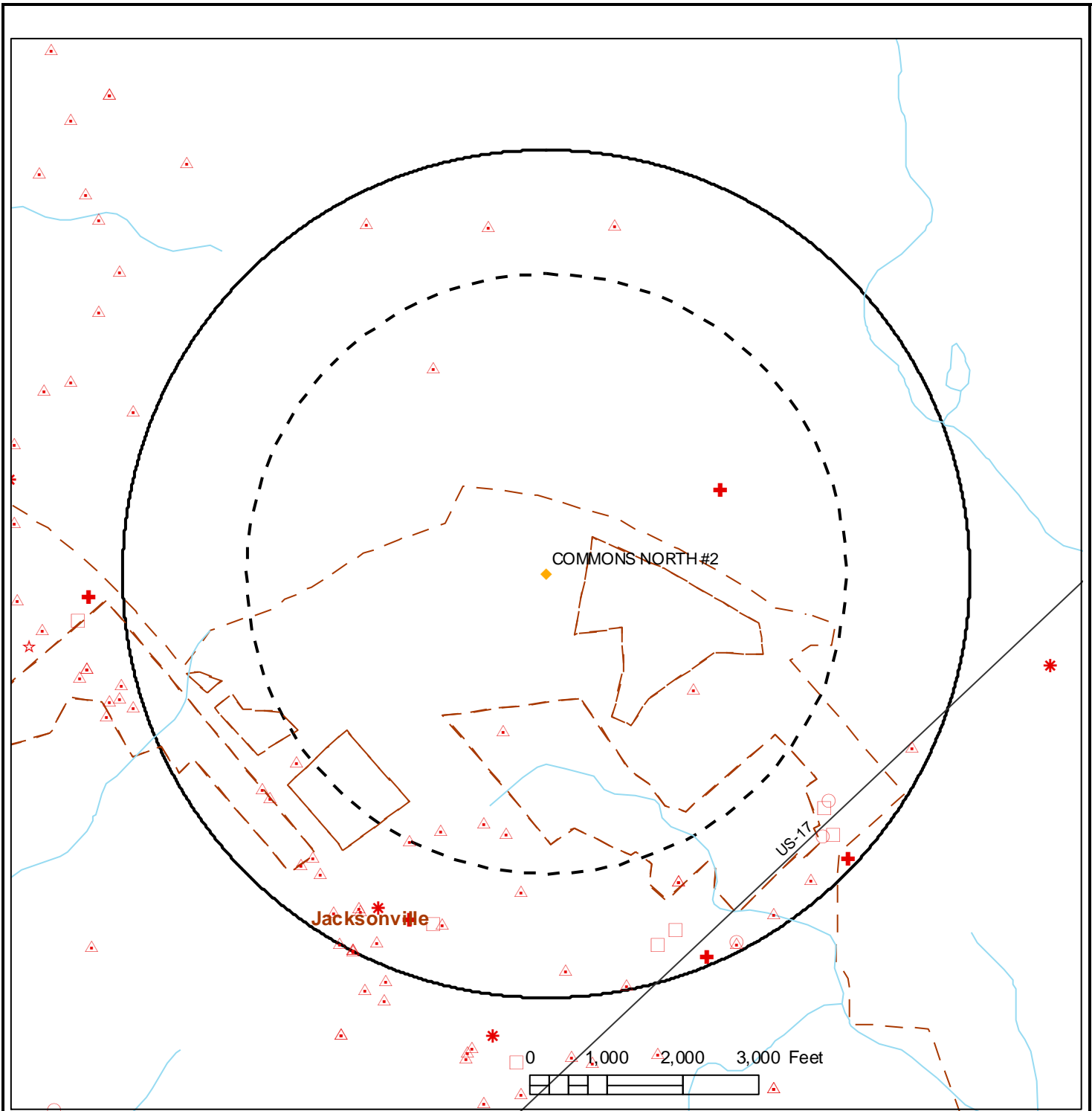
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

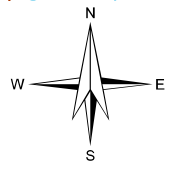




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2

PCS Types

- | | | |
|---------------------------------|--------------------------|--|
| □ Animal Operations | ⬡ Septage Disposal Sites | — Roads |
| △ CERCLIS Sites | ⬢ Soil Remediation Sites | — Rivers and Streams |
| □ RCRA Gen. / Trans. Facilities | ⬣ Solid Waste Facilities | ▬ Major Hydrology |
| ● Non Discharge Permits | ⬤ Tier II Sites | ⬢ Municipal Boundaries |
| △ NPDES Permits | ⬥ RCRA TSD Facilities | ▭ Ground Water Assessment Area - Delineated Area |
| ★ National Priority List Sites | ⬦ Old Landfill Sites | ⬢ Ground Water Assessment Area - Zone A |
| ⊕ PCB Sites | ☆ UIC Permits | |
| ○ Pollution Incidents | ⊕ UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS NORTH #2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
HOME DEPOT #3655	NC0991302563	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD - HWY 17	JACKSONVILLE	Unkno wn	ONSLOW
LEJEUNE HONDA CARS	NCD982117475	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
MOORE BUICK PONTIAC INC	NCD982118127	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
SAM'S CLUB #6573	NCR000005314	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
AUTO LOGIC	11084	Pollution Incidents	H	2601 N. MARINE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
MOORE BUICK	17930	Pollution Incidents	H	HWY 17	JACKSONVILLE	Unkno wn	ONSLO
COBLE DAIRY PRODUCTS- JACKSONVILLE	6596	Pollution Incidents	H	HWY 17 N	JACKSONVILLE	Unkno wn	ONSLO
LOWE'S OF JACKSONVILLE, NC (STORE # 0556)	4042721	Tier II Sites	H	1255 WESTERN BLVD	JACKSONVILLE	Unkno wn	Onslow

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
PANTRY 3125 DBA QUICKSTOP	00-0-0000021309	UST Sites	H	116 PINEY GREEN ROAD	JACKSONVILLE	Unkown	ONSLOW
SAMS CLUB GAS STATION 6573	00-0-0000037067	UST Sites	H	1170 WESTERN BLVD	JACKSONVILLE	Unkown	ONSLOW
HUMPHREY HEATING	00-0-0000020150	UST Sites	H	2423 MARINE BOULEVARD NORTH	JACKSONVILLE	Unkown	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unkown	ONSLOW
National Dodge	SW8930216	NPDES Permits	L	2223 N Marine Blvd	Jacksonville	Unkown	ONSLOW
Affordable Suites	SW8080112	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkown	ONSLOW
Palmetto Park Subdivision	SW8051147	NPDES Permits	L	King Richard Ct	Jacksonville	Unkown	ONSLOW
The Dail Center-Lot 2, Northwest Business Park	SW8030105	NPDES Permits	L	Jacksonvill NC	Jacksonville	Unkown	ONSLOW
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	NPDES Permits	L	Commons Dr N	Jacksonville	Unkown	ONSLOW
Blue Springs Apartments	SW8031111	NPDES Permits	L	460 McDaniel Dr	Jacksonville	Unkown	ONSLOW
Logan's Roadhouse Restaurant	SW8990310	NPDES Permits	L	1177 Western Blvd	Jacksonville	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Lowes Home Center	SW8970415	NPDES Permits	L	Western Blvd	Jacksonville	Unknwn	ONSLOW
Sams Club Jacksonville Store 6573-04	SW8931222	NPDES Permits	L	1170 Western Blvd	Jacksonville	Unknwn	ONSLOW
National Automotive	SW8070721	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unknwn	ONSLOW
O'Charley's Restaurant & Bar	SW8020209	NPDES Permits	L	1270 Western Blvd	Jacksonville	Unknwn	ONSLOW
Cross Pointe Centre	SW8960624	NPDES Permits	L	1250 Western Blvd	Jacksonville	Unknwn	ONSLOW
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	NPDES Permits	L	1260 Western Blvd	Jacksonville	Unknwn	ONSLOW
Candlewood Suites	SW8061125	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
Marine Federal Credit Union Hwy 17	SW8970849	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unknwn	ONSLOW
Gateway Plaza Shopping Center	SW8980817	NPDES Permits	L	1335 Western Blvd	Jacksonville	Unknwn	ONSLOW
Western Blvd Retail	SW8130710	NPDES Permits	L	1345 Western Blvd	Jacksonville	Unknwn	ONSLOW
Lot 2-- Cross Pointe Centre	SW8020631	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
The Legacy at Abbingdon Place	SW8030514	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Autumn Ridge Apartments	SW8010122	NPDES Permits	L	300 Autumn Ridge Dr	Jacksonville	Unkno wn	ONSLOW
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	NPDES Permits	L	500 Talon Cir	Jacksonville	Unkno wn	ONSLOW
Charleston Place	SW8060704	NPDES Permits	L	McDaniel Drive Extension	Jacksonville	Unkno wn	ONSLOW
Windsor Place	SW8000202	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Marine Chevrolet	SW8960705	NPDES Permits	L	1408 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Olive Garden Restaurant Jacksonville	SW8070137	NPDES Permits	L	1415 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unkno wn	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section Viii	Jacksonville	Unkno wn	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unkno wn	ONSLOW
Ramsey Road Tract	SW8041230	NPDES Permits	L	NCSR 1324	Jacksonville	Unkno wn	ONSLOW
The Village at The Glen	SW8080520	NPDES Permits	L	Ramsey Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Ivy Glen at Carolina Forest	SW8080227	NPDES Permits	L	Terry Lee Lanier Dr	Jacksonville	Unknown	ONSLOW
Foss Auto Salvage - Northeast Jacksonville	NCG100119	NPDES Permits	L	199 Drummer Kellum Rd	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS NORTH #2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
HOME DEPOT #3655	NC0991302563	GENERATOR	SQG
HOME DEPOT #3655	NC0991302563	TRANSPORTER	N
LEJEUNE HONDA CARS	NCD982117475	GENERATOR	SQG
LEJEUNE HONDA CARS	NCD982117475	TRANSPORTER	N
MOORE BUICK PONTIAC INC	NCD982118127	GENERATOR	SQG
MOORE BUICK PONTIAC INC	NCD982118127	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
SAM'S CLUB #6573	NCR000005314	GENERATOR	SQG
SAM'S CLUB #6573	NCR000005314	TRANSPORTER	N
AUTO LOGIC	11084	Pollutant Type	GASOLINE/DIESEL/KEROSENE
AUTO LOGIC	11084	Site Risk	L
AUTO LOGIC	11084	Site Priority Code	70E
MOORE BUICK	17930	Pollutant Type	OTHER PETROLEUM PROD.
MOORE BUICK	17930	Site Risk	L
MOORE BUICK	17930	Site Priority Code	60D
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Pollutant Type	GASOLINE/DIESEL/KEROSENE
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Risk	I

PCS Name	PCS ID	Attribute	Value
COBLE DAIRY PRODUCTS- JACKSONVILLE	6596	Site Priority Code	100D
National Dodge	SW8930216	Permit Type	State Stormwater
National Dodge	SW8930216	Permit Issued Date	6/27/2014
National Dodge	SW8930216	Permit Expiration Date	5/18/2026
Affordable Suites	SW8080112	Permit Type	State Stormwater
Affordable Suites	SW8080112	Permit Issued Date	2/6/2008
Affordable Suites	SW8080112	Permit Expiration Date	12/31/2021
Palmetto Park Subdivision	SW8051147	Permit Type	State Stormwater
Palmetto Park Subdivision	SW8051147	Permit Issued Date	1/13/2006
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Type	State Stormwater
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Issued Date	4/14/2003
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Type	State Stormwater
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Issued Date	9/15/2003
Blue Springs Apartments	SW8031111	Permit Type	State Stormwater
Blue Springs Apartments	SW8031111	Permit Issued Date	11/1/2010
Blue Springs Apartments	SW8031111	Permit Expiration Date	2/14/2028
Logan's Roadhouse Restaurant	SW8990310	Permit Type	State Stormwater
Logan's Roadhouse Restaurant	SW8990310	Permit Issued Date	5/12/2009
Logan's Roadhouse Restaurant	SW8990310	Permit Expiration Date	8/30/2023
Lowes Home Center	SW8970415	Permit Type	State Stormwater
Lowes Home Center	SW8970415	Permit Issued Date	9/3/1997
Lowes Home Center	SW8970415	Permit Expiration Date	9/3/2007

PCS Name	PCS ID	Attribute	Value
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Type	State Stormwater
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Issued Date	11/1/2010
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Expiration Date	12/5/2022
National Automotive	SW8070721	Permit Type	State Stormwater
National Automotive	SW8070721	Permit Issued Date	2/20/2008
National Automotive	SW8070721	Permit Expiration Date	8/10/2021
O'Charley's Restaurant & Bar	SW8020209	Permit Type	State Stormwater
O'Charley's Restaurant & Bar	SW8020209	Permit Issued Date	4/23/2002
Cross Pointe Centre	SW8960624	Permit Type	State Stormwater
Cross Pointe Centre	SW8960624	Permit Issued Date	11/2/2009
Cross Pointe Centre	SW8960624	Permit Expiration Date	11/18/2026
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Type	State Stormwater
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Issued Date	11/21/2000
Candlewood Suites	SW8061125	Permit Type	State Stormwater
Candlewood Suites	SW8061125	Permit Issued Date	5/9/2007
Candlewood Suites	SW8061125	Permit Expiration Date	5/9/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Marine Federal Credit Union Hwy 17	SW8970849	Permit Type	State Stormwater
Marine Federal Credit Union Hwy 17	SW8970849	Permit Issued Date	4/25/2008

PCS Name	PCS ID	Attribute	Value
Marine Federal Credit Union Hwy 17	SW8970849	Permit Expiration Date	4/25/2022
Gateway Plaza Shopping Center	SW8980817	Permit Type	State Stormwater
Gateway Plaza Shopping Center	SW8980817	Permit Issued Date	5/3/2013
Gateway Plaza Shopping Center	SW8980817	Permit Expiration Date	9/8/2021
Western Blvd Retail	SW8130710	Permit Type	State Stormwater
Western Blvd Retail	SW8130710	Permit Issued Date	9/5/2013
Lot 2--Cross Pointe Centre	SW8020631	Permit Type	State Stormwater
Lot 2--Cross Pointe Centre	SW8020631	Permit Issued Date	7/29/2002
The Legacy at Abbington Place	SW8030514	Permit Type	State Stormwater
The Legacy at Abbington Place	SW8030514	Permit Issued Date	9/23/2009
The Legacy at Abbington Place	SW8030514	Permit Expiration Date	8/13/2017
Autumn Ridge Apartments	SW8010122	Permit Type	State Stormwater
Autumn Ridge Apartments	SW8010122	Permit Issued Date	8/30/2010
Autumn Ridge Apartments	SW8010122	Permit Expiration Date	5/18/2025
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Type	State Stormwater
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Issued Date	8/31/2009
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Expiration Date	11/8/2023
Charleston Place	SW8060704	Permit Type	State Stormwater
Charleston Place	SW8060704	Permit Issued Date	7/21/2006
Charleston Place	SW8060704	Permit Expiration Date	7/21/2020
Windsor Place	SW8000202	Permit Type	State Stormwater
Windsor Place	SW8000202	Permit Issued Date	1/27/2005

PCS Name	PCS ID	Attribute	Value
Windsor Place	SW8000202	Permit Expiration Date	5/25/2014
Marine Chevrolet	SW8960705	Permit Type	State Stormwater
Marine Chevrolet	SW8960705	Permit Issued Date	5/9/2008
Marine Chevrolet	SW8960705	Permit Expiration Date	5/9/2022
Olive Garden Restaurant Jacksonville	SW8070137	Permit Type	State Stormwater
Olive Garden Restaurant Jacksonville	SW8070137	Permit Issued Date	7/30/2012
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Issued Date	12/15/2005
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Ramsey Road Tract	SW8041230	Permit Type	State Stormwater
Ramsey Road Tract	SW8041230	Permit Issued Date	5/19/2005
The Village at The Glen	SW8080520	Permit Type	State Stormwater
The Village at The Glen	SW8080520	Permit Issued Date	11/28/2012
The Village at The Glen	SW8080520	Permit Expiration Date	9/9/2019
Ivy Glen at Carolina Forest	SW8080227	Permit Type	State Stormwater
Ivy Glen at Carolina Forest	SW8080227	Permit Issued Date	11/13/2012
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Issued Date	11/1/2012

PCS Name	PCS ID	Attribute	Value
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Expiration Date	10/31/2017
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Receiving Stream	Wolf Swamp

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, COMMONS NORTH #2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , COMMONS NORTH #2**

Unsaturated Zone Rating	62.8
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

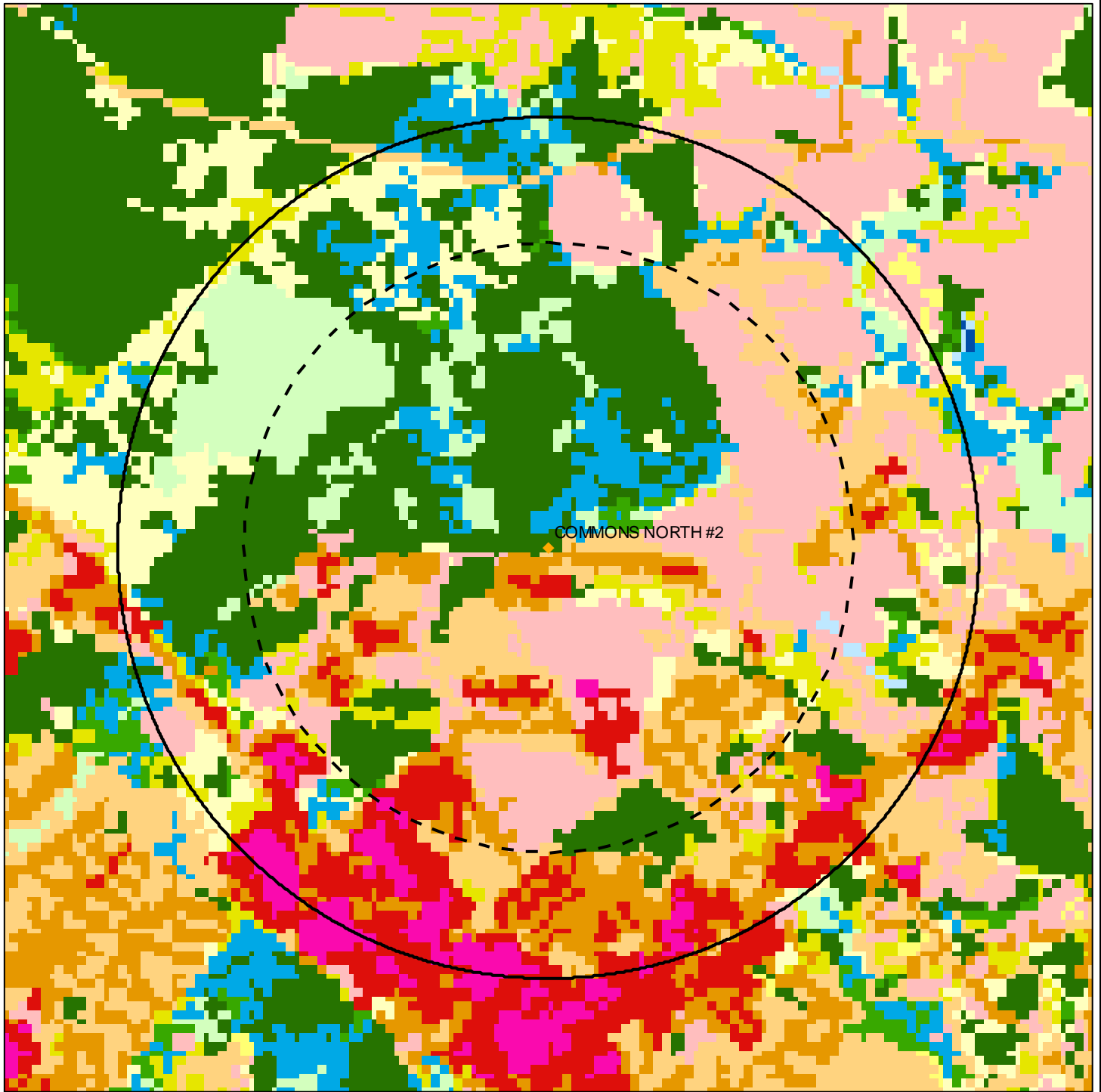
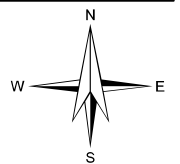


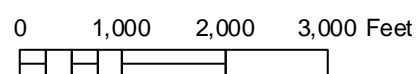
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



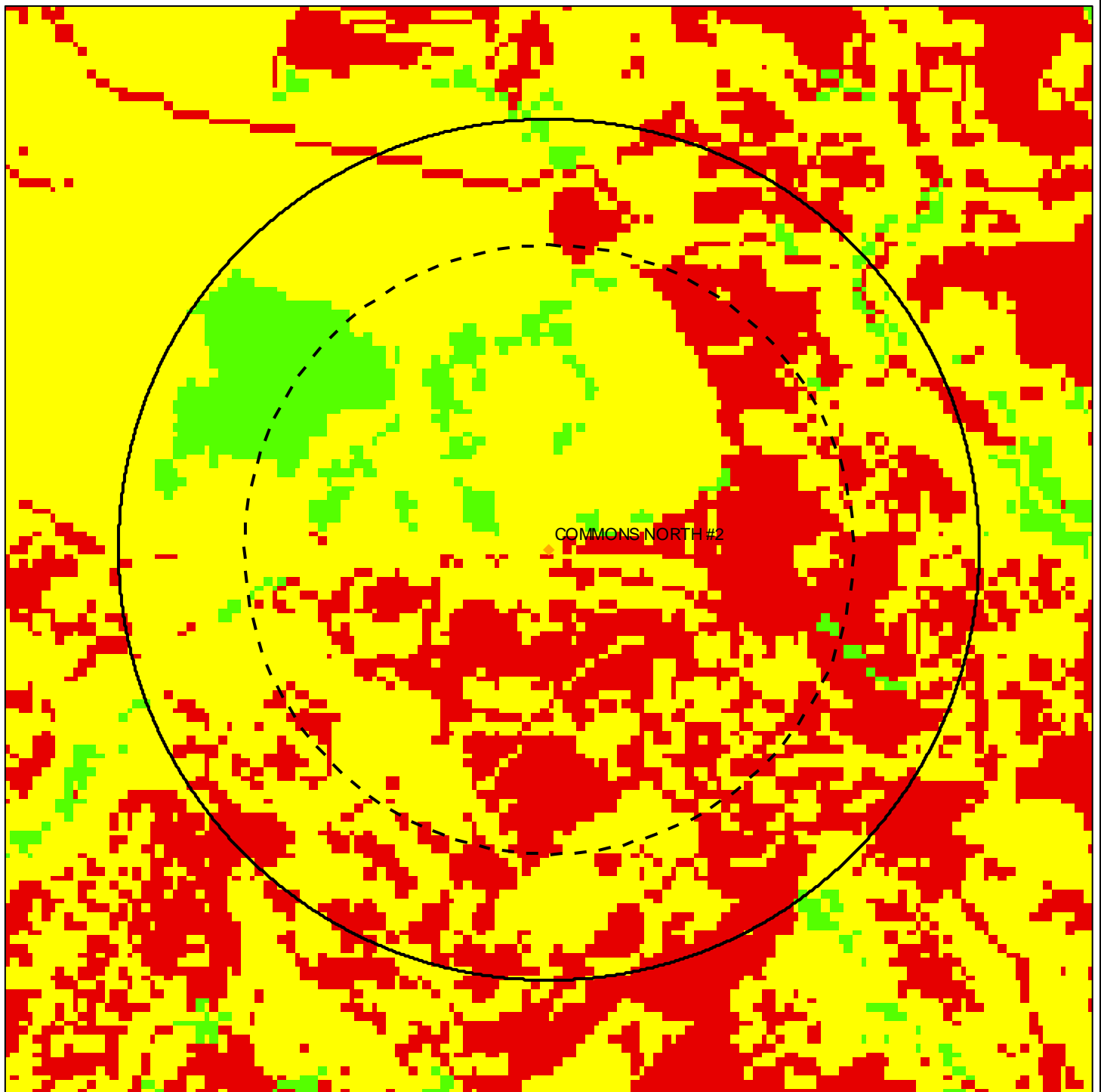
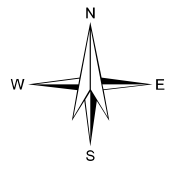
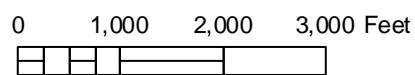


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



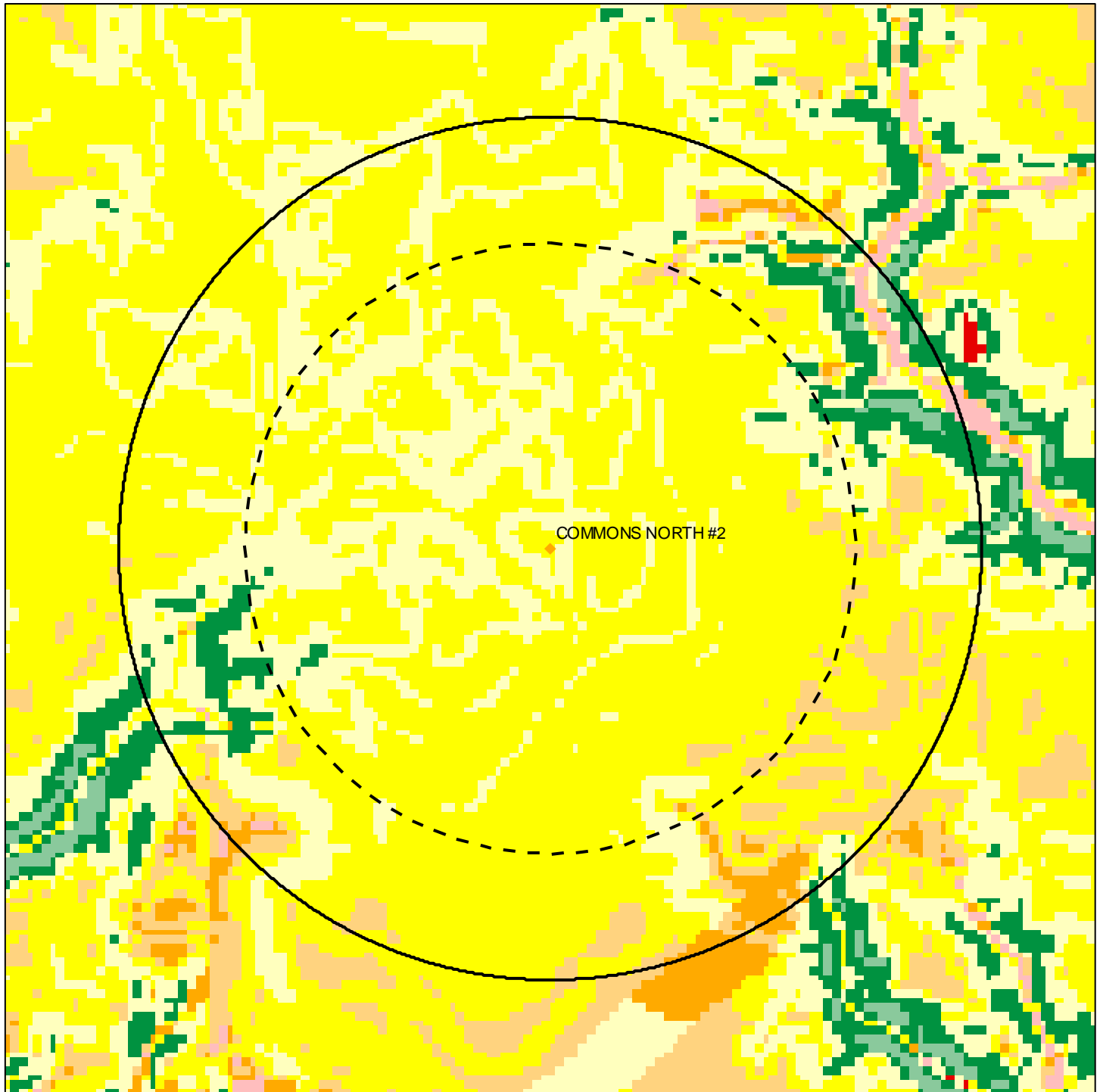
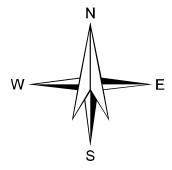
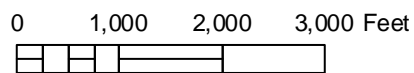


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- | | | |
|-------------------------------|-----------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to 1,280 sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



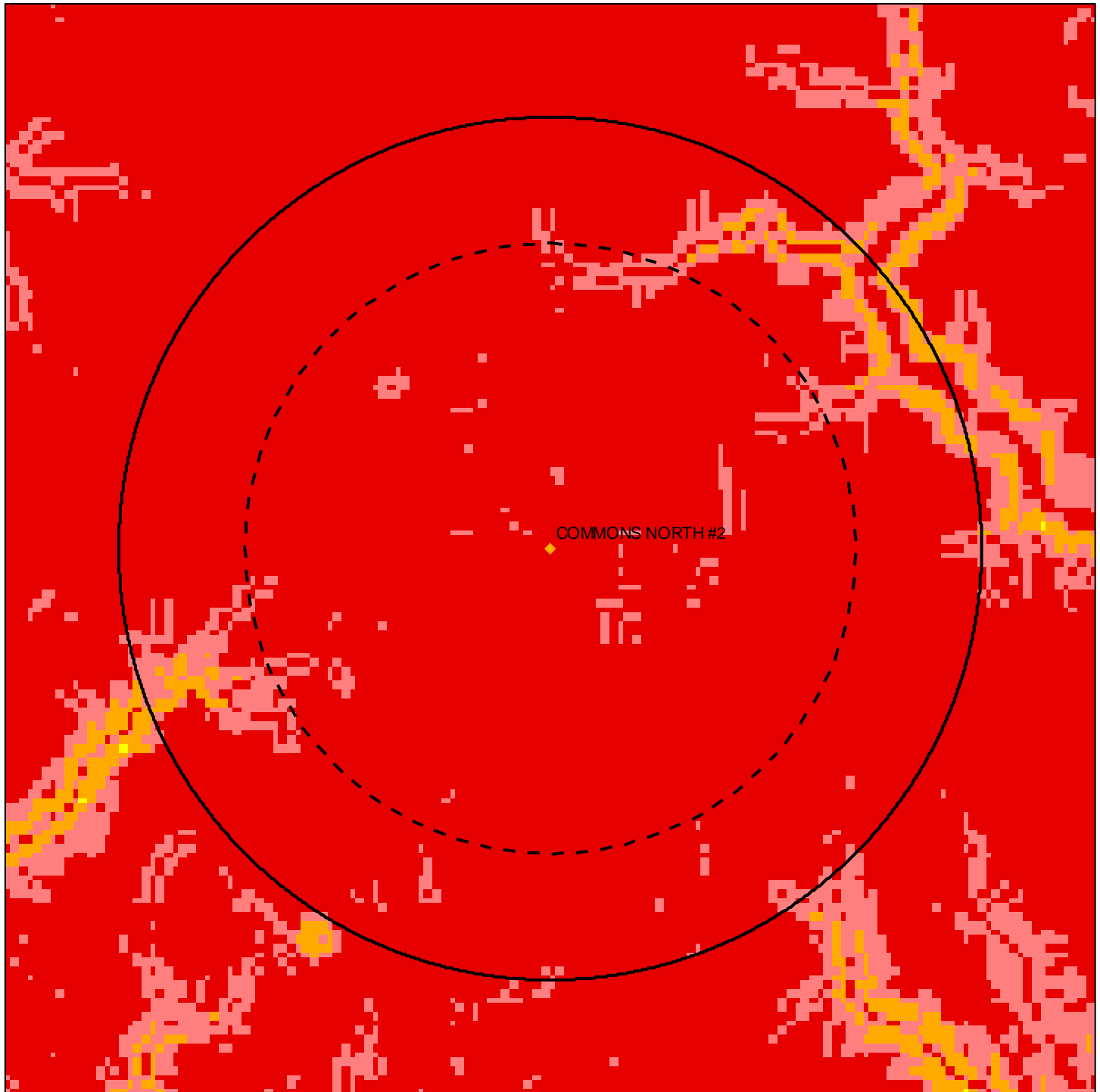
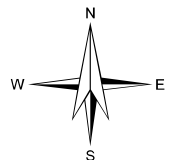








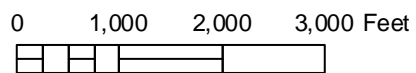


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



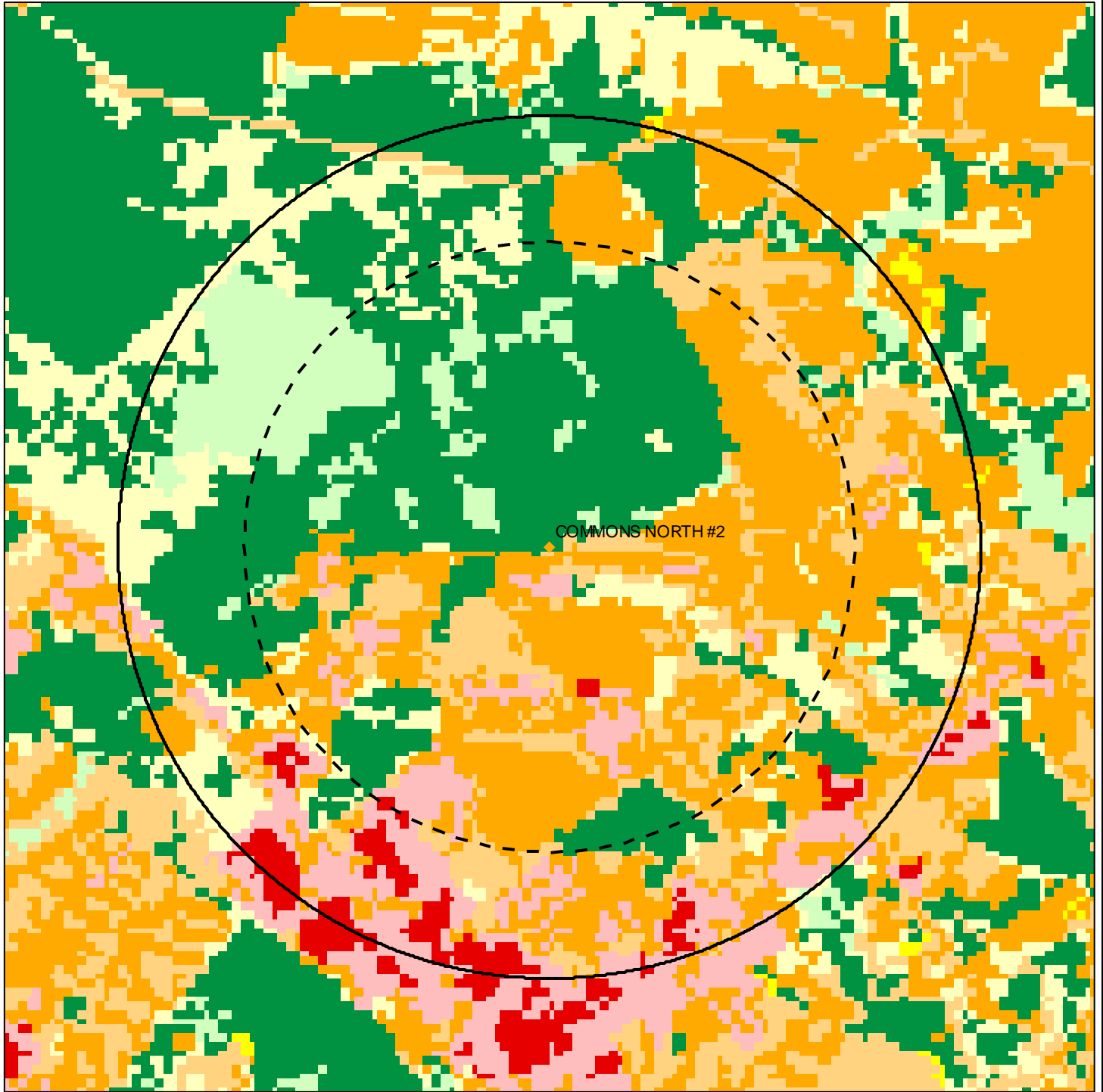
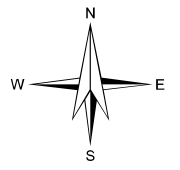











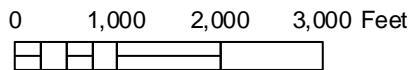


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



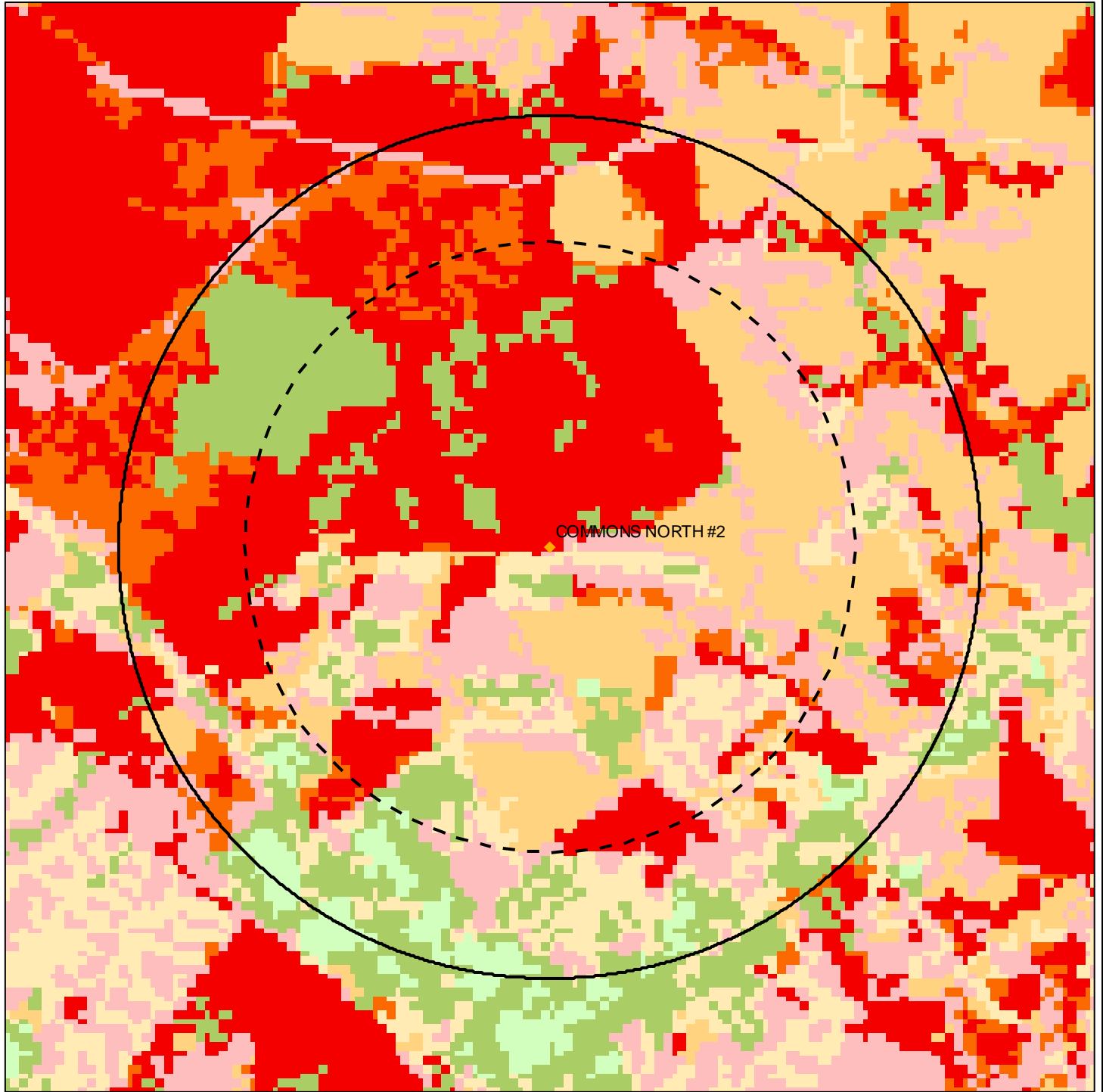
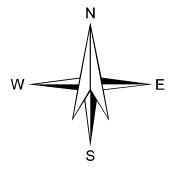
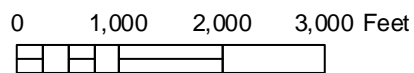


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS NORTH #2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

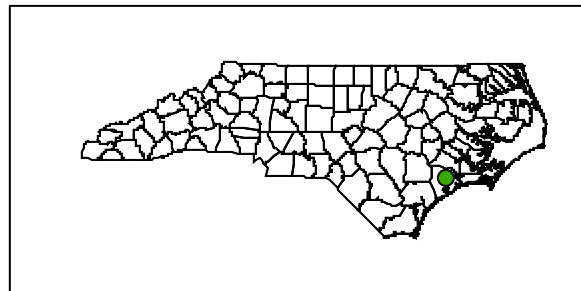
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



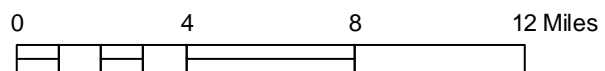
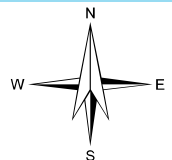


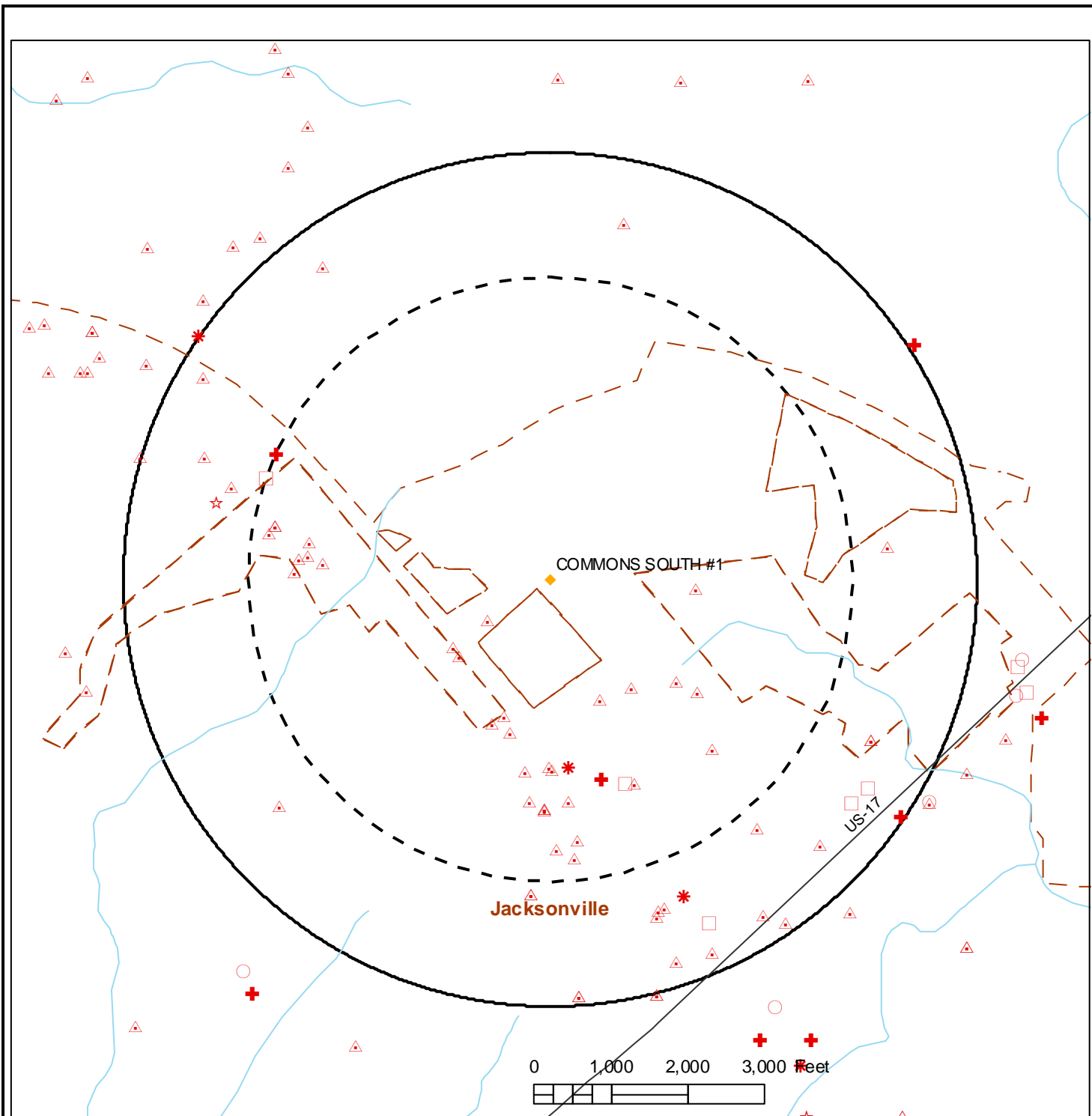
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- - - County Boundaries





MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |

**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS SOUTH #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL GARMEN T CARE CENTER	NCR000143511	RCRA Gen. / Trans. Facilities	H	HENDERSON DR	JACKSONVILLE	Unkno wn	ONSLOW
LEJEUNE HONDA CARS	NCD982117475	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
SAM'S CLUB #6573	NCR000005314	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
WALMART SUPERCENTER #1298	NCR000141994	RCRA Gen. / Trans. Facilities	H	N MARINE RD	JACKSONVILLE	Unkno wn	ONSLOW
LOWE'S OF JACKSONVILLE, NC (STORE # 0556)	4042721	Tier II Sites	H	1255 WESTERN BLVD	JACKSONVILLE	Unkno wn	Onslow
SAM'S CLUB #6573	4037201	Tier II Sites	H	1170 Western Blvd.	Jacksonville	Unkno wn	Onslow
SAMS CLUB GAS STATION 6573	00-0-0000037067	UST Sites	H	1170 WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
HUMPHREY HEATING	00-0-0000020150	UST Sites	H	2423 MARINE BOULEVARD NORTH	JACKSONVILLE	Unkown	ONSLOW
HANDY MART 56	00-0-0000035042	UST Sites	H	3495 WESTERN BOULEVARD	JACKSONVILLE	Unkown	ONSLOW
Kenneth Whichard Commercial Subdivision	SW8040624	NPDES Permits	L	Western Blvd	Jacksonville	Unkown	ONSLOW
Chick-Fil-A Gateway South	SW8040711	NPDES Permits	L	1405 Western Blvd	Jacksonville	Unkown	ONSLOW
Outback Steakhouse	SW8980241	NPDES Permits	L	Patel Subdivision	Jacksonville	Unkown	ONSLOW
Walmart Supercenter Jacksonville	SW8921003	NPDES Permits	L	Int Of Hwy 17 Western Blvd	Jacksonville	Unkown	ONSLOW
Texas Steakhouse & Saloon	SW8970933	NPDES Permits	L	101 Parkwood Dr	Jacksonville	Unkown	ONSLOW
Extended Stay America Efficiency Studios	SW8980232	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkown	ONSLOW
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	NPDES Permits	L	1110 Western Blvd	Jacksonville	Unkown	ONSLOW
SECU - Jacksonville	SW8010517	NPDES Permits	L	1079 Western Blvd	Jacksonville	Unkown	ONSLOW
Hardees Western Boulevard	SW8940420	NPDES Permits	L	1106 Western Blvd	Jacksonville	Unkown	ONSLOW
Fire Station 4 Jacksonville	SW8000332	NPDES Permits	L	100 Firehouse Ln	Jacksonville	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Jacksonville Commons	SW8950417	NPDES Permits	L	Off Recreation Loop And Commons Dr N	Jacksonville	Unknown	ONSLOW
Fairfield Inn Jacksonville	SW8990319	NPDES Permits	L	121 Circuit Ln	Jacksonville	Unknown	ONSLOW
National Dodge	SW8930216	NPDES Permits	L	2223 N Marine Blvd	Jacksonville	Unknown	ONSLOW
Sleep Inn Suites	SW8010107	NPDES Permits	L	129 Circuit Ln	Jacksonville	Unknown	ONSLOW
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	NPDES Permits	L	1171 Western Blvd	Jacksonville	Unknown	ONSLOW
Affordable Suites	SW8080112	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknown	ONSLOW
Palmetto Park Subdivision	SW8051147	NPDES Permits	L	King Richard Ct	Jacksonville	Unknown	ONSLOW
The Dail Center-Lot 2, Northwest Business Park	SW8030105	NPDES Permits	L	Jacksonville NC	Jacksonville	Unknown	ONSLOW
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	NPDES Permits	L	Commons Dr N	Jacksonville	Unknown	ONSLOW
Logan's Roadhouse Restaurant	SW8990310	NPDES Permits	L	1177 Western Blvd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Lot 10 Schilsky Office Park	SW8091115	NPDES Permits	L	112 Tarpor Trl	Jacksonville	Unknwn	ONSLOW
Lowe's Home Center	SW8970415	NPDES Permits	L	Western Blvd	Jacksonville	Unknwn	ONSLOW
Sams Club Jacksonville Store 6573-04	SW8931222	NPDES Permits	L	1170 Western Blvd	Jacksonville	Unknwn	ONSLOW
O'Charley's Restaurant & Bar	SW8020209	NPDES Permits	L	1270 Western Blvd	Jacksonville	Unknwn	ONSLOW
Cross Pointe Centre	SW8960624	NPDES Permits	L	1250 Western Blvd	Jacksonville	Unknwn	ONSLOW
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	NPDES Permits	L	1260 Western Blvd	Jacksonville	Unknwn	ONSLOW
Candlewood Suites	SW8061125	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unknwn	ONSLOW
Gateway Plaza Shopping Center	SW8980817	NPDES Permits	L	1335 Western Blvd	Jacksonville	Unknwn	ONSLOW
Western Blvd Retail	SW8130710	NPDES Permits	L	1345 Western Blvd	Jacksonville	Unknwn	ONSLOW
Lot 2-- Cross Pointe Centre	SW8020631	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unknwn	ONSLOW
The Legacy at Abbingdon Place	SW8030514	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknwn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Autumn Ridge Apartments	SW8010122	NPDES Permits	L	300 Autumn Ridge Dr	Jacksonville	Unkno wn	ONSLOW
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	NPDES Permits	L	500 Talon Cir	Jacksonville	Unkno wn	ONSLOW
Charleston Place	SW8060704	NPDES Permits	L	McDaniel Drive Extension	Jacksonville	Unkno wn	ONSLOW
Windsor Place	SW8000202	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Marine Chevrolet	SW8960705	NPDES Permits	L	1408 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Olive Garden Restaurant Jacksonville	SW8070137	NPDES Permits	L	1415 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unkno wn	ONSLOW
Staybridge Hotel Jacksonville	SW8120207	NPDES Permits	L	110 Cobia Ct	Jacksonville	Unkno wn	ONSLOW
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	NPDES Permits	L	Intersection Of Dolphin Marlin Dr	Jacksonville	Unkno wn	ONSLOW
Cobia Court Lot 11 Schilsky Office Park	SW8070937	NPDES Permits	L	Cobia Ct Lot 11	Jacksonville	Unkno wn	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section Viii	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Schilsky Office Park	SW8070211	NPDES Permits	L	Marlin Dr	Jacksonville	Unknown	ONSLOW
Schilsky Chiropractic Center	SW8020502	NPDES Permits	L	Western Blvd NCSR 1470- Dolphin Dr	Jacksonville	Unknown	ONSLOW
Desuyo Medical Facility	SW8110501	NPDES Permits	L	123 Pompano Dr	Jacksonville	Unknown	ONSLOW
BB&T Jacksonville Property ID# 155007	SW8990523	NPDES Permits	L	2676 Western Blvd	Jacksonville	Unknown	ONSLOW
Golds Gym Jacksonville	SW8990613	NPDES Permits	L	Henderson Dr	Jacksonville	Unknown	ONSLOW
Jacksonville VA Outpatient Clinic	SW8130617	NPDES Permits	L	Henderson Dr	Jacksonville	Unknown	ONSLOW
RBC Centura - Lot 12B HDX Subdivision	SW8071114	NPDES Permits	L	2885 Western Blvd	Jacksonville	Unknown	ONSLOW
Marine Federal Credit Union	SW8020426	NPDES Permits	L	4180 Western Blvd	Jacksonville	Unknown	ONSLOW
The Legacy at Carolina Forest	SW8090104	NPDES Permits	L	339 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Jacksonville VA Outpatient Clinic	WI0800351	UIC Permits	M	Henderson Dr	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS SOUTH #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL GARMENT CARE CENTER	NCR000143511	GENERATOR	SQG
COASTAL GARMENT CARE CENTER	NCR000143511	TRANSPORTER	N
LEJEUNE HONDA CARS	NCD982117475	GENERATOR	SQG
LEJEUNE HONDA CARS	NCD982117475	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
SAM'S CLUB #6573	NCR000005314	GENERATOR	SQG
SAM'S CLUB #6573	NCR000005314	TRANSPORTER	N
WALMART SUPERCENTER #1298	NCR000141994	GENERATOR	SQG
WALMART SUPERCENTER #1298	NCR000141994	TRANSPORTER	N
Kennith Whichard Commercial Subdivision	SW8040624	Permit Type	State Stormwater
Kennith Whichard Commercial Subdivision	SW8040624	Permit Issued Date	7/30/2012
Kennith Whichard Commercial Subdivision	SW8040624	Permit Expiration Date	9/6/2021
Chick-Fil-A Gateway South	SW8040711	Permit Type	State Stormwater
Chick-Fil-A Gateway South	SW8040711	Permit Issued Date	7/20/2004
Outback Steakhouse	SW8980241	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Outback Steakhouse	SW8980241	Permit Issued Date	10/26/1998
Walmart Supercenter Jacksonville	SW8921003	Permit Type	State Stormwater
Walmart Supercenter Jacksonville	SW8921003	Permit Issued Date	8/9/2001
Walmart Supercenter Jacksonville	SW8921003	Permit Expiration Date	7/23/2013
Texas Steakhouse & Saloon	SW8970933	Permit Type	State Stormwater
Texas Steakhouse & Saloon	SW8970933	Permit Issued Date	10/5/2011
Texas Steakhouse & Saloon	SW8970933	Permit Expiration Date	2/25/2022
Extended Stay America Efficiency Studios	SW8980232	Permit Type	State Stormwater
Extended Stay America Efficiency Studios	SW8980232	Permit Issued Date	9/30/1998
Extended Stay America Efficiency Studios	SW8980232	Permit Expiration Date	9/30/2012
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Type	State Stormwater
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Issued Date	9/25/2012
SECU - Jacksonville	SW8010517	Permit Type	State Stormwater
SECU - Jacksonville	SW8010517	Permit Issued Date	9/15/2001
SECU - Jacksonville	SW8010517	Permit Expiration Date	9/15/2015
Hardees Western Boulevard	SW8940420	Permit Type	State Stormwater
Hardees Western Boulevard	SW8940420	Permit Issued Date	5/16/1994
Fire Station 4 Jacksonville	SW8000332	Permit Type	State Stormwater
Fire Station 4 Jacksonville	SW8000332	Permit Issued Date	11/17/2009
Fire Station 4 Jacksonville	SW8000332	Permit Expiration Date	4/28/2024
Jacksonville Commons	SW8950417	Permit Type	State Stormwater
Jacksonville Commons	SW8950417	Permit Issued Date	11/1/2012

PCS Name	PCS ID	Attribute	Value
Fairfield Inn Jacksonville	SW8990319	Permit Type	State Stormwater
Fairfield Inn Jacksonville	SW8990319	Permit Issued Date	9/18/2009
Fairfield Inn Jacksonville	SW8990319	Permit Expiration Date	7/26/2023
National Dodge	SW8930216	Permit Type	State Stormwater
National Dodge	SW8930216	Permit Issued Date	6/27/2014
National Dodge	SW8930216	Permit Expiration Date	5/18/2026
Sleep Inn Suites	SW8010107	Permit Type	State Stormwater
Sleep Inn Suites	SW8010107	Permit Issued Date	1/3/2011
Sleep Inn Suites	SW8010107	Permit Expiration Date	4/25/2025
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Type	State Stormwater
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Issued Date	10/8/2010
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Expiration Date	10/8/2024
Affordable Suites	SW8080112	Permit Type	State Stormwater
Affordable Suites	SW8080112	Permit Issued Date	2/6/2008
Affordable Suites	SW8080112	Permit Expiration Date	12/31/2021
Palmetto Park Subdivision	SW8051147	Permit Type	State Stormwater
Palmetto Park Subdivision	SW8051147	Permit Issued Date	1/13/2006
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Type	State Stormwater
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Issued Date	4/14/2003
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Issued Date	9/15/2003
Logan's Roadhouse Restaurant	SW8990310	Permit Type	State Stormwater
Logan's Roadhouse Restaurant	SW8990310	Permit Issued Date	5/12/2009
Logan's Roadhouse Restaurant	SW8990310	Permit Expiration Date	8/30/2023
Lot 10 Schilsky Office Park	SW8091115	Permit Type	State Stormwater
Lot 10 Schilsky Office Park	SW8091115	Permit Issued Date	4/9/2010
Lowes Home Center	SW8970415	Permit Type	State Stormwater
Lowes Home Center	SW8970415	Permit Issued Date	9/3/1997
Lowes Home Center	SW8970415	Permit Expiration Date	9/3/2007
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Type	State Stormwater
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Issued Date	11/1/2010
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Expiration Date	12/5/2022
O'Charley's Restaurant & Bar	SW8020209	Permit Type	State Stormwater
O'Charley's Restaurant & Bar	SW8020209	Permit Issued Date	4/23/2002
Cross Pointe Centre	SW8960624	Permit Type	State Stormwater
Cross Pointe Centre	SW8960624	Permit Issued Date	11/2/2009
Cross Pointe Centre	SW8960624	Permit Expiration Date	11/18/2026
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Type	State Stormwater
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Issued Date	11/21/2000
Candlewood Suites	SW8061125	Permit Type	State Stormwater
Candlewood Suites	SW8061125	Permit Issued Date	5/9/2007

PCS Name	PCS ID	Attribute	Value
Candlewood Suites	SW8061125	Permit Expiration Date	5/9/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Gateway Plaza Shopping Center	SW8980817	Permit Type	State Stormwater
Gateway Plaza Shopping Center	SW8980817	Permit Issued Date	5/3/2013
Gateway Plaza Shopping Center	SW8980817	Permit Expiration Date	9/8/2021
Western Blvd Retail	SW8130710	Permit Type	State Stormwater
Western Blvd Retail	SW8130710	Permit Issued Date	9/5/2013
Lot 2--Cross Pointe Centre	SW8020631	Permit Type	State Stormwater
Lot 2--Cross Pointe Centre	SW8020631	Permit Issued Date	7/29/2002
The Legacy at Abbington Place	SW8030514	Permit Type	State Stormwater
The Legacy at Abbington Place	SW8030514	Permit Issued Date	9/23/2009
The Legacy at Abbington Place	SW8030514	Permit Expiration Date	8/13/2017
Autumn Ridge Apartments	SW8010122	Permit Type	State Stormwater
Autumn Ridge Apartments	SW8010122	Permit Issued Date	8/30/2010
Autumn Ridge Apartments	SW8010122	Permit Expiration Date	5/18/2025
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Type	State Stormwater
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Issued Date	8/31/2009
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Expiration Date	11/8/2023

PCS Name	PCS ID	Attribute	Value
Charleston Place	SW8060704	Permit Type	State Stormwater
Charleston Place	SW8060704	Permit Issued Date	7/21/2006
Charleston Place	SW8060704	Permit Expiration Date	7/21/2020
Windsor Place	SW8000202	Permit Type	State Stormwater
Windsor Place	SW8000202	Permit Issued Date	1/27/2005
Windsor Place	SW8000202	Permit Expiration Date	5/25/2014
Marine Chevrolet	SW8960705	Permit Type	State Stormwater
Marine Chevrolet	SW8960705	Permit Issued Date	5/9/2008
Marine Chevrolet	SW8960705	Permit Expiration Date	5/9/2022
Olive Garden Restaurant Jacksonville	SW8070137	Permit Type	State Stormwater
Olive Garden Restaurant Jacksonville	SW8070137	Permit Issued Date	7/30/2012
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Staybridge Hotel Jacksonville	SW8120207	Permit Type	State Stormwater
Staybridge Hotel Jacksonville	SW8120207	Permit Issued Date	3/15/2012
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Type	State Stormwater
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Issued Date	4/4/2008
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Type	State Stormwater
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Issued Date	1/24/2008
Northside at the Commons, Section VIII- SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII- SW & IX	SW8030920	Permit Issued Date	12/15/2005

PCS Name	PCS ID	Attribute	Value
Schilsky Office Park	SW8070211	Permit Type	State Stormwater
Schilsky Office Park	SW8070211	Permit Issued Date	6/14/2007
Schilsky Office Park	SW8070211	Permit Expiration Date	6/14/2021
Schilsky Chiropractic Center	SW8020502	Permit Type	State Stormwater
Schilsky Chiropractic Center	SW8020502	Permit Issued Date	4/4/2008
Schilsky Chiropractic Center	SW8020502	Permit Expiration Date	10/18/2016
Desuyo Medical Facility	SW8110501	Permit Type	State Stormwater
Desuyo Medical Facility	SW8110501	Permit Issued Date	5/24/2011
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Type	State Stormwater
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Issued Date	7/9/2013
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Expiration Date	9/29/2021
Golds Gym Jacksonville	SW8990613	Permit Type	State Stormwater
Golds Gym Jacksonville	SW8990613	Permit Issued Date	10/14/2013
Golds Gym Jacksonville	SW8990613	Permit Expiration Date	9/8/2023
Jacksonville VA Outpatient Clinic	SW8130617	Permit Type	State Stormwater
Jacksonville VA Outpatient Clinic	SW8130617	Permit Issued Date	9/25/2014
RBC Centura - Lot 12B HDX Subdivision	SW8071114	Permit Type	State Stormwater
RBC Centura - Lot 12B HDX Subdivision	SW8071114	Permit Issued Date	12/11/2007
Marine Federal Credit Union	SW8020426	Permit Type	State Stormwater
Marine Federal Credit Union	SW8020426	Permit Issued Date	3/5/2004
Marine Federal Credit Union	SW8020426	Permit Expiration Date	3/5/2018
The Legacy at Carolina Forest	SW8090104	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
The Legacy at Carolina Forest	SW8090104	Permit Issued Date	4/3/2009
The Legacy at Carolina Forest	SW8090104	Permit Expiration Date	12/30/2021
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Jacksonville VA Outpatient Clinic	WI0800351	Permit Type	Injection Deemed Geothermal Aqueous Closed-loop Well

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, COMMONS SOUTH #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010 , COMMONS SOUTH #1**

Unsaturated Zone Rating	62.4
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$CR = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum CR) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

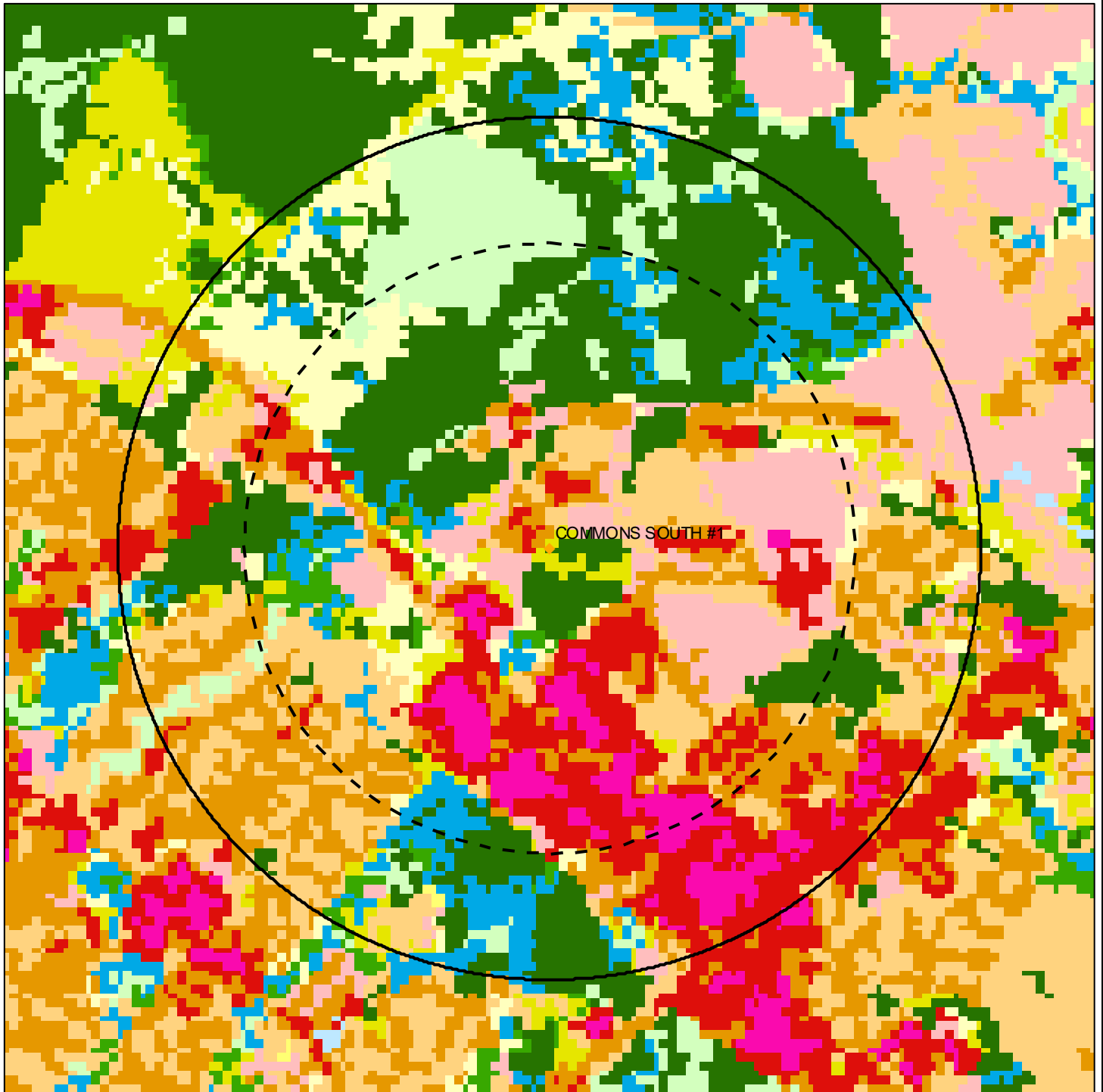
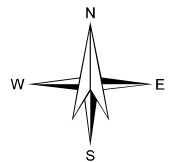


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1

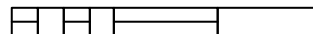


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



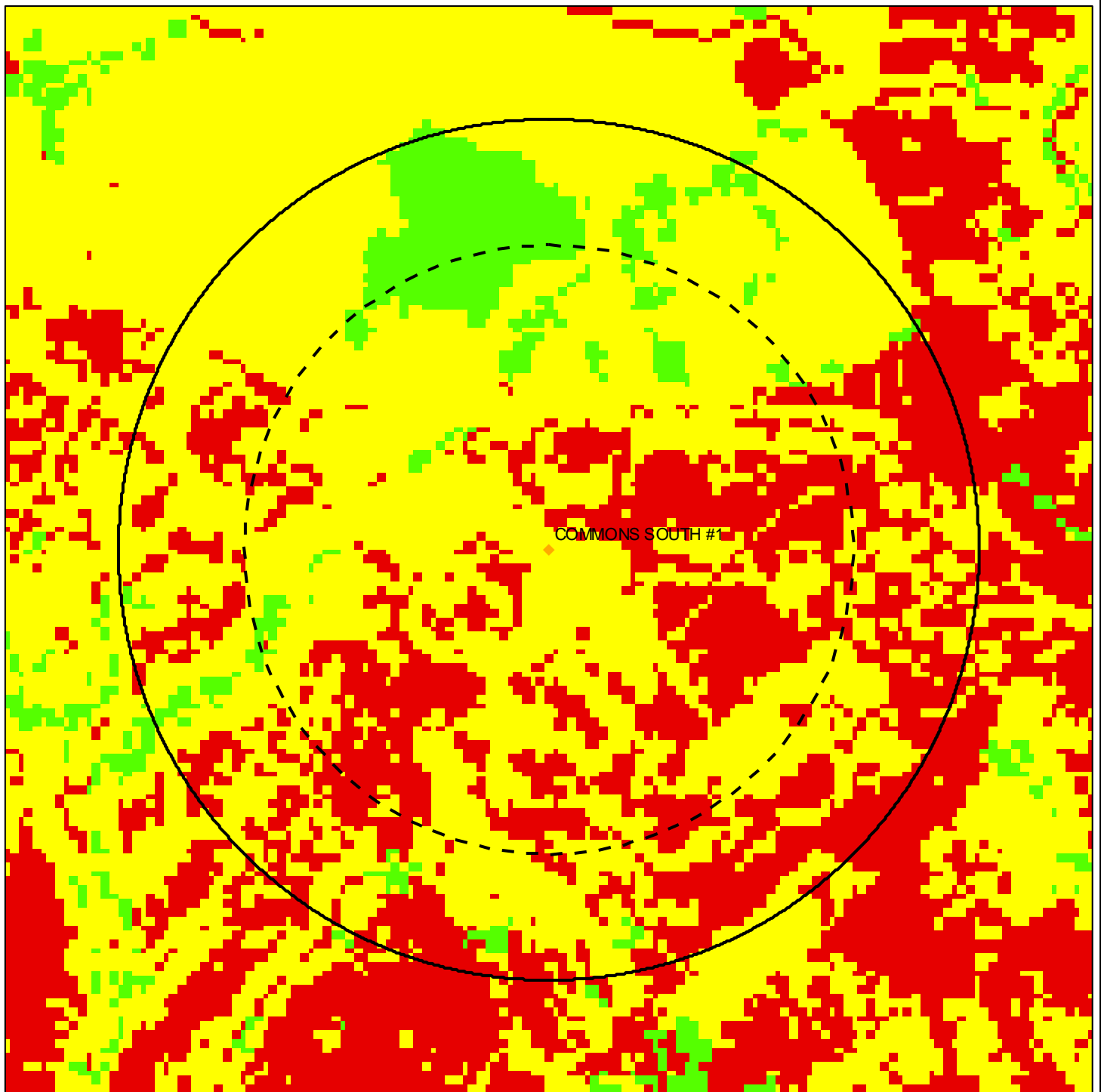
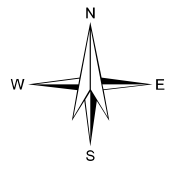
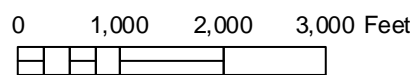


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



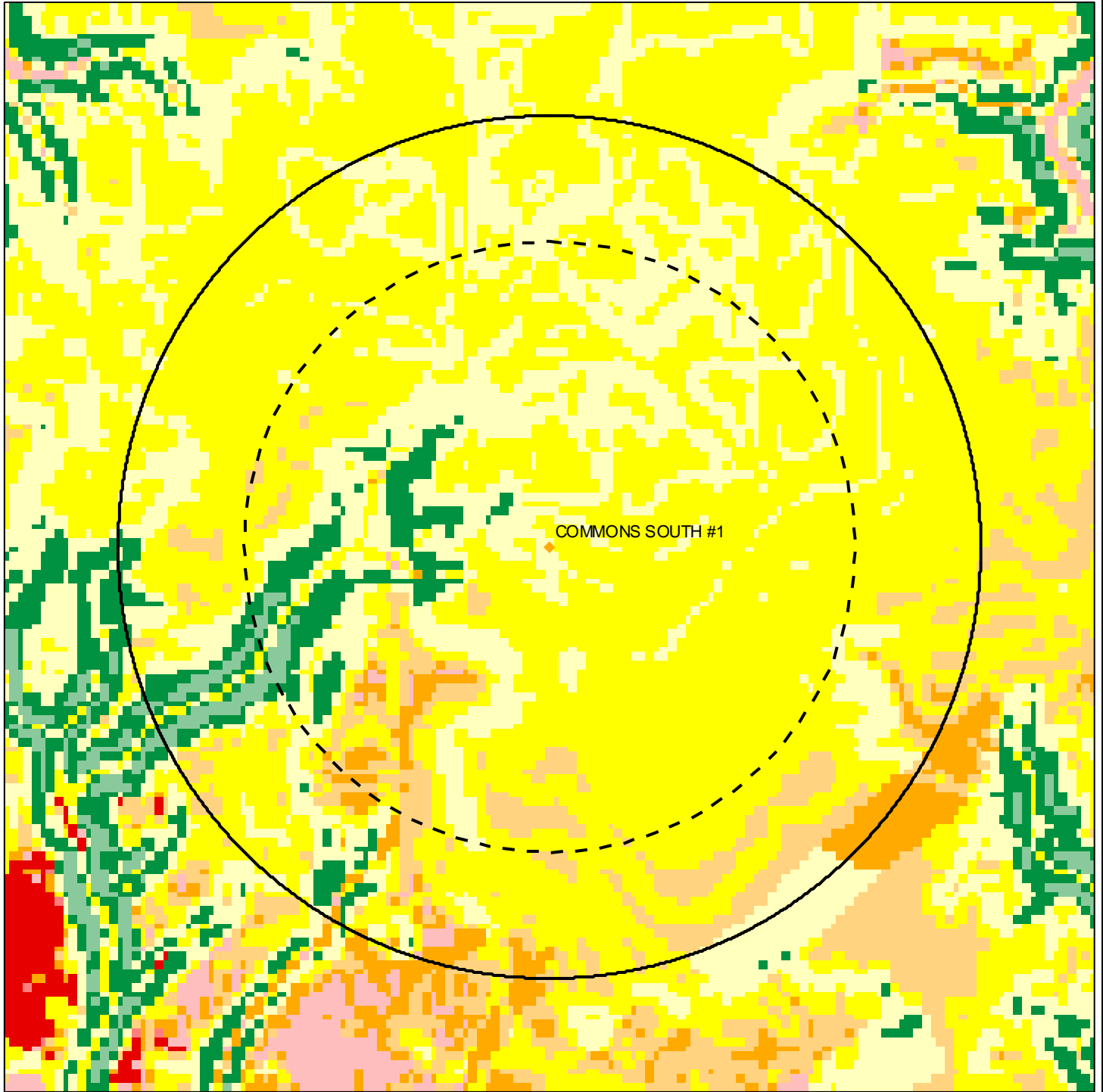
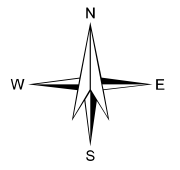
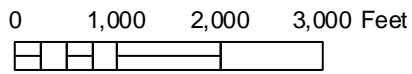


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- | | | |
|-------------------------------|-----------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to 1,280 sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



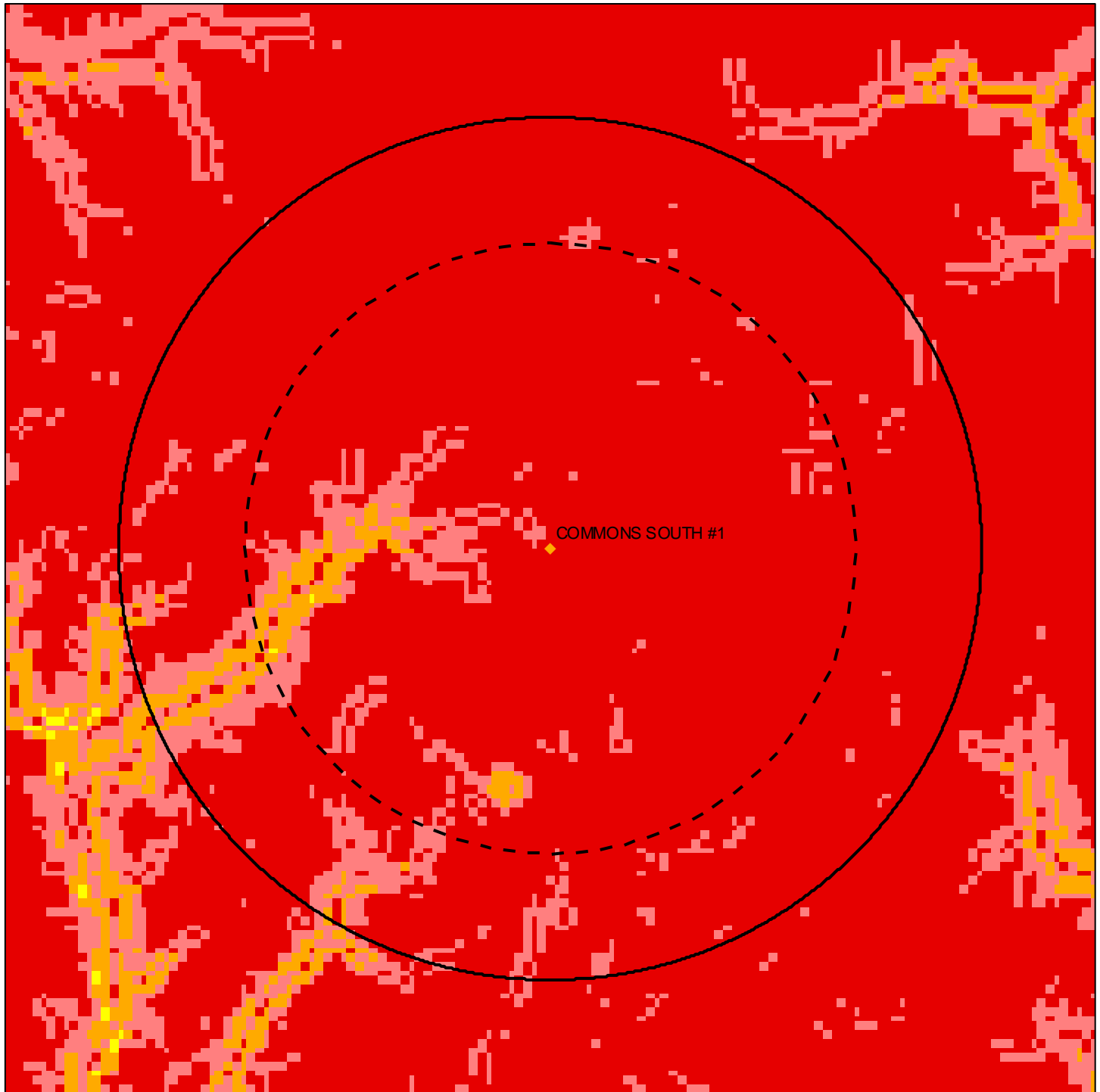
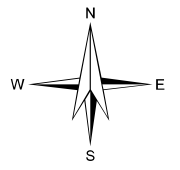
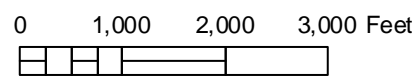


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- | | | |
|---|--|--|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



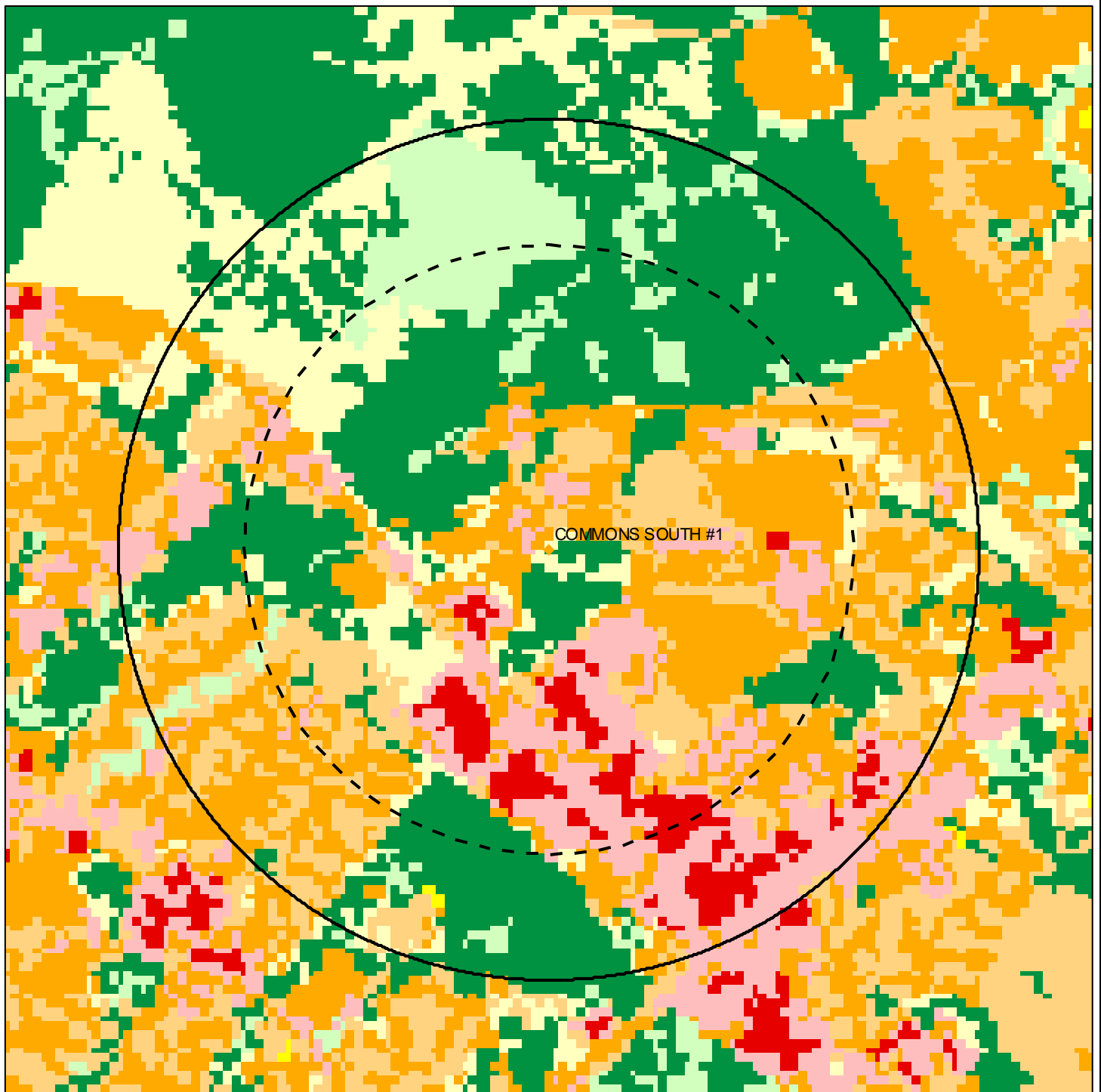
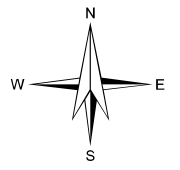


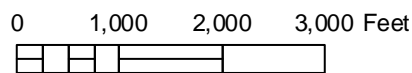


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



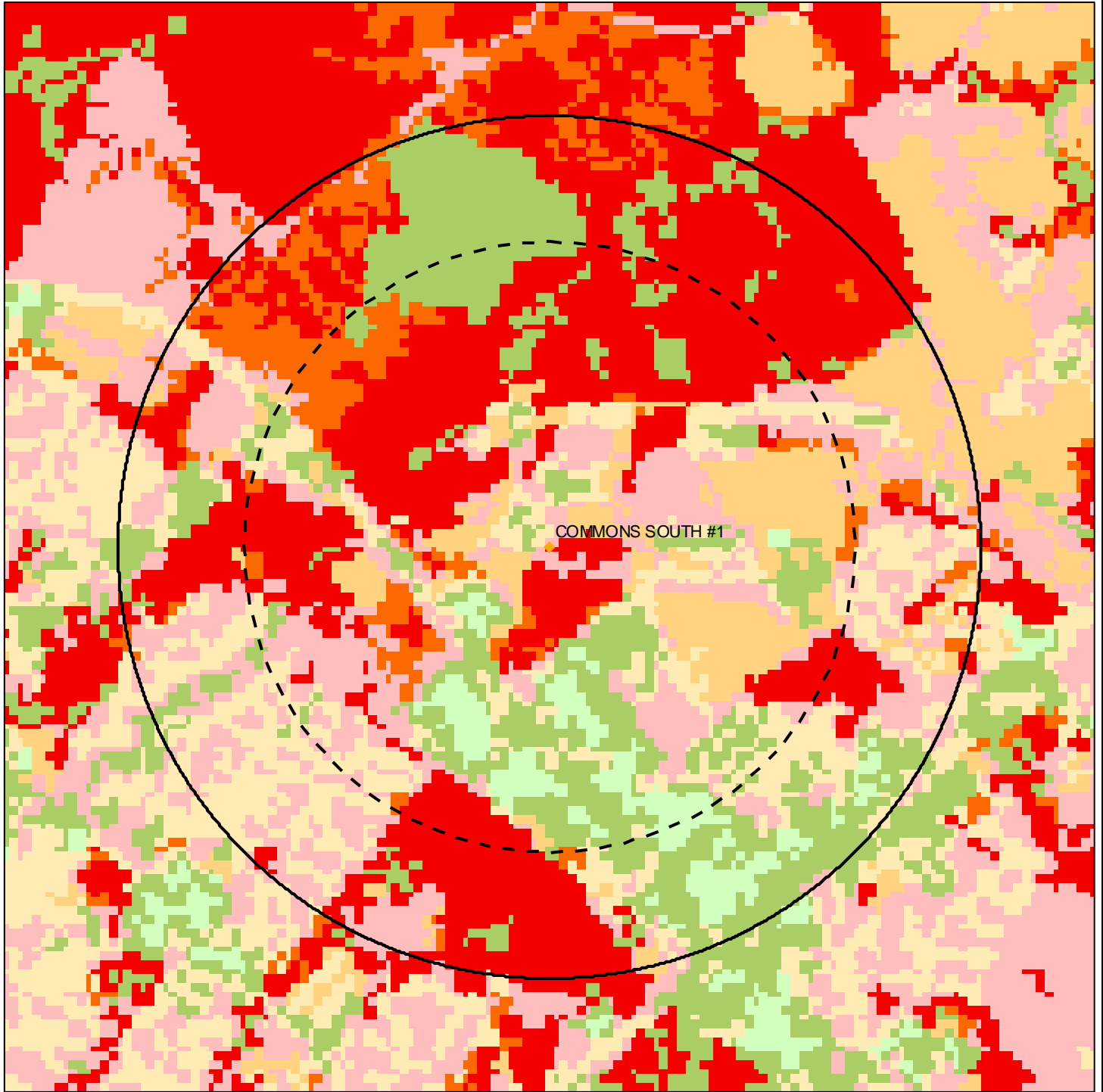
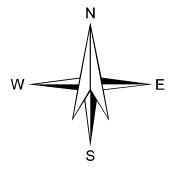
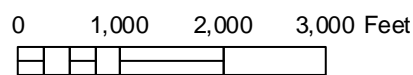


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

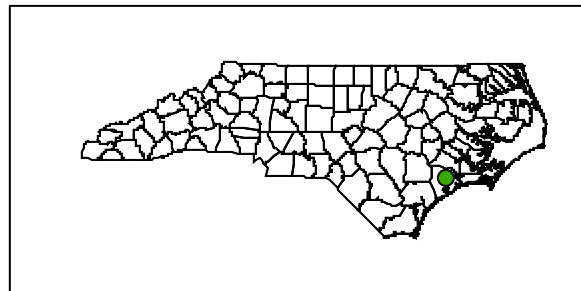
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



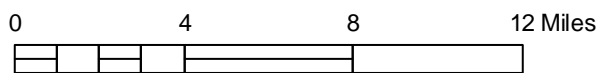
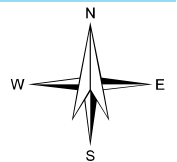


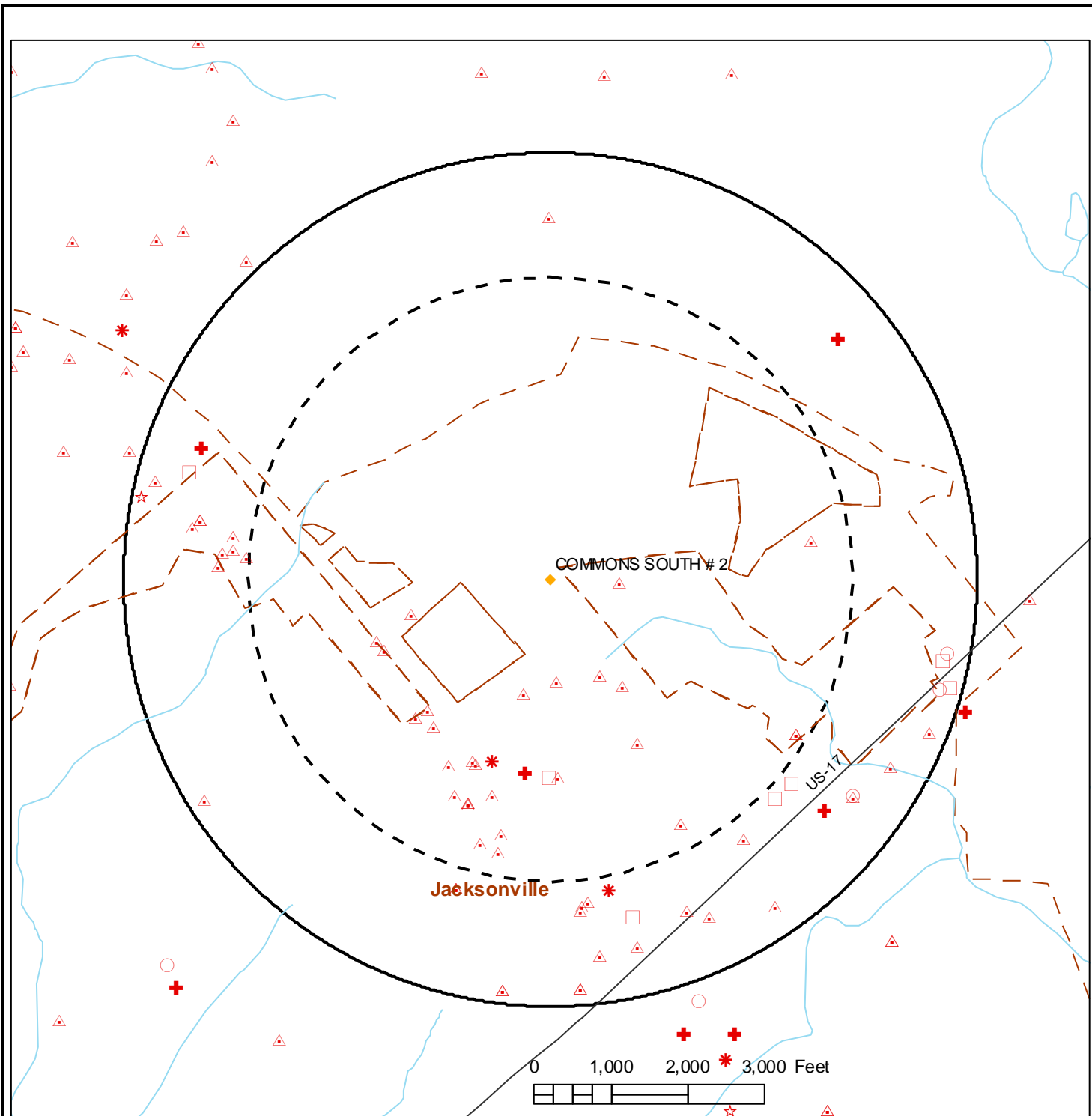
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

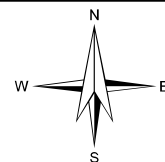




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2

PCS Types

- | | | | | | |
|---|-------------------------------|---|------------------------|---|--|
| □ | Animal Operations | ○ | Septage Disposal Sites | — | Roads |
| △ | CERCLIS Sites | ○ | Soil Remediation Sites | — | Rivers and Streams |
| □ | RCRA Gen. / Trans. Facilities | * | Solid Waste Facilities | — | Major Hydrology |
| ● | Non Discharge Permits | * | Tier II Sites | — | Municipal Boundaries |
| △ | NPDES Permits | ○ | RCRA TSD Facilities | — | Ground Water Assessment Area - Delineated Area |
| ★ | National Priority List Sites | ○ | Old Landfill Sites | — | Ground Water Assessment Area - Zone A |
| + | PCB Sites | ☆ | UIC Permits | | |
| ○ | Pollution Incidents | + | UST Permits | | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS SOUTH # 2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL GARMEN T CARE CENTER	NCR000143511	RCRA Gen. / Trans. Facilities	H	HENDERSON DR	JACKSONVILLE	Unkno wn	ONSLOW
HOME DEPOT #3655	NC0991302563	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD - HWY 17	JACKSONVILLE	Unkno wn	ONSLOW
LEJEUNE HONDA CARS	NCD982117475	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
MOORE BUICK PONTIAC INC	NCD982118127	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
SAM'S CLUB #6573	NCR000005314	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
WALMART SUPERCENTER #1298	NCR000141994	RCRA Gen. / Trans. Facilities	H	N MARINE RD	JACKSONVILLE	Unkno wn	ONSLOW
AUTO LOGIC	11084	Pollution Incidents	H	2601 N. MARINE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
MOORE BUICK	17930	Pollution Incidents	H	HWY 17	JACKSONVILLE	Unkno wn	ONSLO

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COBLE DAIRY PRODUCT S- JACKSON VILLE	6596	Pollution Incidents	H	HWY 17 N	JACKSON VILLE	Unkno wn	ONSLO
LOWE'S OF JACKSON VILLE, NC (STORE # 0556)	4042721	Tier II Sites	H	1255 WESTERN BLVD	JACKSON VILLE	Unkno wn	Onslow
SAM'S CLUB #6573	4037201	Tier II Sites	H	1170 Western Blvd.	Jacksonville	Unkno wn	Onslow
SAMS CLUB GAS STATION 6573	00-0-0000037067	UST Sites	H	1170 WESTERN BLVD	JACKSON VILLE	Unkno wn	ONSLOW
HUMPHREY HEATING	00-0-0000020150	UST Sites	H	2423 MARINE BOULEVARD NORTH	JACKSON VILLE	Unkno wn	ONSLOW
JACKSON VILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSON VILLE	Unkno wn	ONSLOW
HANDY MART 56	00-0-0000035042	UST Sites	H	3495 WESTERN BOULEVARD	JACKSON VILLE	Unkno wn	ONSLOW
Kennith Whichard Commercial Subdivision	SW8040624	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Chick-Fil-A Gateway South	SW8040711	NPDES Permits	L	1405 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Texas Roadhouse of Jacksonville	SW8040908	NPDES Permits	L	103 Moosehaven Rd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Med-Care Lot 1 Moosehaven Business Park	SW8041009	NPDES Permits	L	Hwy 17 Moosehaven Rd	Jacksonville	Unknown	ONSLOW
Outback Steakhouse	SW8980241	NPDES Permits	L	Patel Subdivision	Jacksonville	Unknown	ONSLOW
Walmart Supercenter Jacksonville	SW8921003	NPDES Permits	L	Int Of Hwy 17 Western Blvd	Jacksonville	Unknown	ONSLOW
Texas Steakhouse & Saloon	SW8970933	NPDES Permits	L	101 Parkwood Dr	Jacksonville	Unknown	ONSLOW
Extended Stay America Efficiency Studios	SW8980232	NPDES Permits	L	McDaniel Dr	Jacksonville	Unknown	ONSLOW
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	NPDES Permits	L	1110 Western Blvd	Jacksonville	Unknown	ONSLOW
Comfort Inn Suites	SW8951229	NPDES Permits	L	130 Workshop Ln	Jacksonville	Unknown	ONSLOW
SECU - Jacksonville	SW8010517	NPDES Permits	L	1079 Western Blvd	Jacksonville	Unknown	ONSLOW
Hardees Western Boulevard	SW8940420	NPDES Permits	L	1106 Western Blvd	Jacksonville	Unknown	ONSLOW
Fire Station 4 Jacksonville	SW8000332	NPDES Permits	L	100 Firehouse Ln	Jacksonville	Unknown	ONSLOW
Jacksonville Commons	SW8950417	NPDES Permits	L	Off Recreation Loop And Commons Dr N	Jacksonville	Unknown	ONSLOW
Fairfield Inn Jacksonville	SW8990319	NPDES Permits	L	121 Circuit Ln	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
National Dodge	SW8930216	NPDES Permits	L	2223 N Marine Blvd	Jacksonville	Unkno wn	ONSLOW
Sleep Inn Suites	SW8010107	NPDES Permits	L	129 Circuit Ln	Jacksonville	Unkno wn	ONSLOW
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	NPDES Permits	L	1171 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Affordable Suites	SW8080112	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Palmetto Park Subdivisio n	SW8051147	NPDES Permits	L	King Richard Ct	Jacksonville	Unkno wn	ONSLOW
The Dail Center-Lot 2, Northwest Business Park	SW8030105	NPDES Permits	L	Jacksonvill NC	Jacksonville	Unkno wn	ONSLOW
City of Jacksonville Elevated Water Storage Tank and Water System Improveme nts	SW8030735	NPDES Permits	L	Commons Dr N	Jacksonville	Unkno wn	ONSLOW
Blue Springs Apartments	SW8031111	NPDES Permits	L	460 McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Logan's Roadhouse Restaurant	SW8990310	NPDES Permits	L	1177 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lot 10 Schilsky Office Park	SW8091115	NPDES Permits	L	112 Tarpor Trl	Jacksonville	Unkno wn	ONSLOW
Lowes Home Center	SW8970415	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Sams Club Jacksonville Store 6573-04	SW8931222	NPDES Permits	L	1170 Western Blvd	Jacksonville	Unkno wn	ONSLOW
National Automotive	SW8070721	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unkno wn	ONSLOW
O'Charley's Restaurant & Bar	SW8020209	NPDES Permits	L	1270 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Cross Pointe Centre	SW8960624	NPDES Permits	L	1250 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	NPDES Permits	L	1260 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Candlewood Suites	SW8061125	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unkno wn	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unkno wn	ONSLOW
Marine Federal Credit Union Hwy 17	SW8970849	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unkno wn	ONSLOW
Gateway Plaza Shopping Center	SW8980817	NPDES Permits	L	1335 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Western Blvd Retail	SW8130710	NPDES Permits	L	1345 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lot 2-- Cross Pointe Centre	SW8020631	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unkno wn	ONSLOW
The Legacy at Abbington Place	SW8030514	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Autumn Ridge Apartments	SW8010122	NPDES Permits	L	300 Autumn Ridge Dr	Jacksonville	Unkno wn	ONSLOW
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	NPDES Permits	L	500 Talon Cir	Jacksonville	Unkno wn	ONSLOW
Charleston Place	SW8060704	NPDES Permits	L	McDaniel Drive Extension	Jacksonville	Unkno wn	ONSLOW
Windsor Place	SW8000202	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Marine Chevrolet	SW8960705	NPDES Permits	L	1408 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Olive Garden Restaurant Jacksonville	SW8070137	NPDES Permits	L	1415 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unkno wn	ONSLOW
Staybridge Hotel Jacksonville	SW8120207	NPDES Permits	L	110 Cobia Ct	Jacksonville	Unkno wn	ONSLOW
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	NPDES Permits	L	Intersection Of Dolphin Marlin Dr	Jacksonville	Unkno wn	ONSLOW
Cobia Court Lot 11 Schilsky Office Park	SW8070937	NPDES Permits	L	Cobia Ct Lot 11	Jacksonville	Unkno wn	ONSLOW
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12 17 On Chastain Ct In Section Viii	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Schilsky Office Park	SW8070211	NPDES Permits	L	Marlin Dr	Jacksonville	Unknown	ONSLOW
Schilsky Chiropractic Center	SW8020502	NPDES Permits	L	Western Blvd NCSR 1470- Dolphin Dr	Jacksonville	Unknown	ONSLOW
Desuyo Medical Facility	SW8110501	NPDES Permits	L	123 Pompano Dr	Jacksonville	Unknown	ONSLOW
BB&T Jacksonville Property ID# 155007	SW8990523	NPDES Permits	L	2676 Western Blvd	Jacksonville	Unknown	ONSLOW
Golds Gym Jacksonville	SW8990613	NPDES Permits	L	Henderson Dr	Jacksonville	Unknown	ONSLOW
Jacksonville VA Outpatient Clinic	SW8130617	NPDES Permits	L	Henderson Dr	Jacksonville	Unknown	ONSLOW
Carolina Forest Elementary School	SW8020702	NPDES Permits	L	141 Carolina Forest Blvd	Jacksonville	Unknown	ONSLOW
Jacksonville VA Outpatient Clinic	WI0800351	UIC Permits	M	Henderson Dr	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, COMMONS SOUTH # 2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL GARMENT CARE CENTER	NCR000143511	GENERATOR	SQG
COASTAL GARMENT CARE CENTER	NCR000143511	TRANSPORTER	N
HOME DEPOT #3655	NC0991302563	GENERATOR	SQG
HOME DEPOT #3655	NC0991302563	TRANSPORTER	N
LEJEUNE HONDA CARS	NCD982117475	GENERATOR	SQG
LEJEUNE HONDA CARS	NCD982117475	TRANSPORTER	N
MOORE BUICK PONTIAC INC	NCD982118127	GENERATOR	SQG
MOORE BUICK PONTIAC INC	NCD982118127	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
SAM'S CLUB #6573	NCR000005314	GENERATOR	SQG
SAM'S CLUB #6573	NCR000005314	TRANSPORTER	N
WALMART SUPERCENTER #1298	NCR000141994	GENERATOR	SQG
WALMART SUPERCENTER #1298	NCR000141994	TRANSPORTER	N
AUTO LOGIC	11084	Pollutant Type	GASOLINE/DIESEL/KEROSENE
AUTO LOGIC	11084	Site Risk	L
AUTO LOGIC	11084	Site Priority Code	70E
MOORE BUICK	17930	Pollutant Type	OTHER PETROLEUM PROD.

PCS Name	PCS ID	Attribute	Value
MOORE BUICK	17930	Site Risk	L
MOORE BUICK	17930	Site Priority Code	60D
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Pollutant Type	GASOLINE/DIESEL/KEROSENE
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Risk	I
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Priority Code	100D
Kenneth Whichard Commercial Subdivision	SW8040624	Permit Type	State Stormwater
Kenneth Whichard Commercial Subdivision	SW8040624	Permit Issued Date	7/30/2012
Kenneth Whichard Commercial Subdivision	SW8040624	Permit Expiration Date	9/6/2021
Chick-Fil-A Gateway South	SW8040711	Permit Type	State Stormwater
Chick-Fil-A Gateway South	SW8040711	Permit Issued Date	7/20/2004
Texas Roadhouse of Jacksonville	SW8040908	Permit Type	State Stormwater
Texas Roadhouse of Jacksonville	SW8040908	Permit Issued Date	10/20/2011
Med-Care Lot 1 Moosehaven Business Park	SW8041009	Permit Type	State Stormwater
Med-Care Lot 1 Moosehaven Business Park	SW8041009	Permit Issued Date	12/14/2004
Outback Steakhouse	SW8980241	Permit Type	State Stormwater
Outback Steakhouse	SW8980241	Permit Issued Date	10/26/1998
Walmart Supercenter Jacksonville	SW8921003	Permit Type	State Stormwater
Walmart Supercenter Jacksonville	SW8921003	Permit Issued Date	8/9/2001
Walmart Supercenter Jacksonville	SW8921003	Permit Expiration Date	7/23/2013

PCS Name	PCS ID	Attribute	Value
Texas Steakhouse & Saloon	SW8970933	Permit Type	State Stormwater
Texas Steakhouse & Saloon	SW8970933	Permit Issued Date	10/5/2011
Texas Steakhouse & Saloon	SW8970933	Permit Expiration Date	2/25/2022
Extended Stay America Efficiency Studios	SW8980232	Permit Type	State Stormwater
Extended Stay America Efficiency Studios	SW8980232	Permit Issued Date	9/30/1998
Extended Stay America Efficiency Studios	SW8980232	Permit Expiration Date	9/30/2012
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Type	State Stormwater
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Issued Date	9/25/2012
Comfort Inn Suites	SW8951229	Permit Type	State Stormwater
Comfort Inn Suites	SW8951229	Permit Issued Date	7/16/2009
Comfort Inn Suites	SW8951229	Permit Expiration Date	4/24/2020
SECU - Jacksonville	SW8010517	Permit Type	State Stormwater
SECU - Jacksonville	SW8010517	Permit Issued Date	9/15/2001
SECU - Jacksonville	SW8010517	Permit Expiration Date	9/15/2015
Hardees Western Boulevard	SW8940420	Permit Type	State Stormwater
Hardees Western Boulevard	SW8940420	Permit Issued Date	5/16/1994
Fire Station 4 Jacksonville	SW8000332	Permit Type	State Stormwater
Fire Station 4 Jacksonville	SW8000332	Permit Issued Date	11/17/2009
Fire Station 4 Jacksonville	SW8000332	Permit Expiration Date	4/28/2024
Jacksonville Commons	SW8950417	Permit Type	State Stormwater
Jacksonville Commons	SW8950417	Permit Issued Date	11/1/2012
Fairfield Inn Jacksonville	SW8990319	Permit Type	State Stormwater
Fairfield Inn Jacksonville	SW8990319	Permit Issued Date	9/18/2009
Fairfield Inn Jacksonville	SW8990319	Permit Expiration Date	7/26/2023

PCS Name	PCS ID	Attribute	Value
National Dodge	SW8930216	Permit Type	State Stormwater
National Dodge	SW8930216	Permit Issued Date	6/27/2014
National Dodge	SW8930216	Permit Expiration Date	5/18/2026
Sleep Inn Suites	SW8010107	Permit Type	State Stormwater
Sleep Inn Suites	SW8010107	Permit Issued Date	1/3/2011
Sleep Inn Suites	SW8010107	Permit Expiration Date	4/25/2025
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Type	State Stormwater
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Issued Date	10/8/2010
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Expiration Date	10/8/2024
Affordable Suites	SW8080112	Permit Type	State Stormwater
Affordable Suites	SW8080112	Permit Issued Date	2/6/2008
Affordable Suites	SW8080112	Permit Expiration Date	12/31/2021
Palmetto Park Subdivision	SW8051147	Permit Type	State Stormwater
Palmetto Park Subdivision	SW8051147	Permit Issued Date	1/13/2006
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Type	State Stormwater
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Issued Date	4/14/2003
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Type	State Stormwater
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Issued Date	9/15/2003
Blue Springs Apartments	SW8031111	Permit Type	State Stormwater
Blue Springs Apartments	SW8031111	Permit Issued Date	11/1/2010

PCS Name	PCS ID	Attribute	Value
Blue Springs Apartments	SW8031111	Permit Expiration Date	2/14/2028
Logan's Roadhouse Restaurant	SW8990310	Permit Type	State Stormwater
Logan's Roadhouse Restaurant	SW8990310	Permit Issued Date	5/12/2009
Logan's Roadhouse Restaurant	SW8990310	Permit Expiration Date	8/30/2023
Lot 10 Schilsky Office Park	SW8091115	Permit Type	State Stormwater
Lot 10 Schilsky Office Park	SW8091115	Permit Issued Date	4/9/2010
Lowes Home Center	SW8970415	Permit Type	State Stormwater
Lowes Home Center	SW8970415	Permit Issued Date	9/3/1997
Lowes Home Center	SW8970415	Permit Expiration Date	9/3/2007
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Type	State Stormwater
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Issued Date	11/1/2010
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Expiration Date	12/5/2022
National Automotive	SW8070721	Permit Type	State Stormwater
National Automotive	SW8070721	Permit Issued Date	2/20/2008
National Automotive	SW8070721	Permit Expiration Date	8/10/2021
O'Charley's Restaurant & Bar	SW8020209	Permit Type	State Stormwater
O'Charley's Restaurant & Bar	SW8020209	Permit Issued Date	4/23/2002
Cross Pointe Centre	SW8960624	Permit Type	State Stormwater
Cross Pointe Centre	SW8960624	Permit Issued Date	11/2/2009
Cross Pointe Centre	SW8960624	Permit Expiration Date	11/18/2026
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Type	State Stormwater
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Issued Date	11/21/2000
Candlewood Suites	SW8061125	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Candlewood Suites	SW8061125	Permit Issued Date	5/9/2007
Candlewood Suites	SW8061125	Permit Expiration Date	5/9/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Marine Federal Credit Union Hwy 17	SW8970849	Permit Type	State Stormwater
Marine Federal Credit Union Hwy 17	SW8970849	Permit Issued Date	4/25/2008
Marine Federal Credit Union Hwy 17	SW8970849	Permit Expiration Date	4/25/2022
Gateway Plaza Shopping Center	SW8980817	Permit Type	State Stormwater
Gateway Plaza Shopping Center	SW8980817	Permit Issued Date	5/3/2013
Gateway Plaza Shopping Center	SW8980817	Permit Expiration Date	9/8/2021
Western Blvd Retail	SW8130710	Permit Type	State Stormwater
Western Blvd Retail	SW8130710	Permit Issued Date	9/5/2013
Lot 2--Cross Pointe Centre	SW8020631	Permit Type	State Stormwater
Lot 2--Cross Pointe Centre	SW8020631	Permit Issued Date	7/29/2002
The Legacy at Abbington Place	SW8030514	Permit Type	State Stormwater
The Legacy at Abbington Place	SW8030514	Permit Issued Date	9/23/2009
The Legacy at Abbington Place	SW8030514	Permit Expiration Date	8/13/2017
Autumn Ridge Apartments	SW8010122	Permit Type	State Stormwater
Autumn Ridge Apartments	SW8010122	Permit Issued Date	8/30/2010
Autumn Ridge Apartments	SW8010122	Permit Expiration Date	5/18/2025

PCS Name	PCS ID	Attribute	Value
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Type	State Stormwater
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Issued Date	8/31/2009
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Expiration Date	11/8/2023
Charleston Place	SW8060704	Permit Type	State Stormwater
Charleston Place	SW8060704	Permit Issued Date	7/21/2006
Charleston Place	SW8060704	Permit Expiration Date	7/21/2020
Windsor Place	SW8000202	Permit Type	State Stormwater
Windsor Place	SW8000202	Permit Issued Date	1/27/2005
Windsor Place	SW8000202	Permit Expiration Date	5/25/2014
Marine Chevrolet	SW8960705	Permit Type	State Stormwater
Marine Chevrolet	SW8960705	Permit Issued Date	5/9/2008
Marine Chevrolet	SW8960705	Permit Expiration Date	5/9/2022
Olive Garden Restaurant Jacksonville	SW8070137	Permit Type	State Stormwater
Olive Garden Restaurant Jacksonville	SW8070137	Permit Issued Date	7/30/2012
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Staybridge Hotel Jacksonville	SW8120207	Permit Type	State Stormwater
Staybridge Hotel Jacksonville	SW8120207	Permit Issued Date	3/15/2012
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Type	State Stormwater
Lot 1-A Randy Schilsky Division-Dr Shanie Covert	SW8070121	Permit Issued Date	4/4/2008

PCS Name	PCS ID	Attribute	Value
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Type	State Stormwater
Cobia Court Lot 11 Schilsky Office Park	SW8070937	Permit Issued Date	1/24/2008
Northside at the Commons, Section VIII- SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII- SW & IX	SW8030920	Permit Issued Date	12/15/2005
Schilsky Office Park	SW8070211	Permit Type	State Stormwater
Schilsky Office Park	SW8070211	Permit Issued Date	6/14/2007
Schilsky Office Park	SW8070211	Permit Expiration Date	6/14/2021
Schilsky Chiropractic Center	SW8020502	Permit Type	State Stormwater
Schilsky Chiropractic Center	SW8020502	Permit Issued Date	4/4/2008
Schilsky Chiropractic Center	SW8020502	Permit Expiration Date	10/18/2016
Desuyo Medical Facility	SW8110501	Permit Type	State Stormwater
Desuyo Medical Facility	SW8110501	Permit Issued Date	5/24/2011
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Type	State Stormwater
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Issued Date	7/9/2013
BB&T Jacksonville Property ID# 155007	SW8990523	Permit Expiration Date	9/29/2021
Golds Gym Jacksonville	SW8990613	Permit Type	State Stormwater
Golds Gym Jacksonville	SW8990613	Permit Issued Date	10/14/2013
Golds Gym Jacksonville	SW8990613	Permit Expiration Date	9/8/2023
Jacksonville VA Outpatient Clinic	SW8130617	Permit Type	State Stormwater
Jacksonville VA Outpatient Clinic	SW8130617	Permit Issued Date	9/25/2014
Carolina Forest Elementary School	SW8020702	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Carolina Forest Elementary School	SW8020702	Permit Issued Date	4/8/2010
Jacksonville VA Outpatient Clinic	WI0800351	Permit Type	Injection Deemed Geothermal Aqueous Closed-loop Well

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, COMMONS SOUTH # 2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , COMMONS SOUTH # 2**

Unsaturated Zone Rating	62.8
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

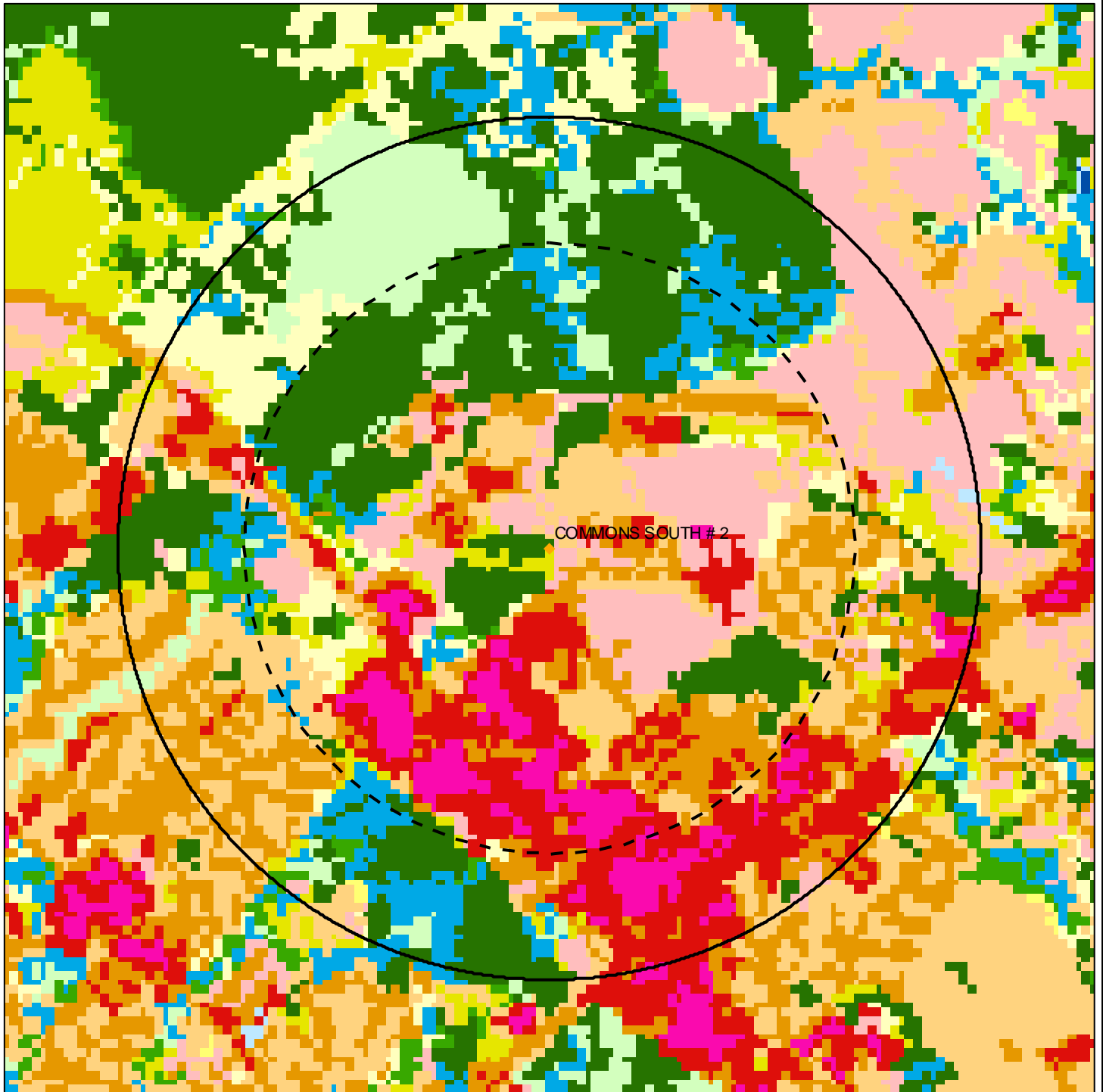
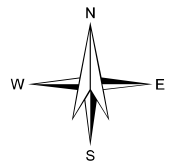


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2

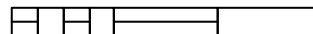


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



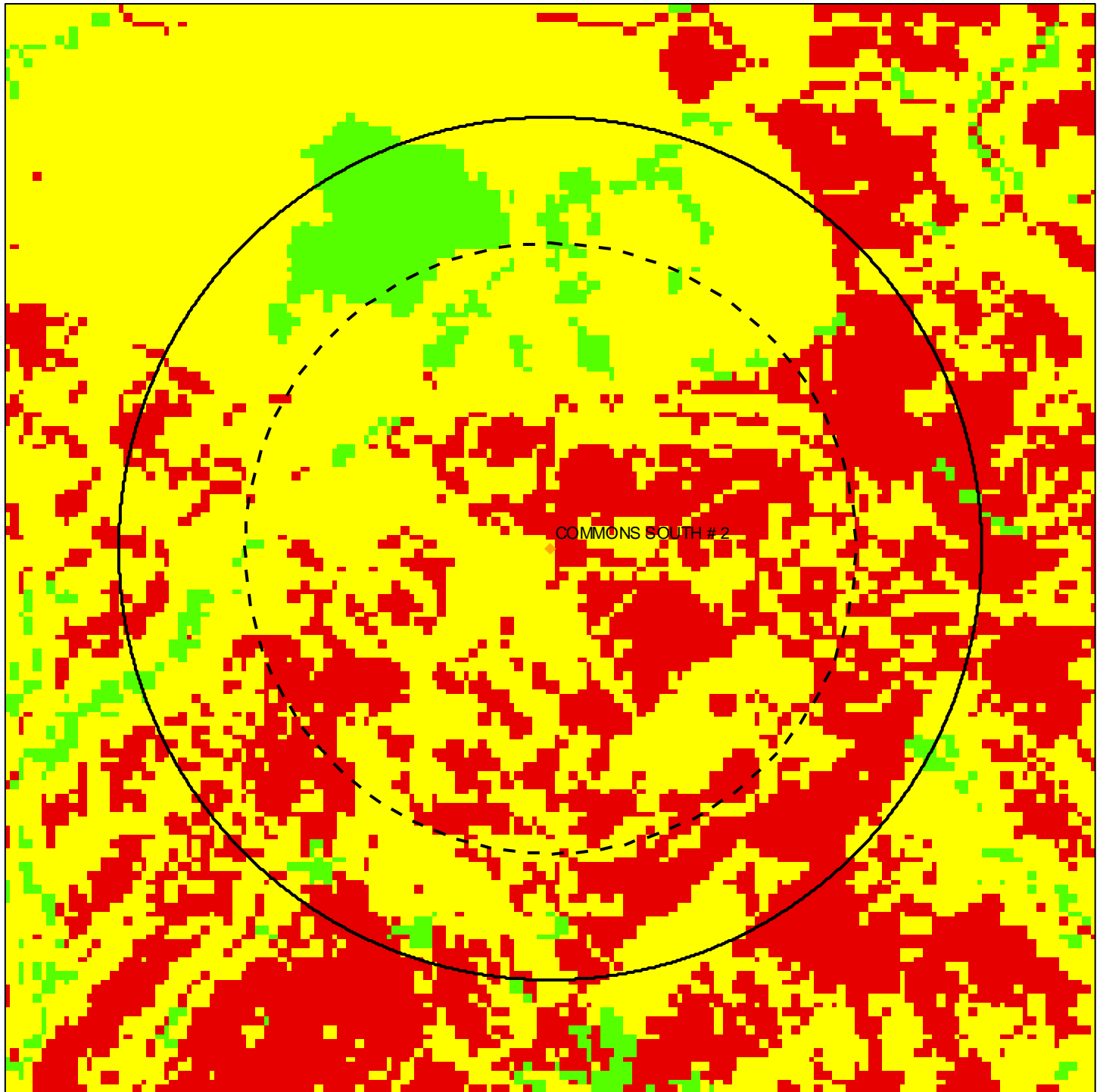
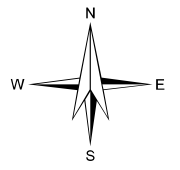
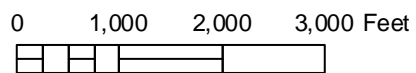


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



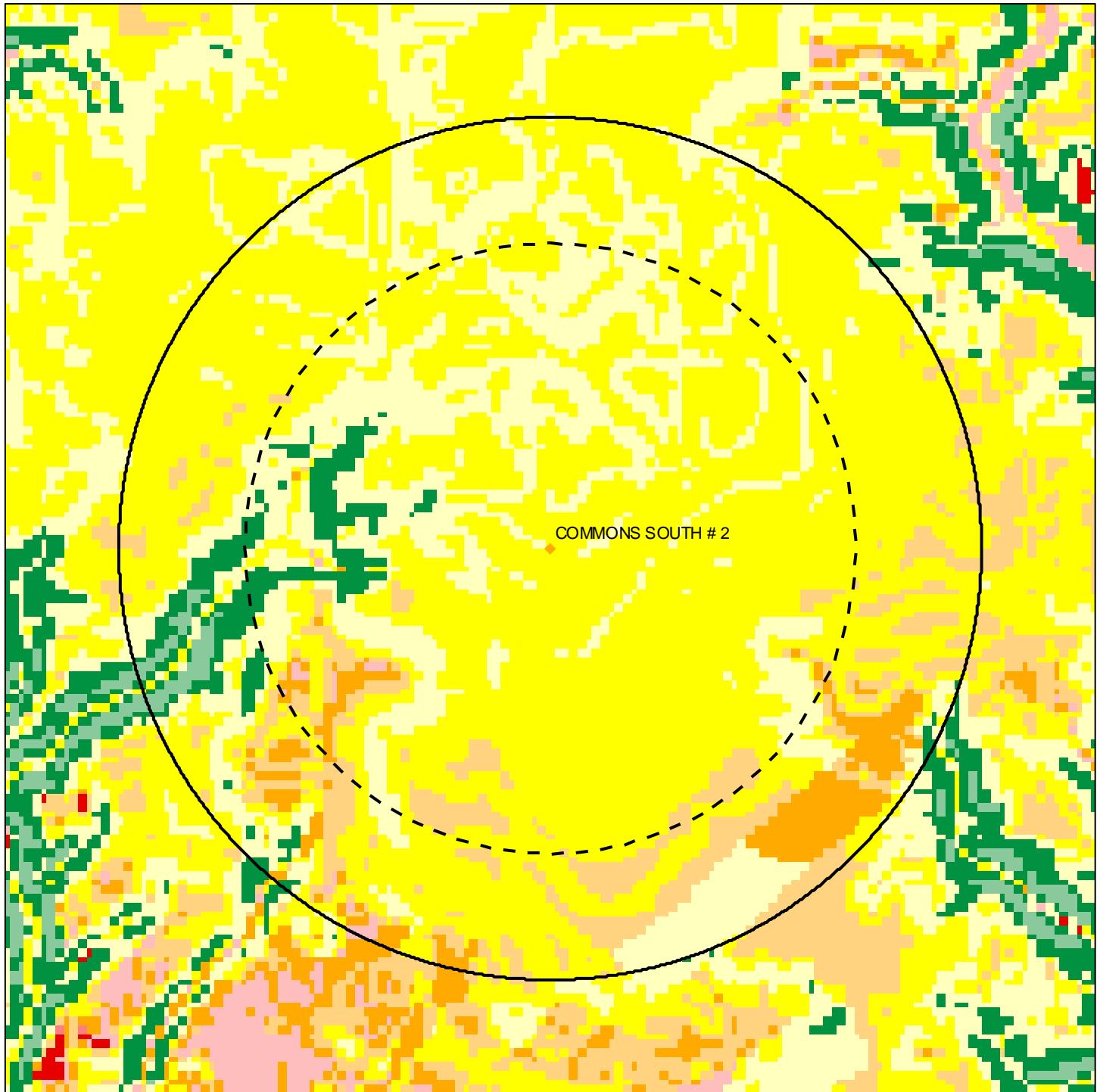
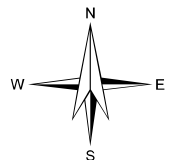
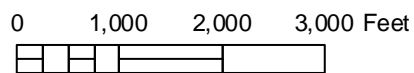


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



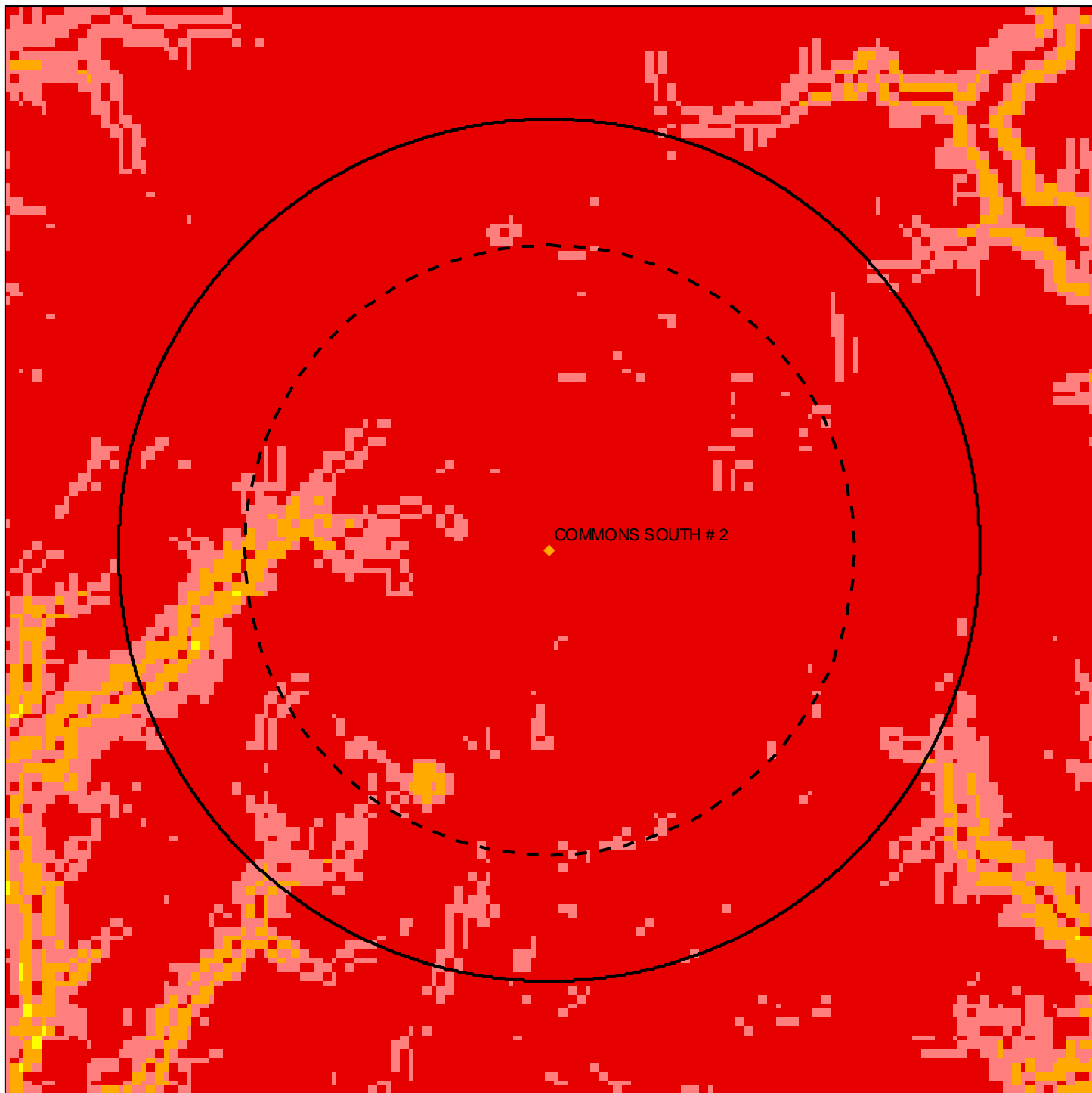
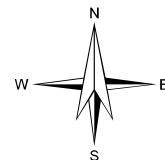








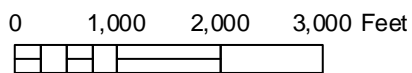


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



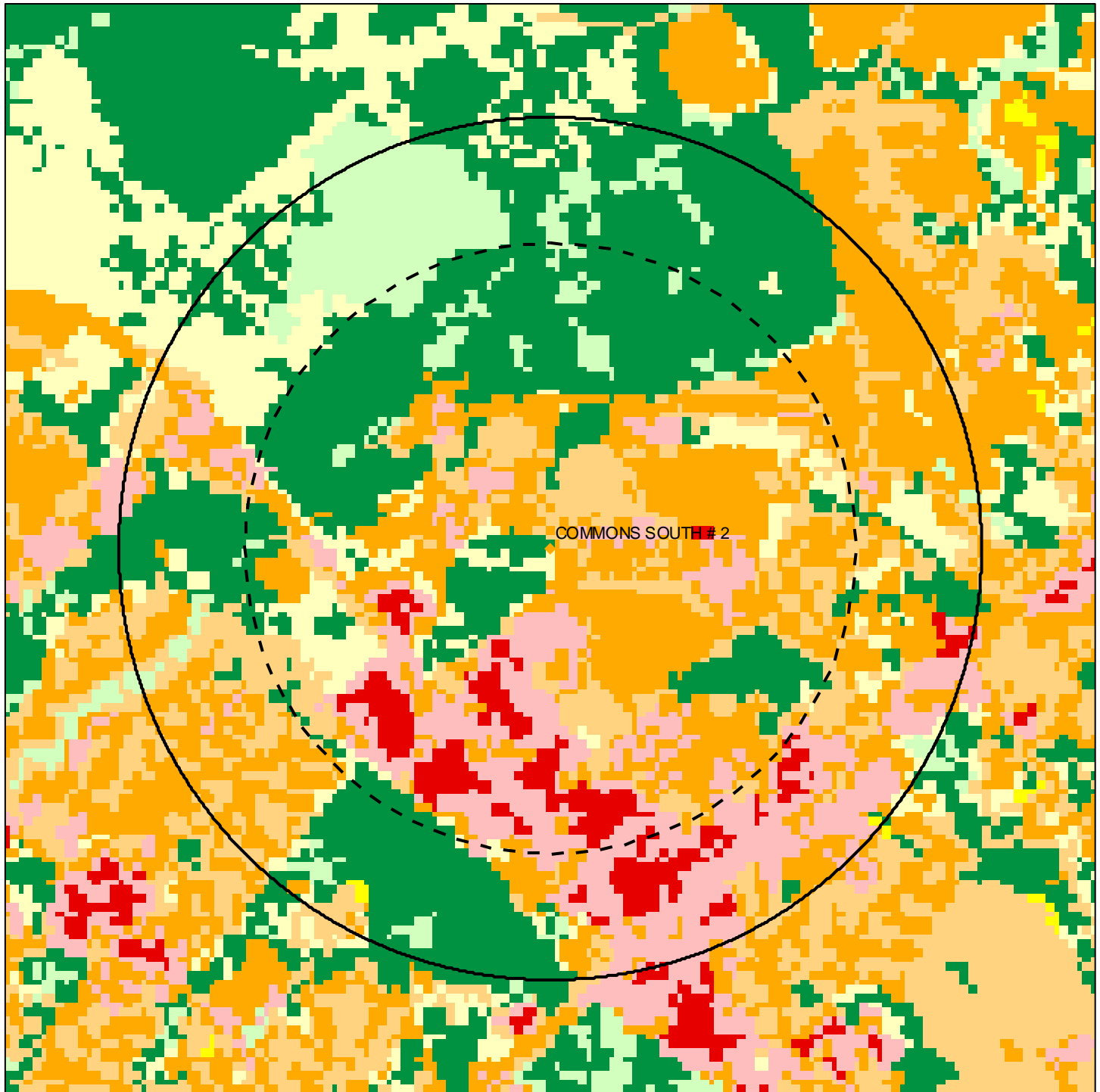
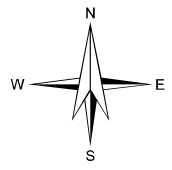


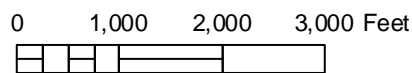


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



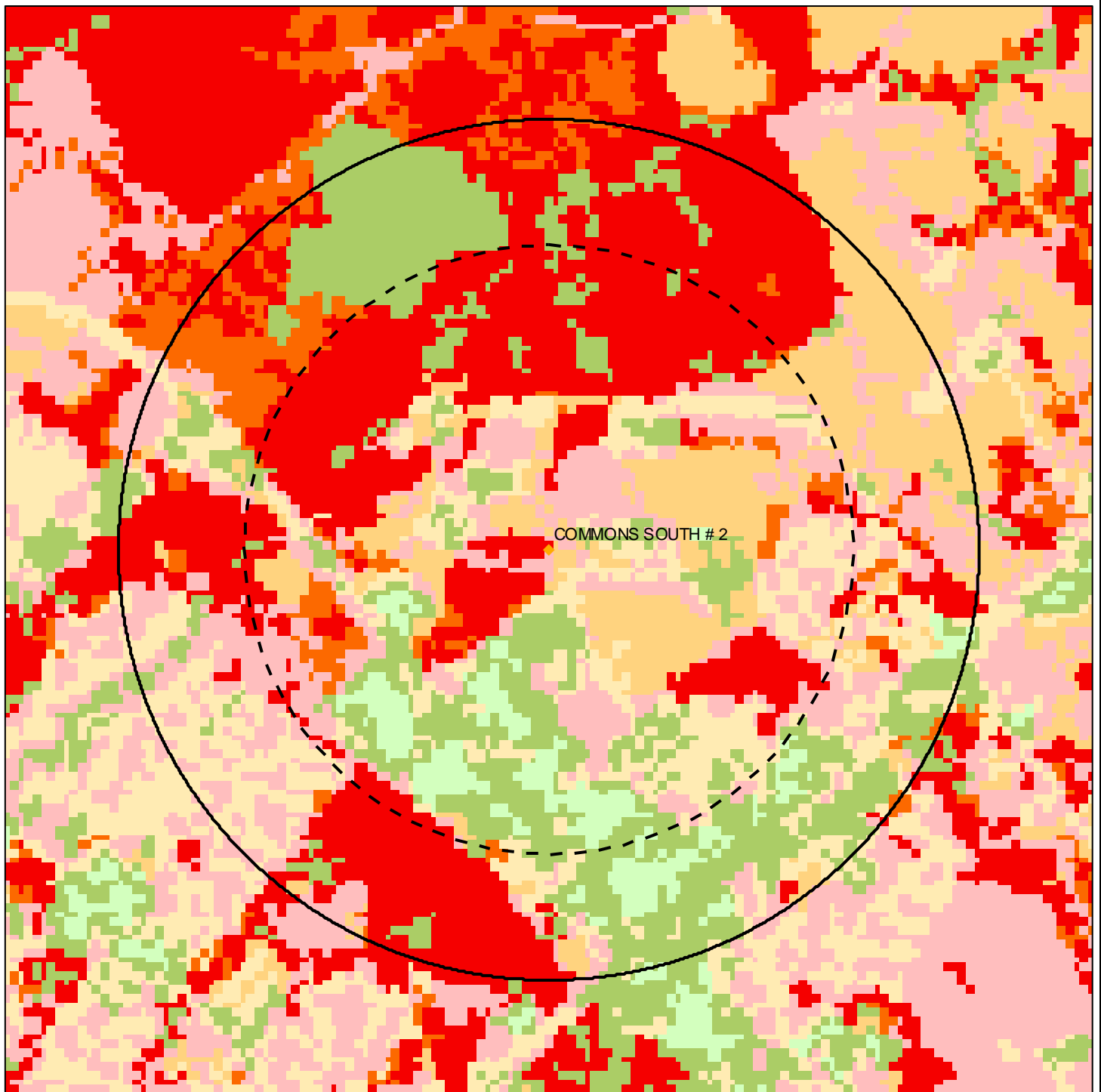
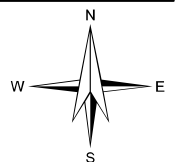
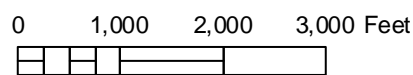


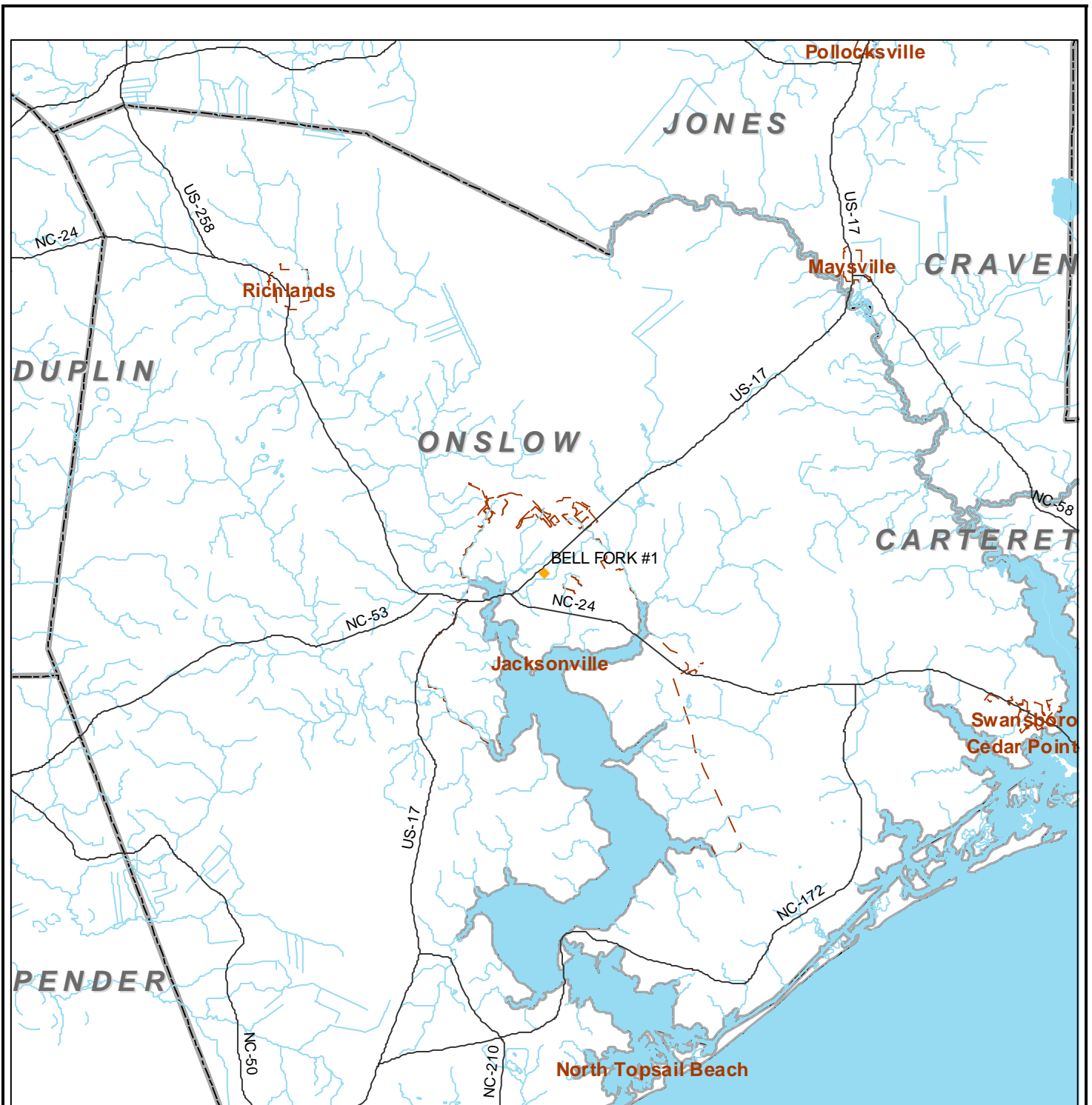
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, COMMONS SOUTH # 2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

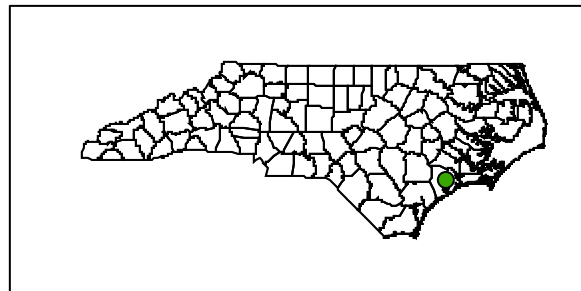
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



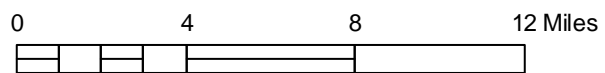
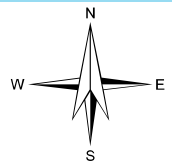


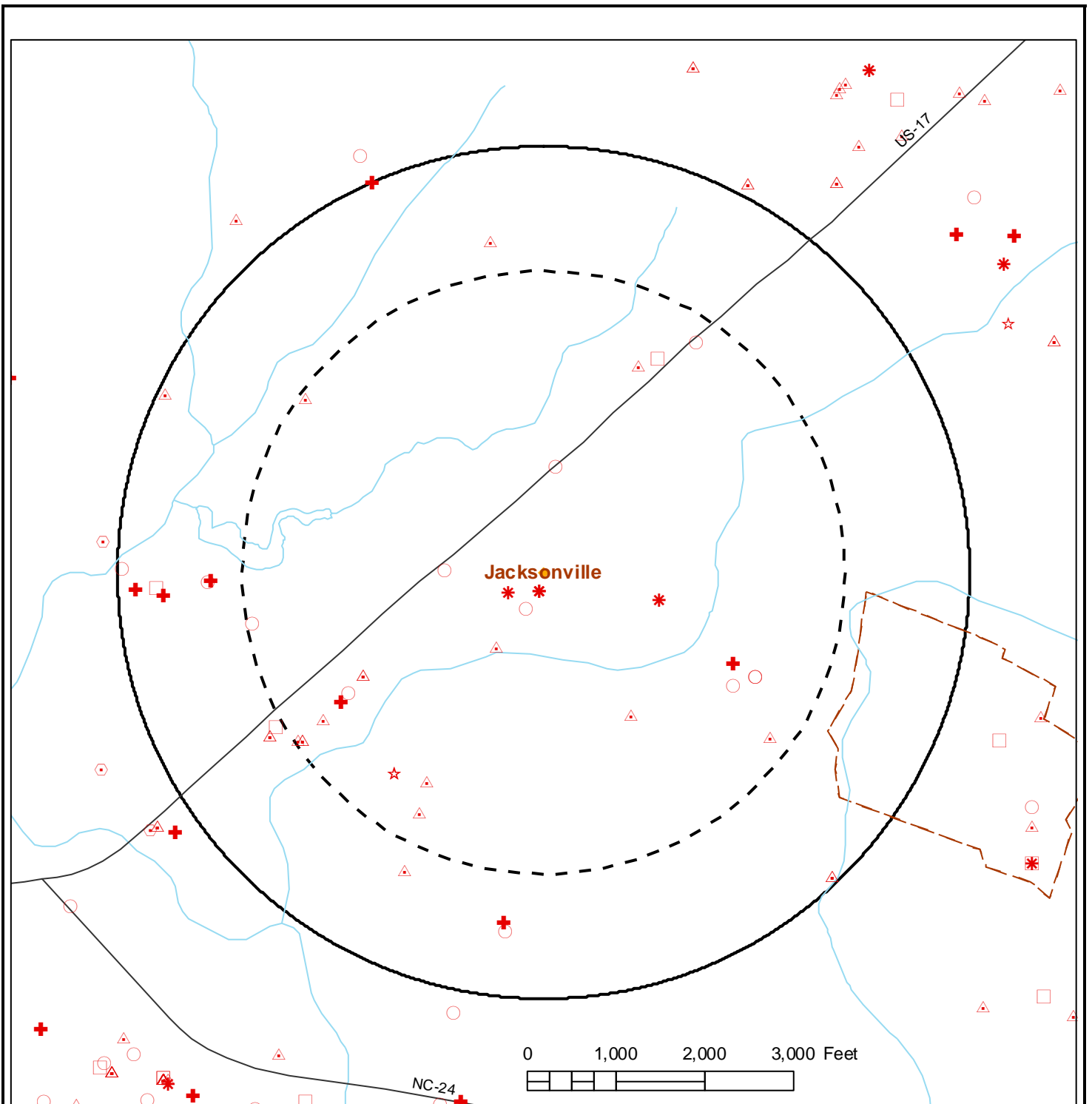
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- Roads
- Rivers and Streams
- Major Hydrology
- Municipal Boundaries
- County Boundaries

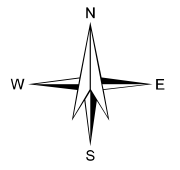




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1

PCS Types

- | | | |
|---------------------------------|--------------------------|--|
| □ Animal Operations | ⬡ Septage Disposal Sites | — Roads |
| △ CERCLIS Sites | ⬢ Soil Remediation Sites | — Rivers and Streams |
| □ RCRA Gen. / Trans. Facilities | * Solid Waste Facilities | — Major Hydrology |
| ● Non Discharge Permits | * Tier II Sites | - - - Municipal Boundaries |
| △ NPDES Permits | ⬢ RCRA TSD Facilities | ▭ Ground Water Assessment Area - Delineated Area |
| ★ National Priority List Sites | ⬢ Old Landfill Sites | - - - Ground Water Assessment Area - Zone A |
| ⊕ PCB Sites | ☆ UIC Permits | |
| ○ Pollution Incidents | ⊕ UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BELL FORK #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
B & S BODY SHOP INC	NCD981930738	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkno wn	ONSLOW
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	RCRA Gen. / Trans. Facilities	H	HENDERSON DR, STE 100	JACKSONVILLE	Unkno wn	ONSLOW
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollution Incidents	H	910 N. MARINE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
SUBURBAN PROPANE	94193	Pollution Incidents	H	1103 N. MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLO
ROY'S DISCOUNT AUTO	9655	Pollution Incidents	H	700 GUM BRANCH RD.	JACKSONVILLE	Unkno wn	ONSLO
NORTHWOODS EXXON	11651	Pollution Incidents	H	2502 ONSLOW DR.	JACKSONVILLE	Unkno wn	ONSLO
S & W READY MIX-JACKSONVILLE	15407	Pollution Incidents	H	24 East THOMPSON ST.	JACKSONVILLE	Unkno wn	ONSLO

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
SCOTCH MAN # 46	19794	Pollution Incidents	H	2560 ONSLOW DR.	JACKSONVILLE	Unkno wn	ONSLO
MOORE'S MINI MART #4 (South UST Basin)	21746	Pollution Incidents	H	303 BELL FORK RD.	JACKSONVILLE	Unkno wn	ONSLO
DASH N #10	32406	Pollution Incidents	H	1316 Hargett Street	Jacksonville	Unkno wn	ONSLO
MOORE'S MINI MART # 4 (North UST Basin)	3426	Pollution Incidents	H	303 BELL FORK RD.	JACKSONVILLE	Unkno wn	ONSLO
carolina gas partners	32681	Pollution Incidents	H	1709 north marine blvd	jacksonville	Unkno wn	ONSLO
Moore's Mini Mart #4 premium submersible	32924	Pollution Incidents	H	303 Bellfork Road	Jacksonvill	Unkno wn	ONSLO
A1 Cleaners	670006	Pollution Incidents	H	327 Henderson Dr	Jacksonville	Unkno wn	ONSLOW
Plant 49 - Southern Equipment Company, Inc. d/b/a Ready Mixed Concrete Company	4028454	Tier II Sites	H	222 Bellfork Road	Jacksonville	Unkno wn	Onslow
Waste Industries, Jacksonville	4035054	Tier II Sites	H	21 E. Thompson St.	Jacksonville	Unkno wn	Onslow
Inergy Propane, LLC	4039804	Tier II Sites	H	25 East Thompson St	Jacksonville	Unkno wn	Onslow
Inergy Propane, LLC	4039855	Tier II Sites	H	1103 N Marine Blvd	Jacksonville	Unkno wn	Onslow

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
CJS FOOD STORE - MIHIR INC	00-0-0000020812	UST Sites	H	1010 GUM BRANCH ROAD	JACKSONVILLE	Unkno wn	ONSLOW
DASH N 10	00-0-0000021378	UST Sites	H	1316 HARGETT ST	JACKSONVILLE	Unkno wn	ONSLOW
PHILLIPS 66 CO #023225 (DUPL SITE) ORIGINAL: 0-020163	00-0-0000022278	UST Sites	H	2560 ONSLOW DR	JACKSONVILLE	Unkno wn	ONSLOW
THE PANTRY 825	00-0-0000031259	UST Sites	H	2561 ONSLOW DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
BP FOOD MART	00-0-0000023014	UST Sites	H	303 BELL FORK ROAD	JACKSONVILLE	Unkno wn	ONSLOW
UNION 76 STATION/LES' AUTO	00-2-0000020246	UST Sites	H	337 HENDERSON DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
WHIZZ MART 4	00-0-0000034491	UST Sites	H	908 NORTH MARINE BOULEVARD	JACKSONVILLE	Unkno wn	ONSLOW
Longley Supply Company Jacksonville	SW8070678	NPDES Permits	L	1520 Bell Fork Rd	Jacksonville	Unkno wn	ONSLOW
Barrus Lift Station Replacement	SWG040024	NPDES Permits	L	Bell Fork Rd	Jacksonville	Unkno wn	ONSLOW
Clyde Erwin Elementary School	SW8060327	NPDES Permits	L	323 New River Dr	Jacksonville	Unkno wn	ONSLOW
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	NPDES Permits	L	Onslow	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
New River Artificial Reef AR398	SW8100921	NPDES Permits	L	New River	Jacksonville	Unknown	ONSLOW
The Crossing at Country Club	SW8931106	NPDES Permits	L	Huff Dr	Jacksonville	Unknown	ONSLOW
Bojangles Jacksonville N Marine Blvd	SW8101019	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unknown	ONSLOW
Advance Auto Parts Marine Boulevard	SW8130713	NPDES Permits	L	Int Of N Marine Blvd And Onslow Dr	Jacksonville	Unknown	ONSLOW
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	NPDES Permits	L	Int Of N Marine Blvd Onslow Dr	Jacksonville	Unknown	ONSLOW
502 N Marine Boulevard Project	SW8080636	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unknown	ONSLOW
Bailey Driveway Marine Boulevard	SW8110618	NPDES Permits	L	502 N Marine Blvd	Jacksonville	Unknown	ONSLOW
Msa Jacksonville Ph I	SW8970538	NPDES Permits	L	1711 Hargett St	Jacksonville	Unknown	ONSLOW
Rite Aid Jacksonville	SW8101116	NPDES Permits	L	2347 Onslow Dr	Jacksonville	Unknown	ONSLOW
The Gasperson Inc Subdivision	SW8070407	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unknown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Oreilly Auto Parts Jacksonville	SW8110110	NPDES Permits	L	912 N Marine Blvd	Jacksonville	Unknown	ONSLOW
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	NPDES Permits	L	Dewitt St Collins Branch Sewer	Jacksonville	Unknown	ONSLOW
SR 1702 NCDOT Project No U4007A	SW8090904	NPDES Permits	L	White Street Extension	Jacksonville	Unknown	ONSLOW
Covered Walks to Serve Coastal Carolina Comm. College	SW8060130	NPDES Permits	L	444 Western Blvd	Jacksonville	Unknown	ONSLOW
First Original Free Will Baptist Church	SW8010631	NPDES Permits	L	NCSR 1308 Gum Branch Rd	Jacksonville	Unknown	ONSLOW
Bradley and Donna Kuegel SFR	WI0800258	UIC Permits	M	402 Nelson Dr	Jacksonville	Unknown	ONSLOW
Gerald and JoAnn Skinner Sr. SFR	WI0800259	UIC Permits	M	400 Nelson Dr	Jacksonville	Unknown	ONSLOW
Jacksonville - East Thompson Street Facility	NCG140027	NPDES Permits	L	24 E Thompson St	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, BELL FORK #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
B & S BODY SHOP INC	NCD981930738	GENERATOR	SQG
B & S BODY SHOP INC	NCD981930738	TRANSPORTER	N
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	GENERATOR	SQG
NCDSCA 067-0004 (COASTAL DRY CLEANERS)	NCR000149492	TRANSPORTER	N
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	GENERATOR	SQG
NCDSCA 067-0006 (A1 CLEANERS)	NCR000141101	TRANSPORTER	N
GREAT GAS AND OIL CO./BULK STORAGE	17643	Pollutant Type	GASOLINE/DIESEL/KEROSENE
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Risk	I
GREAT GAS AND OIL CO./BULK STORAGE	17643	Site Priority Code	240
SUBURBAN PROPANE	94193	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SUBURBAN PROPANE	94193	Site Risk	H
ROY'S DISCOUNT AUTO	9655	Pollutant Type	GASOLINE/DIESEL/KEROSENE
ROY'S DISCOUNT AUTO	9655	Site Risk	H
ROY'S DISCOUNT AUTO	9655	Site Priority Code	20B
NORTHWOODS EXXON	11651	Pollutant Type	GASOLINE/DIESEL/KEROSENE
NORTHWOODS EXXON	11651	Site Risk	L

PCS Name	PCS ID	Attribute	Value
NORTHWOODS EXXON	11651	Site Priority Code	80E
S & W READY MIX-JACKSONVILLE	15407	Pollutant Type	GASOLINE/DIESEL/KEROSENE
S & W READY MIX-JACKSONVILLE	15407	Site Risk	L
S & W READY MIX-JACKSONVILLE	15407	Site Priority Code	30D
SCOTCHMAN # 46	19794	Pollutant Type	GASOLINE/DIESEL/KEROSENE
SCOTCHMAN # 46	19794	Site Risk	I
SCOTCHMAN # 46	19794	Site Priority Code	90
MOORE'S MINI MART #4 (South UST Basin)	21746	Pollutant Type	GASOLINE/DIESEL/KEROSENE
MOORE'S MINI MART #4 (South UST Basin)	21746	Site Risk	L
DASH N #10	32406	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DASH N #10	32406	Site Risk	U
MOORE'S MINI MART # 4 (North UST Basin)	3426	Pollutant Type	GASOLINE/DIESEL/KEROSENE
MOORE'S MINI MART # 4 (North UST Basin)	3426	Site Risk	L
MOORE'S MINI MART # 4 (North UST Basin)	3426	Site Priority Code	85D
carolina gas partners	32681	Pollutant Type	GASOLINE/DIESEL/KEROSENE
Moore's Mini Mart #4 premium submersible	32924	Pollutant Type	GASOLINE/DIESEL/KEROSENE
Moore's Mini Mart #4 premium submersible	32924	Site Risk	I
Longley Supply Company Jacksonville	SW8070678	Permit Type	State Stormwater
Longley Supply Company Jacksonville	SW8070678	Permit Issued Date	12/21/2007
Longley Supply Company Jacksonville	SW8070678	Permit Expiration Date	12/21/2021
Barrus Lift Station Replacement	SWG040024	Permit Type	State Stormwater, Linear Utility Projects COC

PCS Name	PCS ID	Attribute	Value
Barrus Lift Station Replacement	SWG040024	Permit Issued Date	3/1/2011
Clyde Erwin Elementary School	SW8060327	Permit Type	State Stormwater
Clyde Erwin Elementary School	SW8060327	Permit Issued Date	11/25/2013
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Type	State Stormwater
Duke Energy Progress Transmission Line Camp Geiger	SW8981230	Permit Issued Date	1/28/1999
New River Artificial Reef AR398	SW8100921	Permit Type	State Stormwater
New River Artificial Reef AR398	SW8100921	Permit Issued Date	10/21/2010
The Crossing at Country Club	SW8931106	Permit Type	State Stormwater
The Crossing at Country Club	SW8931106	Permit Issued Date	11/19/1993
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Type	State Stormwater
Bojangles Jacksonville N Marine Blvd	SW8101019	Permit Issued Date	4/12/2011
Advance Auto Parts Marine Boulevard	SW8130713	Permit Type	State Stormwater
Advance Auto Parts Marine Boulevard	SW8130713	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Type	State Stormwater
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Issued Date	8/14/2013
Bailey Subdivision US 17 and Onslow Drive formerly Eckerd Drug Store	SW8991107	Permit Expiration Date	1/27/2020

PCS Name	PCS ID	Attribute	Value
502 N Marine Boulevard Project	SW8080636	Permit Type	State Stormwater
502 N Marine Boulevard Project	SW8080636	Permit Issued Date	10/1/2008
Bailey Driveway Marine Boulevard	SW8110618	Permit Type	State Stormwater
Bailey Driveway Marine Boulevard	SW8110618	Permit Issued Date	7/27/2011
Msaa Jacksonville Ph I	SW8970538	Permit Type	State Stormwater
Msaa Jacksonville Ph I	SW8970538	Permit Issued Date	7/25/1997
Msaa Jacksonville Ph I	SW8970538	Permit Expiration Date	7/25/2007
Rite Aid Jacksonville	SW8101116	Permit Type	State Stormwater
Rite Aid Jacksonville	SW8101116	Permit Issued Date	12/9/2010
The Gasperson Inc Subdivision	SW8070407	Permit Type	State Stormwater
The Gasperson Inc Subdivision	SW8070407	Permit Issued Date	10/28/2010
The Gasperson Inc Subdivision	SW8070407	Permit Expiration Date	4/13/2021
Oreilly Auto Parts Jacksonville	SW8110110	Permit Type	State Stormwater
Oreilly Auto Parts Jacksonville	SW8110110	Permit Issued Date	2/7/2011
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	Permit Type	State Stormwater
2009 Sewer Improvements Dewitt Street and Collins Branch Sewer	SW8100722	Permit Issued Date	8/10/2010
SR 1702 NCDOT Project No U4007A	SW8090904	Permit Type	State Stormwater
SR 1702 NCDOT Project No U4007A	SW8090904	Permit Issued Date	1/29/2010
Covered Walks to Serve Coastal Carolina Comm. College	SW8060130	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Covered Walks to Serve Coastal Carolina Comm. College	SW8060130	Permit Issued Date	2/8/2006
First Original Free Will Baptist Church	SW8010631	Permit Type	State Stormwater
First Original Free Will Baptist Church	SW8010631	Permit Issued Date	9/2/2003
First Original Free Will Baptist Church	SW8010631	Permit Expiration Date	9/2/2017
Bradley and Donna Kuegel SFR	WI0800258	Permit Type	Injection Heating/Cooling Water Return Well
Gerald and JoAnn Skinner Sr. SFR	WI0800259	Permit Type	Injection Heating/Cooling Water Return Well
Jacksonville - East Thompson Street Facility	NCG140027	Permit Type	Ready Mix Concrete Stormwater/Wastewater Discharge COC
Jacksonville - East Thompson Street Facility	NCG140027	Permit Issued Date	7/1/2011
Jacksonville - East Thompson Street Facility	NCG140027	Permit Expiration Date	6/30/2016
Jacksonville - East Thompson Street Facility	NCG140027	Receiving Stream	NEW RIVER

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, BELL FORK #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , BELL FORK #1**

Unsaturated Zone Rating	70.2
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

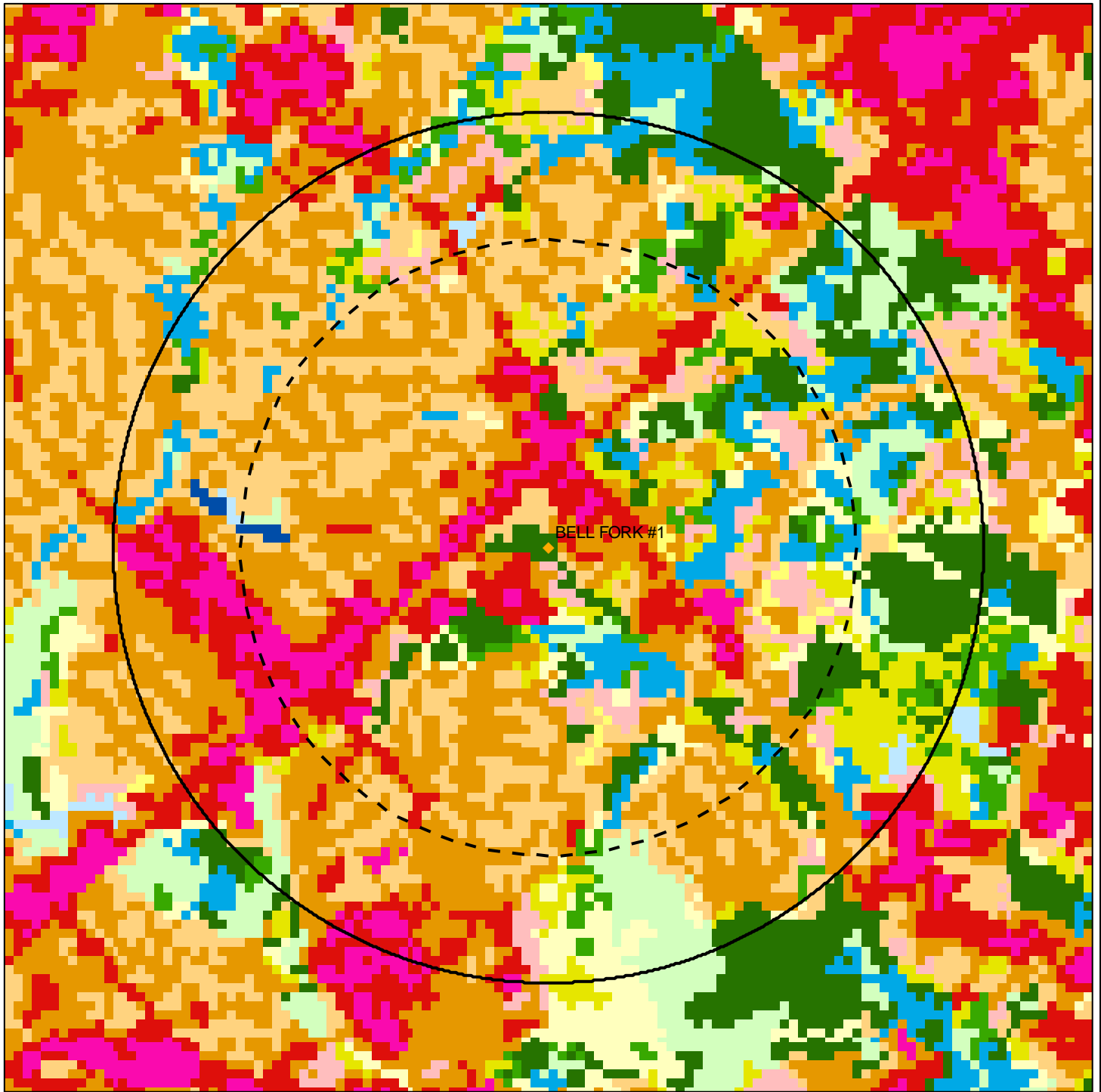
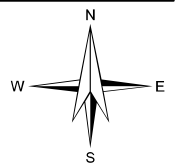


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1

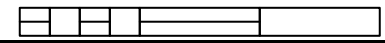


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



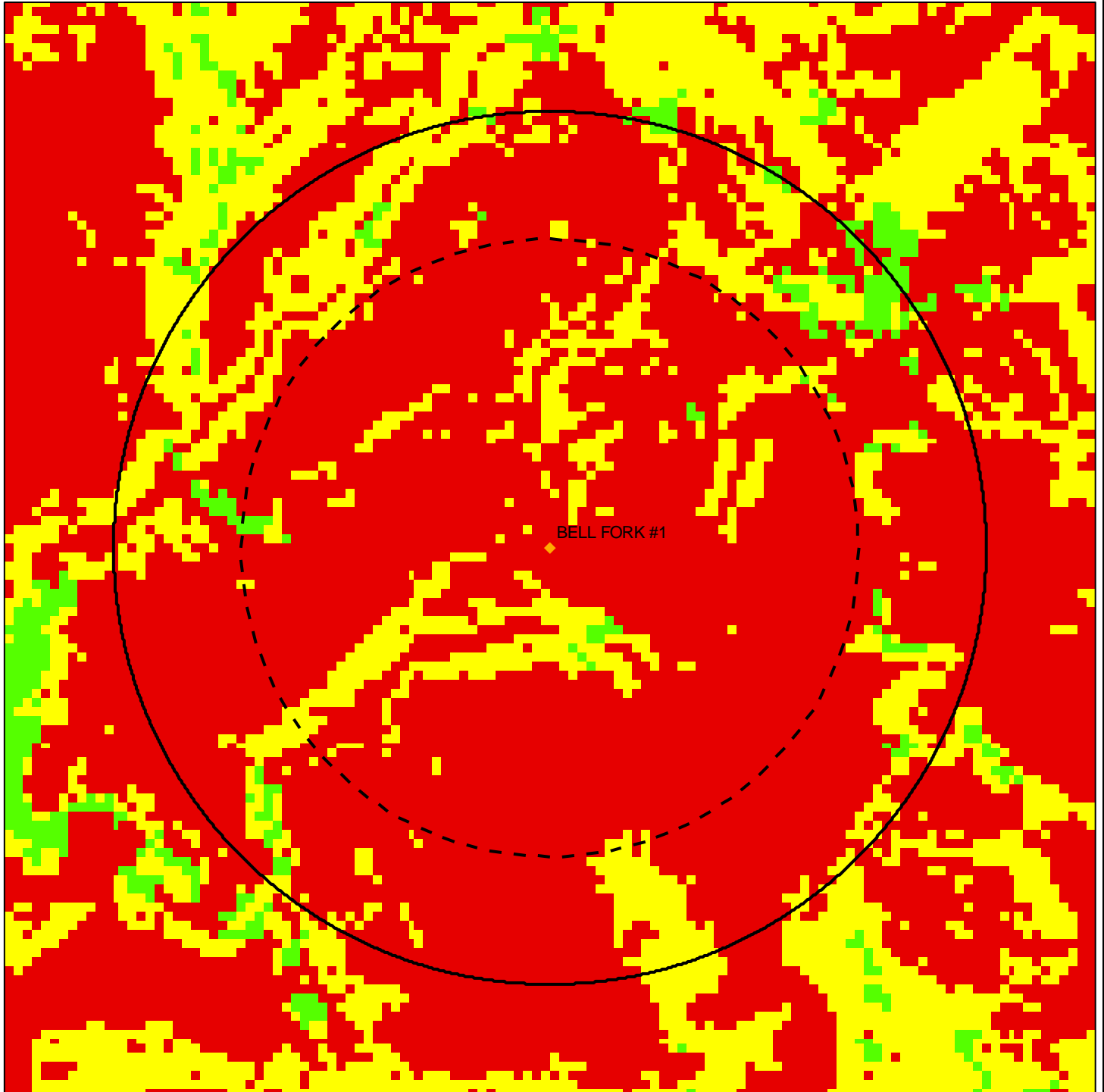
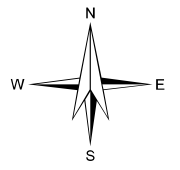
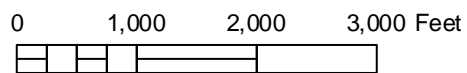


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



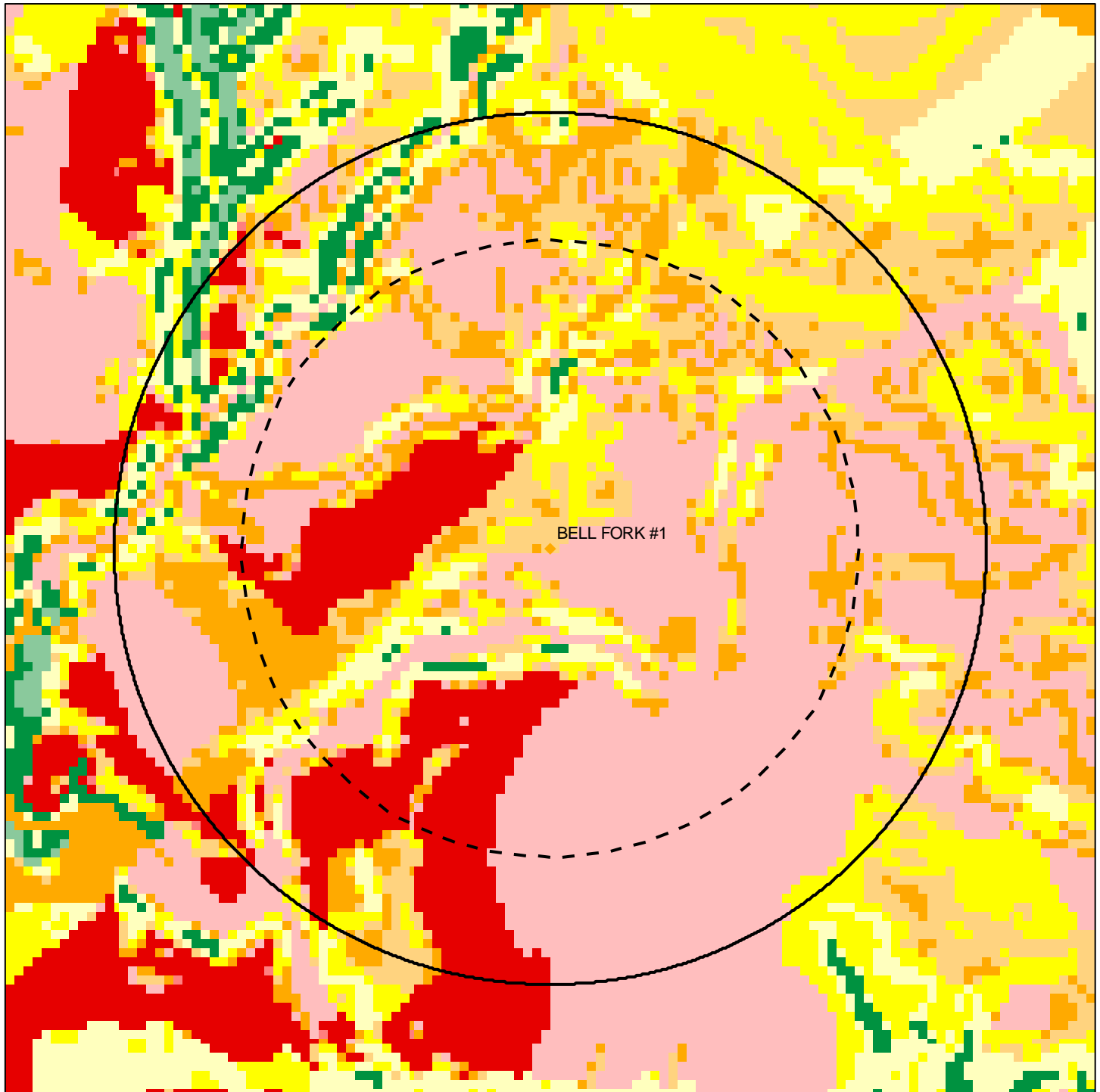
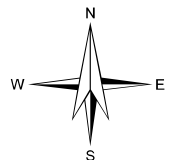
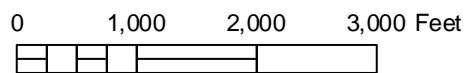


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



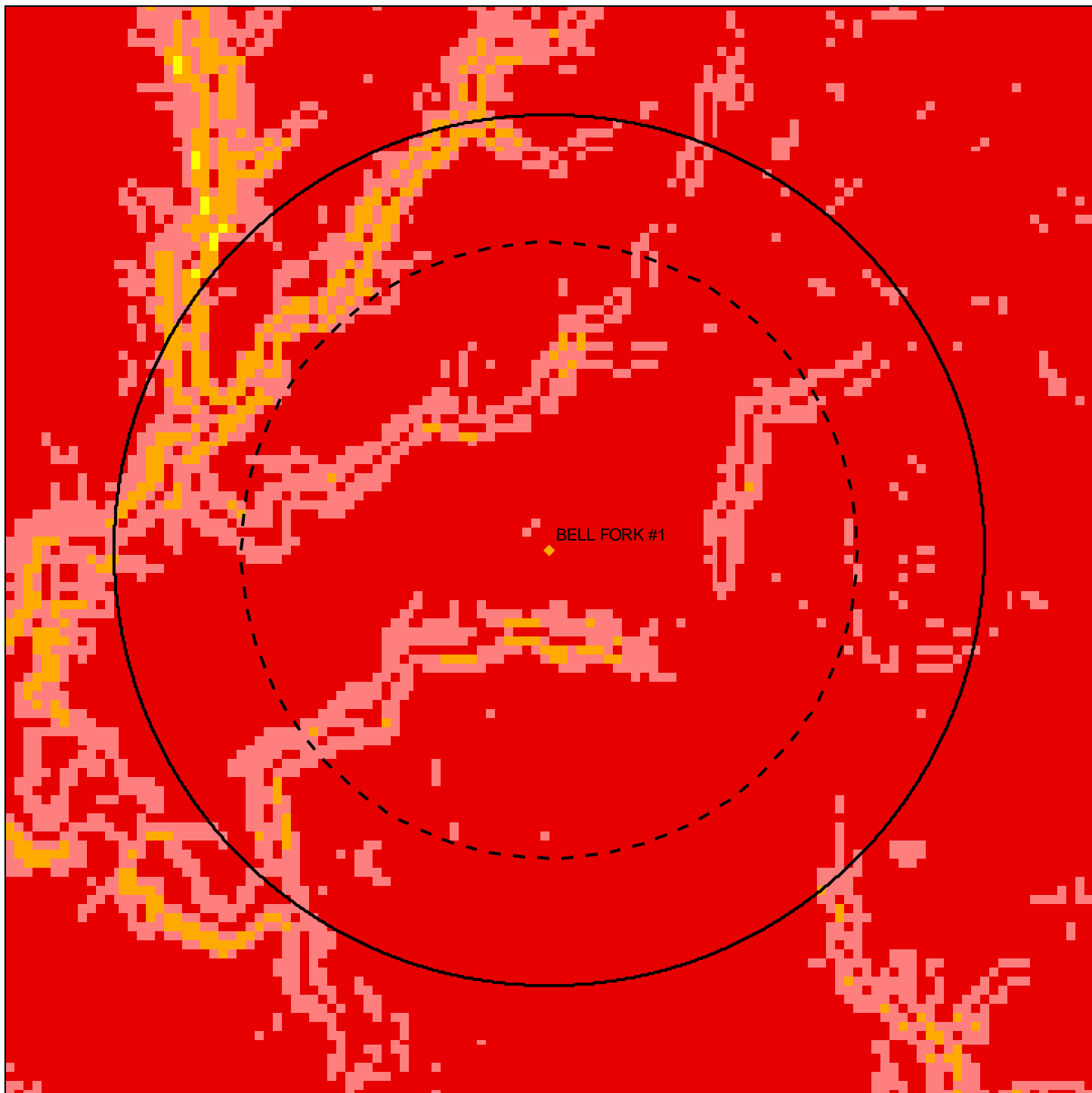
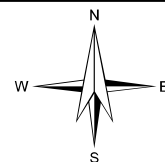








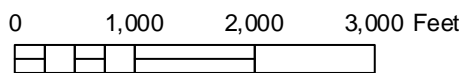


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



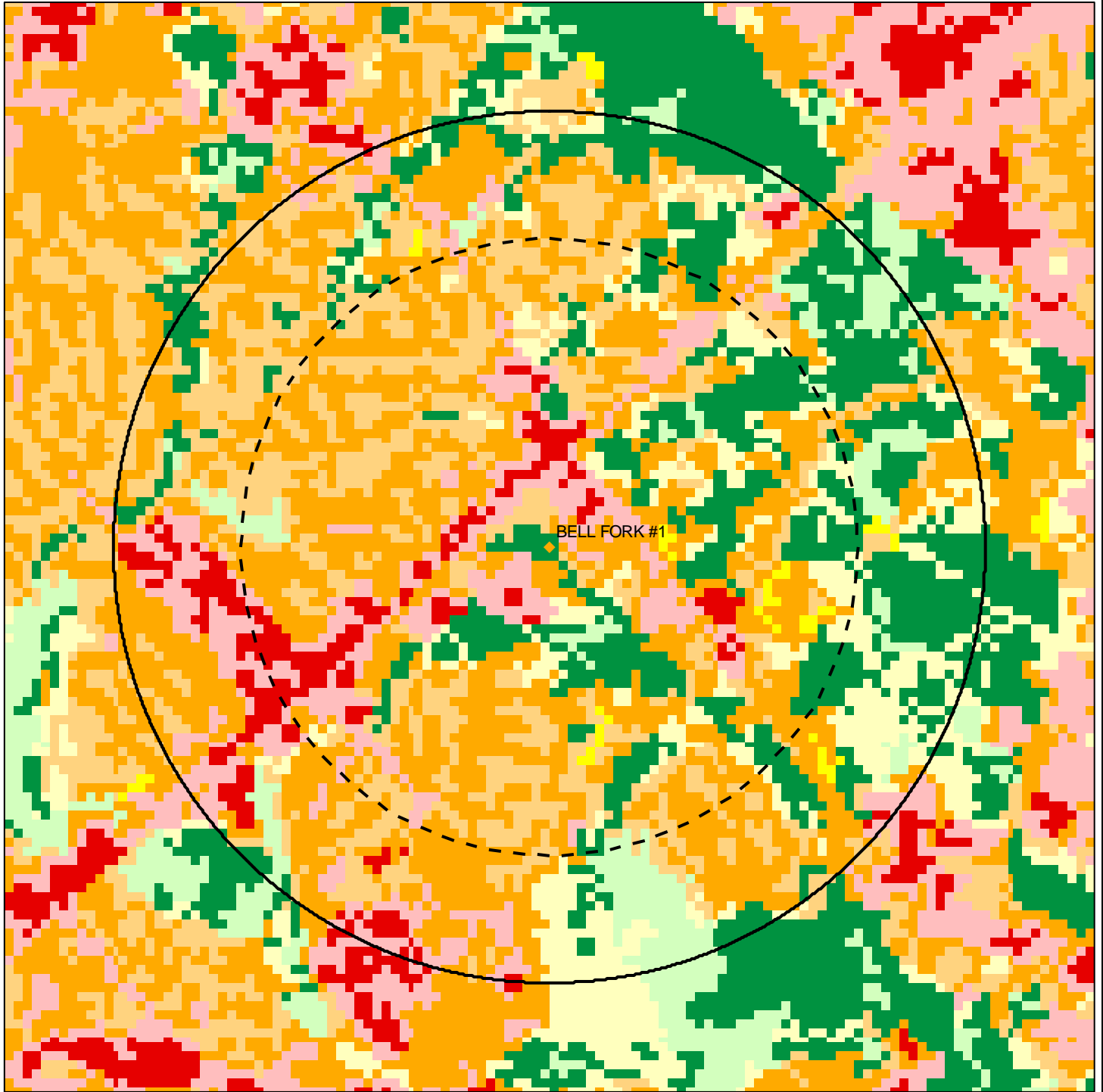
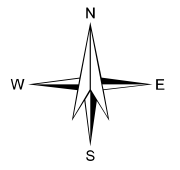




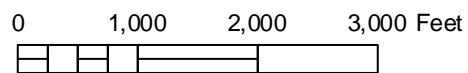


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



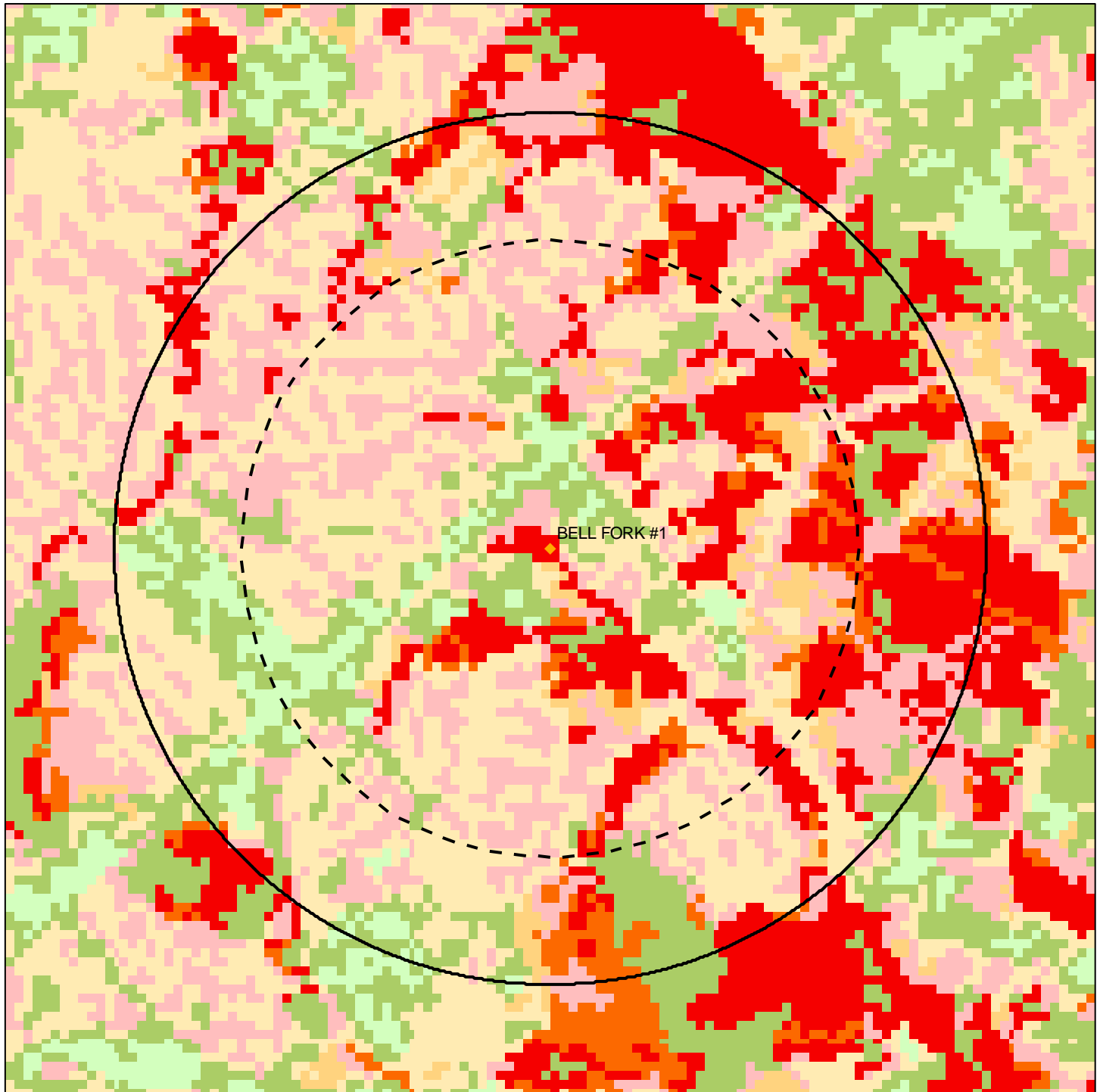
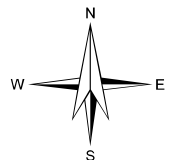
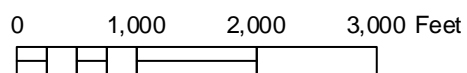


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, BELL FORK #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

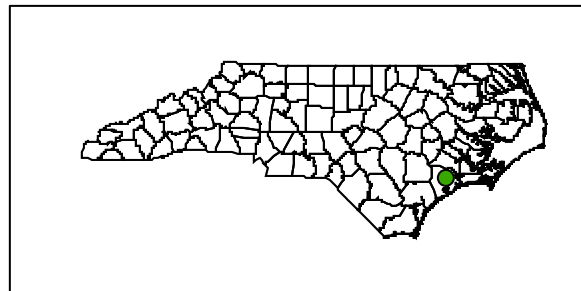
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



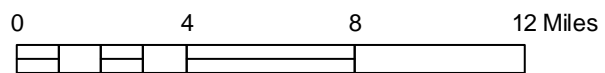
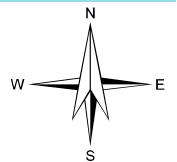


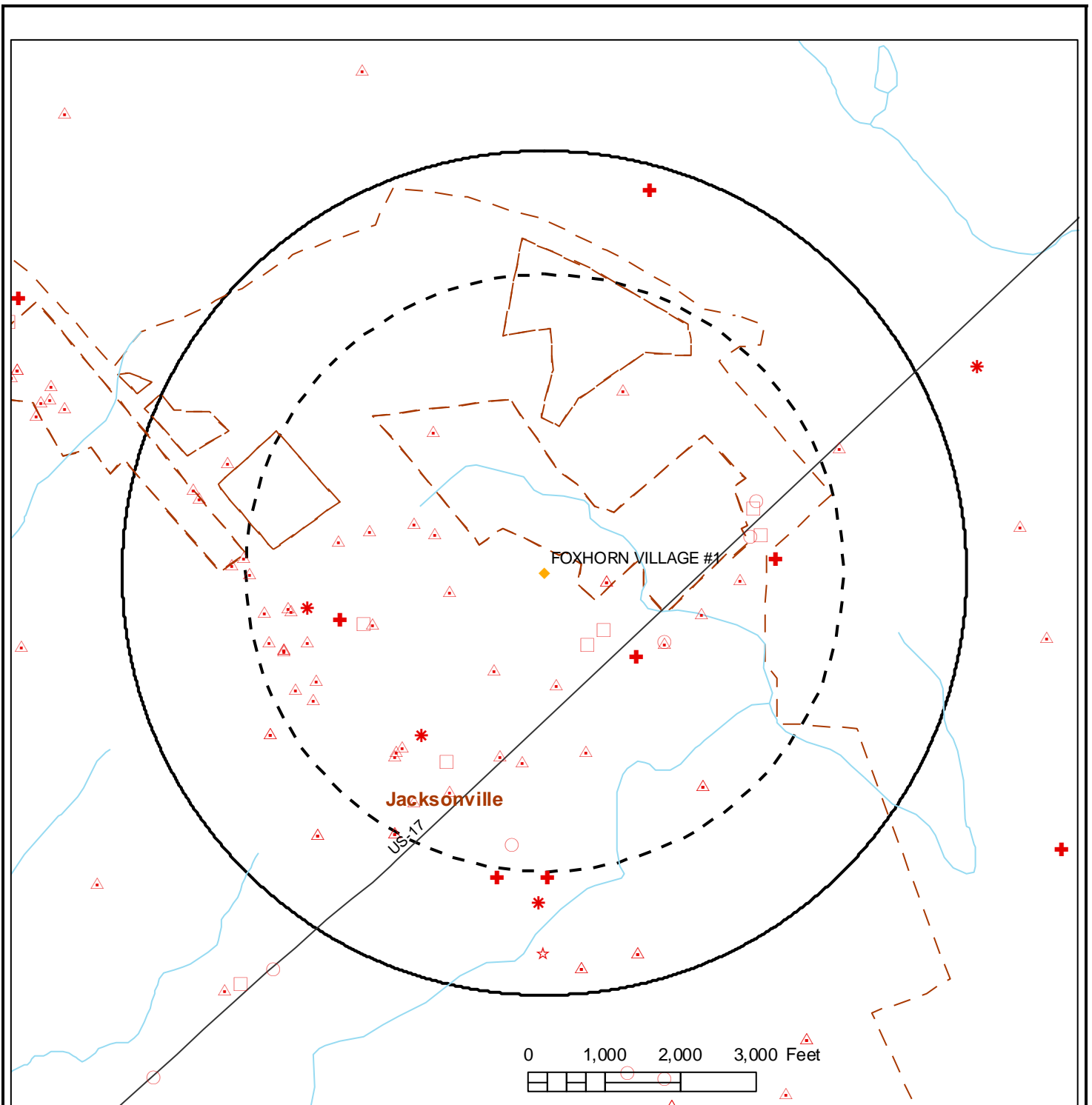
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries

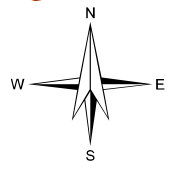




MAP 2. DELINEATED AREA AND PCS MAP
 JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, FOXHORN VILLAGE #1**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
HOME DEPOT #3655	NC0991302563	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD - HWY 17	JACKSONVILLE	Unkno wn	ONSLOW
LEJEUNE HONDA CARS	NCD982117475	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
MOORE BUICK PONTIAC INC	NCD982118127	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
NATIONAL DODGE INC	NCD075565978	RCRA Gen. / Trans. Facilities	H	N MARINE BLVD	JACKSONVILLE	Unkno wn	ONSLOW
SAM'S CLUB #6573	NCR000005314	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
WALMART SUPERCENTER #1298	NCR000141994	RCRA Gen. / Trans. Facilities	H	N MARINE RD	JACKSONVILLE	Unkno wn	ONSLOW
AUTO LOGIC	11084	Pollution Incidents	H	2601 N. MARINE BLVD.	JACKSONVILLE	Unkno wn	ONSLO
A & B TIRE SERVICE	15464	Pollution Incidents	H	472 WESTERN BLVD.	JACKSONVILLE	Unkno wn	ONSLO
MOORE BUICK	17930	Pollution Incidents	H	HWY 17	JACKSONVILLE	Unkno wn	ONSLO

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COBLE DAIRY PRODUCT S- JACKSONVILLE	6596	Pollution Incidents	H	HWY 17 N	JACKSONVILLE	Unkno wn	ONSLO
LOWE'S OF JACKSONVILLE, NC (STORE # 0556)	4042721	Tier II Sites	H	1255 WESTERN BLVD	JACKSONVILLE	Unkno wn	Onslow
SAM'S CLUB #6573	4037201	Tier II Sites	H	1170 Western Blvd.	Jacksonville	Unkno wn	Onslow
Wilco #388	4055083	Tier II Sites	H	454 Western Boulevard	Jacksonville	Unkno wn	Onslow
PANTRY 3125 DBA QUICKSTOP	00-0-0000021309	UST Sites	H	116 PINEY GREEN ROAD	JACKSONVILLE	Unkno wn	ONSLOW
SAMS CLUB GAS STATION 6573	00-0-0000037067	UST Sites	H	1170 WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
HUMPHREY HEATING	00-0-0000020150	UST Sites	H	2423 MARINE BOULEVARD NORTH	JACKSONVILLE	Unkno wn	ONSLOW
JACKSONVILLE MIDDLE SCHOOL	00-0-0000035142	UST Sites	H	315 COMMONS DRIVE	JACKSONVILLE	Unkno wn	ONSLOW
WILCO 388	00-0-0000032757	UST Sites	H	454 WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
HAN-DEE HUGO'S 33	00-0-0000020256	UST Sites	H	467 WESTERN BLVD	JACKSONVILLE	Unkno wn	ONSLOW
CCCC Business Technology Building	SW8880909	NPDES Permits	L	444 Western Blvd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
CCCC Continuing Education & Public Services Bldg	SW8940815	NPDES Permits	L	444 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Coastal Carolina Community College Access Road	SW8080930	NPDES Permits	L	444 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Coastal Carolina Community College Maintenance Building and Parking Lot 4	SW8920903	NPDES Permits	L	444 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Kennith Whichard Commercial Subdivision	SW8040624	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Chick-Fil-A Gateway South	SW8040711	NPDES Permits	L	1405 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Texas Roadhouse of Jacksonville	SW8040908	NPDES Permits	L	103 Moosehaven Rd	Jacksonville	Unkno wn	ONSLOW
Med-Care Lot 1 Moosehaven Business Park	SW8041009	NPDES Permits	L	Hwy 17 Moosehaven Rd	Jacksonville	Unkno wn	ONSLOW
Outback Steakhouse	SW8980241	NPDES Permits	L	Patel Subdivision	Jacksonville	Unkno wn	ONSLOW
Walmart Supercenter Jacksonville	SW8921003	NPDES Permits	L	Int Of Hwy 17 Western Blvd	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Morton Property	SW8050234	NPDES Permits	L	Onslow County	Jacksonville	Unkn wn	ONSLOW
The Village Country Club Hills Section IV B	SW8980423	NPDES Permits	L	Winthrop Way	Jacksonville	Unkn wn	ONSLOW
Texas Steakhouse & Saloon	SW8970933	NPDES Permits	L	101 Parkwood Dr	Jacksonville	Unkn wn	ONSLOW
Extended Stay America Efficiency Studios	SW8980232	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkn wn	ONSLOW
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	NPDES Permits	L	1110 Western Blvd	Jacksonville	Unkn wn	ONSLOW
Comfort Inn Suites	SW8951229	NPDES Permits	L	130 Workshop Ln	Jacksonville	Unkn wn	ONSLOW
SECU - Jacksonville	SW8010517	NPDES Permits	L	1079 Western Blvd	Jacksonville	Unkn wn	ONSLOW
Hardees Western Boulevard	SW8940420	NPDES Permits	L	1106 Western Blvd	Jacksonville	Unkn wn	ONSLOW
Fire Station 4 Jacksonville	SW8000332	NPDES Permits	L	100 Firehouse Ln	Jacksonville	Unkn wn	ONSLOW
Jacksonville Commons	SW8950417	NPDES Permits	L	Off Recreation Loop And Commons Dr N	Jacksonville	Unkn wn	ONSLOW
Fairfield Inn Jacksonville	SW8990319	NPDES Permits	L	121 Circuit Ln	Jacksonville	Unkn wn	ONSLOW
National Dodge	SW8930216	NPDES Permits	L	2223 N Marine Blvd	Jacksonville	Unkn wn	ONSLOW
Sleep Inn Suites	SW8010107	NPDES Permits	L	129 Circuit Ln	Jacksonville	Unkn wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	NPDES Permits	L	1171 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Affordable Suites	SW8080112	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Palmetto Park Subdivisio n	SW8051147	NPDES Permits	L	King Richard Ct	Jacksonville	Unkno wn	ONSLOW
The Dail Center-Lot 2, Northwest Business Park	SW8030105	NPDES Permits	L	Jacksonvill NC	Jacksonville	Unkno wn	ONSLOW
City of Jacksonvill e Elevated Water Storage Tank and Water System Improveme nts	SW8030735	NPDES Permits	L	Commons Dr N	Jacksonville	Unkno wn	ONSLOW
Blue Springs Apartments	SW8031111	NPDES Permits	L	460 McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Logan's Roadhouse Restaurant	SW8990310	NPDES Permits	L	1177 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lowe's Home Center	SW8970415	NPDES Permits	L	Western Blvd	Jacksonville	Unkno wn	ONSLOW
Sams Club Jacksonvill e Store 6573-04	SW8931222	NPDES Permits	L	1170 Western Blvd	Jacksonville	Unkno wn	ONSLOW
National Automotiv e	SW8070721	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
O'Charley's Restaurant & Bar	SW8020209	NPDES Permits	L	1270 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Cross Pointe Centre	SW8960624	NPDES Permits	L	1250 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	NPDES Permits	L	1260 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Candlewood Suites	SW8061125	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
West Fairway Road	SW8080102	NPDES Permits	L	W Fairway Rd	Jacksonville	Unkno wn	ONSLOW
West Fairway Road	SW8900506	NPDES Permits	L	W Fairway Rd	Jacksonville	Unkno wn	ONSLOW
Marine Federal Credit Union Hwy 17	SW8970849	NPDES Permits	L	US Hwy 17 N	Jacksonville	Unkno wn	ONSLOW
Gateway Plaza Shopping Center	SW8980817	NPDES Permits	L	1335 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Western Blvd Retail	SW8130710	NPDES Permits	L	1345 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Lot 2-- Cross Pointe Centre	SW8020631	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unkno wn	ONSLOW
The Legacy at Abbingon Place	SW8030514	NPDES Permits	L	McDaniel Dr	Jacksonville	Unkno wn	ONSLOW
Autumn Ridge Apartments	SW8010122	NPDES Permits	L	300 Autumn Ridge Dr	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	NPDES Permits	L	500 Talon Cir	Jacksonville	Unknown	ONSLow
Charleston Place	SW8060704	NPDES Permits	L	McDaniel Drive Extension	Jacksonville	Unknown	ONSLow
Windsor Place	SW8000202	NPDES Permits	L	NCSR 1470 Western Blvd	Jacksonville	Unknown	ONSLow
Marine Chevrolet	SW8960705	NPDES Permits	L	1408 Western Blvd	Jacksonville	Unknown	ONSLow
Olive Garden Restaurant Jacksonville	SW8070137	NPDES Permits	L	1415 Western Blvd	Jacksonville	Unknown	ONSLow
Jacksonville Commons Elementary and Middle School	SW8951022	NPDES Permits	L	1121 Commons Dr	Jacksonville	Unknown	ONSLow
Northside at the Commons, Section VIII-SW & IX	SW8030920	NPDES Permits	L	Lots 12-17 On Chastain Ct In Section VIII	Jacksonville	Unknown	ONSLow
Coastal Carolina Community College	WI0800382	UIC Permits	M	444 Western Blvd	Jacksonville	Unknown	ONSLow
Foss Auto Salvage - Northeast Jacksonville	NCG100119	NPDES Permits	L	199 Drummer Kellum Rd	Jacksonville	Unknown	ONSLow

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, FOXHORN VILLAGE #1**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
HOME DEPOT #3655	NC0991302563	GENERATOR	SQG
HOME DEPOT #3655	NC0991302563	TRANSPORTER	N
LEJEUNE HONDA CARS	NCD982117475	GENERATOR	SQG
LEJEUNE HONDA CARS	NCD982117475	TRANSPORTER	N
MOORE BUICK PONTIAC INC	NCD982118127	GENERATOR	SQG
MOORE BUICK PONTIAC INC	NCD982118127	TRANSPORTER	N
NATIONAL DODGE INC	NCD075565978	GENERATOR	SQG
NATIONAL DODGE INC	NCD075565978	TRANSPORTER	N
SAM'S CLUB #6573	NCR000005314	GENERATOR	SQG
SAM'S CLUB #6573	NCR000005314	TRANSPORTER	N
WALMART SUPERCENTER #1298	NCR000141994	GENERATOR	SQG
WALMART SUPERCENTER #1298	NCR000141994	TRANSPORTER	N
AUTO LOGIC	11084	Pollutant Type	GASOLINE/DIESEL/KEROSENE
AUTO LOGIC	11084	Site Risk	L
AUTO LOGIC	11084	Site Priority Code	70E
A & B TIRE SERVICE	15464	Pollutant Type	OTHER PETROLEUM PROD.
A & B TIRE SERVICE	15464	Site Risk	L
A & B TIRE SERVICE	15464	Site Priority Code	50E

PCS Name	PCS ID	Attribute	Value
MOORE BUICK	17930	Pollutant Type	OTHER PETROLEUM PROD.
MOORE BUICK	17930	Site Risk	L
MOORE BUICK	17930	Site Priority Code	60D
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Pollutant Type	GASOLINE/DIESEL/KEROSENE
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Risk	I
COBLE DAIRY PRODUCTS-JACKSONVILLE	6596	Site Priority Code	100D
CCCC Business Technology Building	SW8880909	Permit Type	State Stormwater
CCCC Business Technology Building	SW8880909	Permit Issued Date	10/24/1988
CCCC Continuing Education & Public Services Bldg	SW8940815	Permit Type	State Stormwater
CCCC Continuing Education & Public Services Bldg	SW8940815	Permit Issued Date	11/7/1994
Coastal Carolina Community College Access Road	SW8080930	Permit Type	State Stormwater
Coastal Carolina Community College Access Road	SW8080930	Permit Issued Date	11/25/2009
Coastal Carolina Community College Access Road	SW8080930	Permit Expiration Date	12/30/2021
Coastal Carolina Community College Maintenance Building and Parking Lot 4	SW8920903	Permit Type	State Stormwater
Coastal Carolina Community College Maintenance Building and Parking Lot 4	SW8920903	Permit Issued Date	2/13/2012
Coastal Carolina Community College Maintenance Building and Parking Lot 4	SW8920903	Permit Expiration Date	2/13/2020

PCS Name	PCS ID	Attribute	Value
Kennith Whichard Commercial Subdivision	SW8040624	Permit Type	State Stormwater
Kennith Whichard Commercial Subdivision	SW8040624	Permit Issued Date	7/30/2012
Kennith Whichard Commercial Subdivision	SW8040624	Permit Expiration Date	9/6/2021
Chick-Fil-A Gateway South	SW8040711	Permit Type	State Stormwater
Chick-Fil-A Gateway South	SW8040711	Permit Issued Date	7/20/2004
Texas Roadhouse of Jacksonville	SW8040908	Permit Type	State Stormwater
Texas Roadhouse of Jacksonville	SW8040908	Permit Issued Date	10/20/2011
Med-Care Lot 1 Moosehaven Business Park	SW8041009	Permit Type	State Stormwater
Med-Care Lot 1 Moosehaven Business Park	SW8041009	Permit Issued Date	12/14/2004
Outback Steakhouse	SW8980241	Permit Type	State Stormwater
Outback Steakhouse	SW8980241	Permit Issued Date	10/26/1998
Walmart Supercenter Jacksonville	SW8921003	Permit Type	State Stormwater
Walmart Supercenter Jacksonville	SW8921003	Permit Issued Date	8/9/2001
Walmart Supercenter Jacksonville	SW8921003	Permit Expiration Date	7/23/2013
Morton Property	SW8050234	Permit Type	State Stormwater
Morton Property	SW8050234	Permit Issued Date	6/24/2005
The Village Country Club Hills Section IV B	SW8980423	Permit Type	State Stormwater
The Village Country Club Hills Section IV B	SW8980423	Permit Issued Date	8/30/2001
Texas Steakhouse & Saloon	SW8970933	Permit Type	State Stormwater
Texas Steakhouse & Saloon	SW8970933	Permit Issued Date	10/5/2011

PCS Name	PCS ID	Attribute	Value
Texas Steakhouse & Saloon	SW8970933	Permit Expiration Date	2/25/2022
Extended Stay America Efficiency Studios	SW8980232	Permit Type	State Stormwater
Extended Stay America Efficiency Studios	SW8980232	Permit Issued Date	9/30/1998
Extended Stay America Efficiency Studios	SW8980232	Permit Expiration Date	9/30/2012
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Type	State Stormwater
Big Lots Dicks Sporting Goods and Best Buy	SW8921106	Permit Issued Date	9/25/2012
Comfort Inn Suites	SW8951229	Permit Type	State Stormwater
Comfort Inn Suites	SW8951229	Permit Issued Date	7/16/2009
Comfort Inn Suites	SW8951229	Permit Expiration Date	4/24/2020
SECU - Jacksonville	SW8010517	Permit Type	State Stormwater
SECU - Jacksonville	SW8010517	Permit Issued Date	9/15/2001
SECU - Jacksonville	SW8010517	Permit Expiration Date	9/15/2015
Hardees Western Boulevard	SW8940420	Permit Type	State Stormwater
Hardees Western Boulevard	SW8940420	Permit Issued Date	5/16/1994
Fire Station 4 Jacksonville	SW8000332	Permit Type	State Stormwater
Fire Station 4 Jacksonville	SW8000332	Permit Issued Date	11/17/2009
Fire Station 4 Jacksonville	SW8000332	Permit Expiration Date	4/28/2024
Jacksonville Commons	SW8950417	Permit Type	State Stormwater
Jacksonville Commons	SW8950417	Permit Issued Date	11/1/2012
Fairfield Inn Jacksonville	SW8990319	Permit Type	State Stormwater
Fairfield Inn Jacksonville	SW8990319	Permit Issued Date	9/18/2009
Fairfield Inn Jacksonville	SW8990319	Permit Expiration Date	7/26/2023
National Dodge	SW8930216	Permit Type	State Stormwater
National Dodge	SW8930216	Permit Issued Date	6/27/2014
National Dodge	SW8930216	Permit Expiration Date	5/18/2026

PCS Name	PCS ID	Attribute	Value
Sleep Inn Suites	SW8010107	Permit Type	State Stormwater
Sleep Inn Suites	SW8010107	Permit Issued Date	1/3/2011
Sleep Inn Suites	SW8010107	Permit Expiration Date	4/25/2025
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Type	State Stormwater
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Issued Date	10/8/2010
Navy Federal Credit Union Western Boulevard previously Circuit City Stores	SW8941107	Permit Expiration Date	10/8/2024
Affordable Suites	SW8080112	Permit Type	State Stormwater
Affordable Suites	SW8080112	Permit Issued Date	2/6/2008
Affordable Suites	SW8080112	Permit Expiration Date	12/31/2021
Palmetto Park Subdivision	SW8051147	Permit Type	State Stormwater
Palmetto Park Subdivision	SW8051147	Permit Issued Date	1/13/2006
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Type	State Stormwater
The Dail Center-Lot 2, Northwest Business Park	SW8030105	Permit Issued Date	4/14/2003
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Type	State Stormwater
City of Jacksonville Elevated Water Storage Tank and Water System Improvements	SW8030735	Permit Issued Date	9/15/2003
Blue Springs Apartments	SW8031111	Permit Type	State Stormwater
Blue Springs Apartments	SW8031111	Permit Issued Date	11/1/2010
Blue Springs Apartments	SW8031111	Permit Expiration Date	2/14/2028
Logan's Roadhouse Restaurant	SW8990310	Permit Type	State Stormwater

PCS Name	PCS ID	Attribute	Value
Logan's Roadhouse Restaurant	SW8990310	Permit Issued Date	5/12/2009
Logan's Roadhouse Restaurant	SW8990310	Permit Expiration Date	8/30/2023
Lowes Home Center	SW8970415	Permit Type	State Stormwater
Lowes Home Center	SW8970415	Permit Issued Date	9/3/1997
Lowes Home Center	SW8970415	Permit Expiration Date	9/3/2007
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Type	State Stormwater
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Issued Date	11/1/2010
Sams Club Jacksonville Store 6573-04	SW8931222	Permit Expiration Date	12/5/2022
National Automotive	SW8070721	Permit Type	State Stormwater
National Automotive	SW8070721	Permit Issued Date	2/20/2008
National Automotive	SW8070721	Permit Expiration Date	8/10/2021
O'Charley's Restaurant & Bar	SW8020209	Permit Type	State Stormwater
O'Charley's Restaurant & Bar	SW8020209	Permit Issued Date	4/23/2002
Cross Pointe Centre	SW8960624	Permit Type	State Stormwater
Cross Pointe Centre	SW8960624	Permit Issued Date	11/2/2009
Cross Pointe Centre	SW8960624	Permit Expiration Date	11/18/2026
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Type	State Stormwater
Cracker Barrel Jacksonville Lot 4 Cross	SW8000923	Permit Issued Date	11/21/2000
Candlewood Suites	SW8061125	Permit Type	State Stormwater
Candlewood Suites	SW8061125	Permit Issued Date	5/9/2007
Candlewood Suites	SW8061125	Permit Expiration Date	5/9/2021
West Fairway Road	SW8080102	Permit Type	State Stormwater
West Fairway Road	SW8080102	Permit Issued Date	1/23/2008
West Fairway Road	SW8080102	Permit Expiration Date	12/31/2021

PCS Name	PCS ID	Attribute	Value
West Fairway Road	SW8900506	Permit Type	State Stormwater
West Fairway Road	SW8900506	Permit Issued Date	1/23/2008
West Fairway Road	SW8900506	Permit Expiration Date	1/23/2022
Marine Federal Credit Union Hwy 17	SW8970849	Permit Type	State Stormwater
Marine Federal Credit Union Hwy 17	SW8970849	Permit Issued Date	4/25/2008
Marine Federal Credit Union Hwy 17	SW8970849	Permit Expiration Date	4/25/2022
Gateway Plaza Shopping Center	SW8980817	Permit Type	State Stormwater
Gateway Plaza Shopping Center	SW8980817	Permit Issued Date	5/3/2013
Gateway Plaza Shopping Center	SW8980817	Permit Expiration Date	9/8/2021
Western Blvd Retail	SW8130710	Permit Type	State Stormwater
Western Blvd Retail	SW8130710	Permit Issued Date	9/5/2013
Lot 2--Cross Pointe Centre	SW8020631	Permit Type	State Stormwater
Lot 2--Cross Pointe Centre	SW8020631	Permit Issued Date	7/29/2002
The Legacy at Abbington Place	SW8030514	Permit Type	State Stormwater
The Legacy at Abbington Place	SW8030514	Permit Issued Date	9/23/2009
The Legacy at Abbington Place	SW8030514	Permit Expiration Date	8/13/2017
Autumn Ridge Apartments	SW8010122	Permit Type	State Stormwater
Autumn Ridge Apartments	SW8010122	Permit Issued Date	8/30/2010
Autumn Ridge Apartments	SW8010122	Permit Expiration Date	5/18/2025
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Type	State Stormwater
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Issued Date	8/31/2009

PCS Name	PCS ID	Attribute	Value
The Reserve at Jacksonville Commons Phase 1 & 2	SW8990525	Permit Expiration Date	11/8/2023
Charleston Place	SW8060704	Permit Type	State Stormwater
Charleston Place	SW8060704	Permit Issued Date	7/21/2006
Charleston Place	SW8060704	Permit Expiration Date	7/21/2020
Windsor Place	SW8000202	Permit Type	State Stormwater
Windsor Place	SW8000202	Permit Issued Date	1/27/2005
Windsor Place	SW8000202	Permit Expiration Date	5/25/2014
Marine Chevrolet	SW8960705	Permit Type	State Stormwater
Marine Chevrolet	SW8960705	Permit Issued Date	5/9/2008
Marine Chevrolet	SW8960705	Permit Expiration Date	5/9/2022
Olive Garden Restaurant Jacksonville	SW8070137	Permit Type	State Stormwater
Olive Garden Restaurant Jacksonville	SW8070137	Permit Issued Date	7/30/2012
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Type	State Stormwater
Jacksonville Commons Elementary and Middle School	SW8951022	Permit Issued Date	12/13/2005
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Type	State Stormwater
Northside at the Commons, Section VIII-SW & IX	SW8030920	Permit Issued Date	12/15/2005
Coastal Carolina Community College	WI0800382	Permit Type	Injection Deemed Geothermal Aqueous Closed-loop Well
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Type	Used Motor Vehicle Parts Stormwater Discharge COC
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Issued Date	11/1/2012
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Permit Expiration Date	10/31/2017

PCS Name	PCS ID	Attribute	Value
Foss Auto Salvage - Northeast Jacksonville	NCG100119	Receiving Stream	Wolf Swamp

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, FOXHORN VILLAGE #1**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , FOXHORN VILLAGE #1**

Unsaturated Zone Rating	64.7
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

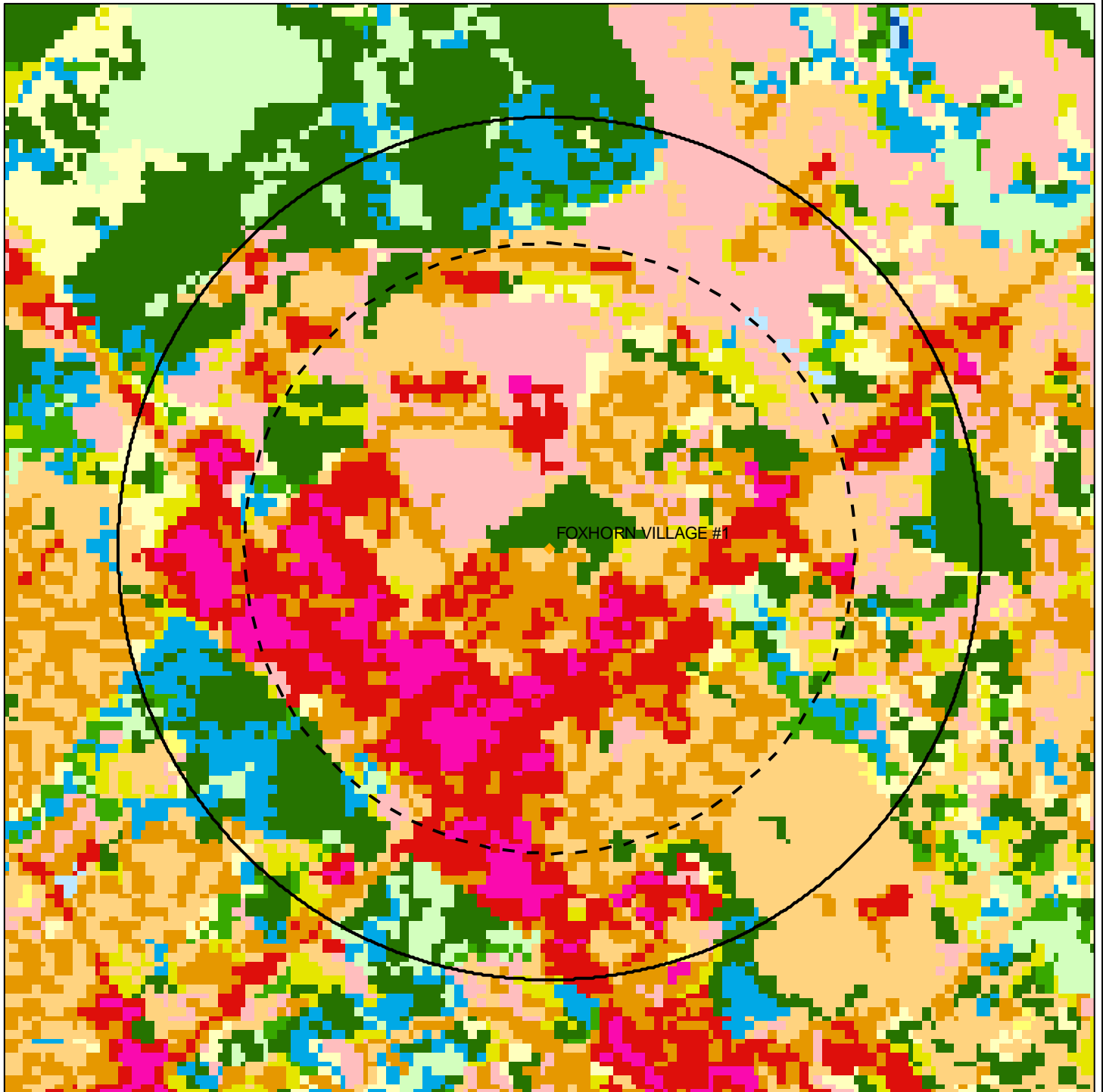
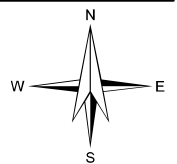


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1

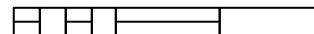


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



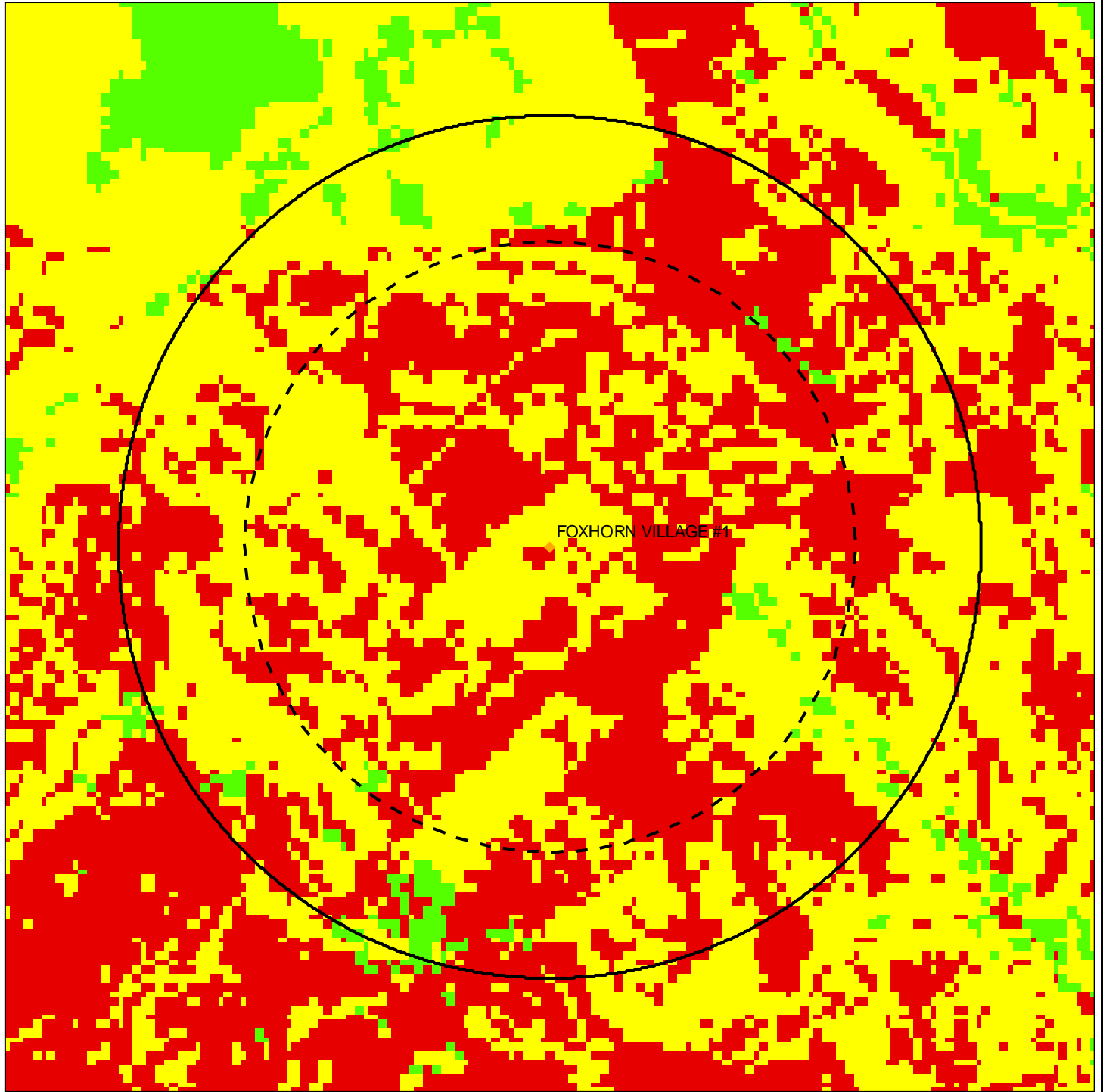
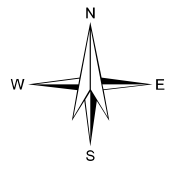
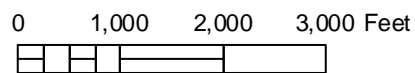


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



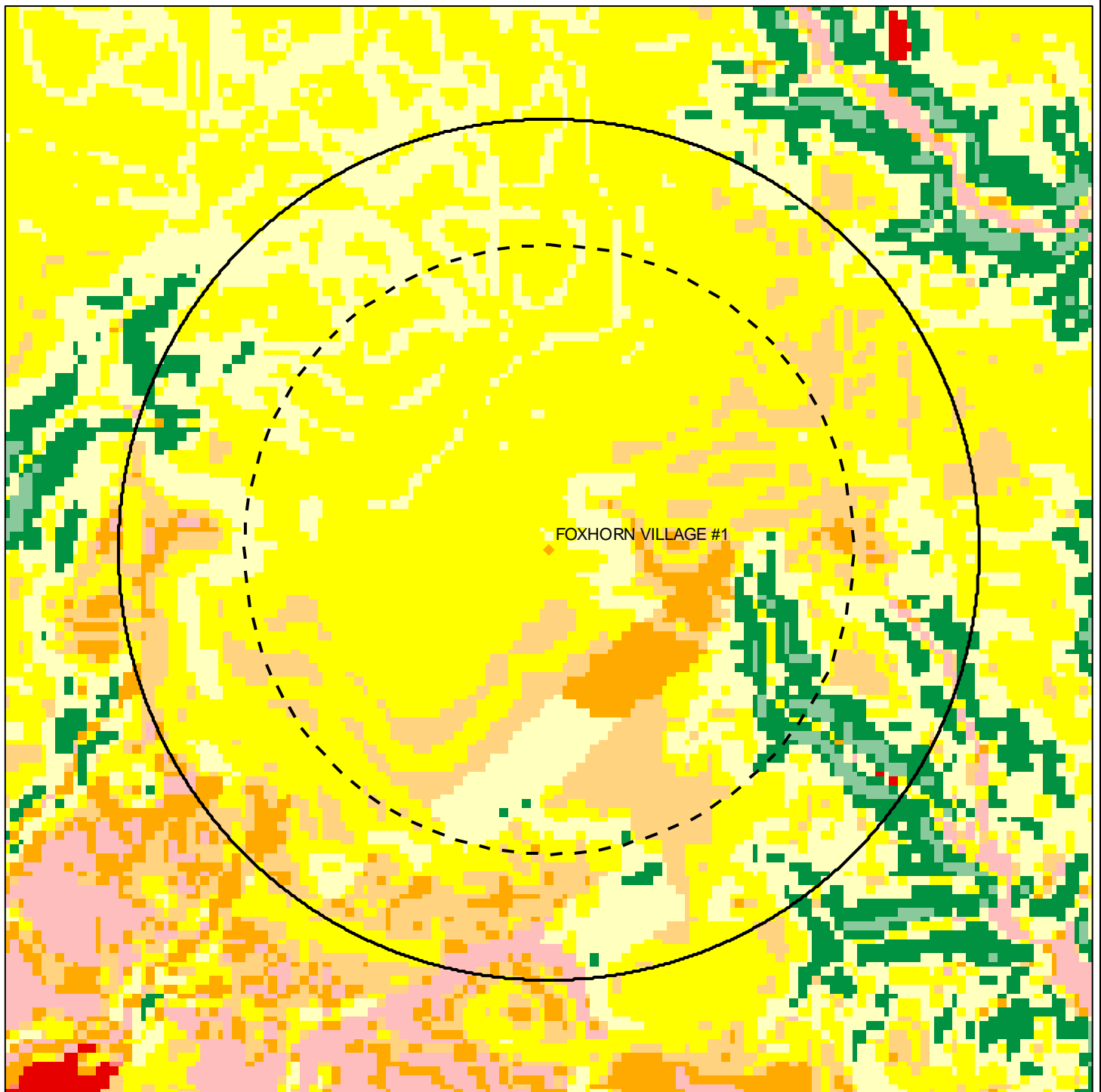
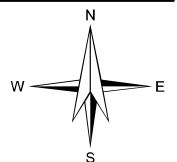
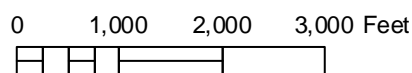


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (> 5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (> 10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



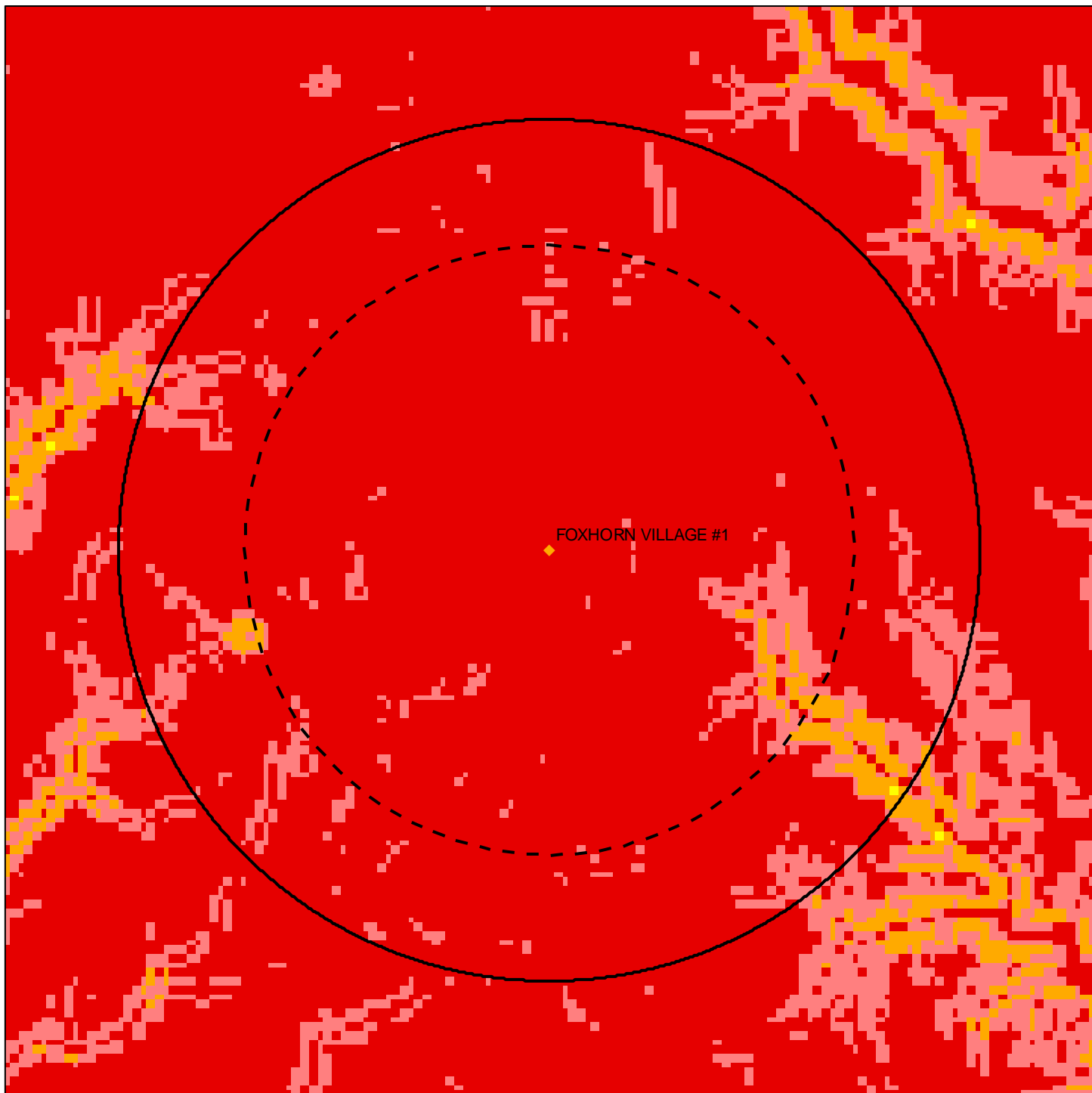
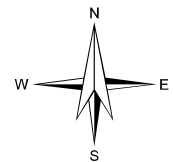








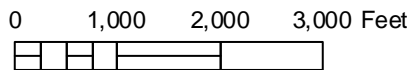


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1



- | | | |
|--|---|--|
|  1 (> 50 percent) |  7 (> 5 to 10 percent) |  Ground Water Assessment Area - Delineated Area |
|  3 (> 20 to 50 percent) |  9 (> 2 to 5 percent) |  Ground Water Assessment Area - Zone A |
|  5 (> 10 to 20 percent) |  10 (<= 2 percent) | |



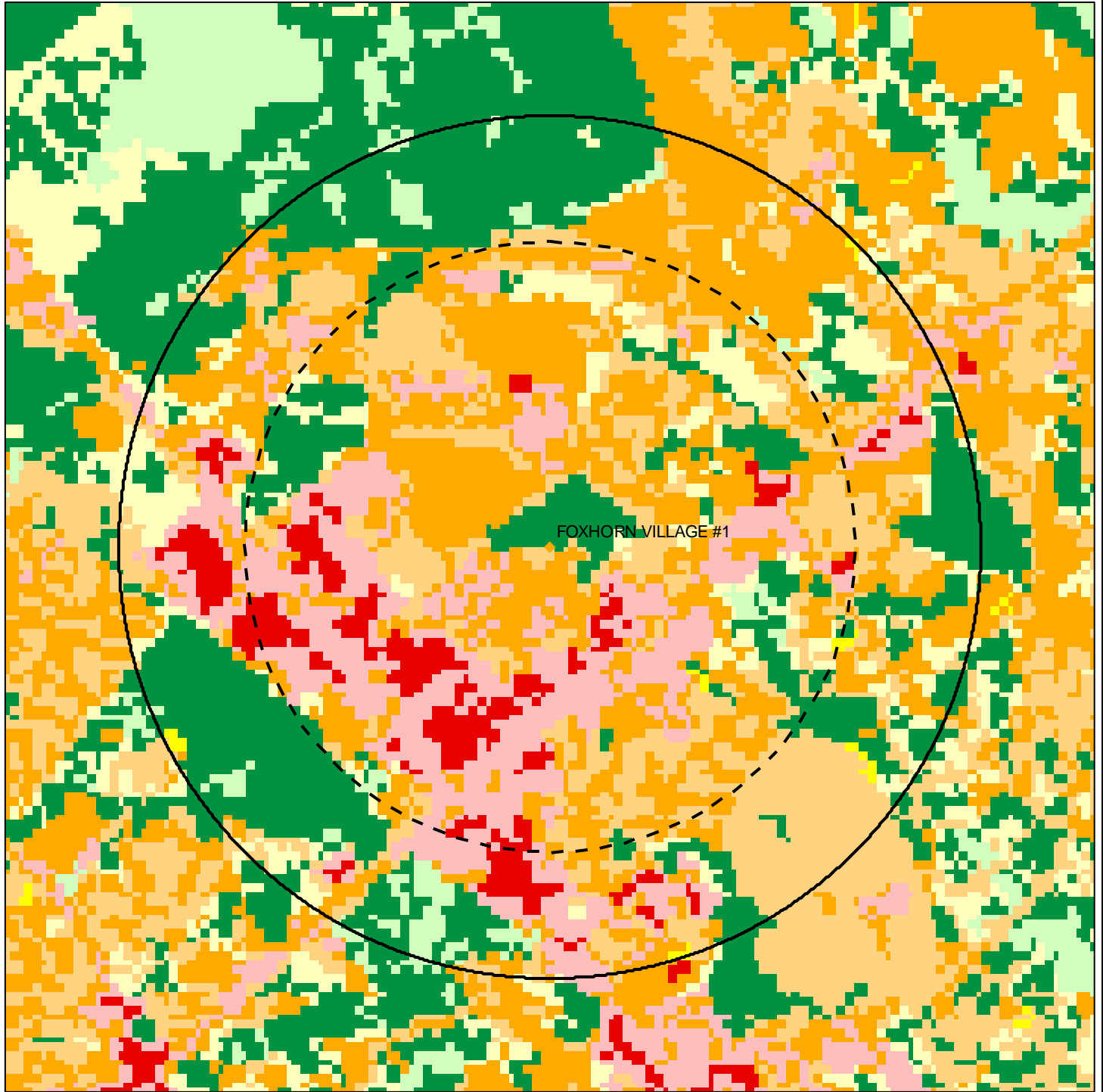


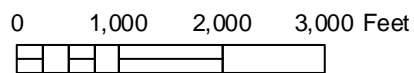
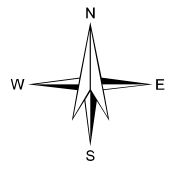


FIGURE 5. LAND USE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1

- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



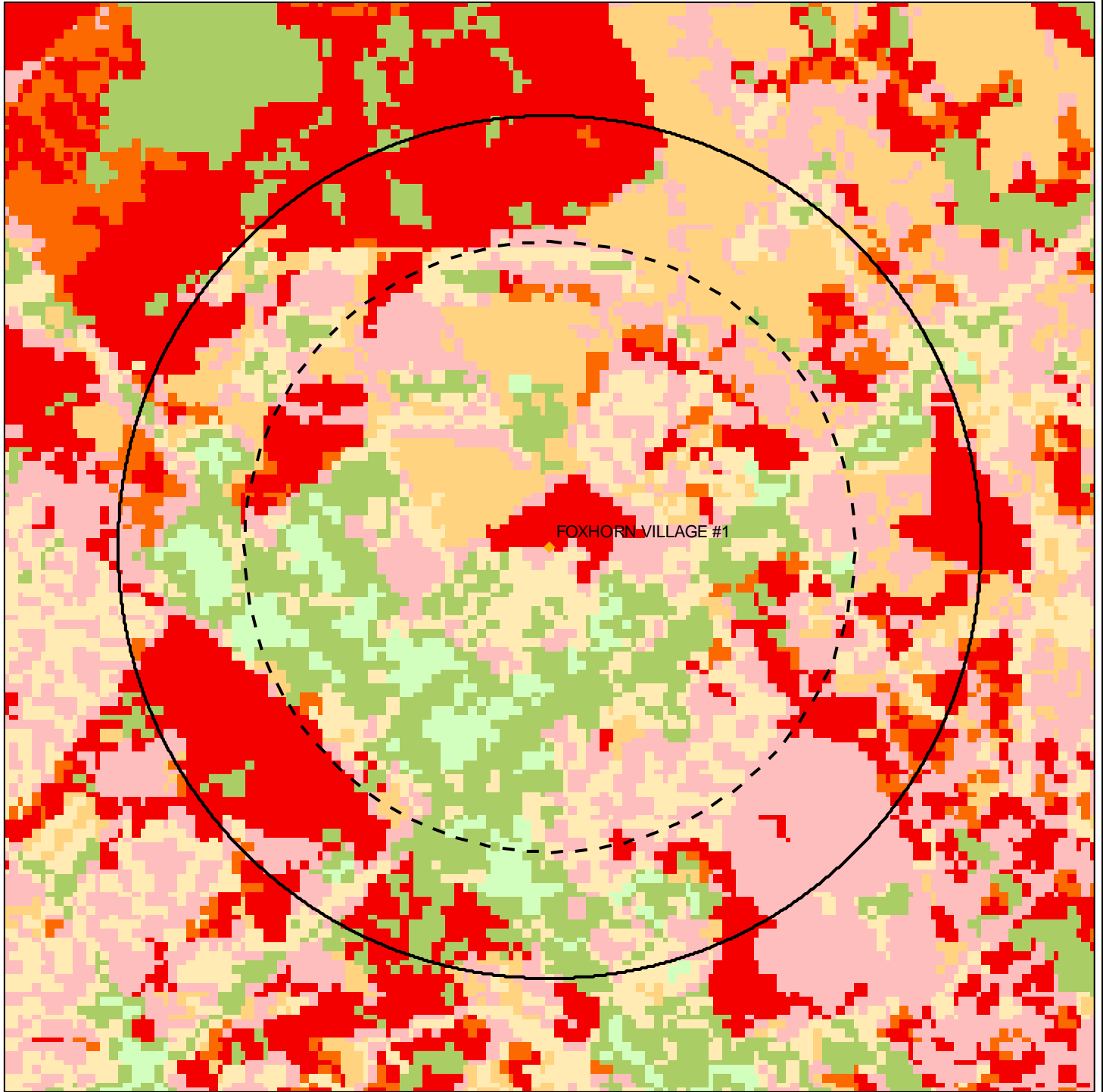
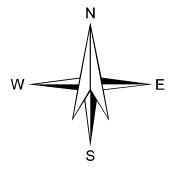
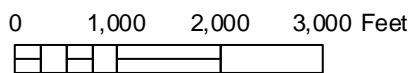


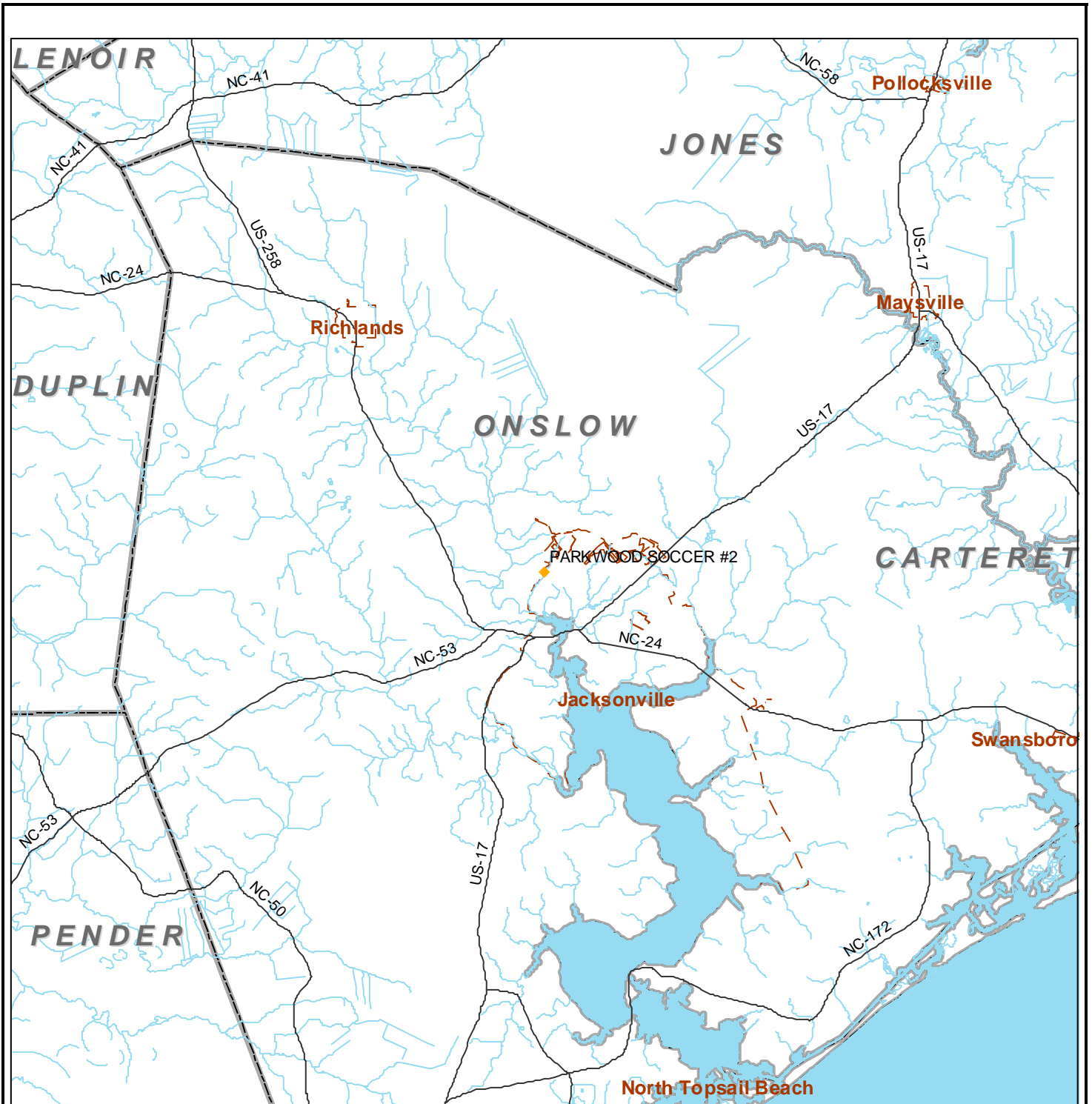
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, FOXHORN VILLAGE #1



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

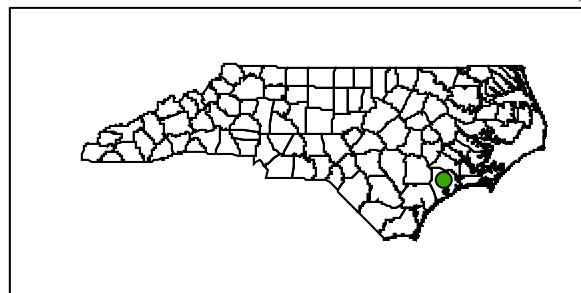
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



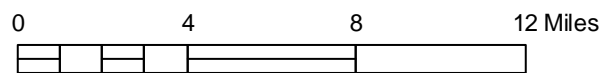
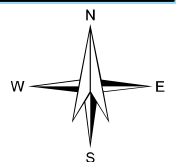


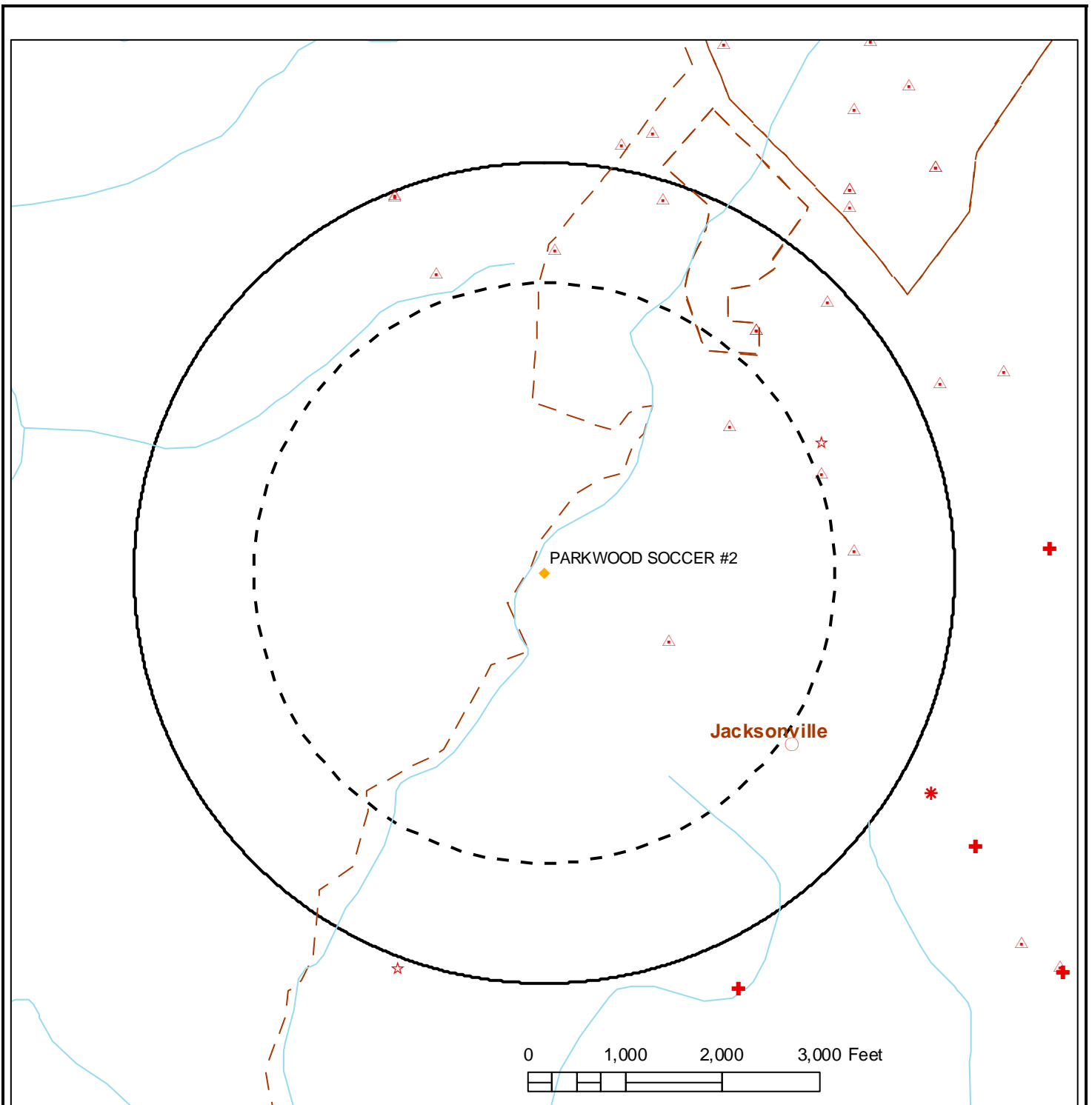
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



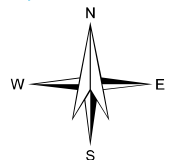


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, PARKWOOD SOCCER #2**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
RUMBLE Y RESIDENCE	32571	Pollution Incidents	H	1015 DANIEL PLACE	JACKSONVILLE	Unkno wn	ONSLO
Parkwood Elementary Addition	SW8950808	NPDES Permits	L	2900 Northwoods Dr	Jacksonville	Unkno wn	ONSLOW
White Oak Congregation of Jehovahs Witnesses	SW8050534	NPDES Permits	L	Henderson Drive And Doris Ave	Jacksonville	Unkno wn	ONSLOW
Kensington Park at Williamsburg Plantation	SW8050629	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unkno wn	ONSLOW
Evansbrook, Phase II	SW8040329	NPDES Permits	L	Iverleigh Ln	Jacksonville	Unkno wn	ONSLOW
Woodlands Phase IIIA	SW8891007	NPDES Permits	L	Plantation Blvd At Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Woodlands III	SW8961101	NPDES Permits	L	Plantation Boulevard Iverleigh Ln	Jacksonville	Unkno wn	ONSLOW
Covenant Presbyterian Church ARP	SW8071227	NPDES Permits	L	106 Plantation Blvd	Jacksonville	Unkno wn	ONSLOW
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unkno wn	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Williamsburg Plantation Parkway	SW8960327	NPDES Permits	L	Williamsburg Plantation Pkwy	Jacksonville	Unknown	ONSLOW
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	NPDES Permits	L	Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Regency Park Section I at Williamsburg Plantation	SW8001114	NPDES Permits	L	Off Williamsburg Pkwy	Jacksonville	Unknown	ONSLOW
Regency Park Section II at Williamsburg Plantation	SW8020919	NPDES Permits	L	S Of Intersection Of Williamsburg Pky	Jacksonville	Unknown	ONSLOW
Glen Spradling and Wanda Spradling SFR	WI0800192	UIC Permits	M	104 Sussex Ct	Jacksonville	Unknown	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, PARKWOOD SOCCER #2**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
RUMBLEY RESIDENCE	32571	Pollutant Type	HEATING OIL
Parkwood Elementary Addition	SW8950808	Permit Type	State Stormwater
Parkwood Elementary Addition	SW8950808	Permit Issued Date	10/17/2007
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Type	State Stormwater
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Issued Date	11/21/2005
White Oak Congregation of Jehovahs Witnesses	SW8050534	Permit Expiration Date	11/21/2019
Kensington Park at Williamsburg Plantation	SW8050629	Permit Type	State Stormwater
Kensington Park at Williamsburg Plantation	SW8050629	Permit Issued Date	9/19/2012
Kensington Park at Williamsburg Plantation	SW8050629	Permit Expiration Date	7/17/2020
Evansbrook, Phase II	SW8040329	Permit Type	State Stormwater
Evansbrook, Phase II	SW8040329	Permit Issued Date	5/26/2004
Woodlands Phase IIIA	SW8891007	Permit Type	State Stormwater
Woodlands Phase IIIA	SW8891007	Permit Issued Date	3/2/1990
Woodlands III	SW8961101	Permit Type	State Stormwater
Woodlands III	SW8961101	Permit Issued Date	2/13/1997
Covenant Presbyterian Church ARP	SW8071227	Permit Type	State Stormwater
Covenant Presbyterian Church ARP	SW8071227	Permit Issued Date	5/14/2008

PCS Name	PCS ID	Attribute	Value
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Type	State Stormwater
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Issued Date	11/22/2013
Hyde Park Sec I Of Williamsburg Plantation	SW8990339	Permit Expiration Date	11/23/2021
Williamsburg Plantation Parkway	SW8960327	Permit Type	State Stormwater
Williamsburg Plantation Parkway	SW8960327	Permit Issued Date	7/19/1996
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Type	State Stormwater
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Issued Date	9/20/2012
Williamsburg Plantation Richmond Park Sections I II and III	SW8951220	Permit Expiration Date	10/21/2021
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Type	State Stormwater
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Issued Date	3/30/2015
Regency Park Section I at Williamsburg Plantation	SW8001114	Permit Expiration Date	3/27/2023
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Type	State Stormwater
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Issued Date	9/14/2012
Regency Park Section II at Williamsburg Plantation	SW8020919	Permit Expiration Date	8/26/2017
Glen Spradling and Wanda Spradling SFR	WI0800192	Permit Type	Injection Water Only GSHP Well System

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, PARKWOOD SOCCER #2**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating	Higher		
Well Integrity/Construction Rating	Higher		

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , PARKWOOD SOCCER #2**

Unsaturated Zone Rating	68.2
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Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

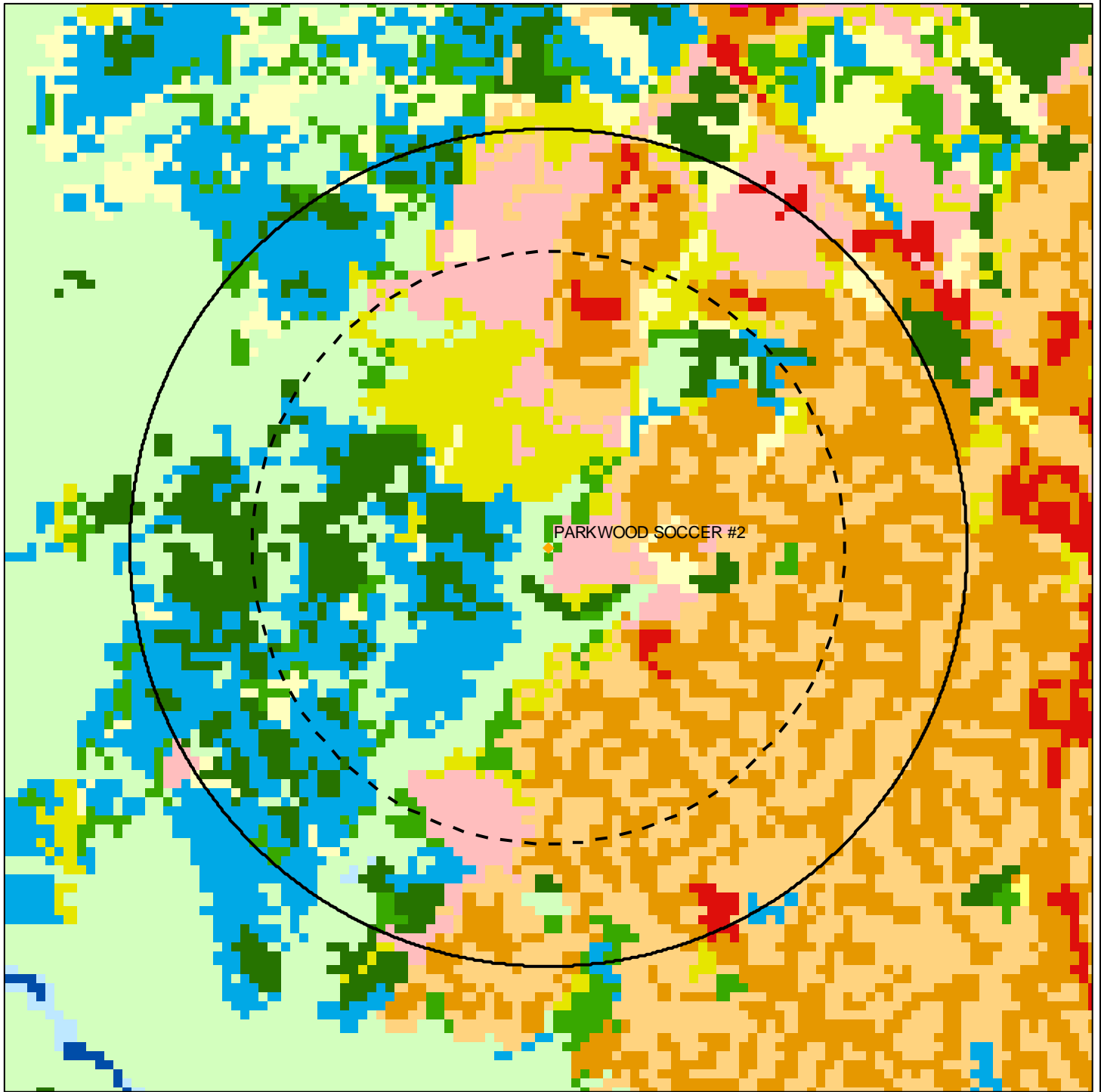
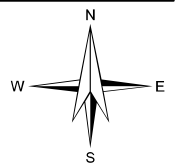


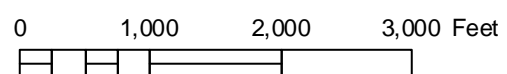
FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



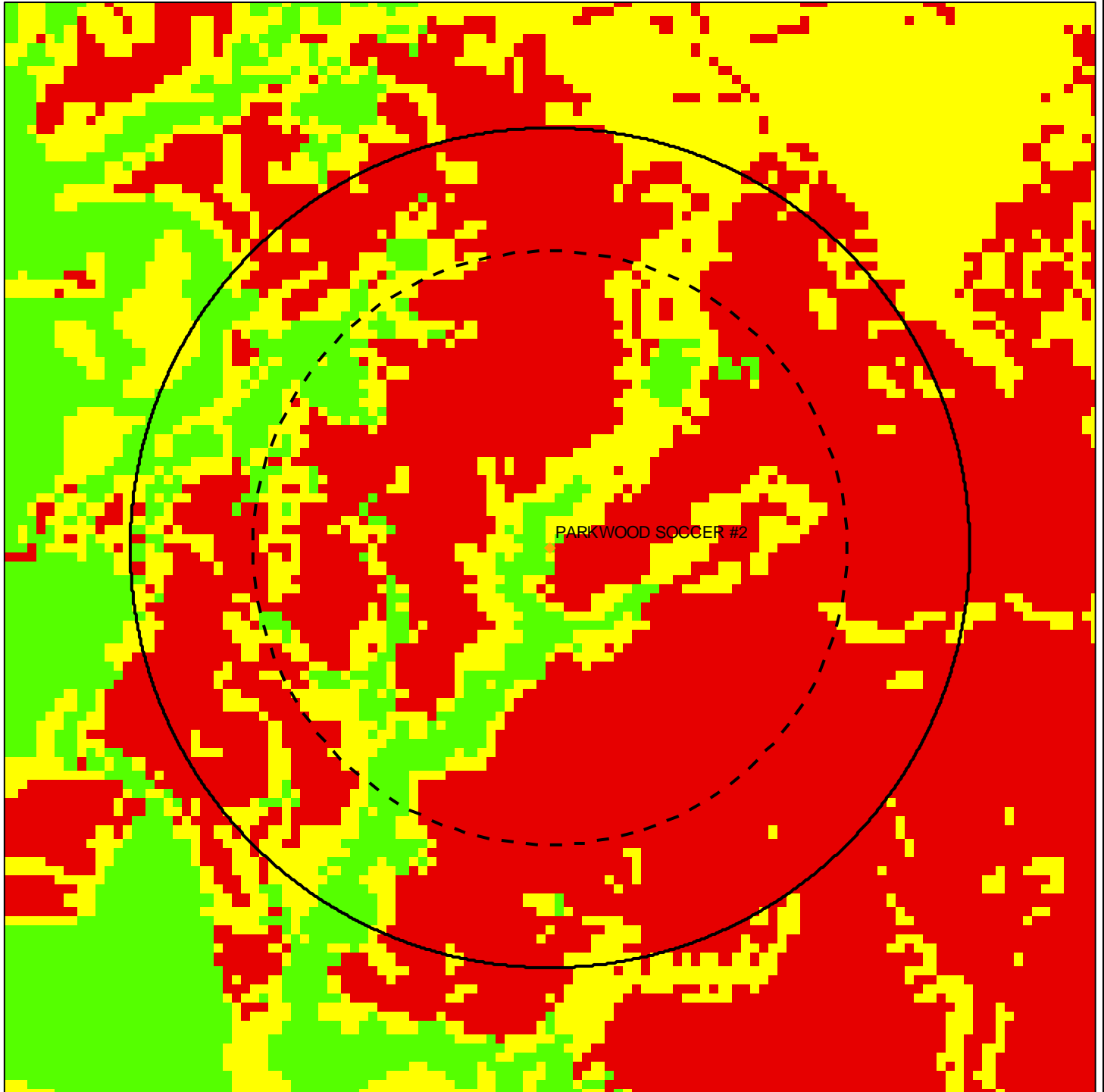
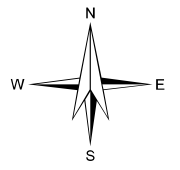
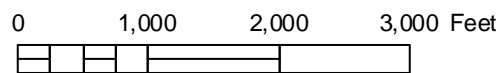


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



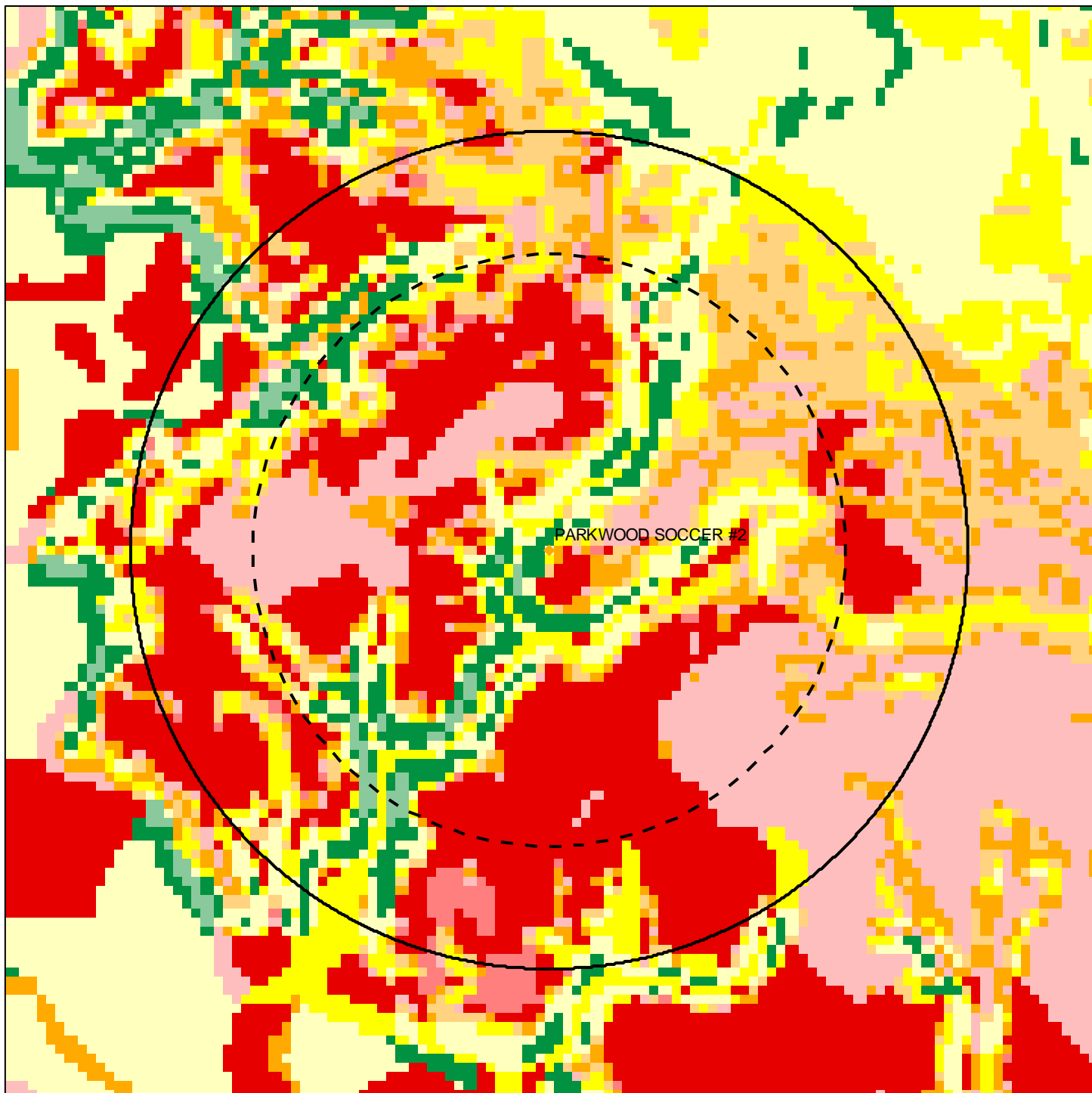
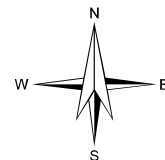
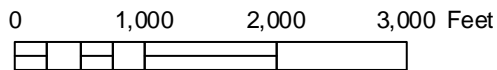


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING

JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



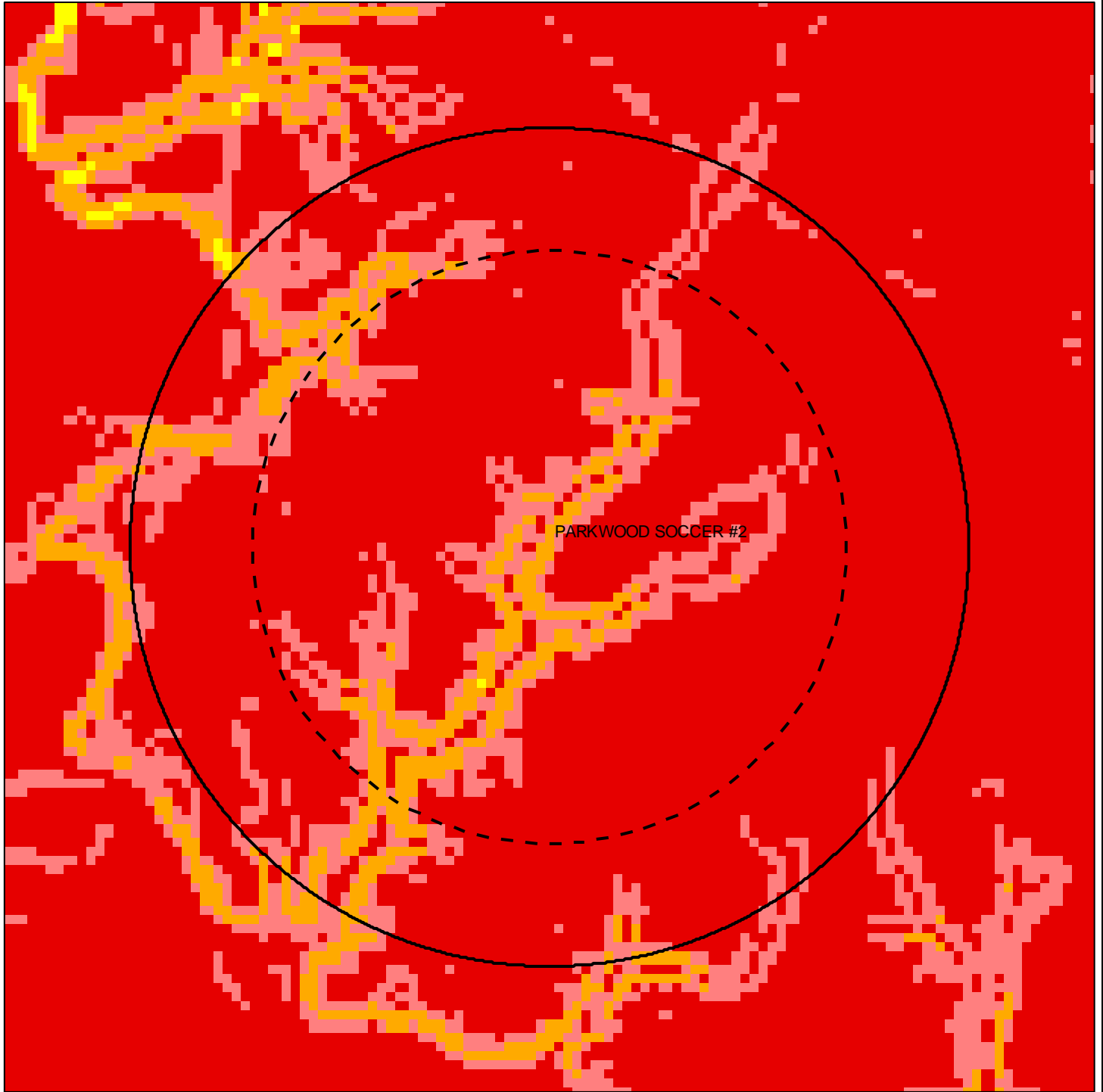
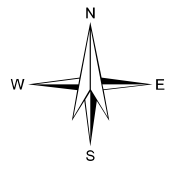
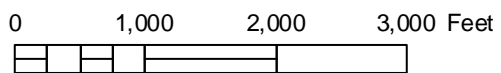


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- | | | |
|------------------------|-----------------------|--|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



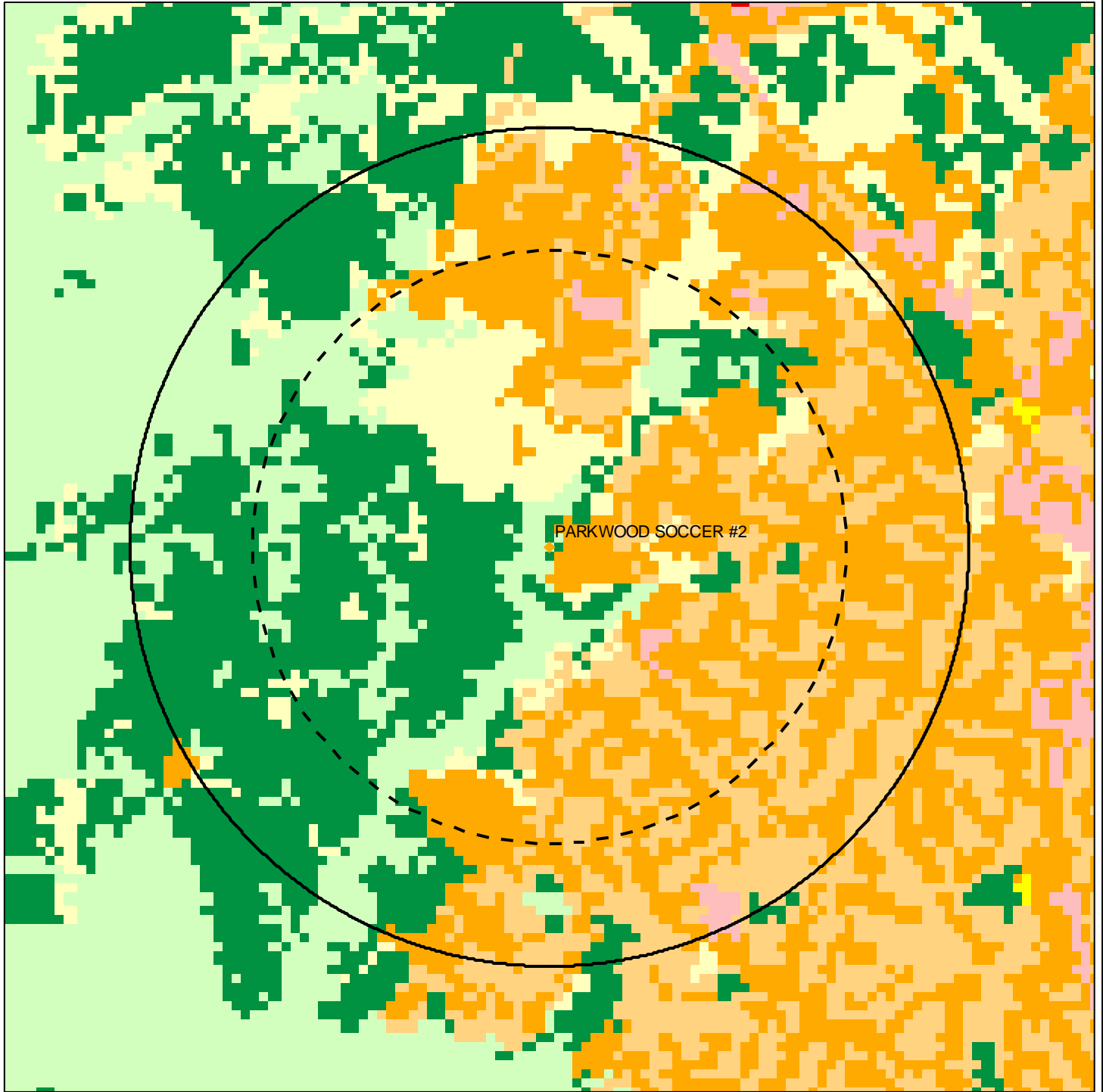
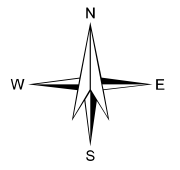











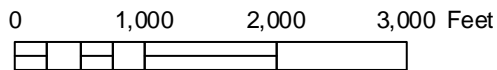


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |
|  Ground Water Assessment Area - Delineated Area | |
|  Ground Water Assessment Area - Zone A | |



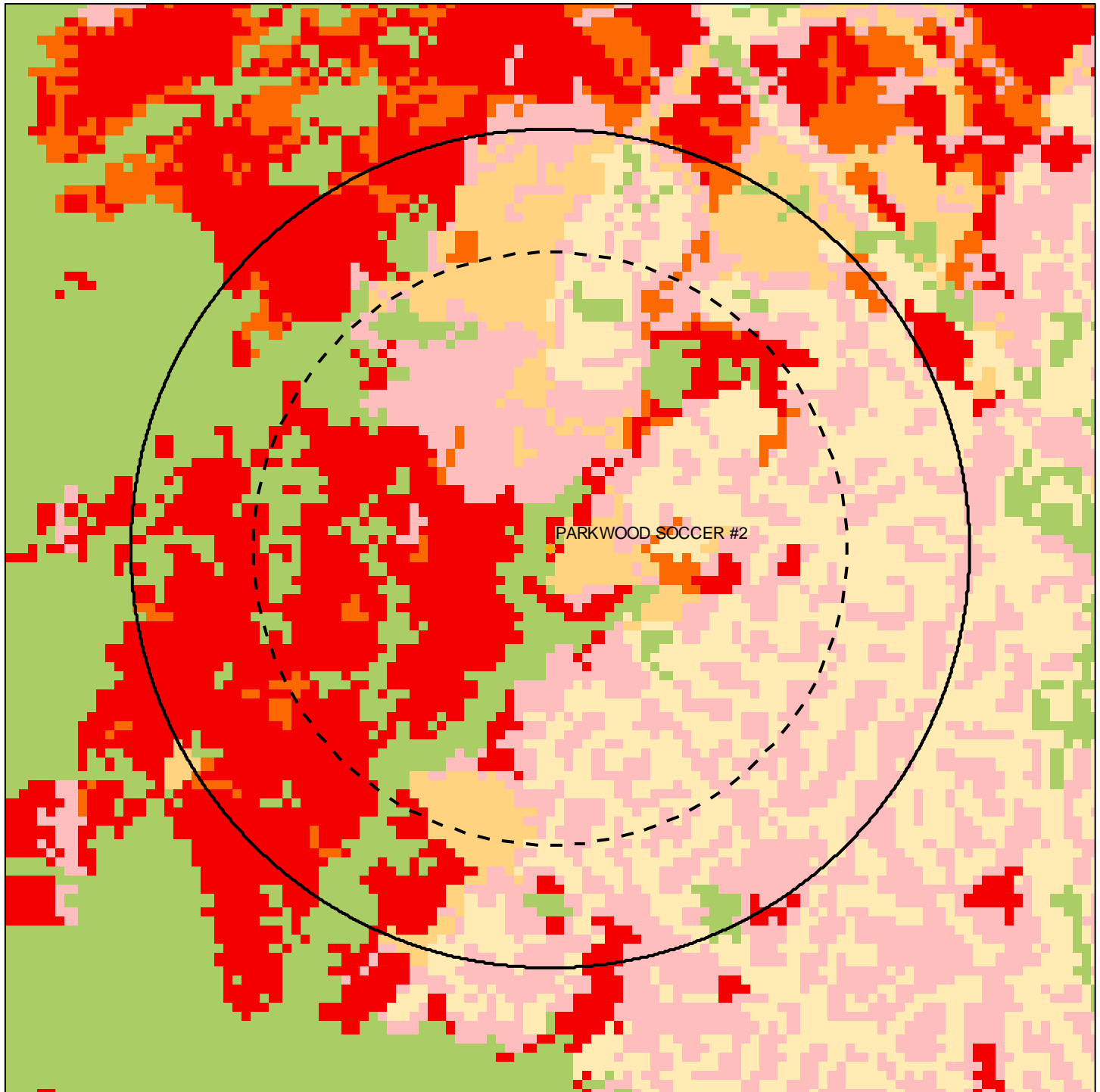
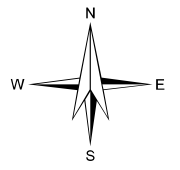
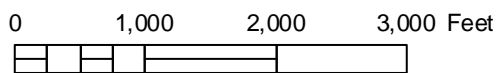


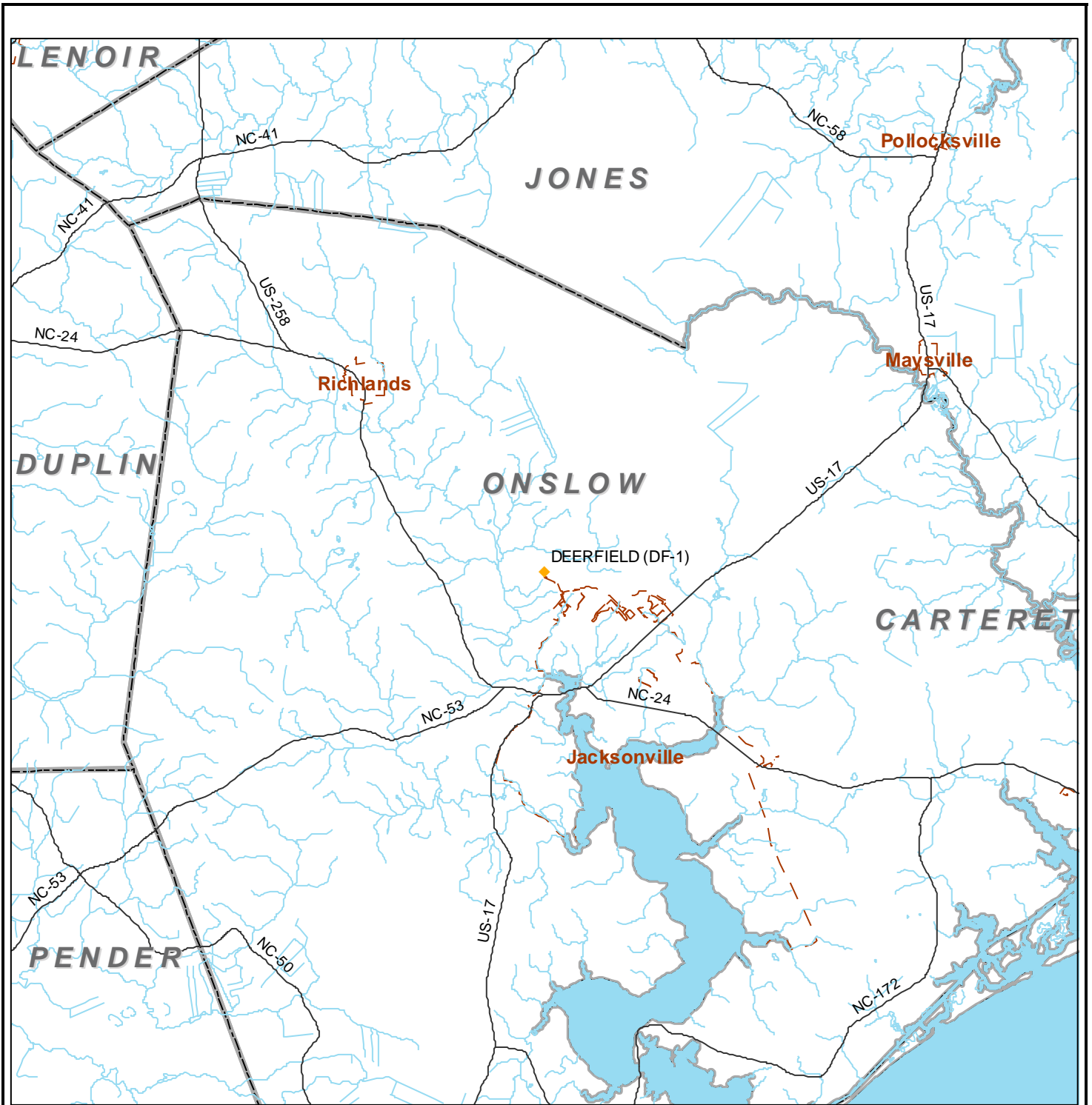
FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, PARKWOOD SOCCER #2



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

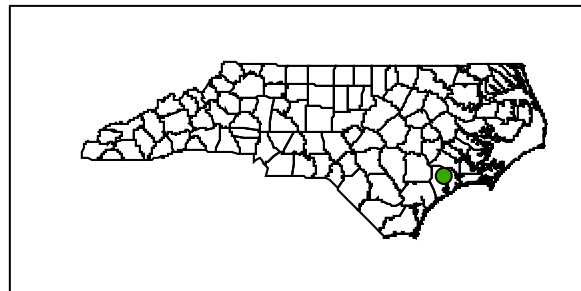
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



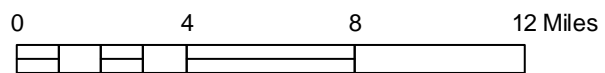
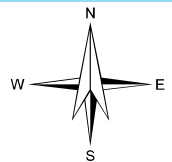


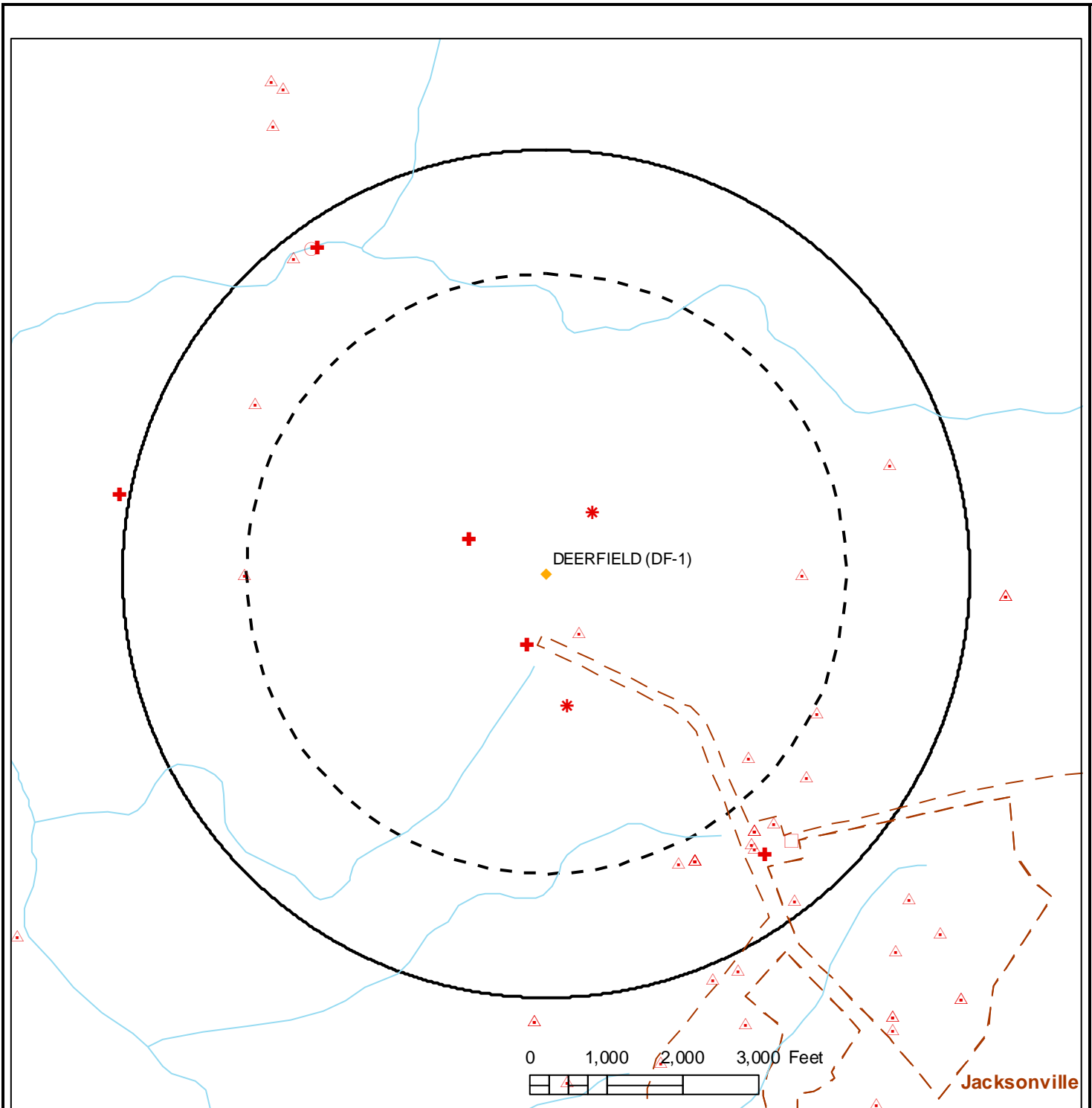
MAP 1. LOCATION MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- Roads
- Rivers and Streams
- Major Hydrology
- - - Municipal Boundaries
- County Boundaries



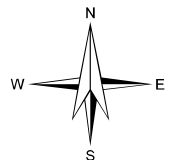


MAP 2. DELINEATED AREA AND PCS MAP

JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)

PCS Types

- | | | |
|-------------------------------|------------------------|--|
| Animal Operations | Septage Disposal Sites | Roads |
| CERCLIS Sites | Soil Remediation Sites | Rivers and Streams |
| RCRA Gen. / Trans. Facilities | Solid Waste Facilities | Major Hydrology |
| Non Discharge Permits | Tier II Sites | Municipal Boundaries |
| NPDES Permits | RCRA TSD Facilities | Ground Water Assessment Area - Delineated Area |
| National Priority List Sites | Old Landfill Sites | Ground Water Assessment Area - Zone A |
| PCB Sites | UIC Permits | |
| Pollution Incidents | UST Permits | |



**Table 4. Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, DEERFIELD (DF-1)**

Common Attributes

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
COASTAL CAROLINA COLLEGE	NCD982115883	RCRA Gen. / Trans. Facilities	H	WESTERN BLVD	JACKSONVILLE	Unkown	ONSLOW
DASHN #4	19163	Pollution Incidents	H	4450 GUMBRANCH RD.	JACKSONVILLE	Unkown	ONSLOW
NC-4594_Time Warner Cable	4030808	Tier II Sites	H	399 Hunting Green Dr	Jacksonville	Unkown	Onslow
LEVEL 3 COMMUNICATIONS - JACKSONVILLE-JCVLNCAU	4091512	Tier II Sites	H	2629 Gum Branch Rd	Jacksonville	Unkown	Onslow
CIRCLE K 2708215	00-0-0000020706	UST Sites	H	3 ARAGONA BOULEVARD	JACKSONVILLE	Unkown	ONSLOW
WHIZZ MART 5	00-0-0000022076	UST Sites	H	4111 GUM BRANCH ROAD	JACKSONVILLE	Unkown	ONSLOW
PANTRY 3120	00-0-0000035939	UST Sites	H	4450 GUMBRANCH ROAD	JACKSONVILLE	Unkown	ONSLOW
WILCO 389	00-0-0000035383	UST Sites	H	6995 WESTERN BLVD	JACKSONVILLE	Unkown	ONSLOW
Williamsburg Crossing Shopping Center	SW8971031	NPDES Permits	L	2200 Gum Branch Rd	Jacksonville	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	NPDES Permits	L	Western Blvd Intersection Of Gum Branch	Jacksonville	Unkown	ONSLOW
Western Parkway NCDOT Project U4007B	SW8100216	NPDES Permits	L	Western Pkwy	Jacksonville	Unkown	ONSLOW
City of Jacksonville Water System Improvements Phase II	SW8100518	NPDES Permits	L	Western Blvd	Jacksonville	Unkown	ONSLOW
Hampton Inn Jacksonville	SW8880309	NPDES Permits	L	Western Blvd Hwy 17	Jacksonville	Unkown	ONSLOW
Kentucky Fried Chicken	SW8900619	NPDES Permits	L	Western Blvd Brynn Marr Rd	Jacksonville	Unkown	ONSLOW
Goodwill Industries	SW8970133	NPDES Permits	L	Western Blvd	Jacksonville	Unkown	ONSLOW
A.T. Williams Oil Company / Wendy's	SW8961233	NPDES Permits	L	6995 Western Blvd	Jacksonville	Unkown	ONSLOW
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	NPDES Permits	L	Western Blvd At Gum Branch Rd	Jacksonville	Unkown	ONSLOW
CVS Pharmacy 5594 Gum Branch Road	SW8070804	NPDES Permits	L	2400 Gum Branch Rd	Jacksonville	Unkown	ONSLOW
FCW&P Properties	SW8110712	NPDES Permits	L	Int Of Gum Branch Rd Western Blvd	Jacksonville	Unkown	ONSLOW

PCS Name	PCS ID	PCS Type	PCS Risk Rating	Street Address	City	Zip	County
Jones Car Wash	SW8110713	NPDES Permits	L	6974 Western Blvd	Jacksonville	Unkno wn	ONSLOW
Coastal Equipment	SW8020206	NPDES Permits	L	Western Blvd gum branch rd	Jacksonville	Unkno wn	ONSLOW
Noland Properties, Inc.	SW8051012	NPDES Permits	L	Williamsburg Pkwy New Frontier Way	Jacksonville	Unkno wn	ONSLOW
River of Life Clear and Grade	SWG03002 6	NPDES Permits	L	Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Mike Choate Tract	SW8060142	NPDES Permits	L	Williamsburg Pkwy Western Blvd	Jacksonville	Unkno wn	ONSLOW
Calvary Assembly of God Church	SW8051110	NPDES Permits	L	3980 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW
Carriage Run at Carolina Forest	SW8031119	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unkno wn	ONSLOW
Raintree Phase IV	SW8970212	NPDES Permits	L	Raintree Rd	Jacksonville	Unkno wn	ONSLOW
Cypress Bay at Carolina Forest	SW8031118	NPDES Permits	L	Carolina Forest Blvd	Jacksonville	Unkno wn	ONSLOW
Summersill School Addt. #2	SW8970411	NPDES Permits	L	Summersill School Rd Sr1322	Jacksonville	Unkno wn	ONSLOW
former Dash N Go #4	NCG510476	NPDES Permits	L	3080 Gum Branch Rd	Jacksonville	Unkno wn	ONSLOW

**Table 4. (Cont.) Potential Contaminant Source Attributes
JACKSONVILLE CITY OF
PWS ID: 04-67-010, DEERFIELD (DF-1)**

Unique Attributes

PCS Name	PCS ID	Attribute	Value
COASTAL CAROLINA COLLEGE	NCD982115883	GENERATOR	SQG
COASTAL CAROLINA COLLEGE	NCD982115883	TRANSPORTER	N
DASHN #4	19163	Pollutant Type	GASOLINE/DIESEL/KEROSENE
DASHN #4	19163	Site Priority Code	110
Williamsburg Crossing Shopping Center	SW8971031	Permit Type	State Stormwater
Williamsburg Crossing Shopping Center	SW8971031	Permit Issued Date	7/8/2009
Williamsburg Crossing Shopping Center	SW8971031	Permit Expiration Date	4/28/2022
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Type	State Stormwater
Emerson Park Section 1 and St James Park Section 1 of Williamsburg Plantation	SW8080115	Permit Issued Date	10/12/2012
Western Parkway NCDOT Project U4007B	SW8100216	Permit Type	State Stormwater
Western Parkway NCDOT Project U4007B	SW8100216	Permit Issued Date	6/10/2010
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Type	State Stormwater
City of Jacksonville Water System Improvements Phase II	SW8100518	Permit Issued Date	6/23/2010

PCS Name	PCS ID	Attribute	Value
Hampton Inn Jacksonville	SW8880309	Permit Type	State Stormwater
Hampton Inn Jacksonville	SW8880309	Permit Issued Date	5/10/1988
Kentucky Fried Chicken	SW8900619	Permit Type	State Stormwater
Kentucky Fried Chicken	SW8900619	Permit Issued Date	6/21/1990
Goodwill Industries	SW8970133	Permit Type	State Stormwater
Goodwill Industries	SW8970133	Permit Issued Date	1/24/1997
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Type	State Stormwater
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Issued Date	1/12/2009
A.T. Williams Oil Company / Wendy's	SW8961233	Permit Expiration Date	10/5/2022
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Type	State Stormwater
Bojangles-Jacksonville Op's 4 & 5 Willia	SW8980516	Permit Issued Date	7/6/1998
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Type	State Stormwater
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Issued Date	9/30/2011
CVS Pharmacy 5594 Gum Branch Road	SW8070804	Permit Expiration Date	9/30/2025
FCW&P Properties	SW8110712	Permit Type	State Stormwater
FCW&P Properties	SW8110712	Permit Issued Date	5/29/2014
FCW&P Properties	SW8110712	Permit Expiration Date	12/30/2021
Jones Car Wash	SW8110713	Permit Type	State Stormwater
Jones Car Wash	SW8110713	Permit Issued Date	9/30/2011
Coastal Equipment	SW8020206	Permit Type	State Stormwater
Coastal Equipment	SW8020206	Permit Issued Date	8/15/2002
Coastal Equipment	SW8020206	Permit Expiration Date	8/15/2016
Noland Properties, Inc.	SW8051012	Permit Type	State Stormwater
Noland Properties, Inc.	SW8051012	Permit Issued Date	5/4/2006
Noland Properties, Inc.	SW8051012	Permit Expiration Date	5/4/2020

PCS Name	PCS ID	Attribute	Value
River of Life Clear and Grade	SWG030026	Permit Type	State Stormwater, Clearing and Grading COC
River of Life Clear and Grade	SWG030026	Permit Issued Date	4/10/2014
Mike Choate Tract	SW8060142	Permit Type	State Stormwater
Mike Choate Tract	SW8060142	Permit Issued Date	5/16/2008
Mike Choate Tract	SW8060142	Permit Expiration Date	12/30/2021
Calvary Assembly of God Church	SW8051110	Permit Type	State Stormwater
Calvary Assembly of God Church	SW8051110	Permit Issued Date	3/1/2012
Calvary Assembly of God Church	SW8051110	Permit Expiration Date	4/11/2016
Carriage Run at Carolina Forest	SW8031119	Permit Type	State Stormwater
Carriage Run at Carolina Forest	SW8031119	Permit Issued Date	10/30/2012
Raintree Phase IV	SW8970212	Permit Type	State Stormwater
Raintree Phase IV	SW8970212	Permit Issued Date	12/10/1997
Cypress Bay at Carolina Forest	SW8031118	Permit Type	State Stormwater
Cypress Bay at Carolina Forest	SW8031118	Permit Issued Date	10/30/2012
Summersill School Addt. #2	SW8970411	Permit Type	State Stormwater
Summersill School Addt. #2	SW8970411	Permit Issued Date	10/20/2007
Summersill School Addt. #2	SW8970411	Permit Expiration Date	10/23/2021
former Dash N Go #4	NCG510476	Permit Type	Groundwater Remediation Wastewater Discharge COC
former Dash N Go #4	NCG510476	Permit Issued Date	10/11/2011
former Dash N Go #4	NCG510476	Permit Expiration Date	9/30/2016
former Dash N Go #4	NCG510476	Receiving Stream	Half Moon Creek

**Table 5. Inherent Vulnerability Rating
 JACKSONVILLE CITY OF
 PWS ID: 04-67-010, DEERFIELD (DF-1)**

Ground Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating			Lower
Unsaturated Zone Rating		Moderate	
Well Integrity/Construction Rating			Lower

Inherent Vulnerability Rating: Lower

**Table 6. Unsaturated Zone Rating Calculation
JACKSONVILLE CITY OF
PWS ID: 04-67-010 , DEERFIELD (DF-1)**

Unsaturated Zone Rating	61.0
-------------------------	------

Notes:

1. Unsaturated Zone Rating for each cell (CR):

$$\text{CR} = [3 \times (\text{vertical hydraulic conductance rating})] + [2 \times (\text{land surface slope rating})] \\ + [3 \times (\text{land use rating})] + [2 \times (\text{land cover rating})]$$

2. Unsaturated Zone Rating (R) for the entire Assessment Area is the mean of the cell ratings (CR) calculated as:

The sum of all cell unsaturated zone ratings (CR) divided by the number of cells (N) within the assessment area: $R = (\sum \text{CR}) / N$

3. The USGS publication “Methods of ranking unsaturated zone and watershed characteristics of public water supplies in North Carolina,” by J. L. Eimers, J. C. Weaver, S. Terziotti, and R. W. Midgette, 1999, provides a detailed discussion of the methods used to determine unsaturated zone ratings.

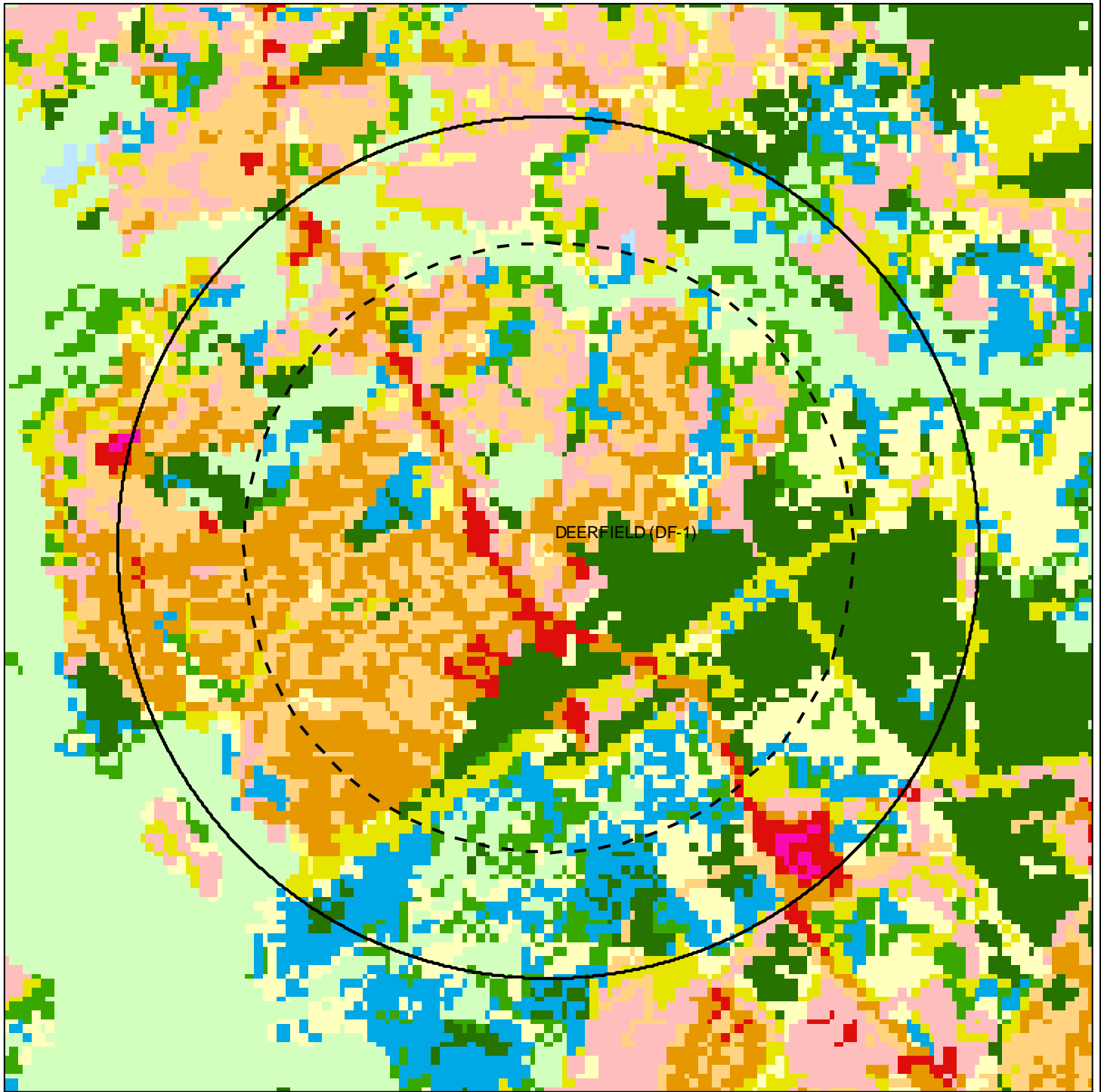
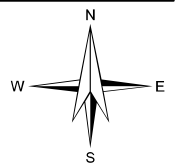


FIGURE 1. LAND USE/LAND COVER CATEGORIES

JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)

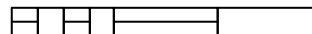


- | | | |
|-----------------------------|--------------------------------|------------------------------|
| Water | Barren Land (Rock, Sand, Clay) | Grassland, Herbaceous |
| Developed, Open Space | Deciduous Forest | Pasture, Hay |
| Developed, Low Intensity | Evergreen Forest | Cultivated Crops |
| Developed, Medium Intensity | Mixed Forest | Woody Wetlands |
| Developed, High Intensity | Shrub/Scrub | Emergent Herbaceous Wetlands |

Ground Water Assessment Area - Delineated Area

Ground Water Assessment Area - Zone A

0 1,000 2,000 3,000 Feet



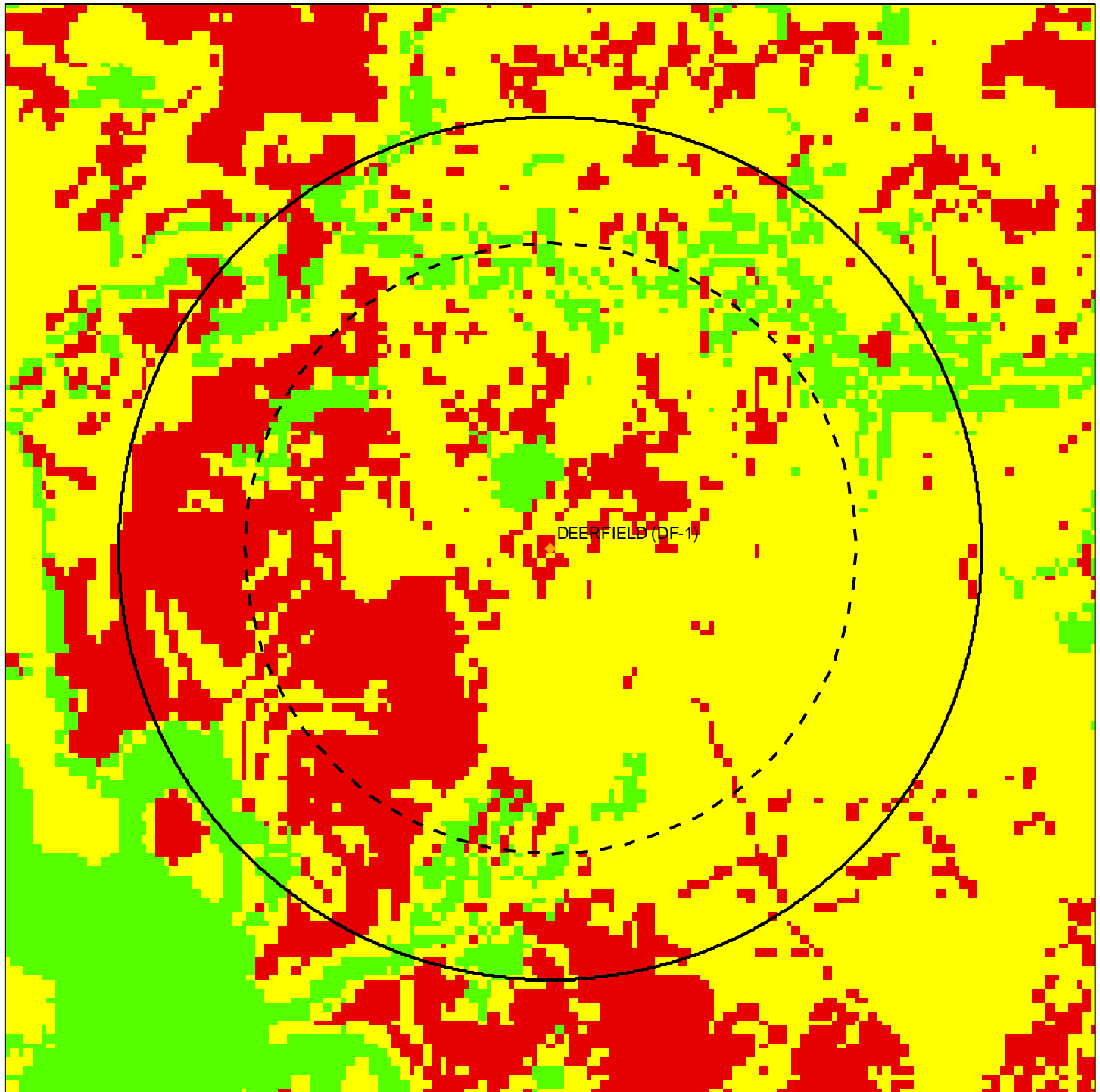
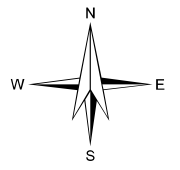
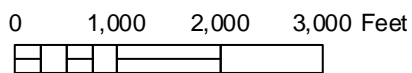


FIGURE 2. UNSATURATED ZONE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- Lower ≤ 50
- Moderate < 50 to 65
- Higher > 65
- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



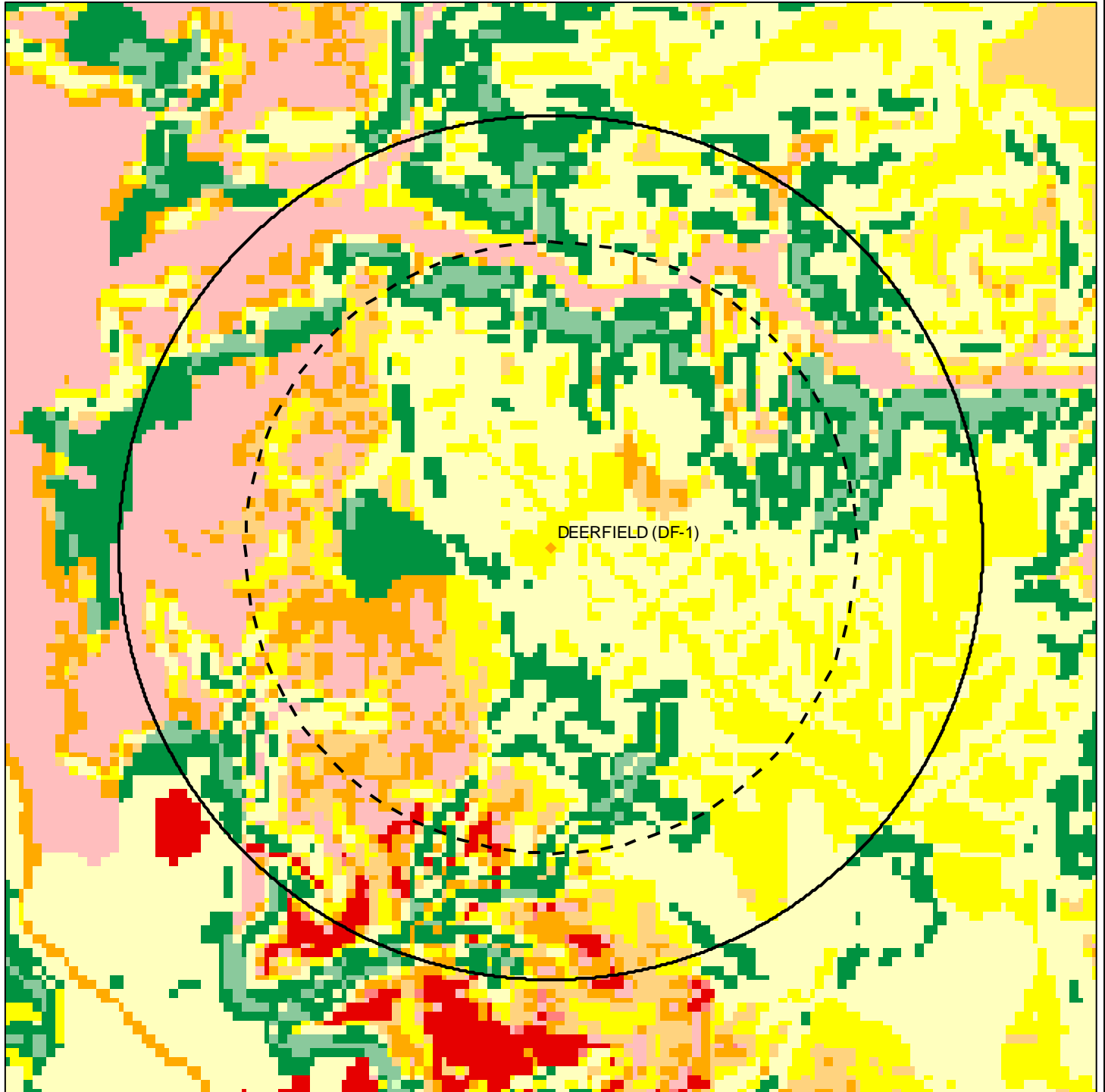
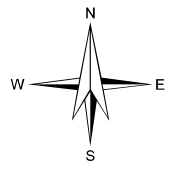
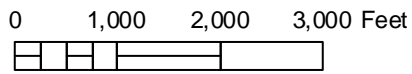


FIGURE 3. VERTICAL HYDRAULIC CONDUCTANCE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- | | | |
|---------------------------------|-------------------------------------|--|
| 1 (≤ 5 sq. ft./day) | 6 (> 80 to 160 sq. ft./day) | Ground Water Assessment Area - Delineated Area |
| 2 (>5 to 10 sq. ft./day) | 7 (> 160 to 320 sq. ft./day) | Ground Water Assessment Area - Zone A |
| 3 (>10 to 20 sq. ft./day) | 8 (> 320 to 640 sq. ft./day) | |
| 4 (> 20 to 40 sq. ft./day) | 9 (> 640 to $1,280$ sq. ft./day) | |
| 5 (> 40 to 80 sq. ft./day) | 10 ($> 1,280$ sq. ft./day) | |



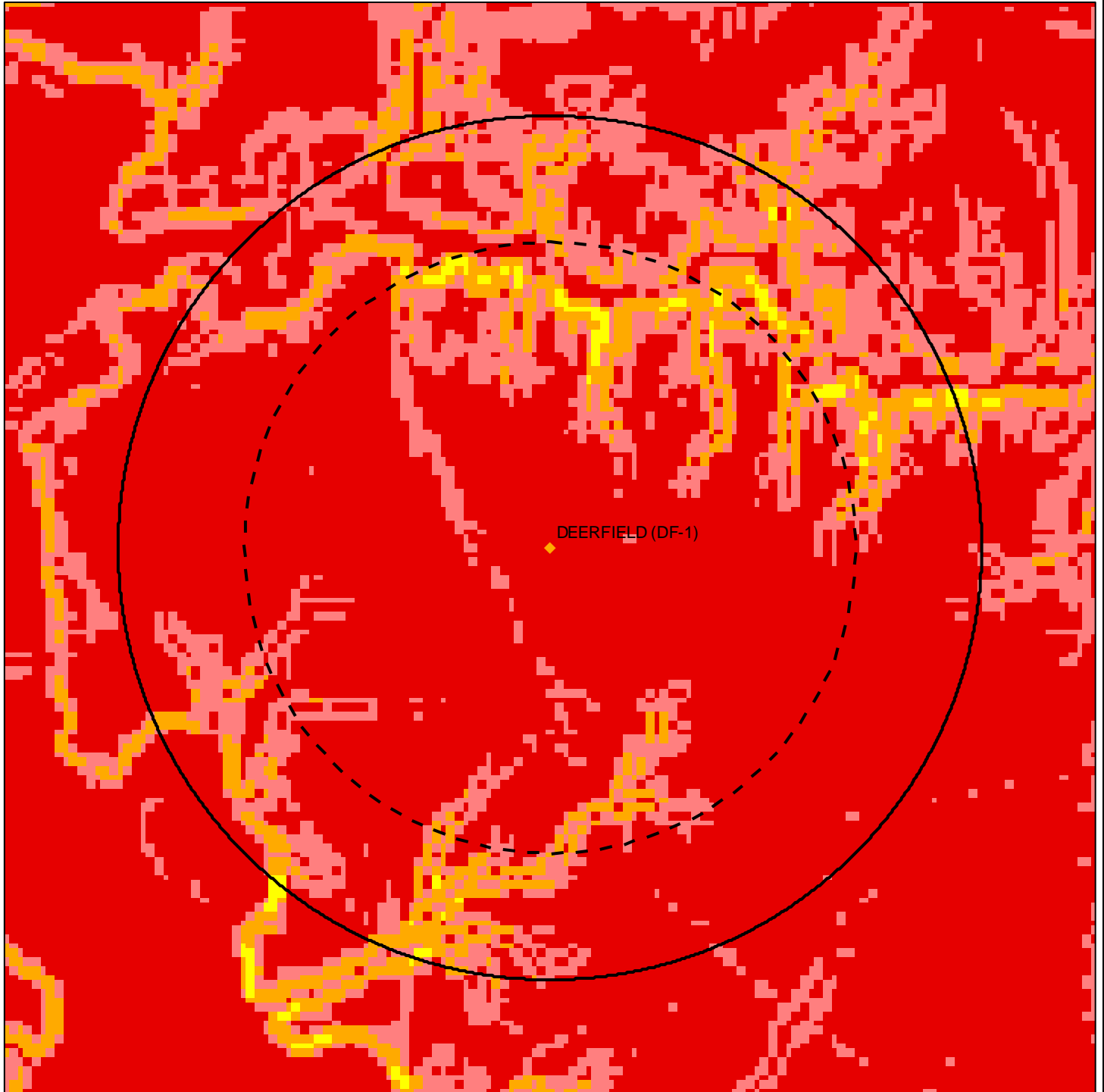
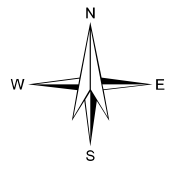
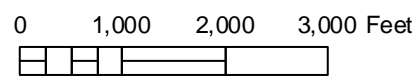


FIGURE 4. LAND SURFACE SLOPE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- | | | |
|---|--|--|
| 1 (> 50 percent) | 7 (> 5 to 10 percent) | Ground Water Assessment Area - Delineated Area |
| 3 (> 20 to 50 percent) | 9 (> 2 to 5 percent) | Ground Water Assessment Area - Zone A |
| 5 (> 10 to 20 percent) | 10 (<= 2 percent) | |



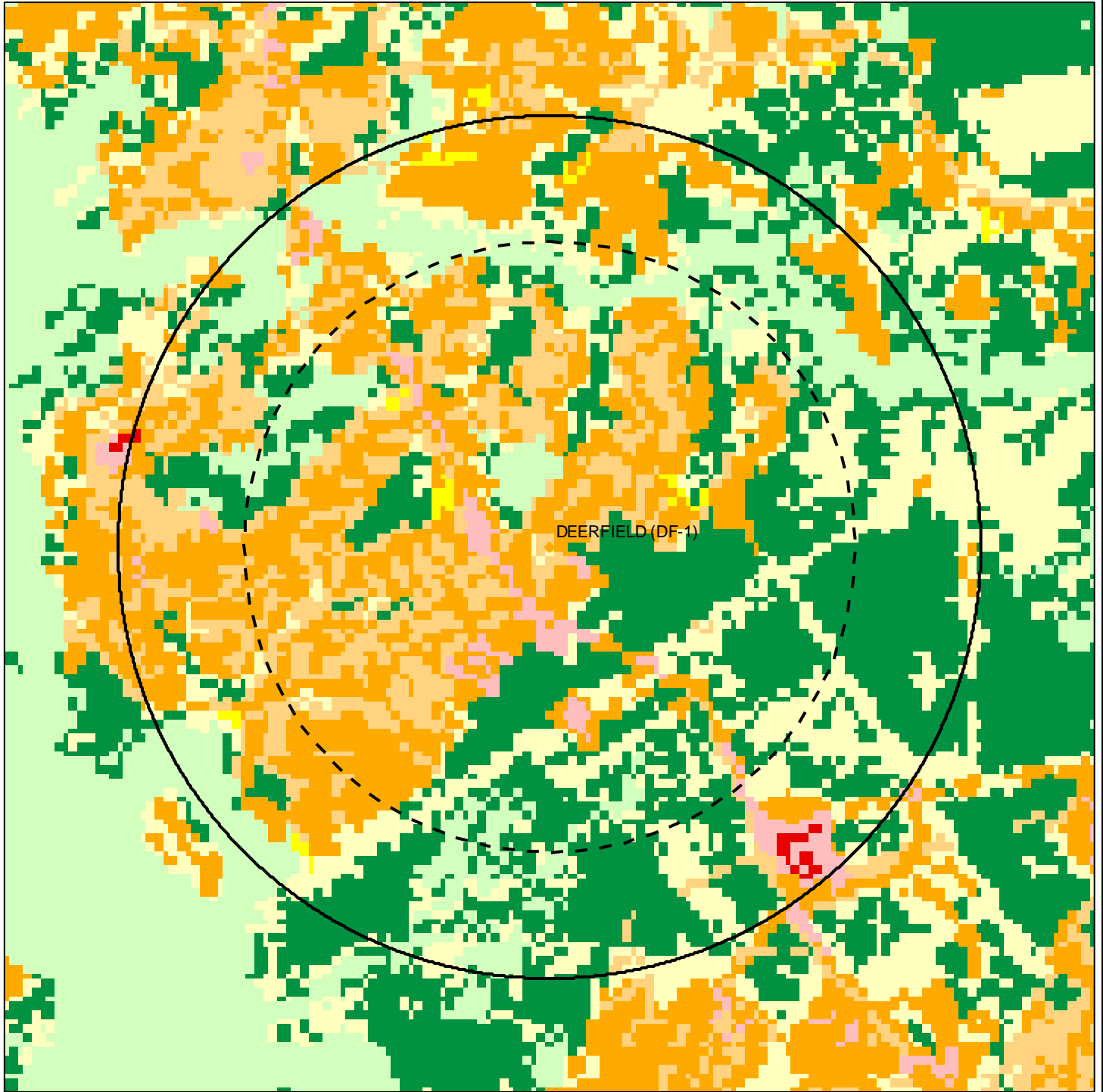
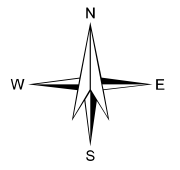




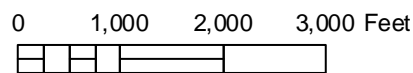


FIGURE 5. LAND USE RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- | | |
|---|--|
|  1 Water, Wetlands (Woody and Herbaceous) |  6 Developed, Open Space |
|  2 Barren Land (Rock/Sand/Clay) |  7 Developed, Low Intensity; Cultivated Crops |
|  3 Forest (Deciduous, Evergreen, Mixed) |  8 Developed, Medium Intensity |
|  4 Grassland/Herbaceous; Shrub/Scrub |  10 Developed, High Intensity |
|  5 Pasture/Hay | |

-  Ground Water Assessment Area - Delineated Area
-  Ground Water Assessment Area - Zone A



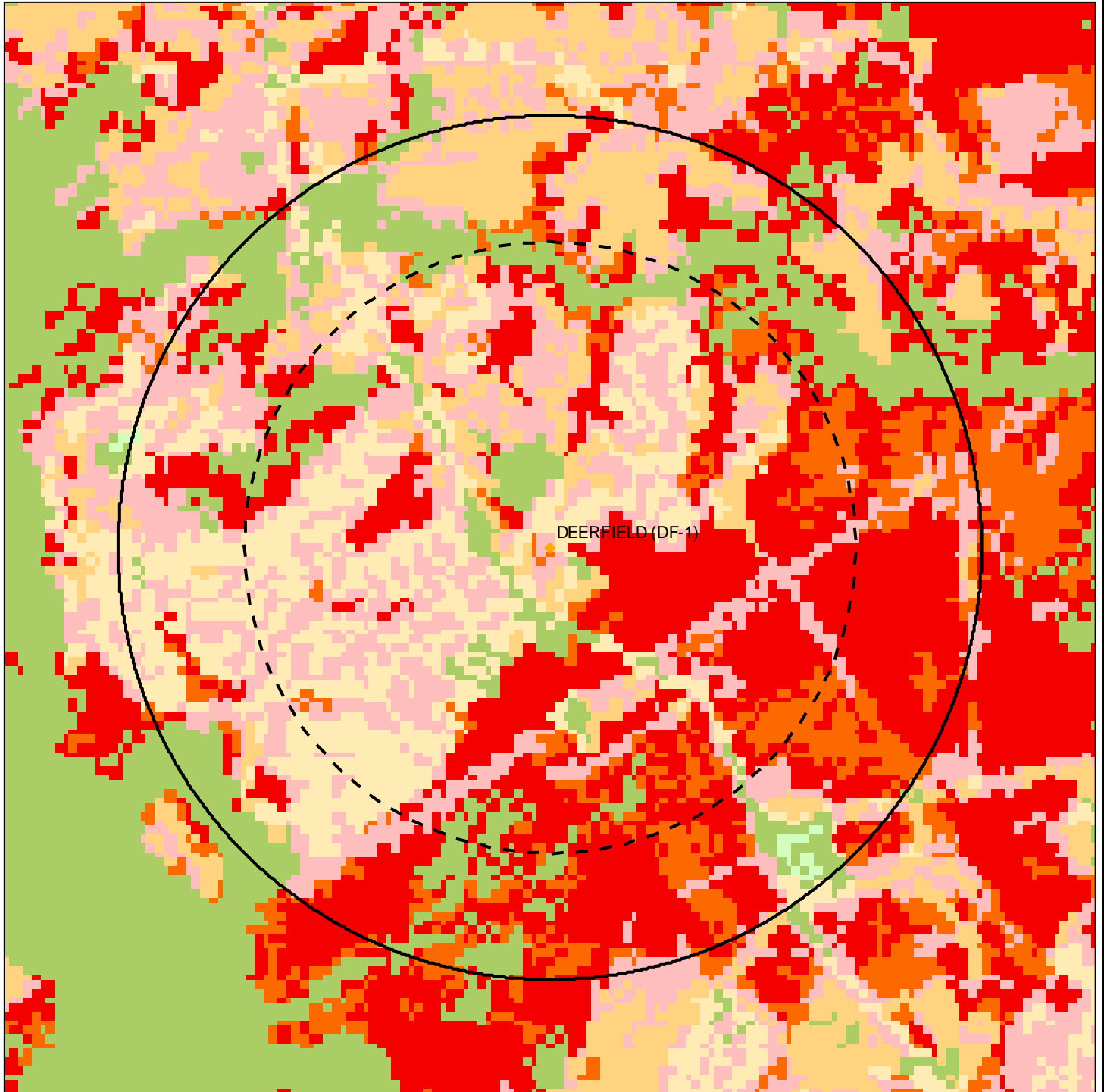
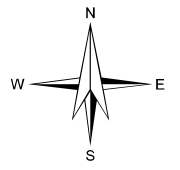
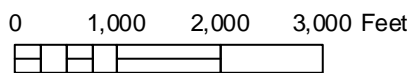


FIGURE 6. LAND COVER RATING
 JACKSONVILLE CITY OF, PWS ID: 0467010, DEERFIELD (DF-1)



- 1 Developed, High Intensity
- 2 Water; Wetlands; Developed, Medium Intensity
- 4 Developed, Low Intensity
- 6 Barren Land (Rock, Sand, Clay); Cultivated Crops
- 8 Grassland/Herbaceous; Pasture/Hay; Developed, Open Space
- 9 Shrub/Scrub
- 10 Deciduous, Evergreen and Mixed Forest

- Ground Water Assessment Area - Delineated Area
- Ground Water Assessment Area - Zone A



Section 6: North Carolina's SWAP Approach

This section of the report is a more detailed description of North Carolina's SWAP approach. This is a summary of Chapter 2 of [North Carolina's Source Water Assessment Program Plan](#).

Description of North Carolina's SWAP Approach

To meet the requirements of the 1996 SDWA Amendments, a Source Water Assessment was completed for approximately 9,000 drinking water sources in North Carolina. A delineated area for assessment was established for each drinking water source. An inventory of potential contaminant sources was conducted in each assessment area and finally, a susceptibility rating was assigned to each drinking water source. Because of the scope of this task and the limited time and resources available for completing the work, North Carolina's SWAP program efforts relies on Geographic Information Systems (GIS) to effectively use information. GIS allows databases to be linked to points on a map (e.g., public water supply sources, streams, geology, land use, roads, permitted waste disposal sites, Superfund sites, etc.) and overlaid on top of one another.

Delineation of Assessment Areas for Surface Water Sources

For the purpose of performing source water assessments, "delineation" means defining what land area constitutes the area contributing water to a public water supply source. The delineation of the source water assessment areas for surface water sources was done in consideration and collaboration with the Water Supply Watershed Protection (WSWP) Program. During the development of the WSWP program (final state rules adopted in 1992), the state worked with local governments to determine the location of all surface water sources and existing land uses within the water supply watersheds. This information, in conjunction with information on the types and location of wastewater discharges, was used to determine the appropriate Water Supply Watershed Classification for more than 200 surface water sources in the state. The watershed classifications, WS-I, WS-II, WS-III, WS-IV, and WS-V are based on the size of the watershed, development activities, and allowable waste treatment and disposal practices.

All surface water sources were located on US Geological Survey 1:24,000 scale topographic maps. The water supply watershed boundaries were delineated (except WS-V waters, which were delineated for the SWAP assessments by the PWS Section), and the boundaries of the Critical Area, and in the case of most WS-IV water supply watersheds Protected Areas (described below) were delineated.

For protection of the surface water sources in North Carolina, a segmentation of the water supply watersheds was implemented through the WSWP rules. The entire drainage areas of WS-I water supply watersheds were delineated. These watersheds are all publicly owned and no new development is allowed in these watersheds. These watersheds are very small. Some are located within National Forests. Others are owned by a local government.

All WS-II, WS-III and WS-IV water supplies require delineation of a Critical Area which is defined as the area within ½ mile and draining to the normal pool elevation of a water supply reservoir, or ½ mile and draining to a water supply intake in a river. For WS-II and WS-III water supplies, the remainder of the drainage area is subject to the development standards of the

WSWP rules and are implemented through local land use ordinances. WS-IV water supplies, which are typically portions of major river systems, are segmented in a Critical Area (previously defined) and a Protected Area. The Protected Area is defined as the area within 5 miles and draining to the normal pool elevation of a reservoir or 10 miles upstream and draining to a river intake. In very few instances the WS-IV Protected Area encompasses the entire drainage area due to the size of the watershed. In 1995, the state allowed local governments to request that the 10 mile Protected Area boundary of a WS-IV water supply be measured “run of river” rather than using a 10-mile arc linear measurement. Surface waters that are used by industry to supply their employees with drinking water or waters formerly used as water supply are generally classified as WS-V. The WS-V waters are protected as water supplies and are typically located upstream of and draining to Class WS-IV waters. Land use restrictions do not apply to WS-V waters under the WSWP rules.

Please note that for the purpose of the PWS Section’s Source Water Assessments, delineation of WS-IV boundaries may be different from the WSWP Program’s delineation. The PWS Section watershed assessment areas include all land draining to a drinking water source. However, the watersheds defined in accordance with the WSWP rules often exclude land area draining to a source based on municipal or county jurisdictional boundaries. Please refer to the WSWP program website (<http://portal.ncdenr.org/web/lr/water-supply-watershed>) for information on the regulations associated with their program and the land area affected by their regulations.

Delineation of Assessment Areas for Public Water Supply Wells

The delineation of source water assessment areas for wells was in accordance with North Carolina’s EPA approved Wellhead Protection Program. The calculated fixed radius method was used to delineate assessment areas around each well in the following areas: piedmont and mountains; the unconfined surficial aquifer of the coastal plain; and in the semi-confined portions of the Castle Hayne aquifer with an estimated recharge rate of 250,000 gallons per day per square mile. The aquifer-source-volume method was used for confined aquifers of the coastal plain. These methods are described below. Well depth is the determining factor for a well to be considered confined. Well depths greater than 70 feet are considered confined.

Other assessment area delineation methods may be of interest to a PWS system in an effort to more accurately define the area contributing water to the well. The state will review delineations provided by any PWS system that employs acceptable alternative delineation methods. Resulting alternative delineation areas will be incorporated into the SWAP if the state concludes that the use of the more sophisticated method is appropriate.

Calculation of the Contributing Area

The first step in delineating the assessment areas is to determine the size of the contributing area to the well. When a well is pumped, it causes groundwater that is flowing through the subsurface to flow toward the well. The surface area surrounding a well that delineates the area in which water entering the groundwater system at the water table eventually flows to the well and discharges is known as the contributing area for the well. In this area, any contaminants released to the environment that reach the water table, can reasonably be expected to move toward and possibly reach the well. The calculated fixed radius method requires the pumping rate (Q) and the recharge rate (W) for the pumping well in order to calculate the size of the contributing area. The contributing area is calculated as follows:

$$A_c = \frac{Q}{W}$$

where:

- A_c = contributing area in square miles,
- Q = maximum daily pumping rate in gallons per day, and
- W = average recharge rate in gallons per day per square mile.

The maximum daily pumping rate in gallons per day was determined from information on wells obtained from PWS Section sanitary survey inspection forms, Division of Water Resources Local Water Supply plans, and information supplied by system owners/operators. Where no information was available, an estimate of maximum daily pumping rate was assigned based on hydrogeologic characteristics of the aquifer supplying water to the well.

Size of the Assessment Area for Wells Using Calculated Fixed Radius Method

Estimates of the size of the contributing area can be obtained using the equation given above. However, because of the complex nature of groundwater flow and contaminant transport, it is not possible to define exact contributing area boundaries around each well. Two factors that affect the shape of the contributing area and its position and orientation with respect to a pumping well are the hydraulic gradient and aquifer transmissivity. The variation in aquifer transmissivity is important in determining the shape of the contributing area for a supply well. In areas where the hydraulic gradient and the aquifer transmissivity are essentially the same in all directions, the shape of the contributing area depends primarily on the hydraulic gradient. Where the water table is nearly flat, as near the water-table divide in broad interstream areas of low relief, the contributing area is approximately circular. Where the hydraulic gradient is moderate to steep, the contributing area is approximately elliptical, being oriented in the direction of groundwater movement.

Due to limited availability of information on both hydraulic gradient and aquifer transmissivity, the assessment area for each well was doubled. Therefore, the assessment area for each well is twice the size of the calculated contributing area or:

$$A_{SWAP} = 2 A_c = \frac{2Q}{W}$$

Delineation of Assessment Areas for Wells in Confined Aquifers

Recharge to confined aquifers is much less than that to the surficial unconfined aquifer where the calculated fixed radius method was used. If the calculated fixed radius method were applied to wells withdrawing water from confined aquifers, the resulting assessment areas would be very large. With the exception of a portion of the Castle Hayne aquifer, the aquifer-source-volume method was used for delineating assessment areas for wells determined to be withdrawing water from highly confined and semi-confined aquifers. "Aquifer source volume" refers to the volume of the source aquifer that supplies the withdrawals from a well for a specified period of time. This factor has been adopted in many states for defining assessment areas for confined aquifers.

For the purpose of these assessments, the volume of aquifer that supplies ten years of withdrawals (i.e. the area surrounding a well in which the time of travel to the well is ten years) was used. A ten-year period should be sufficient to provide time to assess the potential impact of any groundwater contamination discovered within an assessment area and for developing appropriate remediation and source water protection strategies for the water supply. For any well in the coastal plain determined to be withdrawing water from a confined aquifer, the table below will be used to determine the size of the assessment area.

Table 1. Radii of Assessment Areas for Wells Withdrawing from Confined Aquifers in the Coastal Plain

Pumping Rate of Well (Gal. / min.)	Radius of Assessment Area (Feet Rounded)
50	1000
100	1000
200	1500
500	2000
1000	3000
2000	3500

Delineation of Assessment Areas for Water Supply Sources Classified as GWUDIs

Drinking water supplied by a well may include a surface water component. This is defined as Ground Water Under the Direct Influence of Surface Water (GWUDIs). This term is used to indicate that water withdrawn from a well contains a specific indicator or indicators (e.g., giardia) of the presence of a surface water component. The delineated area for a PWS well classified as a GWUDI well will be the combined area of a circle based on the calculated fixed radius method and the resulting upgradient watershed of the intersected surface water. Segmentation of the resulting watersheds was in accordance with the most appropriate water supply watershed classification scheme.

Delineation for Water Supply Sources Classified as Springs

Springs can be defined as areas where the water table intersects the ground surface. Ground water may have flowed many miles before appearing on the surface to form a particular spring. The delineated area for a drinking water source classified as a spring was defined as the entire watershed area upgradient of the spring. Segmentation of the resulting watersheds was in accordance with the most appropriate water supply watershed classification scheme.

Susceptibility Rating Methodology

The state determined that the overall susceptibility rating for each drinking water source should be based on two key components, a contaminant rating and an inherent vulnerability rating. Inherent vulnerability refers to the physical characteristics and existing conditions of the watershed or aquifer. A contaminant rating refers to an evaluation of the number and location of potential sources of contamination. The contaminant rating and inherent vulnerability methodologies are explained below.

Contaminant Rating Methodology

The contaminant rating for each water supply source was determined based on the number and location of potential contaminant sources (PCSs) within the delineated area. The delineated area for the drinking water source encompasses the area where PCSs, if released to the environment, could reasonably be expected to be a risk or a potential for contamination of the drinking water supply. A PCS in this assessment report is a facility or site regulated under a state or federal regulatory program. These facilities are identified in electronic databases that contain location information for each facility. Only databases that include information statewide were used for this source water assessment. Each PCS identified within the delineated area was assigned a risk rating of higher, moderate or lower. The number of PCSs that occur within the delineated area was determined and a Contaminant Rating of higher, moderate or lower was assigned to each drinking water source.

Contaminant Rating for Ground Water Sources

For each ground water source, define an inner Zone A with an area equal to half the area of the delineated assessment area. Using Table 2, determine the number of PCSs that occur within each risk category according to their location, either in Zone A or in the remaining delineated area. Determine the Contaminant Rating of higher, moderate or lower for each well by adding the totals for each risk category.

Table 2. Determination of Contaminant Rating for Ground Water Sources

Potential Contaminant Sources in :	Number of Higher Risk PCSs	Cumulative Number of Higher and Moderate Risk PCSs	Cumulative Number of Higher, Moderate and Lower Risk PCSs
Zone A (the inner 1/2 of the delineated area)	(Number of sources____) ≥ 1 Score: (1 or 0)	(Number of sources____) > 2 Score: (1 or 0)	(Number of sources____) > 4 Score: (1 or 0)
Delineated Area (Zone A plus the remaining delineated area)	(Number of sources____) > 2 Score: (1 or 0)	(Number of sources____) > 4 Score: (1 or 0)	(Number of sources____) > 8 Score: (1 or 0)

For each category, score “1” if the number of contaminants exceeds the indicated threshold, or score “0” if the number of contaminants is less than the threshold. Total all the scores (1 or 0) for each category. Therefore, the highest possible score is 6.

Determine the **Contaminant Rating** for each well as follows:

Higher (6 - 4)

Moderate (3 - 2)

Lower (≤ 1)

Contaminant Rating for Surface Water Sources

Because the WSWP rules prohibit development in these watersheds, the existence of one PCS in the delineated area of a drinking water source located in a WS-I watershed will result in a contaminant rating of higher.

Using Table 3 for WS-II and WS-III watersheds, or Table 4 for WS-IV and V watersheds, determine the number of PCSs that occur within each risk category (i.e., lower, moderate or higher risk) and within each delineated assessment area (e.g., critical area, protected area, etc). Determine the Contaminant Rating for each surface water PWS source by summing the totals for each risk category.

**Table 3. Determination of Contaminant Rating
for Surface Water Sources in WS - II or III Watersheds**

Potential Contaminant Sources in :	Number of Higher Risk PCSs	Cumulative Number of Higher and Moderate Risk PCSs	Cumulative Number of Higher, Moderate and Lower Risk PCSs
Critical Area	(Number of sources____) ≥ 1 Score: <i>(1 or 0)</i>	(Number of sources____) > 5 Score: <i>(1 or 0)</i>	(Number of sources____) > 10 Score: <i>(1 or 0)</i>
Watershed Area Within 1000 Foot Stream Zone	(Number of sources____) > 5 Score: <i>(1 or 0)</i>	(Number of sources____) > 10 Score: <i>(1 or 0)</i>	(Number of sources____) > 20 Score: <i>(1 or 0)</i>
Watershed Area Outside Stream Zone	(Number of sources____) > 20 Score: <i>(1 or 0)</i>	(Number of sources____) > 40 Score: <i>(1 or 0)</i>	(Number of sources____) > 80 Score: <i>(1 or 0)</i>

For each category, score “1” if the number of contaminants exceeds the indicated threshold, or score “0” if the number of contaminants is less than the threshold. Total the scores (1 or 0 for each category). Therefore, the highest possible score is a 9.

Determine the **Contaminant Rating** for each surface water source in a Water Supply Watershed II or III as follows:

- Higher** (9 - 6)
- Moderate** (5 - 3)
- Lower** (≤ 2)

**Table 4. Determination of Contaminant Rating
for Surface Water Sources in WS - IV and V Watersheds**

Potential Contaminant Sources in :	Number of Higher Risk PCSs	Cumulative Number of Higher and Moderate Risk PCSs	Cumulative Number of Higher, Moderate and Lower Risk PCSs
Critical Area	(Number of sources____) ≥ 1 Score: (1 or 0)	(Number of sources____) > 5 Score: (1 or 0)	(Number of sources____) > 10 Score: (1 or 0)
Protected Area Within 1000 Foot Stream Zone	(Number of sources____) > 5 Score: (1 or 0)	(Number of sources____) > 10 Score: (1 or 0)	(Number of sources____) > 20 Score: (1 or 0)
Protected Area Outside Stream Zone	(Number of sources____) > 20 Score: (1 or 0)	(Number of sources____) > 40 Score: (1 or 0)	(Number of sources____) > 80 Score: (1 or 0)
Stream Zone from Protected Area to 25 Mile or Watershed Boundary	(Number of sources____) > 20 Score: (1 or 0)	(Number of sources____) > 40 Score: (1 or 0)	(Number of sources____) > 80 Score: (1 or 0)

For each category, score “1” if the number of contaminants exceeds indicated threshold. If the number of contaminants is less than the threshold score “0.” Total all the scores (1 or 0 for each category). Therefore, the highest possible score is a 12.

Determine the **Contaminant Rating** for each surface water source in a Water Supply Watershed IV or V as follows:

- Higher** (12 - 9)
- Moderate** (8 - 4)
- Lower** (≤ 3)

Inherent Vulnerability Rating Methodology

The inherent vulnerability of a well or surface water source refers to the characteristics or existing conditions of the well or surface water source and its delineated assessment area. Several factors were evaluated for both groundwater and surface water sources and included in the inherent vulnerability rating of each public water supply source. Each drinking water source was assigned an inherent vulnerability rating of higher, moderate or lower.

Inherent Vulnerability Rating for Wells

The characteristics included for assigning an inherent vulnerability rating for wells are aquifer rating, unsaturated zone rating and well integrity/well construction rating. The aquifer rating is an assessment of the water transmitting characteristics of the aquifer. The unsaturated zone rating is an assessment of the likelihood that contaminants from surface and shallow sources will follow the path of aquifer recharge and reach the water table. The well integrity/construction rating is an assessment of the quality of the construction of the well. A brief description of each factor follows:

Aquifer Rating

The aquifer rating is a qualitative assessment of the water transmitting characteristics of the aquifer. Relative differences in aquifer vulnerability were based on a review of relevant literature, expert opinions, and confirmed with historical data. Factors considered in rating aquifer vulnerability include hydraulic conductivity, degree of confinement, dilution, and sorption potential. The attenuative capacity of the unsaturated zone is not considered in the determination of aquifer ratings. Table 5 summarizes the aquifer-rating scheme used for these assessments.

Well depths determined whether a well was considered unconfined, deep confined or shallow confined for these assessments. Wells less than or equal to 70 feet deep were considered to be withdrawing water from an unconfined or surficial aquifer. Wells greater than 70 feet but less than 180 feet deep were considered to be withdrawing water from a shallow confined aquifer. Wells greater than 180 feet deep were considered to be withdrawing water from a deep confined aquifer.

Table 5. Aquifer Rating Based on Water Transmitting Characteristics

Aquifer/Ground Water Source	Rating
Coastal Plain Aquifers:	
Deep Confined (e.g., Kinston area)	Lower
Shallow Confined (e.g., Pamlico Co.)	Moderate
Unconfined (e.g., Castle Hayne Outcrop area)	Higher
Piedmont and Mountain Aquifers:	
Triassic Basins (e.g., Sanford-Durham)	Moderate
Fractured Rock Aquifers	Higher
Other:	
Metamudstones and Meta-argillites of the Carolina Slate Belt	Higher
Areas with Wells Cased to Less Than 20 Feet	Higher
Groundwater under the Direct Influence of Surface Water	Higher
Sand Hills Area	Higher

Unsaturated Zone Rating

The state, in cooperation with the United States Geological Survey (USGS), developed the unsaturated zone rating methodology. The USGS Water-Resources Investigations Report 99-4283, "Methods of Rating Unsaturated Zone and Watershed Characteristics of Public Water Supplies in North Carolina" describes the methodology. The unsaturated zone rating is the combination of selected factors that contribute to the likelihood that contaminants from surface and shallow sources will follow the path of aquifer recharge and reach the water table. Contributing factors, in the form of GIS spatial data layers, include land use/land cover, vertical hydraulic conductance of the unsaturated zone, and land-surface slope. Vertical hydraulic conductance measures the capacity of the unsaturated zone to transmit water from land surface to water table. Land-surface slope and land cover influences the amount of precipitation that infiltrates into the subsurface. Land use describes the activities that take place on the surface or in the shallow subsurface and the type of contaminants that may be present as a result of those activities (i.e., "non-point source" potential contaminant sources).

Well Integrity/Construction Rating

The integrity of well construction can vary widely, depending on details such as casing depth, grouting depth, well materials and driller knowledge. However, these details are not always available for assigning SWAP assessment ratings. In 1994 and 1999 there were important rule changes that greatly improve the quality of the well construction standards. Therefore, the SWAP assessments use well construction and approval dates as a surrogate to construction details to assign a well construction / integrity rating. For wells that construction and approval date is not available, the well construction/integrity rating defaults to Higher.

Table 6 summarizes the characteristics evaluated and rated for the inherent vulnerability for each PWS well. Each well was assigned an inherent vulnerability rating of higher, moderate or lower:

Table 6. Inherent Vulnerability Rating of Wells

Inherent Vulnerability Factors	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Aquifer Rating	10	5	- 1
Unsaturated Zone Rating	10	5	1
Well Integrity/Construction Rating	5	3	1
Totals	25-18	17-15	14-1

Inherent Vulnerability Rating for Surface Water Sources

The inherent vulnerability of a surface water source refers to the characteristics and existing conditions of the source and the delineated assessment area (watershed). The characteristics included for assigning an inherent vulnerability rating are water supply watershed classification, surface water source location, raw water quality, and the watershed characteristics rating. The watershed classification is based on the size of the watershed, development activities, and allowable waste treatment and disposal practices. The surface water sources were characterized based on whether they are located in streams, large multi-purpose reservoirs, or small water supply reservoirs. The raw water quality rating is based on recorded turbidity and total coliform values over a twelve month period. The watershed characteristics rating is an assessment of the likelihood that contaminants will follow the path of overland flow or shallow subsurface flow to a surface water source. A description of each factor follows:

Watershed Classification

In North Carolina, all surface water sources are located in water supply watersheds that are classified as either WS-I, II, III, IV, or V. The Water Supply Watershed Protection rules required that all local governments having land use jurisdiction within water supply watersheds adopt and implement water supply watershed protection ordinances, maps and a management plan. All of these ordinances are in place and have been deemed to be in compliance with the statutory requirements. The inherent vulnerability ratings for watershed classification are based on differences between watershed classes, including size of the watershed, development activities, and allowable waste treatment and disposal practices.

Surface Water Source Location

All surface water sources are located in streams, large multi-purpose reservoirs (Class 3), or small water supply reservoirs (Class 1 or 2). The inherent vulnerability ratings for surface water source location are based on differences between the reaction time for a water plant in the case of a contamination event or spill in a stream versus a reservoir and includes the allowable activities on surface water reservoirs (i.e., single use versus multiple uses allowed).

Raw Water Quality

The likelihood of the presence of *Cryptosporidium* and other water-borne microorganisms increases when turbidity is high. Therefore, turbidity and total coliform bacteria are good indicators of raw water quality. The Area Wide Optimization Program (AWOP) within the PWS Section has developed a ranking system for surface water treatment plants based primarily on these two parameters. This ranking system, with some minor modifications, has been adopted by SWAP in order to assign a raw water quality rating to each surface water source.

The AWOP ranking system is based on the treatment plant's raw, settled and finished water turbidity and coliform levels along with violations of MCLs and treatment techniques. Raw, settled and finished water samples are collected daily and compiled in a monthly report, commonly referred to as a MOR (monthly operating report). The AWOP ranking system first totals the number of months in a year that specific levels of turbidity and coliform are exceeded and/or the number of months certain violations occur. The monthly totals are then multiplied by a weighting factor to balance the relative importance of these parameters. These numbers are then totaled for the year and are considered the water treatment plant's total score.

Because the purpose of SWAP is to assess sources of drinking water supply and not how well water plants treat their water, SWAP only uses the raw water scores for turbidity and coliform from the AWOP ranking system. The total raw water quality scores were divided into three categories of vulnerability: Higher, Moderate and Lower. The AWOP ranking system is for surface water treatment plants and not individual surface water sources. Therefore, in the case where more than one source is used by a treatment plant, the plant's raw water quality rating was initially assigned to all of the plant's sources. Upon review by the regional office staff some of the ratings were then adjusted based on their extensive knowledge of the surface water sources in their area.

Watershed Characteristics Rating

The state determined the watershed characteristics ratings of each surface water source in cooperation with the USGS. The USGS Water-Resources Investigations Report 99-4283, "Methods of Rating Unsaturated Zone and Watershed Characteristics of Public Water Supplies in North Carolina" describes this methodology. The watershed characteristics ratings were based on the combination of selected factors that may contribute to the likelihood that contaminants follow the path of overland flow and reach the surface water source. Contributing factors, in the form of GIS spatial data layers, include average annual precipitation, land cover, land use, land-surface slope and groundwater contribution. Precipitation is the source of water transported overland to a stream or lake. Land-surface slope and land cover influence the amount of precipitation that infiltrates into the subsurface. Land use describes the activities that take place on the surface or in the shallow subsurface and the type of contaminants that may be present as a result of those activities (i.e., non-point source potential contaminant sources). Ground-water contribution is the effect of ground water on surface-water quantity and quality. For these assessments the ground-water contribution is derived from the unsaturated zone rating described in the ground water inherent vulnerability section of this report. Table 7 includes the characteristics that were evaluated and rated for the inherent vulnerability for each surface water source:

Table 7. Inherent Vulnerability of Surface Water Sources

Surface Water Source Characteristics	Higher Vulnerability	Moderate Vulnerability	Lower Vulnerability
Watershed Classification	WS-IV, WS-V 10	WS-III, WS-II 5	WS-I 1
Intake Location	Direct Stream 8	Class 3 Reservoirs 4	Class 1 and 2 Reservoirs 2
Raw Water Quality (water plant data)	5	3	1
Watershed Characteristics Rating	10	5	1
Totals	33 - 21	20 - 13	12 - 5

Susceptibility Rating Methodology

The state assigned a susceptibility rating for each drinking water source that was based on two components, a contaminant rating and an inherent vulnerability rating. Using the results of the evaluations of contaminant rating and inherent vulnerability rating for each public drinking water source, a susceptibility rating of higher, moderate or lower was assigned to each source according to the table below:

**Table 8. Susceptibility Rating for Public Water Supply Sources
by Combining the Inherent Vulnerability and Contaminant Ratings.**

Contaminant Rating	Inherent Vulnerability Rating		
	Higher	Moderate	Lower
Higher	H	H	M
Moderate	H	M	M
Lower	M	M	L

APPENDIX B

BORING LOGS AND MONITORING WELL CONSTRUCTION RECORDS



ENVIRONMENTAL - GEOTECHNICAL
BUILDING SCIENCES - MATERIALS TESTING

MONITORING WELL LOG: MW-2

(Page 1 of 1)

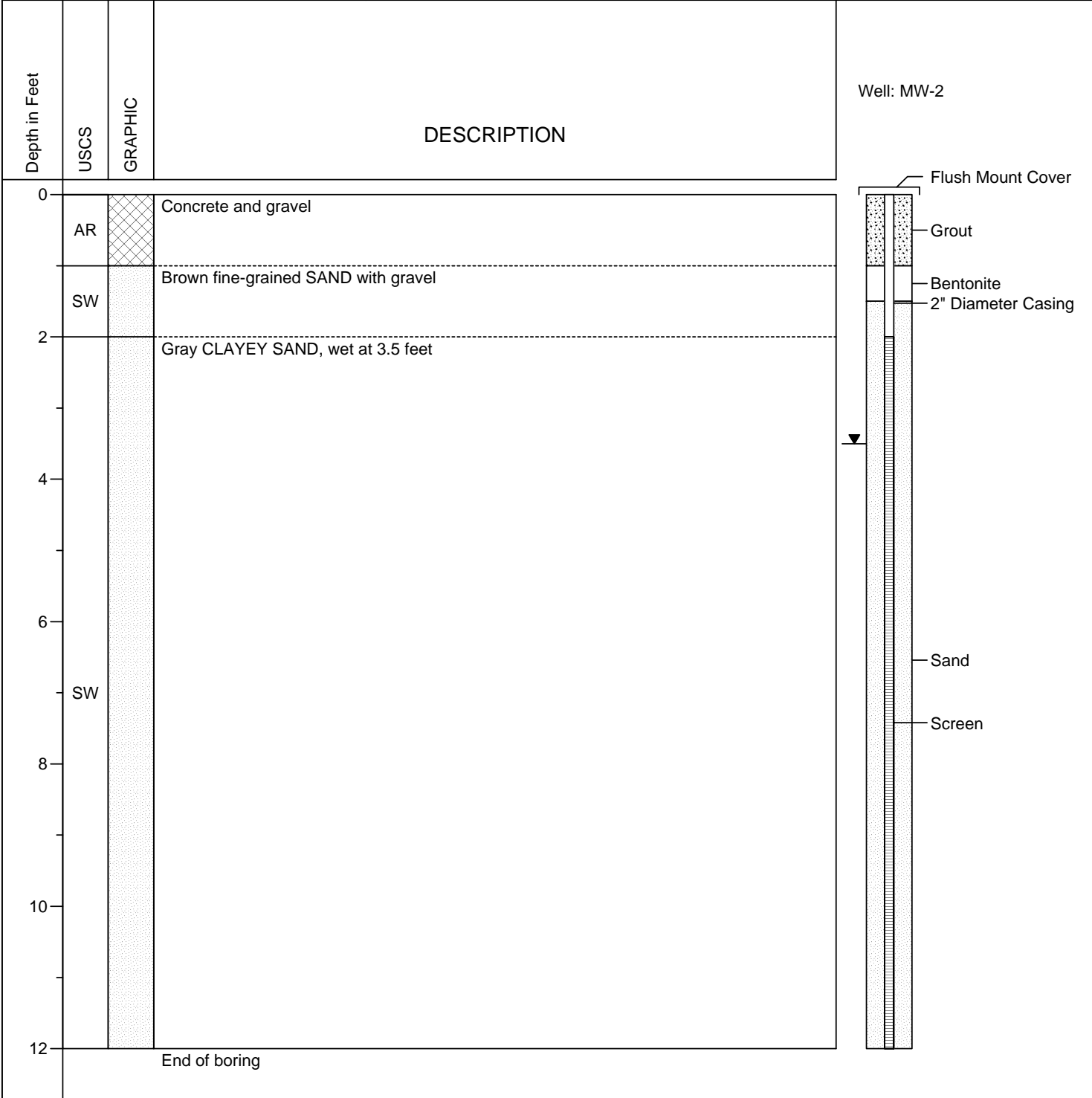
Pantry #3125
116 Piney Green Road,
Jacksonville, Onslow County, North Carolina

Date(s) Drilled : 8/10/2017
Drilling Contractor : Geologic Exploration (GEX)
Drilling Method : HSA

Boring Diameter : 7 Inches
Sampling Method : Logged Soil
Sampling Interval : Continuous

Client: Circle K

Logged By : F. Beecher





MONITORING WELL LOG: MW-3

(Page 1 of 1)

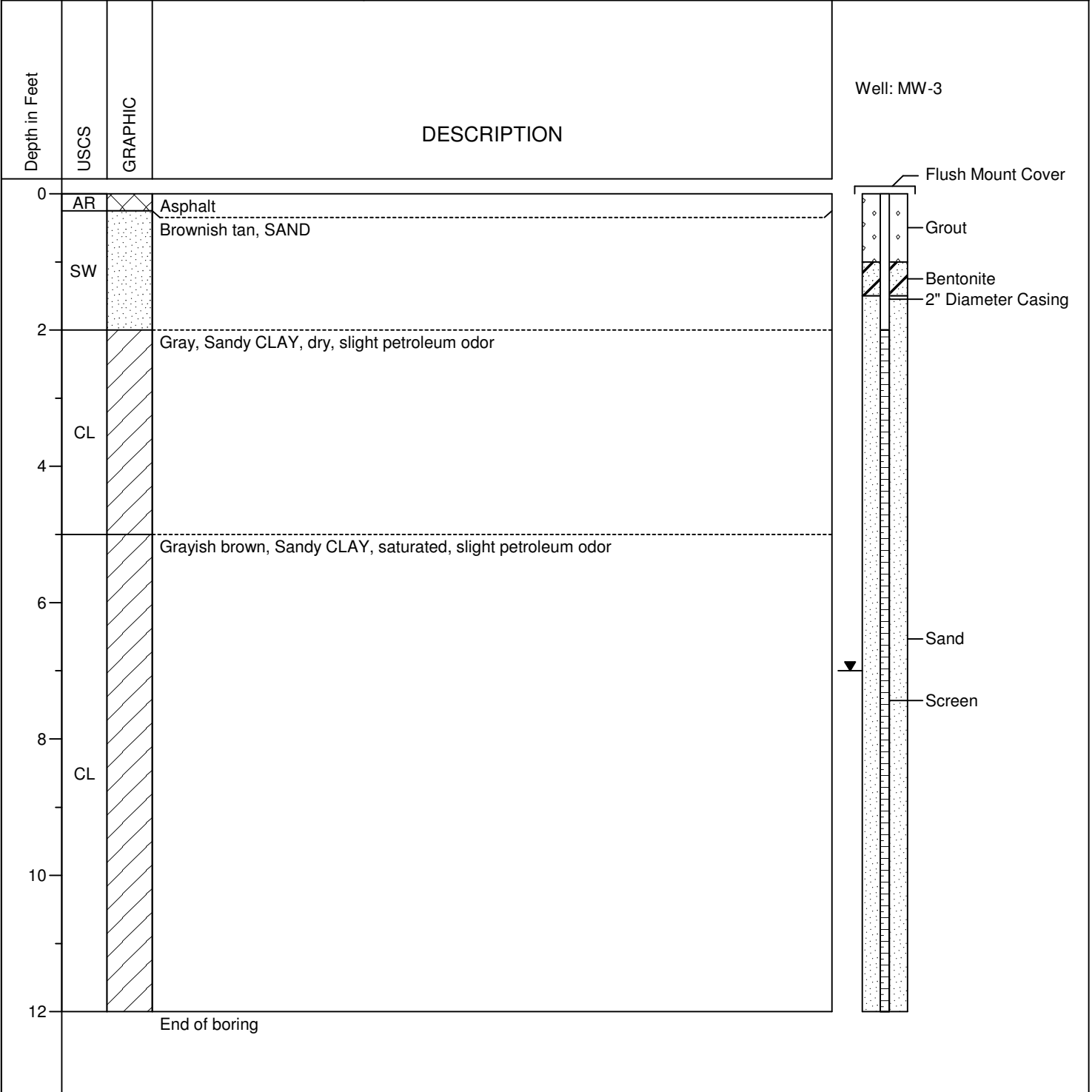
Pantry #3125
116 Piney Green Road,
Jacksonville, Onslow County, North Carolina

Date(s) Drilled : 11/14/2017
Drilling Contractor : Geologic Exploration (GEX)
Drilling Method : HSA

Boring Diameter : 4.25 Inches
Sampling Method : Logged Soil
Sampling Interval : Continuous

Client: Circle K

Logged By : Liz Allen



Boring terminated 12 feet below ground surface.
No samples were collected.



MONITORING WELL LOG: MW-4

(Page 1 of 1)

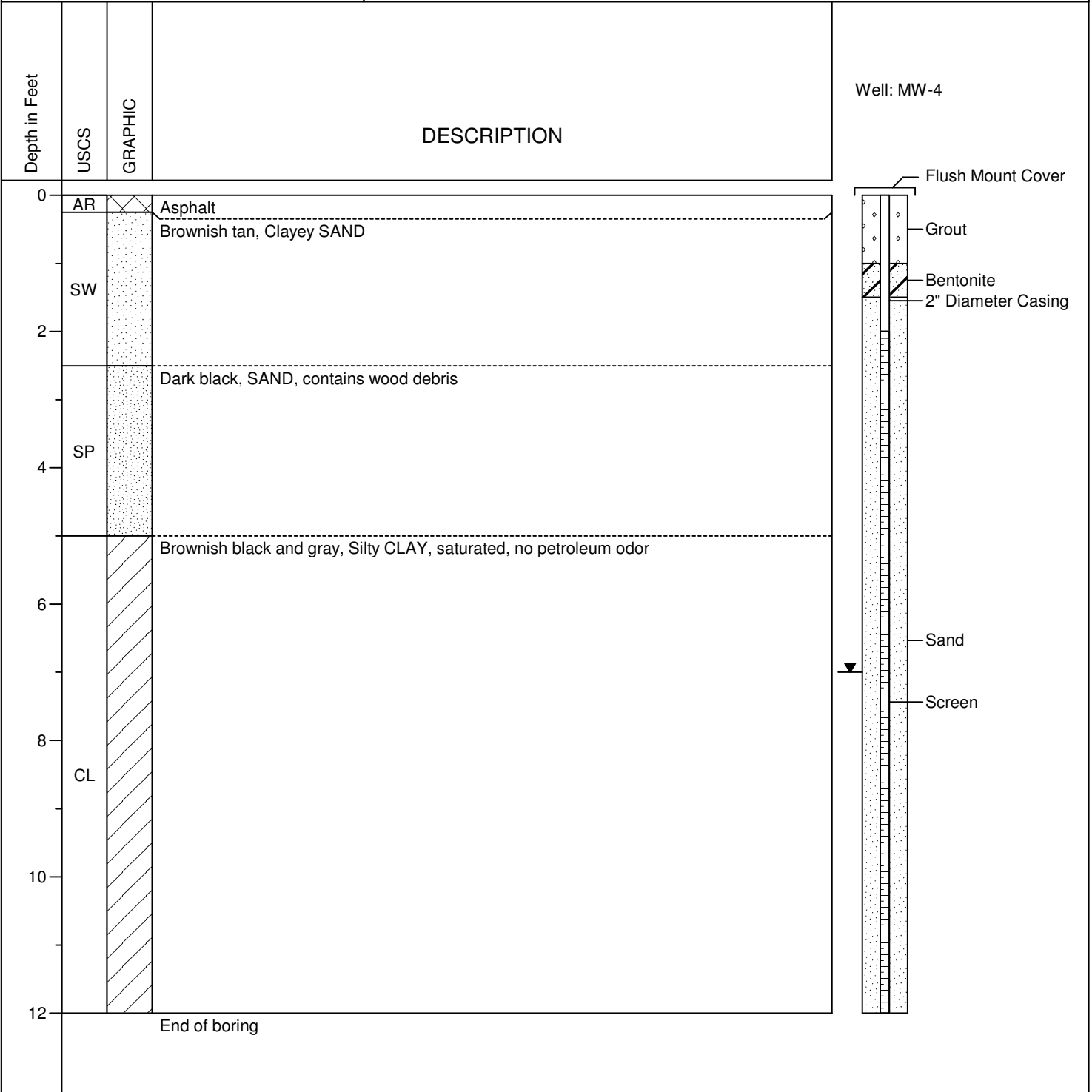
Pantry #3125
116 Piney Green Road,
Jacksonville, Onslow County, North Carolina

Date(s) Drilled : 11/14/2017
Drilling Contractor : Geologic Exploration (GEX)
Drilling Method : HSA

Boring Diameter : 4.25 Inches
Sampling Method : Logged Soil
Sampling Interval : Continuous

Client: Circle K

Logged By : Liz Allen



Boring terminated 12 feet below ground surface.
No samples were collected.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

PAUL MCVEY

Well Contractor Name

A - 4305

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #:

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 08/10/17 **Well ID#** MW-2

5a. Well Location:

PANTRY - 3125

Facility/Owner Name

Facility ID# (if applicable)

116 PINEY GREEN ROAD JACKSONVILLE 28546

Physical Address, City, and Zip

ONSLOW

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

34° 47' 08.76" N 77° 22' 44.12" W

6. Is (are) the well(s): Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 12.0 (ft.)

For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 6.0 (ft.)

If water level is above casing, use "+"

11. Borehole diameter: 7.0 (in.)

12. Well construction method: AUGER

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	2.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
2.0 ft.	12.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	1.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
1.5 ft.	12.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	12.0 ft.	GRAY SANDY CLAY
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE SEAL FROM 1.0 TO 1.5 FEET

22. Certification

Signature of Licensed Well Contractor

08/14/17

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Quality, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

PAUL MCVEY

Well Contractor Name

A - 4305

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #:

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 11/14/17 Well ID# MW-3

5a. Well Location:

PANTRY - 3125

Facility/Owner Name

Facility ID# (if applicable)

116 PINEY GREEN ROAD JACKSONVILLE 28546

Physical Address, City, and Zip

ONSLOW

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

34° 47' 08.76" N 77° 22' 44.12" W

6. Is (are) the well(s): Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. Number of wells constructed: 1

For multiple injection or non-water supply wells ONLY with the same construction, you can submit one form.

9. Total well depth below land surface: 12.0 (ft.)
For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 7.0 (ft.)
If water level is above casing, use "+"

11. Borehole diameter: 7.0 (in.)

12. Well construction method: AUGER
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use ONLY:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION. Rows for water zones.

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL.

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL. Row: 0.0 ft. to 2.0 ft., 2.0 in., SCH 40, PVC.

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL. Row: 2.0 ft. to 12.0 ft., 2.0 in., .010, SCH 40, PVC.

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT. Row: 0.0 ft. to 1.0 ft., PORTLAND BENTONITE, SLURRY.

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD. Row: 1.5 ft. to 12.0 ft., 20-40, FINE SILICA SAND.

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION. Row: 0.0 ft. to 12.0 ft., BROWN/BLACK/TAN SILTY SANDY CLAY.

21. REMARKS

BENTONITE SEAL FROM 1.0 TO 1.5 FEET

22. Certification:

Signature of Paul Mcvey

11/22/17

Signature of Certified Well Contractor

Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

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Division of Water Quality, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

PAUL MCVEY

Well Contractor Name

A - 4305

NC Well Contractor Certification Number

GEOLOGIC EXPLORATION, INC

Company Name

2. Well Construction Permit #:

List all applicable well construction permits (i.e. County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 11/14/17 Well ID# MW-4

5a. Well Location:

PANTRY - 3125

Facility/Owner Name

Facility ID# (if applicable)

116 PINEY GREEN ROAD JACKSONVILLE 28546

Physical Address, City, and Zip

ONSLOW

County

Parcel Identification No. (PIN)

5b. Latitude and Longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

34° 47' 08.76" N 77° 22' 44.12" W

6. Is (are) the well(s): Permanent or Temporary

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For multiple wells list all depths if different (example- 3@200' and 2@100')

10. Static water level below top of casing: 7.0 (ft.)
If water level is above casing, use "+"

11. Borehole diameter: 7.0 (in.)

12. Well construction method: AUGER
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use ONLY:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
0.0 ft.	2.0 ft.	2.0 in.	SCH 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
2.0 ft.	12.0 ft.	2.0 in.	.010	SCH 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
0.0 ft.	1.0 ft.	PORTLAND BENTONITE	SLURRY
ft.	ft.		
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
1.5 ft.	12.0 ft.	20-40	FINE SILICA SAND
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
0.0 ft.	12.0 ft.	BROWN/BLACK/TAN SILTY SANDY CLAY
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

BENTONITE SEAL FROM 1.0 TO 1.5 FEET

22. Certification:

Signature of Certified Well Contractor

11/22/17
Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

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24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit a copy of this form within 30 days of completion of well construction to the following:

Division of Water Quality, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

APPENDIX C

**SOIL AND GROUNDWATER LABORATORY REPORTS AND CHAINS-OF-CUSTODY
DOCUMENTS**

June 22, 2017

Maureen Jackson
ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604

Project Location: Jacksonville, NC
Client Job Number:
Project Number: Pantry 3125
Laboratory Work Order Number: 17F0883

Enclosed are results of analyses for samples received by the laboratory on June 15, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Raleigh NC
 2725 East Millbrook Road, Ste 121
 Raleigh, NC 27604
 ATTN: Maureen Jackson

REPORT DATE: 6/22/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: Pantry 3125

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17F0883

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Jacksonville, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	17F0883-01	Ground Water		EPA 504.1 EPA 625 MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM21-22 6200B SW-846 6020A-B	

EXECUTIVE SUMMARY

Client ID: **MW-1**

Lab ID: **17F0883-01**

Analyte	Results/Qual	DL	RL	Units	Method
1,2,4-Trimethylbenzene	580	1.8	5.0	µg/L	SM21-22 6200B
1,3,5-Trimethylbenzene	170	1.3	5.0	µg/L	SM21-22 6200B
2-Butanone (MEK)	110	24	50	µg/L	SM21-22 6200B
Benzene	42	1.2	5.0	µg/L	SM21-22 6200B
Isopropylbenzene (Cumene)	8.6	1.2	5.0	µg/L	SM21-22 6200B
m+p Xylene	330	2.6	10	µg/L	SM21-22 6200B
Methyl tert-Butyl Ether (MTBE)	5.1	0.90	5.0	µg/L	SM21-22 6200B
Naphthalene	140	1.2	10	µg/L	SM21-22 6200B
n-Propylbenzene	1.5 J	1.3	5.0	µg/L	SM21-22 6200B
o-Xylene	910	1.3	5.0	µg/L	SM21-22 6200B
p-Isopropyltoluene (p-Cymene)	3.7 J	1.5	5.0	µg/L	SM21-22 6200B
sec-Butylbenzene	3.4 J	1.3	5.0	µg/L	SM21-22 6200B
Toluene	7.4	1.7	5.0	µg/L	SM21-22 6200B
2,4-Dimethylphenol	7.5 J	4.7	20	µg/L	EPA 625
2-Methylnaphthalene	37	2.8	10	µg/L	EPA 625
2-Methylphenol	7.7 J	5.2	20	µg/L	EPA 625
4-Chloro-3-methylphenol	55	9.7	20	µg/L	EPA 625
Bis(2-Ethylhexyl)phthalate	9.5 J	9.5	20	µg/L	EPA 625
Naphthalene	110	2.9	10	µg/L	EPA 625
Benzene, (1-methylethyl)-	24			µg/L	EPA 625
Benzene, (2-methyl-1-butenyl)-	16			µg/L	EPA 625
Benzene, 1,2,3,4-tetramethyl-	34			µg/L	EPA 625
Benzene, 1,3,5-trimethyl-	730			µg/L	EPA 625
Benzene, 1-ethyl-2-methyl-	160			µg/L	EPA 625
Benzene, 1-methyl-2-(1-meth...	55			µg/L	EPA 625
Benzene, 4-ethyl-1,2-dimethyl-	17			µg/L	EPA 625
Benzene, propyl-	51			µg/L	EPA 625
Ethylbenzene	150			µg/L	EPA 625
Naphthalene, 1,2,3,4-tetra...	22			µg/L	EPA 625
n-Hexadecanoic acid	13			µg/L	EPA 625
o-Xylene	920			µg/L	EPA 625
C11-C22 Aromatics	610		200	µg/L	MADEP-EPH-04-1.1
C19-C36 Aliphatics	510		200	µg/L	MADEP-EPH-04-1.1
C9-C18 Aliphatics	3200		200	µg/L	MADEP-EPH-04-1.1
Unadjusted C11-C22 Aromatics	750		200	µg/L	MADEP-EPH-04-1.1
C5-C8 Aliphatics	2000	250	500	µg/L	MADEP-VPH-04-1.1
C9-C10 Aromatics	3400	140	500	µg/L	MADEP-VPH-04-1.1
Unadjusted C5-C8 Aliphatics	2400	250	500	µg/L	MADEP-VPH-04-1.1
Unadjusted C9-C12 Aliphatics	4700	180	500	µg/L	MADEP-VPH-04-1.1
Lead	52	0.34	2.0	µg/L	SW-846 6020A-B

Con-Test does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method 6200B, elevated reporting limits for sample(s) 17F0883-01 due to a high concentration of target compounds.

For MA EPH, only carbon fractions were requested and reported.

For method 6020, all dilutions were performed as per standard operating procedure.

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EPA 625

Qualifications:**V-04**

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**Benzidine**

17F0883-01[MW-1], B179499-BLK1, B179499-BS1, B179499-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Benzidine**

17F0883-01[MW-1], B179499-BLK1, B179499-BS1, B179499-BSD1

Benzo(g,h,i)perylene

17F0883-01[MW-1], B179499-BLK1, B179499-BS1, B179499-BSD1

Hexachlorocyclopentadiene

17F0883-01[MW-1], B179499-BLK1, B179499-BS1, B179499-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

17F0883-01[MW-1], B179499-BLK1, B179499-BS1, B179499-BSD1

MADEP-EPH-04-1.1

Qualifications:**L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**n-Nonane**

B179749-BS1

SM21-22 6200B

Qualifications:**L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Acetone**

17F0883-01[MW-1], B179555-BLK1, B179555-BS1, B179555-BSD1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

17F0883-01[MW-1]

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	500	49	µg/L	10	L-04	SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Benzene	42	5.0	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Bromobenzene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Bromochloromethane	ND	5.0	2.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Bromodichloromethane	ND	5.0	3.0	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Bromoform	ND	5.0	2.1	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Bromomethane	ND	20	9.4	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
2-Butanone (MEK)	110	50	24	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
n-Butylbenzene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
sec-Butylbenzene	3.4	5.0	1.3	µg/L	10	J	SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
tert-Butylbenzene	ND	5.0	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Carbon Tetrachloride	ND	5.0	2.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Chlorobenzene	ND	5.0	1.6	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Ethanol	ND	500	450	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Chlorodibromomethane	ND	5.0	1.0	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Chloroethane	ND	5.0	2.8	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Chloroform	ND	5.0	2.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Chloromethane	ND	6.0	5.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
2-Chlorotoluene	ND	5.0	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
4-Chlorotoluene	ND	5.0	1.4	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2-Dibromoethane (EDB)	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2-Dichlorobenzene	ND	5.0	1.7	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,3-Dichlorobenzene	ND	5.0	1.7	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,4-Dichlorobenzene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Dichlorodifluoromethane (Freon 12)	ND	5.0	2.8	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1-Dichloroethane	ND	5.0	1.6	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2-Dichloroethane	ND	5.0	1.9	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1-Dichloroethylene	ND	5.0	2.1	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
cis-1,2-Dichloroethylene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
trans-1,2-Dichloroethylene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2-Dichloropropane	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,3-Dichloropropane	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
2,2-Dichloropropane	ND	5.0	2.1	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1-Dichloropropene	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
cis-1,3-Dichloropropene	ND	5.0	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
trans-1,3-Dichloropropene	ND	5.0	1.1	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Diisopropyl Ether (DIPE)	ND	5.0	1.8	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Ethylbenzene	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
2-Hexanone (MBK)	ND	50	15	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Isopropylbenzene (Cumene)	8.6	5.0	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
p-Isopropyltoluene (p-Cymene)	3.7	5.0	1.5	µg/L	10	J	SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Methyl tert-Butyl Ether (MTBE)	5.1	5.0	0.90	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Methylene Chloride	ND	50	32	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
4-Methyl-2-pentanone (MIBK)	ND	50	15	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	140	10	1.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
n-Propylbenzene	1.5	5.0	1.3	µg/L	10	J	SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Styrene	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1,2,2-Tetrachloroethane	ND	5.0	1.6	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Tetrachloroethylene	ND	5.0	2.7	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Toluene	7.4	5.0	1.7	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2,3-Trichlorobenzene	ND	20	1.4	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2,4-Trichlorobenzene	ND	20	1.9	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1,1-Trichloroethane	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,1,2-Trichloroethane	ND	5.0	2.4	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Trichloroethylene	ND	5.0	2.0	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Trichlorofluoromethane (Freon 11)	ND	5.0	1.5	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2,3-Trichloropropane	ND	10	2.2	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,2,4-Trimethylbenzene	580	5.0	1.8	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
1,3,5-Trimethylbenzene	170	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Vinyl Acetate	ND	50	14	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
Vinyl Chloride	ND	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
m+p Xylene	330	10	2.6	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD
o-Xylene	910	5.0	1.3	µg/L	10		SM21-22 6200B	6/19/17	6/20/17 7:47	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	85.8	70-130	6/20/17 7:47
Toluene-d8	103	70-130	6/20/17 7:47
4-Bromofluorobenzene	102	70-130	6/20/17 7:47

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	10	8.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Acenaphthylene	ND	10	9.2	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Anthracene	ND	10	10	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Benzidine	ND	40	19	µg/L	1	V-04, V-05	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzo(a)anthracene	ND	10	3.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Benzo(a)pyrene	ND	10	9.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Benzo(b)fluoranthene	ND	10	9.9	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Benzo(g,h,i)perylene	ND	10	8.1	µg/L	1	V-05	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzo(k)fluoranthene	ND	10	4.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
4-Bromophenylphenylether	ND	20	4.0	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Butylbenzylphthalate	ND	20	6.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
4-Chloro-3-methylphenol	55	20	9.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Bis(2-chloroethoxy)methane	ND	20	9.5	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Bis(2-chloroethyl)ether	ND	20	8.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Bis(2-chloroisopropyl)ether	ND	20	5.9	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2-Chloronaphthalene	ND	20	5.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2-Chlorophenol	ND	20	3.2	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
4-Chlorophenylphenylether	ND	20	9.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Chrysene	ND	10	5.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Dibenz(a,h)anthracene	ND	10	8.2	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Di-n-butylphthalate	ND	20	9.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
1,3-Dichlorobenzene	ND	10	2.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
1,4-Dichlorobenzene	ND	10	2.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
1,2-Dichlorobenzene	ND	10	3.0	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
3,3-Dichlorobenzidine	ND	20	4.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2,4-Dichlorophenol	ND	20	9.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Diethylphthalate	ND	20	8.5	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2,4-Dimethylphenol	7.5	20	4.7	µg/L	1	J	EPA 625	6/19/17	6/21/17 13:38	BGL
Dimethylphthalate	ND	20	9.3	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
4,6-Dinitro-2-methylphenol	ND	20	11	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2,4-Dinitrophenol	ND	20	13	µg/L	1	V-19	EPA 625	6/19/17	6/21/17 13:38	BGL
2,4-Dinitrotoluene	ND	20	10	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2,6-Dinitrotoluene	ND	20	9.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Di-n-octylphthalate	ND	20	8.5	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	20	4.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Bis(2-Ethylhexyl)phthalate	9.5	20	9.5	µg/L	1	J	EPA 625	6/19/17	6/21/17 13:38	BGL
Fluoranthene	ND	10	8.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Fluorene	ND	10	9.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Hexachlorobenzene	ND	20	9.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Hexachlorobutadiene	ND	20	3.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Hexachlorocyclopentadiene	ND	20	12	µg/L	1	V-05	EPA 625	6/19/17	6/21/17 13:38	BGL
Hexachloroethane	ND	20	3.0	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Indeno(1,2,3-cd)pyrene	ND	10	8.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Isophorone	ND	20	3.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	110	10	2.9	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Nitrobenzene	ND	20	8.6	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2-Nitrophenol	ND	20	4.0	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
4-Nitrophenol	ND	20	4.7	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
N-Nitrosodimethylamine	ND	20	2.6	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
N-Nitrosodiphenylamine	ND	20	3.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
N-Nitrosodi-n-propylamine	ND	20	9.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Pentachlorophenol	ND	20	6.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2-Methylnaphthalene	37	10	2.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Phenanthrene	ND	10	5.8	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2-Methylphenol	7.7	20	5.2	µg/L	1	J	EPA 625	6/19/17	6/21/17 13:38	BGL
Phenol	ND	20	5.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
3/4-Methylphenol	ND	20	8.3	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
Pyrene	ND	10	5.1	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
1,2,4-Trichlorobenzene	ND	10	3.4	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL
2,4,6-Trichlorophenol	ND	20	7.5	µg/L	1		EPA 625	6/19/17	6/21/17 13:38	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	30.8	15-110	
Phenol-d6	29.1	15-110	
Nitrobenzene-d5	70.8	30-130	
2-Fluorobiphenyl	68.4	30-130	
2,4,6-Tribromophenol	24.2	15-110	
p-Terphenyl-d14	79.4	30-130	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene, (1-methylethyl)-	24	µg/L	228216	2.784	1	000098-82-8	91	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, (2-methyl-1-butenyl)-	16	µg/L	238554	4.068	1	056253-64-6	89	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, 1,2,3,4-tetramethyl-	34	µg/L	524623	3.62	1	000488-23-3	94	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, 1,3,5-trimethyl-	730	µg/L	7002620	3.105	1	000108-67-8	95	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, 1-ethyl-2-methyl-	160	µg/L	1504570	2.951	1	000611-14-3	94	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, 1-methyl-2-(1-meth...	55	µg/L	842567	3.638	1	000527-84-4	96	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, 4-ethyl-1,2-dimethyl-	17	µg/L	260063	3.571	1	000934-80-5	96	EPA 625	6/19/17	6/21/17 13:38	BGL
Benzene, propyl-	51	µg/L	488846	2.92	1	000103-65-1	94	EPA 625	6/19/17	6/21/17 13:38	BGL
Ethylbenzene	150	µg/L	1409140	2.493	1	000100-41-4	95	EPA 625	6/19/17	6/21/17 13:38	BGL
Naphthalene, 1,2,3,4-tetra...	22	µg/L	335555	4.225	1	002809-64-5	91	EPA 625	6/19/17	6/21/17 13:38	BGL
n-Hexadecanoic acid	13	µg/L	161511	6.234	1	000057-10-3	90	EPA 625	6/19/17	6/21/17 13:38	BGL
o-Xylene	920	µg/L	8800640	2.647	1	000095-47-6	97	EPA 625	6/19/17	6/21/17 13:38	BGL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	3200	200	µg/L	1		MADEP-EPH-04-1.1	6/21/17	6/22/17 11:14	SCS
C19-C36 Aliphatics	510	200	µg/L	1		MADEP-EPH-04-1.1	6/21/17	6/22/17 11:14	SCS
Unadjusted C11-C22 Aromatics	750	200	µg/L	1		MADEP-EPH-04-1.1	6/21/17	6/22/17 11:14	SCS
C11-C22 Aromatics	610	200	µg/L	1		MADEP-EPH-04-1.1	6/21/17	6/22/17 11:14	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	63.0	40-140	
o-Terphenyl (OTP)	86.7	40-140	
2-Bromonaphthalene	47.3	40-140	
2-Fluorobiphenyl	99.1	40-140	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	2400	500	µg/L	5		MADEP-VPH-04-1.1	6/19/17	6/19/17 21:07	EEH
C5-C8 Aliphatics	2000	500	µg/L	5		MADEP-VPH-04-1.1	6/19/17	6/19/17 21:07	EEH
Unadjusted C9-C12 Aliphatics	4700	500	µg/L	5		MADEP-VPH-04-1.1	6/19/17	6/19/17 21:07	EEH
C9-C12 Aliphatics	ND	500	µg/L	5		MADEP-VPH-04-1.1	6/19/17	6/19/17 21:07	EEH
C9-C10 Aromatics	3400	500	µg/L	5		MADEP-VPH-04-1.1	6/19/17	6/19/17 21:07	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,5-Dibromotoluene (FID)	122		70-130				6/19/17 21:07		
2,5-Dibromotoluene (PID)	97.3		70-130				6/19/17 21:07		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Field Sample #: MW-1

Sampled: 6/15/2017 10:30

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	52	2.0	0.34	µg/L	2		SW-846 6020A-B	6/20/17	6/22/17 4:04	MJH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17F0883

Date Received: 6/15/2017

Sampled: 6/15/2017 10:30

Field Sample #: MW-1

Sample ID: 17F0883-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	0.012	µg/L	1		EPA 504.1	6/21/17	6/21/17 17:15	JMB
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
1,3-Dibromopropane (1)	76.4		70-130						6/21/17 17:15	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01 [MW-1]	B179808	34.6	35.0	06/21/17

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01 [MW-1]	B179499	500	1.00	06/19/17

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01RE1 [MW-1]	B179749	500	2.00	06/21/17

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01 [MW-1]	B179511	1	5.00	06/19/17

Prep Method: SW-846 5030B-SM21-22 6200B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01 [MW-1]	B179555	0.5	5.00	06/19/17

Prep Method: SW-846 3005A-SW-846 6020A-B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17F0883-01 [MW-1]	B179716	50.0	50.0	06/20/17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179555 - SW-846 5030B

Blank (B179555-BLK1)

Prepared & Analyzed: 06/19/17

Acetone	ND	50	µg/L							L-04
Benzene	ND	0.50	µg/L							
Bromobenzene	ND	0.50	µg/L							
Bromochloromethane	ND	0.50	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	0.50	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	5.0	µg/L							
n-Butylbenzene	ND	0.50	µg/L							
sec-Butylbenzene	ND	0.50	µg/L							
tert-Butylbenzene	ND	0.50	µg/L							
Carbon Tetrachloride	ND	0.50	µg/L							
Chlorobenzene	ND	0.50	µg/L							
Ethanol	ND	50	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	0.50	µg/L							
Chloroform	ND	0.50	µg/L							
Chloromethane	ND	0.60	µg/L							
2-Chlorotoluene	ND	0.50	µg/L							
4-Chlorotoluene	ND	0.50	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
1,2-Dichlorobenzene	ND	0.50	µg/L							
1,3-Dichlorobenzene	ND	0.50	µg/L							
1,4-Dichlorobenzene	ND	0.50	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	0.50	µg/L							
1,1-Dichloroethane	ND	0.50	µg/L							
1,2-Dichloroethane	ND	0.50	µg/L							
1,1-Dichloroethylene	ND	0.50	µg/L							
cis-1,2-Dichloroethylene	ND	0.50	µg/L							
trans-1,2-Dichloroethylene	ND	0.50	µg/L							
1,2-Dichloropropane	ND	0.50	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	0.50	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
Ethylbenzene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	5.0	µg/L							
Isopropylbenzene (Cumene)	ND	0.50	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	0.50	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	0.50	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	5.0	µg/L							
Naphthalene	ND	1.0	µg/L							
n-Propylbenzene	ND	0.50	µg/L							
Styrene	ND	0.50	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	0.50	µg/L							
Toluene	ND	0.50	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	2.0	µg/L							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179555 - SW-846 5030B

Blank (B179555-BLK1)

Prepared & Analyzed: 06/19/17

1,1,1-Trichloroethane	ND	0.50	µg/L							
1,1,2-Trichloroethane	ND	0.50	µg/L							
Trichloroethylene	ND	0.50	µg/L							
Trichlorofluoromethane (Freon 11)	ND	0.50	µg/L							
1,2,3-Trichloropropane	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	0.50	µg/L							
1,3,5-Trimethylbenzene	ND	0.50	µg/L							
Vinyl Acetate	ND	5.0	µg/L							
Vinyl Chloride	ND	0.50	µg/L							
m+p Xylene	ND	1.0	µg/L							
o-Xylene	ND	0.50	µg/L							
Surrogate: 1,2-Dichloroethane-d4	22.2		µg/L	25.0		88.8	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	24.8		µg/L	25.0		99.2	70-130			

LCS (B179555-BS1)

Prepared & Analyzed: 06/19/17

Acetone	53.5	50	µg/L	100		53.5 *	70-130			L-04 †
Benzene	10.8	0.50	µg/L	10.0		108	70-130			
Bromobenzene	10.3	0.50	µg/L	10.0		103	70-130			
Bromochloromethane	11.2	0.50	µg/L	10.0		112	70-130			
Bromodichloromethane	9.83	0.50	µg/L	10.0		98.3	70-130			
Bromoform	9.92	0.50	µg/L	10.0		99.2	70-130			
Bromomethane	8.59	2.0	µg/L	10.0		85.9	60-140			†
2-Butanone (MEK)	78.8	5.0	µg/L	100		78.8	70-130			†
n-Butylbenzene	9.76	0.50	µg/L	10.0		97.6	70-130			
sec-Butylbenzene	9.90	0.50	µg/L	10.0		99.0	70-130			
tert-Butylbenzene	9.55	0.50	µg/L	10.0		95.5	70-130			
Carbon Tetrachloride	10.7	0.50	µg/L	10.0		107	70-130			
Chlorobenzene	10.4	0.50	µg/L	10.0		104	70-130			
Ethanol	70.1	50	µg/L	100		70.1	70-130			
Chlorodibromomethane	10.4	0.50	µg/L	10.0		104	70-130			
Chloroethane	9.71	0.50	µg/L	10.0		97.1	60-140			
Chloroform	9.42	0.50	µg/L	10.0		94.2	70-130			
Chloromethane	8.74	0.60	µg/L	10.0		87.4	60-140			†
2-Chlorotoluene	10.8	0.50	µg/L	10.0		108	70-130			
4-Chlorotoluene	10.7	0.50	µg/L	10.0		107	70-130			
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130			
1,2-Dichlorobenzene	9.16	0.50	µg/L	10.0		91.6	70-130			
1,3-Dichlorobenzene	8.95	0.50	µg/L	10.0		89.5	70-130			
1,4-Dichlorobenzene	8.71	0.50	µg/L	10.0		87.1	70-130			
Dichlorodifluoromethane (Freon 12)	9.65	0.50	µg/L	10.0		96.5	60-140			†
1,1-Dichloroethane	10.5	0.50	µg/L	10.0		105	70-130			
1,2-Dichloroethane	9.51	0.50	µg/L	10.0		95.1	70-130			
1,1-Dichloroethylene	9.55	0.50	µg/L	10.0		95.5	70-130			
cis-1,2-Dichloroethylene	9.46	0.50	µg/L	10.0		94.6	70-130			
trans-1,2-Dichloroethylene	10.4	0.50	µg/L	10.0		104	70-130			
1,2-Dichloropropane	10.7	0.50	µg/L	10.0		107	70-130			
1,3-Dichloropropane	10.9	0.50	µg/L	10.0		109	70-130			
2,2-Dichloropropane	8.66	0.50	µg/L	10.0		86.6	70-130			†
1,1-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130			
cis-1,3-Dichloropropene	11.0	0.50	µg/L	10.0		110	70-130			
trans-1,3-Dichloropropene	10.8	0.50	µg/L	10.0		108	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179555 - SW-846 5030B

LCS (B179555-BS1)

Prepared & Analyzed: 06/19/17

Diisopropyl Ether (DIPE)	9.14	0.50	µg/L	10.0		91.4	70-130			
Ethylbenzene	10.8	0.50	µg/L	10.0		108	70-130			
2-Hexanone (MBK)	92.5	5.0	µg/L	100		92.5	70-130			†
Isopropylbenzene (Cumene)	10.9	0.50	µg/L	10.0		109	70-130			
p-Isopropyltoluene (p-Cymene)	9.37	0.50	µg/L	10.0		93.7	70-130			
Methyl tert-Butyl Ether (MTBE)	10.7	0.50	µg/L	10.0		107	70-130			
Methylene Chloride	9.61	5.0	µg/L	10.0		96.1	70-130			
4-Methyl-2-pentanone (MIBK)	100	5.0	µg/L	100		100	70-130			†
Naphthalene	8.94	1.0	µg/L	10.0		89.4	70-130			†
n-Propylbenzene	10.6	0.50	µg/L	10.0		106	70-130			
Styrene	11.4	0.50	µg/L	10.0		114	70-130			
1,1,2,2-Tetrachloroethane	10.2	0.50	µg/L	10.0		102	70-130			
Tetrachloroethylene	10.9	0.50	µg/L	10.0		109	70-130			
Toluene	11.1	0.50	µg/L	10.0		111	70-130			
1,2,3-Trichlorobenzene	9.05	2.0	µg/L	10.0		90.5	70-130			
1,2,4-Trichlorobenzene	8.92	2.0	µg/L	10.0		89.2	70-130			
1,1,1-Trichloroethane	9.78	0.50	µg/L	10.0		97.8	70-130			
1,1,2-Trichloroethane	10.7	0.50	µg/L	10.0		107	70-130			
Trichloroethylene	10.4	0.50	µg/L	10.0		104	70-130			
Trichlorofluoromethane (Freon 11)	10.7	0.50	µg/L	10.0		107	70-130			
1,2,3-Trichloropropane	10.5	1.0	µg/L	10.0		105	70-130			
1,2,4-Trimethylbenzene	10.2	0.50	µg/L	10.0		102	70-130			
1,3,5-Trimethylbenzene	11.2	0.50	µg/L	10.0		112	70-130			
Vinyl Acetate	92.9	5.0	µg/L	100		92.9	70-130			
Vinyl Chloride	10.0	0.50	µg/L	10.0		100	60-140			†
m+p Xylene	21.3	1.0	µg/L	20.0		107	70-130			
o-Xylene	10.6	0.50	µg/L	10.0		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	21.4		µg/L	25.0		85.6	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	25.7		µg/L	25.0		103	70-130			

LCS Dup (B179555-BSD1)

Prepared & Analyzed: 06/19/17

Acetone	51.2	50	µg/L	100		51.2 *	70-130	4.41	25	L-04	†
Benzene	10.5	0.50	µg/L	10.0		105	70-130	2.25	25		
Bromobenzene	10.3	0.50	µg/L	10.0		103	70-130	0.389	25		
Bromochloromethane	10.6	0.50	µg/L	10.0		106	70-130	4.68	25		
Bromodichloromethane	9.64	0.50	µg/L	10.0		96.4	70-130	1.95	25		
Bromoform	10.0	0.50	µg/L	10.0		100	70-130	0.903	25		
Bromomethane	9.68	2.0	µg/L	10.0		96.8	60-140	11.9	25		†
2-Butanone (MEK)	78.9	5.0	µg/L	100		78.9	70-130	0.127	25		†
n-Butylbenzene	9.63	0.50	µg/L	10.0		96.3	70-130	1.34	25		
sec-Butylbenzene	9.78	0.50	µg/L	10.0		97.8	70-130	1.22	25		
tert-Butylbenzene	9.48	0.50	µg/L	10.0		94.8	70-130	0.736	25		
Carbon Tetrachloride	10.2	0.50	µg/L	10.0		102	70-130	4.58	25		
Chlorobenzene	10.2	0.50	µg/L	10.0		102	70-130	1.36	25		
Ethanol	82.4	50	µg/L	100		82.4	70-130	16.1	25		
Chlorodibromomethane	10.4	0.50	µg/L	10.0		104	70-130	0.481	25		
Chloroethane	9.99	0.50	µg/L	10.0		99.9	60-140	2.84	25		
Chloroform	9.20	0.50	µg/L	10.0		92.0	70-130	2.36	25		
Chloromethane	8.88	0.60	µg/L	10.0		88.8	60-140	1.59	25		†
2-Chlorotoluene	10.6	0.50	µg/L	10.0		106	70-130	1.96	25		
4-Chlorotoluene	10.5	0.50	µg/L	10.0		105	70-130	2.27	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179555 - SW-846 5030B										
LCS Dup (B179555-BSD1)										
Prepared & Analyzed: 06/19/17										
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130	0.0936	25	
1,2-Dichlorobenzene	8.88	0.50	µg/L	10.0		88.8	70-130	3.10	25	
1,3-Dichlorobenzene	9.05	0.50	µg/L	10.0		90.5	70-130	1.11	25	
1,4-Dichlorobenzene	8.85	0.50	µg/L	10.0		88.5	70-130	1.59	25	
Dichlorodifluoromethane (Freon 12)	9.52	0.50	µg/L	10.0		95.2	60-140	1.36	25	†
1,1-Dichloroethane	9.95	0.50	µg/L	10.0		99.5	70-130	5.47	25	
1,2-Dichloroethane	9.39	0.50	µg/L	10.0		93.9	70-130	1.27	25	
1,1-Dichloroethylene	9.01	0.50	µg/L	10.0		90.1	70-130	5.82	25	
cis-1,2-Dichloroethylene	9.44	0.50	µg/L	10.0		94.4	70-130	0.212	25	
trans-1,2-Dichloroethylene	9.70	0.50	µg/L	10.0		97.0	70-130	6.48	25	
1,2-Dichloropropane	10.6	0.50	µg/L	10.0		106	70-130	1.32	25	
1,3-Dichloropropane	11.0	0.50	µg/L	10.0		110	70-130	0.825	25	
2,2-Dichloropropane	8.30	0.50	µg/L	10.0		83.0	70-130	4.25	25	†
1,1-Dichloropropene	10.6	0.50	µg/L	10.0		106	70-130	0.951	25	
cis-1,3-Dichloropropene	11.1	0.50	µg/L	10.0		111	70-130	0.272	25	
trans-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130	2.44	25	
Diisopropyl Ether (DIPE)	8.98	0.50	µg/L	10.0		89.8	70-130	1.77	25	
Ethylbenzene	10.6	0.50	µg/L	10.0		106	70-130	1.96	25	
2-Hexanone (MBK)	92.4	5.0	µg/L	100		92.4	70-130	0.119	25	†
Isopropylbenzene (Cumene)	11.0	0.50	µg/L	10.0		110	70-130	0.548	25	
p-Isopropyltoluene (p-Cymene)	9.58	0.50	µg/L	10.0		95.8	70-130	2.22	25	
Methyl tert-Butyl Ether (MTBE)	10.4	0.50	µg/L	10.0		104	70-130	2.66	25	
Methylene Chloride	9.01	5.0	µg/L	10.0		90.1	70-130	6.44	25	
4-Methyl-2-pentanone (MIBK)	101	5.0	µg/L	100		101	70-130	0.557	25	†
Naphthalene	9.23	1.0	µg/L	10.0		92.3	70-130	3.19	25	†
n-Propylbenzene	10.5	0.50	µg/L	10.0		105	70-130	1.14	25	
Styrene	11.2	0.50	µg/L	10.0		112	70-130	1.15	25	
1,1,2,2-Tetrachloroethane	10.2	0.50	µg/L	10.0		102	70-130	0.00	25	
Tetrachloroethylene	10.4	0.50	µg/L	10.0		104	70-130	4.59	25	
Toluene	11.2	0.50	µg/L	10.0		112	70-130	0.810	25	
1,2,3-Trichlorobenzene	9.29	2.0	µg/L	10.0		92.9	70-130	2.62	25	
1,2,4-Trichlorobenzene	9.08	2.0	µg/L	10.0		90.8	70-130	1.78	25	
1,1,1-Trichloroethane	9.54	0.50	µg/L	10.0		95.4	70-130	2.48	25	
1,1,2-Trichloroethane	10.7	0.50	µg/L	10.0		107	70-130	0.280	25	
Trichloroethylene	10.3	0.50	µg/L	10.0		103	70-130	0.873	25	
Trichlorofluoromethane (Freon 11)	9.99	0.50	µg/L	10.0		99.9	70-130	7.24	25	
1,2,3-Trichloropropane	10.4	1.0	µg/L	10.0		104	70-130	1.06	25	
1,2,4-Trimethylbenzene	9.93	0.50	µg/L	10.0		99.3	70-130	2.29	25	
1,3,5-Trimethylbenzene	10.8	0.50	µg/L	10.0		108	70-130	4.00	25	
Vinyl Acetate	89.6	5.0	µg/L	100		89.6	70-130	3.67	25	
Vinyl Chloride	9.58	0.50	µg/L	10.0		95.8	60-140	4.29	25	†
m+p Xylene	21.2	1.0	µg/L	20.0		106	70-130	0.611	25	
o-Xylene	10.4	0.50	µg/L	10.0		104	70-130	1.62	25	
Surrogate: 1,2-Dichloroethane-d4	21.9		µg/L	25.0		87.5	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	25.7		µg/L	25.0		103	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179499 - SW-846 3510C

Blank (B179499-BLK1)

Prepared: 06/19/17 Analyzed: 06/21/17

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-04, V-05
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							V-05
Benzo(k)fluoranthene	ND	5.0	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-19
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							V-05
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179499 - SW-846 3510C

Blank (B179499-BLK1)

Prepared: 06/19/17 Analyzed: 06/21/17

2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	95.7		µg/L	200		47.9	15-110			
Surrogate: Phenol-d6	67.4		µg/L	200		33.7	15-110			
Surrogate: Nitrobenzene-d5	80.8		µg/L	100		80.8	30-130			
Surrogate: 2-Fluorobiphenyl	78.3		µg/L	100		78.3	30-130			
Surrogate: 2,4,6-Tribromophenol	171		µg/L	200		85.7	15-110			
Surrogate: p-Terphenyl-d14	102		µg/L	100		102	30-130			

LCS (B179499-BS1)

Prepared: 06/19/17 Analyzed: 06/21/17

Acenaphthene	70.8	5.0	µg/L	100		70.8	47-145			
Acenaphthylene	69.9	5.0	µg/L	100		69.9	33-145			
Anthracene	74.8	5.0	µg/L	100		74.8	27-133			
Benzidine	43.6	20	µg/L	100		43.6	40-140			V-04, V-05
Benzo(a)anthracene	74.7	5.0	µg/L	100		74.7	33-143			
Benzo(a)pyrene	76.1	5.0	µg/L	100		76.1	17-163			
Benzo(b)fluoranthene	72.3	5.0	µg/L	100		72.3	24-159			
Benzo(g,h,i)perylene	60.6	5.0	µg/L	100		60.6	1-219			V-05
Benzo(k)fluoranthene	74.6	5.0	µg/L	100		74.6	11-162			
4-Bromophenylphenylether	78.2	10	µg/L	100		78.2	53-127			
Butylbenzylphthalate	85.1	10	µg/L	100		85.1	1-152			
4-Chloro-3-methylphenol	83.4	10	µg/L	100		83.4	22-147			
Bis(2-chloroethoxy)methane	76.4	10	µg/L	100		76.4	33-184			
Bis(2-chloroethyl)ether	82.8	10	µg/L	100		82.8	12-158			
Bis(2-chloroisopropyl)ether	63.9	10	µg/L	100		63.9	36-166			
2-Chloronaphthalene	67.4	10	µg/L	100		67.4	60-118			
2-Chlorophenol	76.7	10	µg/L	100		76.7	23-134			
4-Chlorophenylphenylether	71.9	10	µg/L	100		71.9	25-158			
Chrysene	66.0	5.0	µg/L	100		66.0	17-168			
Dibenz(a,h)anthracene	68.4	5.0	µg/L	100		68.4	1-227			
Di-n-butylphthalate	73.0	10	µg/L	100		73.0	1-118			
1,3-Dichlorobenzene	69.8	5.0	µg/L	100		69.8	1-172			
1,4-Dichlorobenzene	68.8	5.0	µg/L	100		68.8	20-124			
1,2-Dichlorobenzene	72.1	5.0	µg/L	100		72.1	32-129			
3,3-Dichlorobenzidine	83.2	10	µg/L	100		83.2	1-262			
2,4-Dichlorophenol	78.9	10	µg/L	100		78.9	39-135			
Diethylphthalate	75.2	10	µg/L	100		75.2	1-114			
2,4-Dimethylphenol	86.1	10	µg/L	100		86.1	32-119			
Dimethylphthalate	77.7	10	µg/L	100		77.7	1-112			
4,6-Dinitro-2-methylphenol	68.0	10	µg/L	100		68.0	1-181			
2,4-Dinitrophenol	67.8	10	µg/L	100		67.8	1-191			V-19
2,4-Dinitrotoluene	77.5	10	µg/L	100		77.5	39-139			
2,6-Dinitrotoluene	76.5	10	µg/L	100		76.5	50-158			
Di-n-octylphthalate	86.3	10	µg/L	100		86.3	4-146			
1,2-Diphenylhydrazine (as Azobenzene)	81.3	10	µg/L	100		81.3	40-140			
Bis(2-Ethylhexyl)phthalate	83.8	10	µg/L	100		83.8	8-158			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179499 - SW-846 3510C

LCS (B179499-BS1)

Prepared: 06/19/17 Analyzed: 06/21/17

Fluoranthene	68.8	5.0	µg/L	100		68.8	26-137			
Fluorene	71.3	5.0	µg/L	100		71.3	59-121			
Hexachlorobenzene	71.6	10	µg/L	100		71.6	1-152			
Hexachlorobutadiene	76.9	10	µg/L	100		76.9	24-116			
Hexachlorocyclopentadiene	54.4	10	µg/L	100		54.4	40-140			V-05
Hexachloroethane	72.5	10	µg/L	100		72.5	40-113			
Indeno(1,2,3-cd)pyrene	63.0	5.0	µg/L	100		63.0	1-171			
Isophorone	77.6	10	µg/L	100		77.6	21-196			
Naphthalene	72.9	5.0	µg/L	100		72.9	21-133			
Nitrobenzene	76.2	10	µg/L	100		76.2	35-180			
2-Nitrophenol	75.1	10	µg/L	100		75.1	29-182			
4-Nitrophenol	47.6	10	µg/L	100		47.6	1-132			
N-Nitrosodimethylamine	53.2	10	µg/L	100		53.2	40-140			
N-Nitrosodiphenylamine	105	10	µg/L	100		105	40-140			
N-Nitrosodi-n-propylamine	81.1	10	µg/L	100		81.1	1-230			
Pentachlorophenol	70.0	10	µg/L	100		70.0	14-176			
2-Methylnaphthalene	79.8	5.0	µg/L	100		79.8	40-140			
Phenanthrene	74.0	5.0	µg/L	100		74.0	54-120			
2-Methylphenol	70.3	10	µg/L	100		70.3	30-130			
Phenol	40.6	10	µg/L	100		40.6	5-112			
3/4-Methylphenol	73.4	10	µg/L	100		73.4	30-130			
Pyrene	83.0	5.0	µg/L	100		83.0	52-115			
1,2,4-Trichlorobenzene	71.0	5.0	µg/L	100		71.0	44-142			
2,4,6-Trichlorophenol	83.0	10	µg/L	100		83.0	37-144			
Surrogate: 2-Fluorophenol	102		µg/L	200		51.2	15-110			
Surrogate: Phenol-d6	75.8		µg/L	200		37.9	15-110			
Surrogate: Nitrobenzene-d5	83.5		µg/L	100		83.5	30-130			
Surrogate: 2-Fluorobiphenyl	85.0		µg/L	100		85.0	30-130			
Surrogate: 2,4,6-Tribromophenol	155		µg/L	200		77.7	15-110			
Surrogate: p-Terphenyl-d14	87.9		µg/L	100		87.9	30-130			

LCS Dup (B179499-BSD1)

Prepared: 06/19/17 Analyzed: 06/21/17

Acenaphthene	73.4	5.0	µg/L	100		73.4	47-145	3.69		
Acenaphthylene	71.8	5.0	µg/L	100		71.8	33-145	2.67		
Anthracene	76.8	5.0	µg/L	100		76.8	27-133	2.59		
Benzidine	97.7	20	µg/L	100		97.7	40-140	76.5		V-04, V-05
Benzo(a)anthracene	76.8	5.0	µg/L	100		76.8	33-143	2.75		
Benzo(a)pyrene	77.7	5.0	µg/L	100		77.7	17-163	2.03		
Benzo(b)fluoranthene	72.0	5.0	µg/L	100		72.0	24-159	0.457		
Benzo(g,h,i)perylene	61.8	5.0	µg/L	100		61.8	1-219	1.83		V-05
Benzo(k)fluoranthene	75.7	5.0	µg/L	100		75.7	11-162	1.42		
4-Bromophenylphenylether	77.6	10	µg/L	100		77.6	53-127	0.873		
Butylbenzylphthalate	93.1	10	µg/L	100		93.1	1-152	8.94		
4-Chloro-3-methylphenol	86.1	10	µg/L	100		86.1	22-147	3.20		
Bis(2-chloroethoxy)methane	75.9	10	µg/L	100		75.9	33-184	0.709		
Bis(2-chloroethyl)ether	84.1	10	µg/L	100		84.1	12-158	1.52		
Bis(2-chloroisopropyl)ether	63.8	10	µg/L	100		63.8	36-166	0.172		
2-Chloronaphthalene	68.5	10	µg/L	100		68.5	60-118	1.66		
2-Chlorophenol	75.4	10	µg/L	100		75.4	23-134	1.66		
4-Chlorophenylphenylether	74.6	10	µg/L	100		74.6	25-158	3.60		
Chrysene	67.7	5.0	µg/L	100		67.7	17-168	2.60		
Dibenz(a,h)anthracene	69.9	5.0	µg/L	100		69.9	1-227	2.07		

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179499 - SW-846 3510C										
LCS Dup (B179499-BSD1)										
					Prepared: 06/19/17 Analyzed: 06/21/17					
Di-n-butylphthalate	77.9	10	µg/L	100		77.9	1-118	6.42		
1,3-Dichlorobenzene	69.9	5.0	µg/L	100		69.9	1-172	0.143		
1,4-Dichlorobenzene	70.2	5.0	µg/L	100		70.2	20-124	1.96		
1,2-Dichlorobenzene	72.8	5.0	µg/L	100		72.8	32-129	1.03		
3,3-Dichlorobenzidine	84.0	10	µg/L	100		84.0	1-262	0.921		
2,4-Dichlorophenol	79.8	10	µg/L	100		79.8	39-135	1.12		
Diethylphthalate	79.9	10	µg/L	100		79.9	1-114	6.10		
2,4-Dimethylphenol	84.8	10	µg/L	100		84.8	32-119	1.56		
Dimethylphthalate	80.8	10	µg/L	100		80.8	1-112	3.95		
4,6-Dinitro-2-methylphenol	62.4	10	µg/L	100		62.4	1-181	8.61		
2,4-Dinitrophenol	61.3	10	µg/L	100		61.3	1-191	10.0		V-19
2,4-Dinitrotoluene	82.6	10	µg/L	100		82.6	39-139	6.41		
2,6-Dinitrotoluene	81.6	10	µg/L	100		81.6	50-158	6.39		
Di-n-octylphthalate	90.8	10	µg/L	100		90.8	4-146	5.17		
1,2-Diphenylhydrazine (as Azobenzene)	79.5	10	µg/L	100		79.5	40-140	2.26		
Bis(2-Ethylhexyl)phthalate	90.8	10	µg/L	100		90.8	8-158	8.04		
Fluoranthene	74.5	5.0	µg/L	100		74.5	26-137	8.08		
Fluorene	73.7	5.0	µg/L	100		73.7	59-121	3.35		
Hexachlorobenzene	71.9	10	µg/L	100		71.9	1-152	0.460		
Hexachlorobutadiene	77.5	10	µg/L	100		77.5	24-116	0.738		
Hexachlorocyclopentadiene	48.8	10	µg/L	100		48.8	40-140	10.9		V-05
Hexachloroethane	73.1	10	µg/L	100		73.1	40-113	0.838		
Indeno(1,2,3-cd)pyrene	63.0	5.0	µg/L	100		63.0	1-171	0.127		
Isophorone	77.5	10	µg/L	100		77.5	21-196	0.0129		
Naphthalene	72.7	5.0	µg/L	100		72.7	21-133	0.165		
Nitrobenzene	76.8	10	µg/L	100		76.8	35-180	0.771		
2-Nitrophenol	74.6	10	µg/L	100		74.6	29-182	0.722		
4-Nitrophenol	47.7	10	µg/L	100		47.7	1-132	0.273		
N-Nitrosodimethylamine	52.7	10	µg/L	100		52.7	40-140	0.964		
N-Nitrosodiphenylamine	103	10	µg/L	100		103	40-140	1.52		
N-Nitrosodi-n-propylamine	79.3	10	µg/L	100		79.3	1-230	2.27		
Pentachlorophenol	70.6	10	µg/L	100		70.6	14-176	0.811		
2-Methylnaphthalene	81.9	5.0	µg/L	100		81.9	40-140	2.61	20	
Phenanthrene	75.3	5.0	µg/L	100		75.3	54-120	1.78		
2-Methylphenol	70.3	10	µg/L	100		70.3	30-130	0.0142	20	
Phenol	40.6	10	µg/L	100		40.6	5-112	0.0985		
3/4-Methylphenol	71.0	10	µg/L	100		71.0	30-130	3.26	20	
Pyrene	91.7	5.0	µg/L	100		91.7	52-115	9.95		
1,2,4-Trichlorobenzene	71.5	5.0	µg/L	100		71.5	44-142	0.744		
2,4,6-Trichlorophenol	85.7	10	µg/L	100		85.7	37-144	3.28		
Surrogate: 2-Fluorophenol	102		µg/L	200		51.0	15-110			
Surrogate: Phenol-d6	73.7		µg/L	200		36.8	15-110			
Surrogate: Nitrobenzene-d5	83.3		µg/L	100		83.3	30-130			
Surrogate: 2-Fluorobiphenyl	85.2		µg/L	100		85.2	30-130			
Surrogate: 2,4,6-Tribromophenol	162		µg/L	200		81.1	15-110			
Surrogate: p-Terphenyl-d14	96.4		µg/L	100		96.4	30-130			

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QUALITY CONTROL

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179499 - SW-846 3510C

Blank (B179499-BLK1)

Prepared: 06/19/17 Analyzed: 06/21/17

No TICs Found	0.0		µg/L							
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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179749 - SW-846 3510C

Blank (B179749-BLK1)

Prepared: 06/21/17 Analyzed: 06/22/17

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	78.7		µg/L	99.8		78.8	40-140			
Surrogate: o-Terphenyl (OTP)	85.9		µg/L	100		85.9	40-140			
Surrogate: 2-Bromonaphthalene	46.9		µg/L	100		46.9	40-140			
Surrogate: 2-Fluorobiphenyl	83.9		µg/L	100		83.9	40-140			

LCS (B179749-BS1)

Prepared: 06/21/17 Analyzed: 06/22/17

C9-C18 Aliphatics	428	100	µg/L	600		71.3	40-140			
C19-C36 Aliphatics	700	100	µg/L	800		87.5	40-140			
Acenaphthene	69.3	2.0	µg/L	100		69.3	40-140			
Acenaphthylene	67.2	2.0	µg/L	100		67.2	40-140			
Anthracene	72.5	2.0	µg/L	100		72.5	40-140			
Benzo(a)anthracene	74.8	2.0	µg/L	100		74.8	40-140			
Benzo(a)pyrene	72.0	2.0	µg/L	100		72.0	40-140			
Benzo(b)fluoranthene	73.9	2.0	µg/L	100		73.9	40-140			
Benzo(g,h,i)perylene	72.6	2.0	µg/L	100		72.6	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179749 - SW-846 3510C

LCS (B179749-BS1)

Prepared: 06/21/17 Analyzed: 06/22/17

Benzo(k)fluoranthene	69.2	2.0	µg/L	100		69.2	40-140			
Chrysene	71.6	2.0	µg/L	100		71.6	40-140			
Dibenz(a,h)anthracene	76.0	2.0	µg/L	100		76.0	40-140			
Fluoranthene	73.3	2.0	µg/L	100		73.3	40-140			
Fluorene	71.6	2.0	µg/L	100		71.6	40-140			
Indeno(1,2,3-cd)pyrene	75.4	2.0	µg/L	100		75.4	40-140			
2-Methylnaphthalene	66.5	2.0	µg/L	100		66.5	40-140			
Naphthalene	56.0	2.0	µg/L	100		56.0	40-140			
Phenanthrene	73.3	2.0	µg/L	100		73.3	40-140			
Pyrene	74.2	2.0	µg/L	100		74.2	40-140			
n-Decane	41.5	2.0	µg/L	100		41.5	40-140			
n-Docosane	69.6	2.0	µg/L	100		69.6	40-140			
n-Dodecane	54.2	2.0	µg/L	100		54.2	40-140			
n-Eicosane	68.5	2.0	µg/L	100		68.5	40-140			
n-Hexacosane	69.7	2.0	µg/L	100		69.7	40-140			
n-Hexadecane	68.3	2.0	µg/L	100		68.3	40-140			
n-Hexatriacontane	77.7	2.0	µg/L	100		77.7	40-140			
n-Nonadecane	68.3	2.0	µg/L	100		68.3	40-140			
n-Nonane	29.6	2.0	µg/L	100		29.6	* 30-140			L-07
n-Octacosane	69.6	2.0	µg/L	100		69.6	40-140			
n-Octadecane	71.2	2.0	µg/L	100		71.2	40-140			
n-Tetracosane	70.1	2.0	µg/L	100		70.1	40-140			
n-Tetradecane	63.7	2.0	µg/L	100		63.7	40-140			
n-Triacontane	72.0	2.0	µg/L	100		72.0	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	63.3		µg/L	99.8		63.4	40-140			
Surrogate: o-Terphenyl (OTP)	73.7		µg/L	100		73.7	40-140			
Surrogate: 2-Bromonaphthalene	68.1		µg/L	100		68.1	40-140			
Surrogate: 2-Fluorobiphenyl	78.4		µg/L	100		78.4	40-140			

LCS Dup (B179749-BSD1)

Prepared: 06/21/17 Analyzed: 06/22/17

C9-C18 Aliphatics	434	100	µg/L	600		72.3	40-140	1.36	25	
C19-C36 Aliphatics	709	100	µg/L	800		88.6	40-140	1.16	25	
Acenaphthene	81.4	2.0	µg/L	100		81.4	40-140	16.0	25	
Acenaphthylene	78.8	2.0	µg/L	100		78.8	40-140	15.9	25	
Anthracene	87.6	2.0	µg/L	100		87.6	40-140	19.0	25	
Benzo(a)anthracene	91.7	2.0	µg/L	100		91.7	40-140	20.3	25	
Benzo(a)pyrene	87.9	2.0	µg/L	100		87.9	40-140	19.8	25	
Benzo(b)fluoranthene	90.5	2.0	µg/L	100		90.5	40-140	20.2	25	
Benzo(g,h,i)perylene	88.1	2.0	µg/L	100		88.1	40-140	19.3	25	
Benzo(k)fluoranthene	84.8	2.0	µg/L	100		84.8	40-140	20.3	25	
Chrysene	88.2	2.0	µg/L	100		88.2	40-140	20.8	25	
Dibenz(a,h)anthracene	93.0	2.0	µg/L	100		93.0	40-140	20.0	25	
Fluoranthene	89.4	2.0	µg/L	100		89.4	40-140	19.7	25	
Fluorene	85.0	2.0	µg/L	100		85.0	40-140	17.2	25	
Indeno(1,2,3-cd)pyrene	91.7	2.0	µg/L	100		91.7	40-140	19.5	25	
2-Methylnaphthalene	77.5	2.0	µg/L	100		77.5	40-140	15.3	25	
Naphthalene	66.4	2.0	µg/L	100		66.4	40-140	17.1	25	
Phenanthrene	88.6	2.0	µg/L	100		88.6	40-140	18.9	25	
Pyrene	90.5	2.0	µg/L	100		90.5	40-140	19.8	25	
n-Decane	45.3	2.0	µg/L	100		45.3	40-140	8.72	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179749 - SW-846 3510C										
LCS Dup (B179749-BSD1)										
					Prepared: 06/21/17 Analyzed: 06/22/17					
n-Docosane	70.9	2.0	µg/L	100		70.9	40-140	1.84	25	
n-Dodecane	55.2	2.0	µg/L	100		55.2	40-140	1.84	25	
n-Eicosane	69.6	2.0	µg/L	100		69.6	40-140	1.58	25	
n-Hexacosane	71.2	2.0	µg/L	100		71.2	40-140	2.12	25	
n-Hexadecane	69.6	2.0	µg/L	100		69.6	40-140	1.81	25	
n-Hexatriacontane	80.1	2.0	µg/L	100		80.1	40-140	3.00	25	
n-Nonadecane	69.3	2.0	µg/L	100		69.3	40-140	1.38	25	
n-Nonane	34.0	2.0	µg/L	100		34.0	30-140	13.9	25	
n-Octacosane	71.2	2.0	µg/L	100		71.2	40-140	2.26	25	
n-Octadecane	72.3	2.0	µg/L	100		72.3	40-140	1.48	25	
n-Tetracosane	71.5	2.0	µg/L	100		71.5	40-140	1.97	25	
n-Tetradecane	64.1	2.0	µg/L	100		64.1	40-140	0.742	25	
n-Triacontane	73.9	2.0	µg/L	100		73.9	40-140	2.61	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	64.2		µg/L	99.8		64.3	40-140			
Surrogate: o-Terphenyl (OTP)	87.5		µg/L	100		87.5	40-140			
Surrogate: 2-Bromonaphthalene	82.0		µg/L	100		82.0	40-140			
Surrogate: 2-Fluorobiphenyl	91.6		µg/L	100		91.6	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179511 - MA VPH										
Blank (B179511-BLK1)										
Prepared & Analyzed: 06/19/17										
Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	49.9		µg/L	40.0		125	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	51.9		µg/L	40.0		130	70-130			
LCS (B179511-BS1)										
Prepared & Analyzed: 06/19/17										
Benzene	96.6	1.0	µg/L	100		96.6	70-130			
Butylcyclohexane	95.9	1.0	µg/L	100		95.9	70-130			
Decane	103	1.0	µg/L	100		103	70-130			
Ethylbenzene	99.2	1.0	µg/L	100		99.2	70-130			
Methyl tert-Butyl Ether (MTBE)	107	1.0	µg/L	100		107	70-130			
2-Methylpentane	96.2	1.0	µg/L	100		96.2	70-130			
Naphthalene	106	5.0	µg/L	100		106	70-130			
Nonane	101	1.0	µg/L	100		101	70-130			
Pentane	73.1	1.0	µg/L	100		73.1	70-130			
Toluene	96.4	1.0	µg/L	100		96.4	70-130			
1,2,4-Trimethylbenzene	96.6	1.0	µg/L	100		96.6	70-130			
2,2,4-Trimethylpentane	100	1.0	µg/L	100		100	70-130			
m+p Xylene	197	2.0	µg/L	200		98.4	70-130			
o-Xylene	98.5	1.0	µg/L	100		98.5	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	47.2		µg/L	40.0		118	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	46.1		µg/L	40.0		115	70-130			
LCS Dup (B179511-BSD1)										
Prepared & Analyzed: 06/19/17										
Benzene	101	1.0	µg/L	100		101	70-130	4.64	25	
Butylcyclohexane	102	1.0	µg/L	100		102	70-130	6.24	25	
Decane	112	1.0	µg/L	100		112	70-130	8.56	25	
Ethylbenzene	103	1.0	µg/L	100		103	70-130	4.08	25	
Methyl tert-Butyl Ether (MTBE)	112	1.0	µg/L	100		112	70-130	4.72	25	
2-Methylpentane	102	1.0	µg/L	100		102	70-130	6.06	25	
Naphthalene	115	5.0	µg/L	100		115	70-130	8.19	25	
Nonane	108	1.0	µg/L	100		108	70-130	6.83	25	
Pentane	82.0	1.0	µg/L	100		82.0	70-130	11.4	25	
Toluene	101	1.0	µg/L	100		101	70-130	4.19	25	
1,2,4-Trimethylbenzene	101	1.0	µg/L	100		101	70-130	4.54	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B179511 - MA VPH

LCS Dup (B179511-BSD1)

Prepared & Analyzed: 06/19/17

2,2,4-Trimethylpentane	109	1.0	µg/L	100		109	70-130	8.82	25	
m+p Xylene	206	2.0	µg/L	200		103	70-130	4.46	25	
o-Xylene	103	1.0	µg/L	100		103	70-130	4.44	25	
Surrogate: 2,5-Dibromotoluene (FID)	47.2		µg/L	40.0		118	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	48.8		µg/L	40.0		122	70-130			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179716 - SW-846 3005A										
Blank (B179716-BLK1)				Prepared: 06/20/17 Analyzed: 06/22/17						
Lead	ND	2.0	µg/L							
LCS (B179716-BS1)				Prepared: 06/20/17 Analyzed: 06/21/17						
Lead	269	5.0	µg/L	250		108	80-120			
LCS Dup (B179716-BSD1)				Prepared: 06/20/17 Analyzed: 06/21/17						
Lead	267	5.0	µg/L	250		107	80-120	0.955	20	

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QUALITY CONTROL

Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B179808 - EPA 504 water										
Blank (B179808-BLK1)										
Prepared & Analyzed: 06/21/17										
1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
Surrogate: 1,3-Dibromopropane	0.895		µg/L	1.05		85.1	70-130			
LCS (B179808-BS1)										
Prepared & Analyzed: 06/21/17										
1,2-Dibromoethane (EDB)	0.183	0.020	µg/L	0.178		103	70-130			
Surrogate: 1,3-Dibromopropane	0.944		µg/L	1.02		92.9	70-130			
LCS Dup (B179808-BSD1)										
Prepared & Analyzed: 06/21/17										
1,2-Dibromoethane (EDB)	0.196	0.021	µg/L	0.182		108	70-130	7.08		
Surrogate: 1,3-Dibromopropane	0.988		µg/L	1.04		95.1	70-130			

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FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
 - L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - RL-11 Elevated reporting limit due to high concentration of target compounds.
 - V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-19 Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC,ME
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>MADEP-VPH-04-1.1 in Water</i>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-VPH-04-1.1 in Water	
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
SM21-22 6200B in Water	
Acetone	NC
Benzene	NC
Bromobenzene	NC
Bromochloromethane	NC
Bromodichloromethane	NC
Bromoform	NC
Bromomethane	NC
2-Butanone (MEK)	NC
n-Butylbenzene	NC
sec-Butylbenzene	NC
tert-Butylbenzene	NC
Carbon Tetrachloride	NC
Chlorobenzene	NC
Ethanol	NC
Chlorodibromomethane	NC
Chloroethane	NC
Chloroform	NC
Chloromethane	NC
2-Chlorotoluene	NC
4-Chlorotoluene	NC
1,2-Dibromoethane (EDB)	NC
1,2-Dichlorobenzene	NC
1,3-Dichlorobenzene	NC
1,4-Dichlorobenzene	NC
Dichlorodifluoromethane (Freon 12)	NC
1,1-Dichloroethane	NC
1,2-Dichloroethane	NC
1,1-Dichloroethylene	NC
cis-1,2-Dichloroethylene	NC
trans-1,2-Dichloroethylene	NC
1,2-Dichloropropane	NC
1,3-Dichloropropane	NC
2,2-Dichloropropane	NC
1,1-Dichloropropene	NC
cis-1,3-Dichloropropene	NC
trans-1,3-Dichloropropene	NC
Diisopropyl Ether (DIPE)	NC
Ethylbenzene	NC
2-Hexanone (MBK)	NC
Isopropylbenzene (Cumene)	NC
p-Isopropyltoluene (p-Cymene)	NC
Methyl tert-Butyl Ether (MTBE)	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM21-22 6200B in Water	
Methylene Chloride	NC
4-Methyl-2-pentanone (MIBK)	NC
Naphthalene	NC
n-Propylbenzene	NC
Styrene	NC
1,1,2,2-Tetrachloroethane	NC
Tetrachloroethylene	NC
Toluene	NC
1,2,3-Trichlorobenzene	NC
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	NC
1,1,2-Trichloroethane	NC
Trichloroethylene	NC
Trichlorofluoromethane (Freon 11)	NC
1,2,3-Trichloropropane	NC
1,2,4-Trimethylbenzene	NC
1,3,5-Trimethylbenzene	NC
Vinyl Acetate	NC
Vinyl Chloride	NC
m+p Xylene	NC
o-Xylene	NC

SW-846 6020A-B in Water

Lead CT,NH,NY,ME,VA,NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1



Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
http://www.contestlabs.com

Company Name: *ATC Associates*
Address: *2225 E. Mulbrook Suite 121, Raleigh, NC*
Attention: *Maureen Jackson*
Project Location: *Jacksonville, NC*
Sampled By: *Frank Beecher*

Telephone: *910-388-0489*
Project # *Pantry 3125*

Client PO#

DATA DELIVERY (check all that apply)
 FAX EMAIL WEBSITE

Fax #

Email:

Format: OPDF EXCEL OGIS OTHER

Collection "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Conc Code
<i>01</i>	<i>MW-1</i>	<i>6/15/17 1030</i>	<i>X 6W</i>	<i>U</i>

Project Proposal Provided? (for billing purposes)
 yes proposal date

Comments: *TF Rates*

Relinquished by: (signature) <i>Frank Beecher</i>	Date/Time: <i>6/15/17 1030</i>
Received by: (signature) <i>4.10 BAA</i>	Date/Time: <i>06/16/17 9.19</i>
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround ^{††}	Detection Limit Requirements
<input type="checkbox"/> 5-Day	North Carolina
<input type="checkbox"/> 5-7-Day	<input checked="" type="checkbox"/> D2L
<input type="checkbox"/> 10-Day	<input type="checkbox"/> GWPC
<input checked="" type="checkbox"/> RUSH [†]	<input type="checkbox"/> SWSL
<input type="checkbox"/> 24-Hr '48-Hr	<input type="checkbox"/> OTHER
<input type="checkbox"/> 72-Hr '4-Day	
[†] Requires Lab Approval	

Program Information
<input type="checkbox"/> DSCA <input type="checkbox"/> IHSB Orphaned Landfill
<input type="checkbox"/> SWS Landfill <input checked="" type="checkbox"/> JUST <input type="checkbox"/> REC
<input type="checkbox"/> Other:

Analysis Requested
<i>6200B</i>
<i>62510 Pts</i>
<i>SOL1 EOB</i>
<i>Lead</i>
<i>Madeup VPT</i>
<i>Madeup EPT</i>

# of Containers	
** Preservation	
*** Container Code	

- Dissolved Metals**
- Field Filtered
 - Lab to Filter
- ***Cont. Code:**
- A=amber glass
 - G=glass
 - P=plastic
 - ST=sterile
 - V= vial
 - S=summa can
 - T=tetral bag
 - O=Other
- **Preservation**
- I = Iced
 - H = HCL
 - M = Methanol
 - N = Nitric Acid
 - S = Sulfuric Acid
 - B = Sodium bisulfate
 - X = Na hydroxide
 - T = Na thiosulfate
 - O = Other
- *Matrix Code:**
- GW= groundwater
 - WW= wastewater
 - DW= drinking water
 - A = air
 - S = soil/solid
 - SL = sludge
 - O = other



NELAC & AIHA Certified
WBE/DBE Certified

^{††} TURNAROUND TIME (business days) STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN.
IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT



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810700411537

Ship date: Thu 6/15/2017

Actual delivery: Fri 6/16/2017 9:19 am



Delivered

Signed for by: B.BONITA

BRE US

MA US

Travel History

Date/Time	Activity	Location
6/16/2017 - Friday		
9:19 am	Delivered	MA
7:45 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
7:40 am	At local FedEx facility	WINDSOR LOCKS, CT
6:20 am	At destination sort facility	EAST GRANBY, CT
4:44 am	Departed FedEx location	INDIANAPOLIS, IN
6/15/2017 - Thursday		
11:23 pm	Arrived at FedEx location	INDIANAPOLIS, IN
8:14 pm	Left FedEx origin facility	WILMINGTON, NC
5:50 pm	Picked up	WILMINGTON, NC

Shipment Facts

Tracking number	810700411537	Service	FedEx Priority Overnight
Weight	3 lbs / 1.36 kgs	Dimensions	24x15x14 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	3 lbs / 1.36 kgs	Terms	Third Party
Shipper reference	PANTRY 3125	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	Standard transit	6/16/2017 by 10:30 am



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 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client ATC Associates
 Received By BNA Date 06/16/12 Time 9:19
 How were the samples received? In Cooler false No Cooler _____ On Ice true No Ice _____
 Direct From Sample _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C true By Gun # 7 Actual Temp - 4.1°C
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? NA Were Samples Tampered with? False
 Was COC Relinquished? True Does Chain Agree With Samples? True
 Are there broken/leaking/loose caps on any samples? False
 Is COC in ink/ Legible? True Were samples received within holding time? _____
 Did COC include all pertinent Information? Client? True Analysis? True Sampler Name? True
 Project? True ID's? True Collection Dates/Times? True
 Are Sample labels filled out and legible? True
 Are there Lab to Filters? False Who was notified? NA
 Are there Rushes? False Who was notified? NA
 Are there Short Holds? False Who was notified? NA
 Is there enough Volume? True
 Is there Headspace where applicable? True MS/MSD? False
 Proper Media/Containers Used? True splitting samples require? False
 Were TB's received? False On COC? False
 Do All Samples Have the proper pH? True Acid True Base NA

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	4
HCL-	6	500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	1
Bisulfate-		Col./Bacteria		Flashpoint	
DI-		Other Plastic		Other Glass	
Thiosulfate-	3	SOC Kit		Plastic Bag	
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	
HCL-		500 mL Amb.		500 mL Plastic	
Meoh-		250 mL Amb.		250 mL Plastic	
Bisulfate-		Col./Bacteria		Flashpoint	
DI-		Other Plastic		Other Glass	
Thiosulfate-		SOC Kit		Plastic Bag	
Sulfuric-		Perchlorate		Ziplock	

Comments:

August 22, 2017

Maureen Jackson
ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604

Project Location: Jacksonville, NC
Client Job Number:
Project Number: Pantry 3125
Laboratory Work Order Number: 17H0898

Enclosed are results of analyses for samples received by the laboratory on August 15, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604
ATTN: Maureen Jackson

REPORT DATE: 8/22/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: Pantry 3125

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17H0898

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Jacksonville, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SMW-2	17H0898-01	Soil		MADEP-EPH-04-1.1 MADEP-VPH-04-1.1 SM 2540G SW-846 8260B SW-846 8270D	

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EXECUTIVE SUMMARY

Client ID: **SMW-2**

Lab ID: **17H0898-01**

	Analyte	Results/Qual	DL	RL	Units	Method
% Solids		84.6			% Wt	SM 2540G

Con-Test does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For MA EPH, only carbon fractions were requested and reported.

Qualifications:**O-02**

Soil/methanol ratio does not meet method specifications. Insufficient amount of soil. Data validation is not affected since a sufficient amount of preservative is present. Detection limits may be above useful levels.

Analyte & Samples(s) Qualified:

17H0898-01[SMW-2]

SW-846 8270D

Qualifications:**L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Hexachlorocyclopentadiene**

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**Benzidine**

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

Bis(2-chloroisopropyl)ether

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

Hexachlorocyclopentadiene

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**Pentachloronitrobenzene**

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Benzidine**

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

Benzo(g,h,i)perylene

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

Dibenz(a,h)anthracene

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

N-Nitrosodimethylamine

17H0898-01[SMW-2], B184552-BLK1, B184552-BS1, B184552-BSD1

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly in methanol with a soil/methanol ratio of 1:1 +/- 25% completely covered by methanol in the proper containers specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.086	0.020	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Acrylonitrile	ND	0.0052	0.0021	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Benzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Bromobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Bromochloromethane	ND	0.0017	0.0012	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Bromodichloromethane	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Bromoform	ND	0.0017	0.0012	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Bromomethane	ND	0.0086	0.0036	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
2-Butanone (MEK)	ND	0.034	0.015	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
tert-Butyl Alcohol (TBA)	ND	0.034	0.018	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
n-Butylbenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
sec-Butylbenzene	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
tert-Butylbenzene	ND	0.0017	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Carbon Disulfide	ND	0.0052	0.0037	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Carbon Tetrachloride	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Chlorobenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Chlorodibromomethane	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Chloroethane	ND	0.017	0.0013	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Chloroform	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Chloromethane	ND	0.0086	0.0055	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
2-Chlorotoluene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
4-Chlorotoluene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	0.00086	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Dibromomethane	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
trans-1,4-Dichloro-2-butene	ND	0.0034	0.0018	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.0011	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1-Dichloroethane	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2-Dichloroethane	ND	0.0017	0.0011	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1-Dichloroethylene	ND	0.0034	0.00094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2-Dichloropropane	ND	0.0017	0.0011	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,3-Dichloropropane	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
2,2-Dichloropropane	ND	0.0017	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1-Dichloropropene	ND	0.0017	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
cis-1,3-Dichloropropene	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
trans-1,3-Dichloropropene	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Diethyl Ether	ND	0.017	0.0015	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00086	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,4-Dioxane	ND	0.086	0.049	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Ethanol	ND	0.17	0.034	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Ethylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Hexachlorobutadiene	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
2-Hexanone (MBK)	ND	0.017	0.0094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Methylene Chloride	ND	0.017	0.0061	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0065	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Naphthalene	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
n-Propylbenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Styrene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.0015	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1,2,2-Tetrachloroethane	ND	0.0034	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Tetrachloroethylene	ND	0.0017	0.0011	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Tetrahydrofuran	ND	0.0086	0.0019	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Toluene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1,2-Trichloroethane	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Trichloroethylene	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	0.00094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2,3-Trichloropropane	ND	0.0017	0.00094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0086	0.00077	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
Vinyl Chloride	ND	0.0086	0.00094	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
m+p Xylene	ND	0.0034	0.0015	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF
o-Xylene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260B	8/17/17	8/17/17 8:08	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	107	70-130	8/17/17 8:08
Toluene-d8	104	70-130	8/17/17 8:08
4-Bromofluorobenzene	102	70-130	8/17/17 8:08

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.060	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Acenaphthylene	ND	0.20	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Acetophenone	ND	0.40	0.079	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Aniline	ND	0.40	0.11	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Anthracene	ND	0.20	0.058	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzidine	ND	0.78	0.50	mg/Kg dry	1	V-04, V-20	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzo(a)anthracene	ND	0.20	0.053	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzo(a)pyrene	ND	0.20	0.063	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzo(b)fluoranthene	ND	0.20	0.057	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzo(g,h,i)perylene	ND	0.20	0.089	mg/Kg dry	1	V-20	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzo(k)fluoranthene	ND	0.20	0.063	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Benzoic Acid	ND	1.2	0.21	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Bis(2-chloroethoxy)methane	ND	0.40	0.077	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Bis(2-chloroethyl)ether	ND	0.40	0.079	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Bis(2-chloroisopropyl)ether	ND	0.40	0.086	mg/Kg dry	1	V-05	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Bromophenylphenylether	ND	0.40	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Butylbenzylphthalate	ND	0.40	0.096	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Carbazole	ND	0.20	0.052	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Chloroaniline	ND	0.78	0.092	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Chloro-3-methylphenol	ND	0.78	0.086	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Chloronaphthalene	ND	0.40	0.076	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Chlorophenol	ND	0.40	0.072	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Chlorophenylphenylether	ND	0.40	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Chrysene	ND	0.20	0.063	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Dibenz(a,h)anthracene	ND	0.20	0.12	mg/Kg dry	1	V-20	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Dibenzofuran	ND	0.40	0.070	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Di-n-butylphthalate	ND	0.40	0.087	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,2-Dichlorobenzene	ND	0.40	0.071	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,3-Dichlorobenzene	ND	0.40	0.069	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,4-Dichlorobenzene	ND	0.40	0.072	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
3,3-Dichlorobenzidine	ND	0.20	0.061	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4-Dichlorophenol	ND	0.40	0.069	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Diethylphthalate	ND	0.40	0.072	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4-Dimethylphenol	ND	0.40	0.074	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Dimethylphthalate	ND	0.40	0.071	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4,6-Dinitro-2-methylphenol	ND	0.40	0.38	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4-Dinitrophenol	ND	0.78	0.23	mg/Kg dry	1	V-05	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4-Dinitrotoluene	ND	0.40	0.065	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,6-Dinitrotoluene	ND	0.40	0.071	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Di-n-octylphthalate	ND	0.40	0.21	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.40	0.065	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Fluoranthene	ND	0.20	0.066	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Fluorene	ND	0.20	0.065	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	0.071	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Hexachlorobutadiene	ND	0.40	0.071	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Hexachlorocyclopentadiene	ND	0.40	0.085	mg/Kg dry	1	L-04, V-05	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Hexachloroethane	ND	0.40	0.080	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Indeno(1,2,3-cd)pyrene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Isophorone	ND	0.40	0.078	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1-Methylnaphthalene	ND	0.20	0.077	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Methylnaphthalene	ND	0.20	0.070	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Methylphenol	ND	0.40	0.10	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
3/4-Methylphenol	ND	0.40	0.13	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Naphthalene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Nitroaniline	ND	0.40	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
3-Nitroaniline	ND	0.40	0.058	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Nitroaniline	ND	0.40	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Nitrobenzene	ND	0.40	0.076	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2-Nitrophenol	ND	0.40	0.11	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
4-Nitrophenol	ND	0.78	0.087	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
N-Nitrosodimethylamine	ND	0.40	0.25	mg/Kg dry	1	V-20	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
N-Nitrosodiphenylamine	ND	0.40	0.083	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
N-Nitrosodi-n-propylamine	ND	0.40	0.083	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Pentachloronitrobenzene	ND	0.40	0.096	mg/Kg dry	1	V-16	SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Pentachlorophenol	ND	0.40	0.097	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Phenanthrene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Phenol	ND	0.40	0.069	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Pyrene	ND	0.20	0.066	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Pyridine	ND	0.40	0.065	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.40	0.072	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
1,2,4-Trichlorobenzene	ND	0.40	0.072	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4,5-Trichlorophenol	ND	0.40	0.091	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
2,4,6-Trichlorophenol	ND	0.40	0.067	mg/Kg dry	1		SW-846 8270D	8/21/17	8/22/17 12:06	BGL
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
2-Fluorophenol		64.7	30-130						8/22/17 12:06	
Phenol-d6		60.9	30-130						8/22/17 12:06	
Nitrobenzene-d5		73.4	30-130						8/22/17 12:06	
2-Fluorobiphenyl		68.1	30-130						8/22/17 12:06	
2,4,6-Tribromophenol		73.6	30-130						8/22/17 12:06	
p-Terphenyl-d14		76.0	30-130						8/22/17 12:06	

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	8/18/17	8/21/17 12:38	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	8/18/17	8/21/17 12:38	SCS
Unadjusted C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	8/18/17	8/21/17 12:38	SCS
C11-C22 Aromatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	8/18/17	8/21/17 12:38	SCS
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	76.7		40-140				8/21/17 12:38		
o-Terphenyl (OTP)	73.8		40-140				8/21/17 12:38		
2-Bromonaphthalene	57.1		40-140				8/21/17 12:38		
2-Fluorobiphenyl	80.2		40-140				8/21/17 12:38		

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Field Sample #: SMW-2

Sampled: 8/10/2017 10:10

Sample ID: 17H0898-01

Sample Matrix: Soil

Sample Flags: O-02

Petroleum Hydrocarbons Analyses - VPH

Soil/Methanol Preservation Ratio: 0.44

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	29	mg/Kg dry	1		MADEP-VPH-04-1.1	8/17/17	8/17/17 16:42	EEH
C5-C8 Aliphatics	ND	29	mg/Kg dry	1		MADEP-VPH-04-1.1	8/17/17	8/17/17 16:42	EEH
Unadjusted C9-C12 Aliphatics	ND	29	mg/Kg dry	1		MADEP-VPH-04-1.1	8/17/17	8/17/17 16:42	EEH
C9-C12 Aliphatics	ND	29	mg/Kg dry	1		MADEP-VPH-04-1.1	8/17/17	8/17/17 16:42	EEH
C9-C10 Aromatics	ND	29	mg/Kg dry	1		MADEP-VPH-04-1.1	8/17/17	8/17/17 16:42	EEH
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
2,5-Dibromotoluene (FID)		128	70-130					8/17/17 16:42	
2,5-Dibromotoluene (PID)		109	70-130					8/17/17 16:42	

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 17H0898

Date Received: 8/15/2017

Sampled: 8/10/2017 10:10

Field Sample #: SMW-2

Sample ID: 17H0898-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.6		% Wt	1		SM 2540G	8/17/17	8/18/17 6:57	MRL

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Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17H0898-01 [SMW-2]	B184454	20.0	2.00	08/18/17

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17H0898-01 [SMW-2]	B184324	6.50	16.0	08/17/17

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
17H0898-01 [SMW-2]	B184295	08/17/17

Prep Method: SW-846 5035-SW-846 8260B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17H0898-01 [SMW-2]	B184335	6.88	10.0	08/17/17

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
17H0898-01 [SMW-2]	B184552	30.0	1.00	08/21/17

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184335 - SW-846 5035

Blank (B184335-BLK1)

Prepared & Analyzed: 08/17/17

Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethanol	ND	0.20	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184335 - SW-846 5035

Blank (B184335-BLK1)

Prepared & Analyzed: 08/17/17

Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet							
Tetrachloroethylene	ND	0.0020	mg/Kg wet							
Tetrahydrofuran	ND	0.010	mg/Kg wet							
Toluene	ND	0.0020	mg/Kg wet							
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet							
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet							
Trichloroethylene	ND	0.0020	mg/Kg wet							
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet							
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet							
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet							
Vinyl Chloride	ND	0.010	mg/Kg wet							
m+p Xylene	ND	0.0040	mg/Kg wet							
o-Xylene	ND	0.0020	mg/Kg wet							
Surrogate: 1,2-Dichloroethane-d4	0.0524		mg/Kg wet	0.0500		105	70-130			
Surrogate: Toluene-d8	0.0520		mg/Kg wet	0.0500		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.0495		mg/Kg wet	0.0500		99.0	70-130			

LCS (B184335-BS1)

Prepared & Analyzed: 08/17/17

Acetone	0.161	0.10	mg/Kg wet	0.200		80.6	70-160			†
Acrylonitrile	0.0224	0.0060	mg/Kg wet	0.0200		112	70-130			
tert-Amyl Methyl Ether (TAME)	0.0192	0.0010	mg/Kg wet	0.0200		95.8	70-130			
Benzene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
Bromobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130			
Bromochloromethane	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Bromodichloromethane	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130			
Bromoform	0.0196	0.0020	mg/Kg wet	0.0200		97.9	70-130			
Bromomethane	0.0169	0.010	mg/Kg wet	0.0200		84.4	40-130			†
2-Butanone (MEK)	0.219	0.040	mg/Kg wet	0.200		110	70-160			†
tert-Butyl Alcohol (TBA)	0.211	0.040	mg/Kg wet	0.200		106	40-130			†
n-Butylbenzene	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130			
sec-Butylbenzene	0.0231	0.0020	mg/Kg wet	0.0200		115	70-130			
tert-Butylbenzene	0.0234	0.0020	mg/Kg wet	0.0200		117	70-160			†
tert-Butyl Ethyl Ether (TBEE)	0.0231	0.0010	mg/Kg wet	0.0200		116	70-130			
Carbon Disulfide	0.0212	0.0060	mg/Kg wet	0.0200		106	70-130			
Carbon Tetrachloride	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Chlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130			
Chlorodibromomethane	0.0221	0.0010	mg/Kg wet	0.0200		111	70-130			
Chloroethane	0.0192	0.020	mg/Kg wet	0.0200		96.1	70-130			J
Chloroform	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130			
Chloromethane	0.0187	0.010	mg/Kg wet	0.0200		93.6	70-130			

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B184335 - SW-846 5035										
LCS (B184335-BS1)										
Prepared & Analyzed: 08/17/17										
2-Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
4-Chlorotoluene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
1,2-Dibromoethane (EDB)	0.0207	0.0010	mg/Kg wet	0.0200		103	70-130			
Dibromomethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130			
1,2-Dichlorobenzene	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130			
1,3-Dichlorobenzene	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
1,4-Dichlorobenzene	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130			
trans-1,4-Dichloro-2-butene	0.0220	0.0040	mg/Kg wet	0.0200		110	70-130			
Dichlorodifluoromethane (Freon 12)	0.0151	0.020	mg/Kg wet	0.0200		75.4	40-160			J †
1,1-Dichloroethane	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
1,2-Dichloroethane	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130			
1,1-Dichloroethylene	0.0210	0.0040	mg/Kg wet	0.0200		105	70-130			
cis-1,2-Dichloroethylene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
trans-1,2-Dichloroethylene	0.0260	0.0020	mg/Kg wet	0.0200		130	70-130			
1,2-Dichloropropane	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130			
1,3-Dichloropropane	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130			
2,2-Dichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1-Dichloropropene	0.0182	0.0020	mg/Kg wet	0.0200		91.2	70-130			
cis-1,3-Dichloropropene	0.0192	0.0010	mg/Kg wet	0.0200		95.8	70-130			
trans-1,3-Dichloropropene	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130			
Diethyl Ether	0.0189	0.020	mg/Kg wet	0.0200		94.7	70-130			J
Diisopropyl Ether (DIPE)	0.0221	0.0010	mg/Kg wet	0.0200		110	70-130			
1,4-Dioxane	0.254	0.10	mg/Kg wet	0.200		127	40-160			†
Ethanol	0.196	0.20	mg/Kg wet	0.200		98.0	40-160			J
Ethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Hexachlorobutadiene	0.0255	0.0020	mg/Kg wet	0.0200		127	70-160			†
2-Hexanone (MBK)	0.222	0.020	mg/Kg wet	0.200		111	70-160			†
Isopropylbenzene (Cumene)	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130			
p-Isopropyltoluene (p-Cymene)	0.0232	0.0020	mg/Kg wet	0.0200		116	70-130			
Methyl tert-Butyl Ether (MTBE)	0.0200	0.0040	mg/Kg wet	0.0200		99.9	70-130			
Methylene Chloride	0.0235	0.020	mg/Kg wet	0.0200		118	40-160			†
4-Methyl-2-pentanone (MIBK)	0.234	0.020	mg/Kg wet	0.200		117	70-160			†
Naphthalene	0.0194	0.0040	mg/Kg wet	0.0200		96.8	40-130			†
n-Propylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130			
Styrene	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130			
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1,2,2-Tetrachloroethane	0.0193	0.0010	mg/Kg wet	0.0200		96.6	70-130			
Tetrachloroethylene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130			
Tetrahydrofuran	0.0189	0.010	mg/Kg wet	0.0200		94.5	70-130			
Toluene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,2,3-Trichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.1	70-130			
1,2,4-Trichlorobenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130			
1,3,5-Trichlorobenzene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-130			
1,1,1-Trichloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1,2-Trichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130			
Trichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130			
Trichlorofluoromethane (Freon 11)	0.0219	0.010	mg/Kg wet	0.0200		109	70-130			
1,2,3-Trichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0211	0.010	mg/Kg wet	0.0200		106	70-130			
1,2,4-Trimethylbenzene	0.0230	0.0020	mg/Kg wet	0.0200		115	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184335 - SW-846 5035

LCS (B184335-BS1)

Prepared & Analyzed: 08/17/17

1,3,5-Trimethylbenzene	0.0221	0.0020	mg/Kg wet	0.0200		110	70-130			
Vinyl Chloride	0.0182	0.010	mg/Kg wet	0.0200		90.8	40-130			†
m+p Xylene	0.0413	0.0040	mg/Kg wet	0.0400		103	70-130			
o-Xylene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0522		mg/Kg wet	0.0500		104	70-130			
Surrogate: Toluene-d8	0.0530		mg/Kg wet	0.0500		106	70-130			
Surrogate: 4-Bromofluorobenzene	0.0495		mg/Kg wet	0.0500		99.0	70-130			

LCS Dup (B184335-BSD1)

Prepared & Analyzed: 08/17/17

Acetone	0.167	0.10	mg/Kg wet	0.200		83.4	70-160	3.47	25	†
Acrylonitrile	0.0228	0.0060	mg/Kg wet	0.0200		114	70-130	1.68	25	
tert-Amyl Methyl Ether (TAME)	0.0185	0.0010	mg/Kg wet	0.0200		92.7	70-130	3.29	25	
Benzene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130	4.33	25	
Bromobenzene	0.0170	0.0020	mg/Kg wet	0.0200		85.0	70-130	12.6	25	
Bromochloromethane	0.0231	0.0020	mg/Kg wet	0.0200		116	70-130	4.51	25	
Bromodichloromethane	0.0185	0.0020	mg/Kg wet	0.0200		92.4	70-130	6.39	25	
Bromoform	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	2.48	25	
Bromomethane	0.0180	0.010	mg/Kg wet	0.0200		90.1	40-130	6.53	25	†
2-Butanone (MEK)	0.207	0.040	mg/Kg wet	0.200		103	70-160	5.87	25	†
tert-Butyl Alcohol (TBA)	0.224	0.040	mg/Kg wet	0.200		112	40-130	5.77	25	†
n-Butylbenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	6.93	25	
sec-Butylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130	5.80	25	
tert-Butylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-160	7.90	25	†
tert-Butyl Ethyl Ether (TBEE)	0.0220	0.0010	mg/Kg wet	0.0200		110	70-130	4.96	25	
Carbon Disulfide	0.0197	0.0060	mg/Kg wet	0.0200		98.4	70-130	7.34	25	
Carbon Tetrachloride	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	3.22	25	
Chlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130	4.52	25	
Chlorodibromomethane	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	7.69	25	
Chloroethane	0.0182	0.020	mg/Kg wet	0.0200		90.8	70-130	5.67	25	J
Chloroform	0.0195	0.0040	mg/Kg wet	0.0200		97.7	70-130	3.22	25	
Chloromethane	0.0183	0.010	mg/Kg wet	0.0200		91.6	70-130	2.16	25	
2-Chlorotoluene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	3.60	25	
4-Chlorotoluene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	8.24	25	
1,2-Dibromo-3-chloropropane (DBCP)	0.0219	0.0020	mg/Kg wet	0.0200		110	70-130	5.59	25	
1,2-Dibromoethane (EDB)	0.0189	0.0010	mg/Kg wet	0.0200		94.5	70-130	8.99	25	
Dibromomethane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130	5.66	25	
1,2-Dichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	9.57	25	
1,3-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	8.36	25	
1,4-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	5.14	25	
trans-1,4-Dichloro-2-butene	0.0211	0.0040	mg/Kg wet	0.0200		106	70-130	4.27	25	
Dichlorodifluoromethane (Freon 12)	0.0141	0.020	mg/Kg wet	0.0200		70.7	40-160	6.43	25	J †
1,1-Dichloroethane	0.0219	0.0020	mg/Kg wet	0.0200		109	70-130	3.95	25	
1,2-Dichloroethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	5.22	25	
1,1-Dichloroethylene	0.0207	0.0040	mg/Kg wet	0.0200		103	70-130	1.73	25	
cis-1,2-Dichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130	5.61	25	
trans-1,2-Dichloroethylene	0.0249	0.0020	mg/Kg wet	0.0200		124	70-130	4.64	25	
1,2-Dichloropropane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	6.43	25	
1,3-Dichloropropane	0.0189	0.0010	mg/Kg wet	0.0200		94.5	70-130	8.80	25	
2,2-Dichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130	8.28	25	
1,1-Dichloropropene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	10.9	25	
cis-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.3	70-130	4.81	25	
trans-1,3-Dichloropropene	0.0193	0.0010	mg/Kg wet	0.0200		96.4	70-130	10.2	25	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B184335 - SW-846 5035										
LCS Dup (B184335-BSD1)										
Prepared & Analyzed: 08/17/17										
Diethyl Ether	0.0191	0.020	mg/Kg wet	0.0200		95.6	70-130	0.946	25	J
Diisopropyl Ether (DIPE)	0.0210	0.0010	mg/Kg wet	0.0200		105	70-130	4.92	25	
1,4-Dioxane	0.233	0.10	mg/Kg wet	0.200		116	40-160	8.70	50	† ‡
Ethanol	0.186	0.20	mg/Kg wet	0.200		92.8	40-160	5.42	25	J
Ethylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	8.15	25	
Hexachlorobutadiene	0.0244	0.0020	mg/Kg wet	0.0200		122	70-160	4.49	25	
2-Hexanone (MBK)	0.218	0.020	mg/Kg wet	0.200		109	70-160	2.19	25	†
Isopropylbenzene (Cumene)	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	0.916	25	
p-Isopropyltoluene (p-Cymene)	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	8.18	25	
Methyl tert-Butyl Ether (MTBE)	0.0198	0.0040	mg/Kg wet	0.0200		99.1	70-130	0.804	25	
Methylene Chloride	0.0226	0.020	mg/Kg wet	0.0200		113	40-160	3.90	25	†
4-Methyl-2-pentanone (MIBK)	0.222	0.020	mg/Kg wet	0.200		111	70-160	5.29	25	†
Naphthalene	0.0185	0.0040	mg/Kg wet	0.0200		92.4	40-130	4.65	25	†
n-Propylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	5.22	25	
Styrene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130	4.65	25	
1,1,1,2-Tetrachloroethane	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130	11.7	25	
1,1,2,2-Tetrachloroethane	0.0183	0.0010	mg/Kg wet	0.0200		91.5	70-130	5.42	25	
Tetrachloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	2.23	25	
Tetrahydrofuran	0.0180	0.010	mg/Kg wet	0.0200		89.8	70-130	5.10	25	
Toluene	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	5.93	25	
1,2,3-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		103	70-130	3.57	25	
1,2,4-Trichlorobenzene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	3.84	25	
1,3,5-Trichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130	7.34	25	
1,1,1-Trichloroethane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	0.940	25	
1,1,2-Trichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130	10.3	25	
Trichloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130	0.0956	25	
Trichlorofluoromethane (Freon 11)	0.0210	0.010	mg/Kg wet	0.0200		105	70-130	3.91	25	
1,2,3-Trichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	1.13	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0200	0.010	mg/Kg wet	0.0200		100	70-130	5.15	25	
1,2,4-Trimethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130	8.62	25	
1,3,5-Trimethylbenzene	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	6.55	25	
Vinyl Chloride	0.0176	0.010	mg/Kg wet	0.0200		87.9	40-130	3.25	25	†
m+p Xylene	0.0391	0.0040	mg/Kg wet	0.0400		97.8	70-130	5.52	25	
o-Xylene	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130	5.67	25	
Surrogate: 1,2-Dichloroethane-d4	0.0529		mg/Kg wet	0.0500		106	70-130			
Surrogate: Toluene-d8	0.0512		mg/Kg wet	0.0500		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.0512		mg/Kg wet	0.0500		102	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184552 - SW-846 3546

Blank (B184552-BLK1)

Prepared: 08/21/17 Analyzed: 08/22/17

Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-20
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							V-20
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							V-05
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							V-20
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-05
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							L-04, V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184552 - SW-846 3546

Blank (B184552-BLK1)

Prepared: 08/21/17 Analyzed: 08/22/17

2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							V-20
N-Nitrosodiphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							V-16
Pentachlorophenol	ND	0.34	mg/Kg wet							
Phenanthrene	ND	0.17	mg/Kg wet							
Phenol	ND	0.34	mg/Kg wet							
Pyrene	ND	0.17	mg/Kg wet							
Pyridine	ND	0.34	mg/Kg wet							
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet							
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet							
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet							
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet							
Surrogate: 2-Fluorophenol	4.43		mg/Kg wet	6.67		66.4	30-130			
Surrogate: Phenol-d6	3.94		mg/Kg wet	6.67		59.1	30-130			
Surrogate: Nitrobenzene-d5	2.33		mg/Kg wet	3.33		69.8	30-130			
Surrogate: 2-Fluorobiphenyl	2.26		mg/Kg wet	3.33		67.8	30-130			
Surrogate: 2,4,6-Tribromophenol	5.10		mg/Kg wet	6.67		76.5	30-130			
Surrogate: p-Terphenyl-d14	2.71		mg/Kg wet	3.33		81.2	30-130			

LCS (B184552-BS1)

Prepared: 08/21/17 Analyzed: 08/22/17

Acenaphthene	1.11	0.17	mg/Kg wet	1.67		66.5	40-140			
Acenaphthylene	1.11	0.17	mg/Kg wet	1.67		66.7	40-140			
Acetophenone	1.06	0.34	mg/Kg wet	1.67		63.3	40-140			
Aniline	0.530	0.34	mg/Kg wet	1.67		31.8	10-140			†
Anthracene	1.27	0.17	mg/Kg wet	1.67		76.3	40-140			
Benzidine	1.05	0.66	mg/Kg wet	1.67		62.7	40-140			V-04, V-20
Benzo(a)anthracene	1.32	0.17	mg/Kg wet	1.67		79.3	40-140			
Benzo(a)pyrene	1.31	0.17	mg/Kg wet	1.67		78.8	40-140			
Benzo(b)fluoranthene	1.09	0.17	mg/Kg wet	1.67		65.2	40-140			
Benzo(g,h,i)perylene	1.65	0.17	mg/Kg wet	1.67		99.3	40-140			V-20
Benzo(k)fluoranthene	1.25	0.17	mg/Kg wet	1.67		75.2	40-140			
Benzoic Acid	0.848	1.0	mg/Kg wet	1.67		50.9	30-130			J
Bis(2-chloroethoxy)methane	1.10	0.34	mg/Kg wet	1.67		66.2	40-140			
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		64.9	40-140			
Bis(2-chloroisopropyl)ether	0.964	0.34	mg/Kg wet	1.67		57.8	40-140			V-05
Bis(2-Ethylhexyl)phthalate	1.32	0.34	mg/Kg wet	1.67		79.4	40-140			
4-Bromophenylphenylether	1.28	0.34	mg/Kg wet	1.67		76.6	40-140			
Butylbenzylphthalate	1.28	0.34	mg/Kg wet	1.67		76.7	40-140			
Carbazole	1.26	0.17	mg/Kg wet	1.67		75.3	40-140			
4-Chloroaniline	0.709	0.66	mg/Kg wet	1.67		42.5	10-140			†
4-Chloro-3-methylphenol	1.31	0.66	mg/Kg wet	1.67		78.8	30-130			
2-Chloronaphthalene	0.986	0.34	mg/Kg wet	1.67		59.2	40-140			

QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B184552 - SW-846 3546										
LCS (B184552-BS1)										
					Prepared: 08/21/17 Analyzed: 08/22/17					
2-Chlorophenol	1.08	0.34	mg/Kg wet	1.67		64.6	30-130			
4-Chlorophenylphenylether	1.20	0.34	mg/Kg wet	1.67		71.9	40-140			
Chrysene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140			
Dibenz(a,h)anthracene	1.51	0.17	mg/Kg wet	1.67		90.7	40-140			V-20
Dibenzofuran	1.18	0.34	mg/Kg wet	1.67		71.0	40-140			
Di-n-butylphthalate	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
1,2-Dichlorobenzene	1.01	0.34	mg/Kg wet	1.67		60.3	40-140			
1,3-Dichlorobenzene	0.971	0.34	mg/Kg wet	1.67		58.3	40-140			
1,4-Dichlorobenzene	0.970	0.34	mg/Kg wet	1.67		58.2	40-140			
3,3-Dichlorobenzidine	0.854	0.17	mg/Kg wet	1.67		51.2	20-140			†
2,4-Dichlorophenol	1.21	0.34	mg/Kg wet	1.67		72.4	30-130			
Diethylphthalate	1.21	0.34	mg/Kg wet	1.67		72.7	40-140			
2,4-Dimethylphenol	1.22	0.34	mg/Kg wet	1.67		73.0	30-130			
Dimethylphthalate	1.21	0.34	mg/Kg wet	1.67		72.8	40-140			
4,6-Dinitro-2-methylphenol	1.10	0.34	mg/Kg wet	1.67		66.2	30-130			
2,4-Dinitrophenol	0.787	0.66	mg/Kg wet	1.67		47.2	30-130			V-05
2,4-Dinitrotoluene	1.16	0.34	mg/Kg wet	1.67		69.3	40-140			
2,6-Dinitrotoluene	1.19	0.34	mg/Kg wet	1.67		71.3	40-140			
Di-n-octylphthalate	1.10	0.34	mg/Kg wet	1.67		66.1	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	1.26	0.34	mg/Kg wet	1.67		75.5	40-140			
Fluoranthene	1.30	0.17	mg/Kg wet	1.67		77.7	40-140			
Fluorene	1.16	0.17	mg/Kg wet	1.67		69.4	40-140			
Hexachlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.6	40-140			
Hexachlorobutadiene	1.28	0.34	mg/Kg wet	1.67		76.7	40-140			
Hexachlorocyclopentadiene	0.607	0.34	mg/Kg wet	1.67		36.4 *	40-140			L-04, V-05
Hexachloroethane	1.02	0.34	mg/Kg wet	1.67		61.0	40-140			
Indeno(1,2,3-cd)pyrene	1.50	0.17	mg/Kg wet	1.67		90.3	40-140			
Isophorone	1.14	0.34	mg/Kg wet	1.67		68.5	40-140			
1-Methylnaphthalene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140			
2-Methylnaphthalene	1.15	0.17	mg/Kg wet	1.67		69.0	40-140			
2-Methylphenol	0.947	0.34	mg/Kg wet	1.67		56.8	30-130			
3/4-Methylphenol	1.02	0.34	mg/Kg wet	1.67		61.5	30-130			
Naphthalene	1.13	0.17	mg/Kg wet	1.67		67.6	40-140			
2-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		73.8	40-140			
3-Nitroaniline	1.01	0.34	mg/Kg wet	1.67		60.7	30-140			†
4-Nitroaniline	1.25	0.34	mg/Kg wet	1.67		75.3	40-140			
Nitrobenzene	1.15	0.34	mg/Kg wet	1.67		69.0	40-140			
2-Nitrophenol	1.12	0.34	mg/Kg wet	1.67		67.2	30-130			
4-Nitrophenol	0.931	0.66	mg/Kg wet	1.67		55.9	30-130			
N-Nitrosodimethylamine	1.18	0.34	mg/Kg wet	1.67		70.9	40-140			V-20
N-Nitrosodiphenylamine	1.63	0.34	mg/Kg wet	1.67		97.7	40-140			
N-Nitrosodi-n-propylamine	0.985	0.34	mg/Kg wet	1.67		59.1	40-140			
Pentachloronitrobenzene	1.37	0.34	mg/Kg wet	1.67		82.0	40-140			V-16
Pentachlorophenol	0.833	0.34	mg/Kg wet	1.67		50.0	30-130			
Phenanthrene	1.27	0.17	mg/Kg wet	1.67		76.1	40-140			
Phenol	1.11	0.34	mg/Kg wet	1.67		66.8	30-130			
Pyrene	1.22	0.17	mg/Kg wet	1.67		73.1	40-140			
Pyridine	0.855	0.34	mg/Kg wet	1.67		51.3	30-140			†
1,2,4,5-Tetrachlorobenzene	1.23	0.34	mg/Kg wet	1.67		73.5	40-140			
1,2,4-Trichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.3	40-140			
2,4,5-Trichlorophenol	1.06	0.34	mg/Kg wet	1.67		63.6	30-130			
2,4,6-Trichlorophenol	1.18	0.34	mg/Kg wet	1.67		70.8	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184552 - SW-846 3546

LCS (B184552-BS1)

Prepared: 08/21/17 Analyzed: 08/22/17

Surrogate: 2-Fluorophenol	4.75		mg/Kg wet	6.67		71.3	30-130			
Surrogate: Phenol-d6	4.44		mg/Kg wet	6.67		66.7	30-130			
Surrogate: Nitrobenzene-d5	2.69		mg/Kg wet	3.33		80.7	30-130			
Surrogate: 2-Fluorobiphenyl	2.51		mg/Kg wet	3.33		75.4	30-130			
Surrogate: 2,4,6-Tribromophenol	5.80		mg/Kg wet	6.67		86.9	30-130			
Surrogate: p-Terphenyl-d14	2.95		mg/Kg wet	3.33		88.4	30-130			

LCS Dup (B184552-BS1)

Prepared: 08/21/17 Analyzed: 08/22/17

Acenaphthene	1.09	0.17	mg/Kg wet	1.67		65.4	40-140	1.55	30	
Acenaphthylene	1.08	0.17	mg/Kg wet	1.67		65.1	40-140	2.46	30	
Acetophenone	1.09	0.34	mg/Kg wet	1.67		65.2	40-140	2.93	30	
Aniline	0.558	0.34	mg/Kg wet	1.67		33.5	10-140	5.02	50	† ‡
Anthracene	1.20	0.17	mg/Kg wet	1.67		71.8	40-140	6.08	30	
Benazidine	0.889	0.66	mg/Kg wet	1.67		53.3	40-140	16.2	30	V-04, V-20
Benzo(a)anthracene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140	5.50	30	
Benzo(a)pyrene	1.24	0.17	mg/Kg wet	1.67		74.2	40-140	6.09	30	
Benzo(b)fluoranthene	1.02	0.17	mg/Kg wet	1.67		61.3	40-140	6.20	30	
Benzo(g,h,i)perylene	1.58	0.17	mg/Kg wet	1.67		94.7	40-140	4.74	30	V-20
Benzo(k)fluoranthene	1.18	0.17	mg/Kg wet	1.67		70.6	40-140	6.36	30	
Benzoic Acid	0.898	1.0	mg/Kg wet	1.67		53.9	30-130	5.77	50	J ‡
Bis(2-chloroethoxy)methane	1.10	0.34	mg/Kg wet	1.67		65.9	40-140	0.424	30	
Bis(2-chloroethyl)ether	1.11	0.34	mg/Kg wet	1.67		66.5	40-140	2.41	30	
Bis(2-chloroisopropyl)ether	1.02	0.34	mg/Kg wet	1.67		61.0	40-140	5.25	30	V-05
Bis(2-Ethylhexyl)phthalate	1.22	0.34	mg/Kg wet	1.67		72.9	40-140	8.46	30	
4-Bromophenylphenylether	1.18	0.34	mg/Kg wet	1.67		70.7	40-140	8.09	30	
Butylbenzylphthalate	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	5.46	30	
Carbazole	1.21	0.17	mg/Kg wet	1.67		72.5	40-140	3.79	30	
4-Chloroaniline	0.729	0.66	mg/Kg wet	1.67		43.8	10-140	2.83	30	†
4-Chloro-3-methylphenol	1.26	0.66	mg/Kg wet	1.67		75.9	30-130	3.85	30	
2-Chloronaphthalene	0.958	0.34	mg/Kg wet	1.67		57.5	40-140	2.95	30	
2-Chlorophenol	1.11	0.34	mg/Kg wet	1.67		66.8	30-130	3.32	30	
4-Chlorophenylphenylether	1.17	0.34	mg/Kg wet	1.67		70.1	40-140	2.51	30	
Chrysene	1.23	0.17	mg/Kg wet	1.67		74.0	40-140	6.61	30	
Dibenz(a,h)anthracene	1.44	0.17	mg/Kg wet	1.67		86.5	40-140	4.65	30	V-20
Dibenzofuran	1.14	0.34	mg/Kg wet	1.67		68.5	40-140	3.58	30	
Di-n-butylphthalate	1.15	0.34	mg/Kg wet	1.67		69.0	40-140	5.28	30	
1,2-Dichlorobenzene	1.01	0.34	mg/Kg wet	1.67		60.9	40-140	0.891	30	
1,3-Dichlorobenzene	0.981	0.34	mg/Kg wet	1.67		58.9	40-140	1.02	30	
1,4-Dichlorobenzene	0.994	0.34	mg/Kg wet	1.67		59.6	40-140	2.38	30	
3,3-Dichlorobenzidine	0.856	0.17	mg/Kg wet	1.67		51.3	20-140	0.195	50	† ‡
2,4-Dichlorophenol	1.20	0.34	mg/Kg wet	1.67		72.3	30-130	0.221	30	
Diethylphthalate	1.18	0.34	mg/Kg wet	1.67		70.8	40-140	2.65	30	
2,4-Dimethylphenol	1.19	0.34	mg/Kg wet	1.67		71.3	30-130	2.35	30	
Dimethylphthalate	1.18	0.34	mg/Kg wet	1.67		70.7	40-140	2.90	30	
4,6-Dinitro-2-methylphenol	1.04	0.34	mg/Kg wet	1.67		62.3	30-130	6.16	30	
2,4-Dinitrophenol	0.752	0.66	mg/Kg wet	1.67		45.1	30-130	4.46	30	V-05
2,4-Dinitrotoluene	1.13	0.34	mg/Kg wet	1.67		67.7	40-140	2.37	30	
2,6-Dinitrotoluene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140	0.336	30	
Di-n-octylphthalate	1.04	0.34	mg/Kg wet	1.67		62.2	40-140	6.02	30	
1,2-Diphenylhydrazine (as Azobenzene)	1.22	0.34	mg/Kg wet	1.67		73.0	40-140	3.31	30	
Fluoranthene	1.23	0.17	mg/Kg wet	1.67		73.6	40-140	5.47	30	
Fluorene	1.12	0.17	mg/Kg wet	1.67		67.1	40-140	3.40	30	

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B184552 - SW-846 3546										
LCS Dup (B184552-BSD1)										
					Prepared: 08/21/17 Analyzed: 08/22/17					
Hexachlorobenzene	1.18	0.34	mg/Kg wet	1.67		71.0	40-140	6.27	30	
Hexachlorobutadiene	1.24	0.34	mg/Kg wet	1.67		74.5	40-140	2.80	30	
Hexachlorocyclopentadiene	0.596	0.34	mg/Kg wet	1.67		35.8	* 40-140	1.77	30	L-04, V-05
Hexachloroethane	1.05	0.34	mg/Kg wet	1.67		62.8	40-140	2.97	30	
Indeno(1,2,3-cd)pyrene	1.40	0.17	mg/Kg wet	1.67		84.2	40-140	6.97	30	
Isophorone	1.18	0.34	mg/Kg wet	1.67		70.7	40-140	3.22	30	
1-Methylnaphthalene	1.15	0.17	mg/Kg wet	1.67		68.8	40-140	0.261	30	
2-Methylnaphthalene	1.17	0.17	mg/Kg wet	1.67		70.0	40-140	1.38	30	
2-Methylphenol	1.04	0.34	mg/Kg wet	1.67		62.1	30-130	8.92	30	
3/4-Methylphenol	1.04	0.34	mg/Kg wet	1.67		62.6	30-130	1.84	30	
Naphthalene	1.12	0.17	mg/Kg wet	1.67		67.3	40-140	0.534	30	
2-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		73.6	40-140	0.217	30	
3-Nitroaniline	1.00	0.34	mg/Kg wet	1.67		60.2	30-140	0.761	30	†
4-Nitroaniline	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	3.65	30	
Nitrobenzene	1.19	0.34	mg/Kg wet	1.67		71.2	40-140	3.05	30	
2-Nitrophenol	1.22	0.34	mg/Kg wet	1.67		73.2	30-130	8.46	30	
4-Nitrophenol	0.848	0.66	mg/Kg wet	1.67		50.9	30-130	9.33	50	‡
N-Nitrosodimethylamine	1.16	0.34	mg/Kg wet	1.67		69.6	40-140	1.88	30	V-20
N-Nitrosodiphenylamine	1.54	0.34	mg/Kg wet	1.67		92.7	40-140	5.32	30	
N-Nitrosodi-n-propylamine	1.04	0.34	mg/Kg wet	1.67		62.7	40-140	5.81	30	
Pentachloronitrobenzene	1.25	0.34	mg/Kg wet	1.67		74.8	40-140	9.21	30	V-16
Pentachlorophenol	0.745	0.34	mg/Kg wet	1.67		44.7	30-130	11.2	30	
Phenanthrene	1.20	0.17	mg/Kg wet	1.67		72.0	40-140	5.62	30	
Phenol	1.16	0.34	mg/Kg wet	1.67		69.5	30-130	3.96	30	
Pyrene	1.15	0.17	mg/Kg wet	1.67		69.2	40-140	5.42	30	
Pyridine	0.852	0.34	mg/Kg wet	1.67		51.1	30-140	0.351	30	†
1,2,4,5-Tetrachlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.7	40-140	3.97	30	
1,2,4-Trichlorobenzene	1.13	0.34	mg/Kg wet	1.67		68.1	40-140	0.323	30	
2,4,5-Trichlorophenol	1.05	0.34	mg/Kg wet	1.67		62.8	30-130	1.27	30	
2,4,6-Trichlorophenol	1.12	0.34	mg/Kg wet	1.67		67.4	30-130	4.89	30	
Surrogate: 2-Fluorophenol	4.89		mg/Kg wet	6.67		73.4	30-130			
Surrogate: Phenol-d6	4.51		mg/Kg wet	6.67		67.6	30-130			
Surrogate: Nitrobenzene-d5	2.71		mg/Kg wet	3.33		81.4	30-130			
Surrogate: 2-Fluorobiphenyl	2.44		mg/Kg wet	3.33		73.2	30-130			
Surrogate: 2,4,6-Tribromophenol	5.45		mg/Kg wet	6.67		81.8	30-130			
Surrogate: p-Terphenyl-d14	2.77		mg/Kg wet	3.33		83.0	30-130			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184454 - SW-846 3546

Blank (B184454-BLK1)

Prepared: 08/18/17 Analyzed: 08/21/17

C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
Acenaphthene	ND	0.10	mg/Kg wet							
Acenaphthylene	ND	0.10	mg/Kg wet							
Anthracene	ND	0.10	mg/Kg wet							
Benzo(a)anthracene	ND	0.10	mg/Kg wet							
Benzo(a)pyrene	ND	0.10	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.10	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.10	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.10	mg/Kg wet							
Chrysene	ND	0.10	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.10	mg/Kg wet							
Fluoranthene	ND	0.10	mg/Kg wet							
Fluorene	ND	0.10	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.10	mg/Kg wet							
2-Methylnaphthalene	ND	0.10	mg/Kg wet							
Naphthalene	ND	0.10	mg/Kg wet							
Phenanthrene	ND	0.10	mg/Kg wet							
Pyrene	ND	0.10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	3.98		mg/Kg wet	4.99		79.7	40-140			
Surrogate: o-Terphenyl (OTP)	3.82		mg/Kg wet	5.00		76.3	40-140			
Surrogate: 2-Bromonaphthalene	3.74		mg/Kg wet	5.00		74.9	40-140			
Surrogate: 2-Fluorobiphenyl	4.21		mg/Kg wet	5.00		84.2	40-140			

LCS (B184454-BS1)

Prepared: 08/18/17 Analyzed: 08/21/17

C9-C18 Aliphatics	26.7	10	mg/Kg wet	30.0		88.9	40-140			
C19-C36 Aliphatics	36.4	10	mg/Kg wet	40.0		91.1	40-140			
Acenaphthene	3.51	0.10	mg/Kg wet	5.00		70.1	40-140			
Acenaphthylene	3.28	0.10	mg/Kg wet	5.00		65.7	40-140			
Anthracene	3.66	0.10	mg/Kg wet	5.00		73.3	40-140			
Benzo(a)anthracene	3.62	0.10	mg/Kg wet	5.00		72.5	40-140			
Benzo(a)pyrene	3.55	0.10	mg/Kg wet	5.00		71.0	40-140			
Benzo(b)fluoranthene	3.61	0.10	mg/Kg wet	5.00		72.2	40-140			
Benzo(g,h,i)perylene	3.42	0.10	mg/Kg wet	5.00		68.5	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184454 - SW-846 3546

LCS (B184454-BS1)

Prepared: 08/18/17 Analyzed: 08/21/17

Benzo(k)fluoranthene	3.55	0.10	mg/Kg wet	5.00		70.9	40-140			
Chrysene	3.64	0.10	mg/Kg wet	5.00		72.7	40-140			
Dibenz(a,h)anthracene	3.56	0.10	mg/Kg wet	5.00		71.1	40-140			
Fluoranthene	3.64	0.10	mg/Kg wet	5.00		72.8	40-140			
Fluorene	3.42	0.10	mg/Kg wet	5.00		68.3	40-140			
Indeno(1,2,3-cd)pyrene	3.33	0.10	mg/Kg wet	5.00		66.6	40-140			
2-Methylnaphthalene	3.14	0.10	mg/Kg wet	5.00		62.8	40-140			
Naphthalene	3.04	0.10	mg/Kg wet	5.00		60.7	40-140			
Phenanthrene	3.58	0.10	mg/Kg wet	5.00		71.6	40-140			
Pyrene	3.66	0.10	mg/Kg wet	5.00		73.1	40-140			
n-Decane	2.60	0.10	mg/Kg wet	5.00		51.9	40-140			
n-Docosane	3.58	0.10	mg/Kg wet	5.00		71.6	40-140			
n-Dodecane	3.11	0.10	mg/Kg wet	5.00		62.3	40-140			
n-Eicosane	3.60	0.10	mg/Kg wet	5.00		72.1	40-140			
n-Hexacosane	3.50	0.10	mg/Kg wet	5.00		70.0	40-140			
n-Hexadecane	3.72	0.10	mg/Kg wet	5.00		74.5	40-140			
n-Hexatriacontane	3.61	0.10	mg/Kg wet	5.00		72.3	40-140			
n-Nonadecane	3.60	0.10	mg/Kg wet	5.00		72.0	40-140			
n-Nonane	2.05	0.10	mg/Kg wet	5.00		41.1	30-140			
n-Octacosane	3.43	0.10	mg/Kg wet	5.00		68.7	40-140			
n-Octadecane	3.91	0.10	mg/Kg wet	5.00		78.2	40-140			
n-Tetracosane	3.60	0.10	mg/Kg wet	5.00		72.0	40-140			
n-Tetradecane	3.63	0.10	mg/Kg wet	5.00		72.6	40-140			
n-Triacontane	3.50	0.10	mg/Kg wet	5.00		70.0	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	3.90		mg/Kg wet	4.99		78.1	40-140			
Surrogate: o-Terphenyl (OTP)	3.68		mg/Kg wet	5.00		73.5	40-140			
Surrogate: 2-Bromonaphthalene	3.72		mg/Kg wet	5.00		74.4	40-140			
Surrogate: 2-Fluorobiphenyl	4.23		mg/Kg wet	5.00		84.7	40-140			

LCS Dup (B184454-BSD1)

Prepared: 08/18/17 Analyzed: 08/21/17

C9-C18 Aliphatics	28.3	10	mg/Kg wet	30.0		94.3	40-140	5.87	25	
C19-C36 Aliphatics	36.8	10	mg/Kg wet	40.0		91.9	40-140	0.844	25	
Acenaphthene	3.84	0.10	mg/Kg wet	5.00		76.8	40-140	9.02	25	
Acenaphthylene	3.62	0.10	mg/Kg wet	5.00		72.4	40-140	9.70	25	
Anthracene	3.93	0.10	mg/Kg wet	5.00		78.6	40-140	7.07	25	
Benzo(a)anthracene	3.91	0.10	mg/Kg wet	5.00		78.2	40-140	7.60	25	
Benzo(a)pyrene	3.82	0.10	mg/Kg wet	5.00		76.5	40-140	7.41	25	
Benzo(b)fluoranthene	3.89	0.10	mg/Kg wet	5.00		77.8	40-140	7.40	25	
Benzo(g,h,i)perylene	3.67	0.10	mg/Kg wet	5.00		73.4	40-140	6.96	25	
Benzo(k)fluoranthene	3.82	0.10	mg/Kg wet	5.00		76.4	40-140	7.49	25	
Chrysene	3.92	0.10	mg/Kg wet	5.00		78.3	40-140	7.38	25	
Dibenz(a,h)anthracene	3.85	0.10	mg/Kg wet	5.00		77.0	40-140	7.86	25	
Fluoranthene	3.91	0.10	mg/Kg wet	5.00		78.1	40-140	7.07	25	
Fluorene	3.70	0.10	mg/Kg wet	5.00		74.1	40-140	8.06	25	
Indeno(1,2,3-cd)pyrene	3.59	0.10	mg/Kg wet	5.00		71.8	40-140	7.59	25	
2-Methylnaphthalene	3.54	0.10	mg/Kg wet	5.00		70.7	40-140	11.8	25	
Naphthalene	3.46	0.10	mg/Kg wet	5.00		69.2	40-140	13.0	25	
Phenanthrene	3.86	0.10	mg/Kg wet	5.00		77.3	40-140	7.59	25	
Pyrene	3.93	0.10	mg/Kg wet	5.00		78.5	40-140	7.16	25	
n-Decane	2.93	0.10	mg/Kg wet	5.00		58.6	40-140	12.1	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B184454 - SW-846 3546										
LCS Dup (B184454-BSD1)										
					Prepared: 08/18/17 Analyzed: 08/21/17					
n-Docosane	3.76	0.10	mg/Kg wet	5.00		75.2	40-140	4.99	25	
n-Dodecane	3.52	0.10	mg/Kg wet	5.00		70.4	40-140	12.2	25	
n-Eicosane	3.79	0.10	mg/Kg wet	5.00		75.9	40-140	5.19	25	
n-Hexacosane	3.67	0.10	mg/Kg wet	5.00		73.3	40-140	4.60	25	
n-Hexadecane	4.00	0.10	mg/Kg wet	5.00		80.1	40-140	7.22	25	
n-Hexatriacontane	3.81	0.10	mg/Kg wet	5.00		76.2	40-140	5.23	25	
n-Nonadecane	3.80	0.10	mg/Kg wet	5.00		75.9	40-140	5.33	25	
n-Nonane	2.30	0.10	mg/Kg wet	5.00		46.1	30-140	11.4	25	
n-Octacosane	3.60	0.10	mg/Kg wet	5.00		72.0	40-140	4.77	25	
n-Octadecane	4.17	0.10	mg/Kg wet	5.00		83.4	40-140	6.41	25	
n-Tetracosane	3.78	0.10	mg/Kg wet	5.00		75.6	40-140	4.80	25	
n-Tetradecane	3.96	0.10	mg/Kg wet	5.00		79.1	40-140	8.60	25	
n-Triacontane	3.67	0.10	mg/Kg wet	5.00		73.3	40-140	4.69	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	4.03		mg/Kg wet	4.99		80.7	40-140			
Surrogate: o-Terphenyl (OTP)	3.85		mg/Kg wet	5.00		77.0	40-140			
Surrogate: 2-Bromonaphthalene	3.72		mg/Kg wet	5.00		74.4	40-140			
Surrogate: 2-Fluorobiphenyl	4.23		mg/Kg wet	5.00		84.5	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184324 - MA VPH

Blank (B184324-BLK1)

Prepared & Analyzed: 08/17/17

Unadjusted C5-C8 Aliphatics	ND	0.20	mg/Kg wet							
C5-C8 Aliphatics	ND	0.20	mg/Kg wet							
Unadjusted C9-C12 Aliphatics	ND	0.20	mg/Kg wet							
C9-C12 Aliphatics	ND	0.20	mg/Kg wet							
C9-C10 Aromatics	ND	0.20	mg/Kg wet							
Benzene	ND	0.0010	mg/Kg wet							
Butylcyclohexane	ND	0.0010	mg/Kg wet							
Decane	ND	0.0010	mg/Kg wet							
Ethylbenzene	ND	0.0010	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0010	mg/Kg wet							
2-Methylpentane	ND	0.0010	mg/Kg wet							
Naphthalene	ND	0.010	mg/Kg wet							
Nonane	ND	0.0010	mg/Kg wet							
Pentane	ND	0.0010	mg/Kg wet							
Toluene	ND	0.0010	mg/Kg wet							
1,2,4-Trimethylbenzene	ND	0.0010	mg/Kg wet							
2,2,4-Trimethylpentane	ND	0.0010	mg/Kg wet							
m+p Xylene	ND	0.0020	mg/Kg wet							
o-Xylene	ND	0.0010	mg/Kg wet							
Surrogate: 2,5-Dibromotoluene (FID)	0.0373		mg/Kg wet	0.0400		93.3	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0343		mg/Kg wet	0.0400		85.8	70-130			

LCS (B184324-BS1)

Prepared & Analyzed: 08/17/17

Benzene	0.0880	0.0010	mg/Kg wet	0.100		88.0	70-130			
Butylcyclohexane	0.0841	0.0010	mg/Kg wet	0.100		84.1	70-130			
Decane	0.0918	0.0010	mg/Kg wet	0.100		91.8	70-130			
Ethylbenzene	0.0886	0.0010	mg/Kg wet	0.100		88.6	70-130			
Methyl tert-Butyl Ether (MTBE)	0.100	0.0010	mg/Kg wet	0.100		100	70-130			
2-Methylpentane	0.0936	0.0010	mg/Kg wet	0.100		93.6	70-130			
Naphthalene	0.0902	0.010	mg/Kg wet	0.100		90.2	70-130			
Nonane	0.0864	0.0010	mg/Kg wet	0.100		86.4	30-130			
Pentane	0.0916	0.0010	mg/Kg wet	0.100		91.6	70-130			
Toluene	0.0894	0.0010	mg/Kg wet	0.100		89.4	70-130			
1,2,4-Trimethylbenzene	0.0885	0.0010	mg/Kg wet	0.100		88.5	70-130			
2,2,4-Trimethylpentane	0.0920	0.0010	mg/Kg wet	0.100		92.0	70-130			
m+p Xylene	0.177	0.0020	mg/Kg wet	0.200		88.6	70-130			
o-Xylene	0.0890	0.0010	mg/Kg wet	0.100		89.0	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	0.0409		mg/Kg wet	0.0400		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0340		mg/Kg wet	0.0400		85.0	70-130			

LCS Dup (B184324-BSD1)

Prepared & Analyzed: 08/17/17

Benzene	0.0883	0.0010	mg/Kg wet	0.100		88.3	70-130	0.313	25	
Butylcyclohexane	0.0849	0.0010	mg/Kg wet	0.100		84.9	70-130	1.00	25	
Decane	0.0915	0.0010	mg/Kg wet	0.100		91.5	70-130	0.331	25	
Ethylbenzene	0.0885	0.0010	mg/Kg wet	0.100		88.5	70-130	0.141	25	
Methyl tert-Butyl Ether (MTBE)	0.102	0.0010	mg/Kg wet	0.100		102	70-130	1.31	25	
2-Methylpentane	0.0893	0.0010	mg/Kg wet	0.100		89.3	70-130	4.69	25	
Naphthalene	0.0919	0.010	mg/Kg wet	0.100		91.9	70-130	1.91	25	
Nonane	0.0859	0.0010	mg/Kg wet	0.100		85.9	30-130	0.516	25	
Pentane	0.0884	0.0010	mg/Kg wet	0.100		88.4	70-130	3.62	25	
Toluene	0.0895	0.0010	mg/Kg wet	0.100		89.5	70-130	0.120	25	
1,2,4-Trimethylbenzene	0.0890	0.0010	mg/Kg wet	0.100		89.0	70-130	0.512	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B184324 - MA VPH

LCS Dup (B184324-BSD1)

Prepared & Analyzed: 08/17/17

2,2,4-Trimethylpentane	0.0898	0.0010	mg/Kg wet	0.100		89.8	70-130	2.35	25	
m+p Xylene	0.178	0.0020	mg/Kg wet	0.200		88.9	70-130	0.346	25	
o-Xylene	0.0896	0.0010	mg/Kg wet	0.100		89.6	70-130	0.661	25	
Surrogate: 2,5-Dibromotoluene (FID)	0.0407		mg/Kg wet	0.0400		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	0.0350		mg/Kg wet	0.0400		87.5	70-130			

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FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
 - L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - O-02 Soil/methanol ratio does not meet method specifications. Insufficient amount of soil. Data validation is not affected since a sufficient amount of preservative is present. Detection limits may be above useful levels.
 - V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-16 Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC,ME
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
MADEP-VPH-04-1.1 in Soil	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
SW-846 8260B in Soil	
Acetone	NC
Acrylonitrile	NC
tert-Amyl Methyl Ether (TAME)	NC
Benzene	NC
Bromobenzene	NC
Bromochloromethane	NC
Bromodichloromethane	NC
Bromoform	NC
Bromomethane	NC
2-Butanone (MEK)	NC
tert-Butyl Alcohol (TBA)	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260B in Soil</i>	
n-Butylbenzene	NC
sec-Butylbenzene	NC
tert-Butylbenzene	NC
tert-Butyl Ethyl Ether (TBEE)	NC
Carbon Disulfide	NC
Carbon Tetrachloride	NC
Chlorobenzene	NC
Chlorodibromomethane	NC
Chloroethane	NC
Chloroform	NC
Chloromethane	NC
2-Chlorotoluene	NC
4-Chlorotoluene	NC
1,2-Dibromo-3-chloropropane (DBCP)	NC
1,2-Dibromoethane (EDB)	NC
Dibromomethane	NC
1,2-Dichlorobenzene	NC
1,3-Dichlorobenzene	NC
1,4-Dichlorobenzene	NC
trans-1,4-Dichloro-2-butene	NC
Dichlorodifluoromethane (Freon 12)	NC
1,1-Dichloroethane	NC
1,2-Dichloroethane	NC
1,1-Dichloroethylene	NC
cis-1,2-Dichloroethylene	NC
trans-1,2-Dichloroethylene	NC
1,2-Dichloropropane	NC
1,3-Dichloropropane	NC
2,2-Dichloropropane	NC
1,1-Dichloropropene	NC
cis-1,3-Dichloropropene	NC
trans-1,3-Dichloropropene	NC
Diethyl Ether	NC
Diisopropyl Ether (DIPE)	NC
1,4-Dioxane	NC
Ethylbenzene	NC
Hexachlorobutadiene	NC
2-Hexanone (MBK)	NC
Isopropylbenzene (Cumene)	NC
p-Isopropyltoluene (p-Cymene)	NC
Methyl tert-Butyl Ether (MTBE)	NC
Methylene Chloride	NC
4-Methyl-2-pentanone (MIBK)	NC
Naphthalene	NC
n-Propylbenzene	NC
Styrene	NC
1,1,1,2-Tetrachloroethane	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260B in Soil	
1,1,2,2-Tetrachloroethane	NC
Tetrachloroethylene	NC
Tetrahydrofuran	NC
Toluene	NC
1,2,3-Trichlorobenzene	NC
1,2,4-Trichlorobenzene	NC
1,3,5-Trichlorobenzene	NC
1,1,1-Trichloroethane	NC
1,1,2-Trichloroethane	NC
Trichloroethylene	NC
Trichlorofluoromethane (Freon 11)	NC
1,2,3-Trichloropropane	NC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC
1,2,4-Trimethylbenzene	NC
1,3,5-Trimethylbenzene	NC
Vinyl Chloride	NC
m+p Xylene	NC
o-Xylene	NC
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodiphenylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Soil</i>	

2-Fluorophenol NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018



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810700411033

Ship date:

Tue 8/15/2017

Actual delivery:

Wed 8/16/2017 9:29 am

RAL US



Delivered

Signed for by: P.BLAKE

MA US

Travel History

Date/Time	Activity	Location
8/16/2017 - Wednesday		
9:29 am	Delivered	MA
7:48 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
7:41 am	At local FedEx facility	WINDSOR LOCKS, CT
6:09 am	At destination sort facility	EAST GRANBY, CT
4:30 am	Departed FedEx location	INDIANAPOLIS, IN
8/15/2017 - Tuesday		
11:36 pm	Arrived at FedEx location	INDIANAPOLIS, IN
7:59 pm	Left FedEx origin facility	WILMINGTON, NC
5:50 pm	Picked up	WILMINGTON, NC

Shipment Facts

Tracking number	810700411033	Service	FedEx Priority Overnight
Dimensions	24x14x14 in.	Delivered To	Shipping/Receiving
Total pieces	1	Terms	Third Party
Shipper reference	PANTRY 3125 3075	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	Standard transit	8/16/2017 by 10:30 am



Search or tracking number

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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client ATC Assoc.
 Received By WCG Date 8/16/17 Time 9:29
 How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
 Direct from Sampling _____ Ambient _____ Melted Ice _____
 Were samples within Temperature? 2-6°C T By Gun # 7 Actual Temp - 3.8°C
 By Blank # _____ Actual Temp - _____
 Was Custody Seal Intact? N/A Were Samples Tampered with? F
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified? _____
 Are there Rushes? F Who was notified? _____
 Are there Short Holds? F Who was notified? _____
 Is there enough Volume? T
 Is there Headspace where applicable? T MS/MSD? N/A
 Proper Media/Containers Used? T Is splitting samples required? N/A
 Were trip blanks received? N/A On COC? N/A
 Do all samples have the proper pH? Acid N/A Base N/A

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb /Clear
Meoh-	<u>2</u>	250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-	<u>2</u>	Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments:

September 26, 2017

Maureen Jackson
ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604

Project Location: Jacksonville, NC
Client Job Number:
Project Number: Pantry 3125
Laboratory Work Order Number: 17I0800

Enclosed are results of analyses for samples received by the laboratory on September 18, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604
ATTN: Maureen Jackson

REPORT DATE: 9/26/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: Pantry 3125

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 1710800

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Jacksonville, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-2	1710800-01	Ground Water		EPA 602 EPA 625 MADEP-EPH-04-1.1 MADEP-VPH-04-1.1	

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EXECUTIVE SUMMARY

Client ID: **MW-2**

Lab ID: **17I0800-01**

No Results Detected

Con-Test does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA VPH, only hydrocarbon ranges were requested and reported.

For method MA EPH, only hydrocarbon ranges were requested and reported.

Qualifications:**L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2-Chloronaphthalene**

1710800-01[MW-2], B186688-BLK1, B186688-BS1, B186688-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**Fluorene**

B186688-BSD1

Pyrene

B186688-BSD1

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:**2,4,6-Tribromophenol**

1710800-01[MW-2]

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**4,6-Dinitro-2-methylphenol**

B186688-BLK1, B186688-BS1, B186688-BSD1

Benzidine

B186688-BLK1, B186688-BS1, B186688-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

1710800-01[MW-2]

Benzidine

1710800-01[MW-2]

Hexachlorocyclopentadiene

1710800-01[MW-2]

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B186688-BLK1, B186688-BS1, B186688-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**1,2,4-Trichlorobenzene**

1710800-01[MW-2]

2,4-Dinitrophenol

B186688-BLK1, B186688-BS1, B186688-BSD1

4,6-Dinitro-2-methylphenol

B186688-BLK1, B186688-BS1, B186688-BSD1

4-Nitrophenol

1710800-01[MW-2]

Hexachlorobutadiene

1710800-01[MW-2]

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Tod Kopycinski". The signature is written in a cursive, somewhat stylized script.

Tod E. Kopycinski
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	1.0	0.31	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
Chlorobenzene	ND	1.0	0.25	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
1,2-Dichlorobenzene	ND	1.0	0.24	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
1,3-Dichlorobenzene	ND	1.0	0.34	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
1,4-Dichlorobenzene	ND	1.0	0.37	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
Ethylbenzene	ND	1.0	0.28	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.18	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
Toluene	ND	1.0	0.27	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
m+p Xylene	ND	2.0	0.52	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
o-Xylene	ND	1.0	0.39	µg/L	1		EPA 602	9/21/17	9/21/17 23:43	EEH
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
1-Chloro-3-fluorobenzene		94.7	81.1-133						9/21/17 23:43	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	4.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Acenaphthylene	ND	5.0	4.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Anthracene	ND	5.0	5.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Benzidine	ND	20	9.4	µg/L	1	V-05	EPA 625	9/20/17	9/25/17 20:44	BGL
Benzo(a)anthracene	ND	5.0	1.8	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Benzo(a)pyrene	ND	5.0	4.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Benzo(b)fluoranthene	ND	5.0	5.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Benzo(g,h,i)perylene	ND	5.0	4.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Benzo(k)fluoranthene	ND	5.0	2.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
4-Bromophenylphenylether	ND	10	2.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Butylbenzylphthalate	ND	10	3.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
4-Chloro-3-methylphenol	ND	10	4.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Bis(2-chloroethoxy)methane	ND	10	4.8	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Bis(2-chloroethyl)ether	ND	10	4.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Bis(2-chloroisopropyl)ether	ND	10	3.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2-Chloronaphthalene	ND	10	2.9	µg/L	1	L-04	EPA 625	9/20/17	9/25/17 20:44	BGL
2-Chlorophenol	ND	10	1.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
4-Chlorophenylphenylether	ND	10	4.7	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Chrysene	ND	5.0	2.5	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Dibenz(a,h)anthracene	ND	5.0	4.1	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Di-n-butylphthalate	ND	10	4.7	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
1,3-Dichlorobenzene	ND	5.0	1.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
1,4-Dichlorobenzene	ND	5.0	1.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
1,2-Dichlorobenzene	ND	5.0	1.5	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
3,3-Dichlorobenzidine	ND	10	2.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2,4-Dichlorophenol	ND	10	4.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Diethylphthalate	ND	10	4.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2,4-Dimethylphenol	ND	10	2.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Dimethylphthalate	ND	10	4.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
4,6-Dinitro-2-methylphenol	ND	10	5.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2,4-Dinitrophenol	ND	10	6.7	µg/L	1	V-05	EPA 625	9/20/17	9/25/17 20:44	BGL
2,4-Dinitrotoluene	ND	10	5.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2,6-Dinitrotoluene	ND	10	4.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Di-n-octylphthalate	ND	10	4.3	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	2.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	4.7	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Fluoranthene	ND	5.0	4.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Fluorene	ND	5.0	4.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Hexachlorobenzene	ND	10	4.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Hexachlorobutadiene	ND	10	1.8	µg/L	1	V-20	EPA 625	9/20/17	9/25/17 20:44	BGL
Hexachlorocyclopentadiene	ND	10	6.0	µg/L	1	V-05	EPA 625	9/20/17	9/25/17 20:44	BGL
Hexachloroethane	ND	10	1.5	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Indeno(1,2,3-cd)pyrene	ND	5.0	4.2	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Isophorone	ND	10	1.8	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	ND	5.0	1.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Nitrobenzene	ND	10	4.3	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2-Nitrophenol	ND	10	2.0	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
4-Nitrophenol	ND	10	2.3	µg/L	1	V-20	EPA 625	9/20/17	9/25/17 20:44	BGL
N-Nitrosodimethylamine	ND	10	1.3	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
N-Nitrosodiphenylamine	ND	10	1.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
N-Nitrosodi-n-propylamine	ND	10	4.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Pentachlorophenol	ND	10	3.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2-Methylnaphthalene	ND	5.0	1.4	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Phenanthrene	ND	5.0	2.9	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
2-Methylphenol	ND	10	2.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Phenol	ND	10	2.5	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
3/4-Methylphenol	ND	10	4.1	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
Pyrene	ND	5.0	2.6	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL
1,2,4-Trichlorobenzene	ND	5.0	1.7	µg/L	1	V-20	EPA 625	9/20/17	9/25/17 20:44	BGL
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1		EPA 625	9/20/17	9/25/17 20:44	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	46.4	15-110	
Phenol-d6	31.6	15-110	
Nitrobenzene-d5	70.7	30-130	
2-Fluorobiphenyl	78.9	30-130	
2,4,6-Tribromophenol	111	* 15-110	S-07
p-Terphenyl-d14	89.5	30-130	

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			EPA 625	9/20/17	9/25/17 20:44	BGL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	9/21/17	9/23/17 2:24	PJG
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	9/21/17	9/23/17 2:24	PJG
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	9/21/17	9/23/17 2:24	PJG
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	9/21/17	9/23/17 2:24	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	48.5		40-140					9/23/17 2:24	
o-Terphenyl (OTP)	78.0		40-140					9/23/17 2:24	
2-Bromonaphthalene	78.8		40-140					9/23/17 2:24	
2-Fluorobiphenyl	94.0		40-140					9/23/17 2:24	

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Project Location: Jacksonville, NC

Sample Description:

Work Order: 1710800

Date Received: 9/18/2017

Field Sample #: MW-2

Sampled: 9/15/2017 10:50

Sample ID: 1710800-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	9/21/17	9/21/17 20:20	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	9/21/17	9/21/17 20:20	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	9/21/17	9/21/17 20:20	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	9/21/17	9/21/17 20:20	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	9/21/17	9/21/17 20:20	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,5-Dibromotoluene (FID)	91.7		70-130				9/21/17 20:20		
2,5-Dibromotoluene (PID)	102		70-130				9/21/17 20:20		

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Sample Extraction Data**Prep Method: EPA 602-EPA 602**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17I0800-01 [MW-2]	B186772	5	5.00	09/21/17

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17I0800-01 [MW-2]	B186688	1000	1.00	09/20/17

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17I0800-01 [MW-2]	B186803	1000	2.00	09/21/17

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17I0800-01 [MW-2]	B186735	5	5.00	09/21/17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B186772 - EPA 602										
Blank (B186772-BLK1)										
Prepared & Analyzed: 09/21/17										
Benzene	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1-Chloro-3-fluorobenzene	14.7		µg/L	15.0		98.1	81.1-133			
LCS (B186772-BS1)										
Prepared & Analyzed: 09/21/17										
Benzene	20.8	1.0	µg/L	20.0		104	80.1-119			
Chlorobenzene	21.1	1.0	µg/L	20.0		106	82.5-112			
1,2-Dichlorobenzene	21.2	1.0	µg/L	20.0		106	83.9-116			
1,3-Dichlorobenzene	21.7	1.0	µg/L	20.0		109	84.5-112			
1,4-Dichlorobenzene	21.3	1.0	µg/L	20.0		106	84.4-114			
Ethylbenzene	21.7	1.0	µg/L	20.0		109	85.6-115			
Methyl tert-Butyl Ether (MTBE)	20.6	1.0	µg/L	20.0		103	78.1-123			
Toluene	21.2	1.0	µg/L	20.0		106	84.4-112			
m+p Xylene	42.1	2.0	µg/L	40.0		105	85-114			
o-Xylene	21.2	1.0	µg/L	20.0		106	78.5-110			
Surrogate: 1-Chloro-3-fluorobenzene	14.1		µg/L	15.0		93.9	81.1-133			
LCS Dup (B186772-BSD1)										
Prepared & Analyzed: 09/21/17										
Benzene	20.7	1.0	µg/L	20.0		104	80.1-119	0.453	10	
Chlorobenzene	21.4	1.0	µg/L	20.0		107	82.5-112	1.06	10	
1,2-Dichlorobenzene	20.9	1.0	µg/L	20.0		104	83.9-116	1.72	10	
1,3-Dichlorobenzene	21.1	1.0	µg/L	20.0		106	84.5-112	2.88	10	
1,4-Dichlorobenzene	21.2	1.0	µg/L	20.0		106	84.4-114	0.297	10	
Ethylbenzene	20.9	1.0	µg/L	20.0		104	85.6-115	3.97	10	
Methyl tert-Butyl Ether (MTBE)	20.4	1.0	µg/L	20.0		102	78.1-123	0.590	10	
Toluene	20.9	1.0	µg/L	20.0		105	84.4-112	1.16	10	
m+p Xylene	41.2	2.0	µg/L	40.0		103	85-114	2.09	10	
o-Xylene	20.7	1.0	µg/L	20.0		104	78.5-110	2.03	10	
Surrogate: 1-Chloro-3-fluorobenzene	15.5		µg/L	15.0		103	81.1-133			

QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186688 - SW-846 3510C

Blank (B186688-BLK1)

Prepared: 09/20/17 Analyzed: 09/22/17

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							V-04
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							L-04
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							V-04, V-20
2,4-Dinitrophenol	ND	10	µg/L							V-19, V-20
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B186688 - SW-846 3510C										
Blank (B186688-BLK1)										
Prepared: 09/20/17 Analyzed: 09/22/17										
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	84.2		µg/L	200		42.1	15-110			
Surrogate: Phenol-d6	63.2		µg/L	200		31.6	15-110			
Surrogate: Nitrobenzene-d5	71.3		µg/L	100		71.3	30-130			
Surrogate: 2-Fluorobiphenyl	66.6		µg/L	100		66.6	30-130			
Surrogate: 2,4,6-Tribromophenol	132		µg/L	200		65.9	15-110			
Surrogate: p-Terphenyl-d14	83.0		µg/L	100		83.0	30-130			
LCS (B186688-BS1)										
Prepared: 09/20/17 Analyzed: 09/22/17										
Acenaphthene	62.4	5.0	µg/L	100		62.4	47-145			
Acenaphthylene	58.9	5.0	µg/L	100		58.9	33-145			
Anthracene	62.1	5.0	µg/L	100		62.1	27-133			
Benzidine	69.8	20	µg/L	100		69.8	40-140			V-04
Benzo(a)anthracene	63.5	5.0	µg/L	100		63.5	33-143			
Benzo(a)pyrene	66.1	5.0	µg/L	100		66.1	17-163			
Benzo(b)fluoranthene	63.8	5.0	µg/L	100		63.8	24-159			
Benzo(g,h,i)perylene	57.6	5.0	µg/L	100		57.6	1-219			
Benzo(k)fluoranthene	60.3	5.0	µg/L	100		60.3	11-162			
4-Bromophenylphenylether	64.8	10	µg/L	100		64.8	53-127			
Butylbenzylphthalate	76.6	10	µg/L	100		76.6	1-152			
4-Chloro-3-methylphenol	70.2	10	µg/L	100		70.2	22-147			
Bis(2-chloroethoxy)methane	78.7	10	µg/L	100		78.7	33-184			
Bis(2-chloroethyl)ether	78.7	10	µg/L	100		78.7	12-158			
Bis(2-chloroisopropyl)ether	85.3	10	µg/L	100		85.3	36-166			
2-Chloronaphthalene	57.4	10	µg/L	100		57.4 *	60-118			L-04
2-Chlorophenol	69.6	10	µg/L	100		69.6	23-134			
4-Chlorophenylphenylether	63.9	10	µg/L	100		63.9	25-158			
Chrysene	61.0	5.0	µg/L	100		61.0	17-168			
Dibenz(a,h)anthracene	64.2	5.0	µg/L	100		64.2	1-227			
Di-n-butylphthalate	70.6	10	µg/L	100		70.6	1-118			
1,3-Dichlorobenzene	66.3	5.0	µg/L	100		66.3	1-172			
1,4-Dichlorobenzene	67.3	5.0	µg/L	100		67.3	20-124			
1,2-Dichlorobenzene	67.9	5.0	µg/L	100		67.9	32-129			
3,3-Dichlorobenzidine	75.8	10	µg/L	100		75.8	1-262			
2,4-Dichlorophenol	68.6	10	µg/L	100		68.6	39-135			
Diethylphthalate	64.6	10	µg/L	100		64.6	1-114			
2,4-Dimethylphenol	65.4	10	µg/L	100		65.4	32-119			
Dimethylphthalate	65.1	10	µg/L	100		65.1	1-112			
4,6-Dinitro-2-methylphenol	86.3	10	µg/L	100		86.3	1-181			V-04, V-20
2,4-Dinitrophenol	84.8	10	µg/L	100		84.8	1-191			V-19, V-20
2,4-Dinitrotoluene	77.4	10	µg/L	100		77.4	39-139			
2,6-Dinitrotoluene	81.1	10	µg/L	100		81.1	50-158			
Di-n-octylphthalate	81.4	10	µg/L	100		81.4	4-146			
1,2-Diphenylhydrazine (as Azobenzene)	74.6	10	µg/L	100		74.6	40-140			
Bis(2-Ethylhexyl)phthalate	75.1	10	µg/L	100		75.1	8-158			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186688 - SW-846 3510C

LCS (B186688-BS1)

Prepared: 09/20/17 Analyzed: 09/22/17

Fluoranthene	63.9	5.0	µg/L	100		63.9	26-137			
Fluorene	60.5	5.0	µg/L	100		60.5	59-121			
Hexachlorobenzene	63.6	10	µg/L	100		63.6	1-152			
Hexachlorobutadiene	58.7	10	µg/L	100		58.7	24-116			
Hexachlorocyclopentadiene	63.2	10	µg/L	100		63.2	40-140			
Hexachloroethane	69.6	10	µg/L	100		69.6	40-113			
Indeno(1,2,3-cd)pyrene	65.6	5.0	µg/L	100		65.6	1-171			
Isophorone	77.5	10	µg/L	100		77.5	21-196			
Naphthalene	61.1	5.0	µg/L	100		61.1	21-133			
Nitrobenzene	71.1	10	µg/L	100		71.1	35-180			
2-Nitrophenol	74.9	10	µg/L	100		74.9	29-182			
4-Nitrophenol	36.6	10	µg/L	100		36.6	1-132			
N-Nitrosodimethylamine	44.4	10	µg/L	100		44.4	40-140			
N-Nitrosodiphenylamine	82.3	10	µg/L	100		82.3	40-140			
N-Nitrosodi-n-propylamine	76.4	10	µg/L	100		76.4	1-230			
Pentachlorophenol	71.2	10	µg/L	100		71.2	14-176			
2-Methylnaphthalene	65.2	5.0	µg/L	100		65.2	40-140			
Phenanthrene	61.9	5.0	µg/L	100		61.9	54-120			
2-Methylphenol	67.0	10	µg/L	100		67.0	30-130			
Phenol	34.1	10	µg/L	100		34.1	5-112			
3/4-Methylphenol	63.1	10	µg/L	100		63.1	30-130			
Pyrene	64.6	5.0	µg/L	100		64.6	52-115			
1,2,4-Trichlorobenzene	64.2	5.0	µg/L	100		64.2	44-142			
2,4,6-Trichlorophenol	67.6	10	µg/L	100		67.6	37-144			
Surrogate: 2-Fluorophenol	101		µg/L	200		50.4	15-110			
Surrogate: Phenol-d6	71.3		µg/L	200		35.6	15-110			
Surrogate: Nitrobenzene-d5	78.3		µg/L	100		78.3	30-130			
Surrogate: 2-Fluorobiphenyl	69.2		µg/L	100		69.2	30-130			
Surrogate: 2,4,6-Tribromophenol	142		µg/L	200		70.8	15-110			
Surrogate: p-Terphenyl-d14	73.9		µg/L	100		73.9	30-130			

LCS Dup (B186688-BSD1)

Prepared: 09/20/17 Analyzed: 09/22/17

Acenaphthene	56.3	5.0	µg/L	100		56.3	47-145	10.2		
Acenaphthylene	53.7	5.0	µg/L	100		53.7	33-145	9.32		
Anthracene	55.8	5.0	µg/L	100		55.8	27-133	10.7		
Benzidine	56.0	20	µg/L	100		56.0	40-140	21.9		V-04
Benzo(a)anthracene	56.7	5.0	µg/L	100		56.7	33-143	11.3		
Benzo(a)pyrene	59.2	5.0	µg/L	100		59.2	17-163	11.1		
Benzo(b)fluoranthene	56.3	5.0	µg/L	100		56.3	24-159	12.4		
Benzo(g,h,i)perylene	51.1	5.0	µg/L	100		51.1	1-219	12.0		
Benzo(k)fluoranthene	54.0	5.0	µg/L	100		54.0	11-162	11.0		
4-Bromophenylphenylether	55.2	10	µg/L	100		55.2	53-127	15.9		
Butylbenzylphthalate	62.5	10	µg/L	100		62.5	1-152	20.2		
4-Chloro-3-methylphenol	61.3	10	µg/L	100		61.3	22-147	13.4		
Bis(2-chloroethoxy)methane	67.2	10	µg/L	100		67.2	33-184	15.9		
Bis(2-chloroethyl)ether	64.7	10	µg/L	100		64.7	12-158	19.4		
Bis(2-chloroisopropyl)ether	69.8	10	µg/L	100		69.8	36-166	20.0		
2-Chloronaphthalene	53.0	10	µg/L	100		53.0 *	60-118	8.10		L-04
2-Chlorophenol	59.0	10	µg/L	100		59.0	23-134	16.6		
4-Chlorophenylphenylether	56.1	10	µg/L	100		56.1	25-158	12.9		
Chrysene	54.7	5.0	µg/L	100		54.7	17-168	10.9		
Dibenz(a,h)anthracene	55.4	5.0	µg/L	100		55.4	1-227	14.9		

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B186688 - SW-846 3510C										
LCS Dup (B186688-BSD1)										
					Prepared: 09/20/17 Analyzed: 09/22/17					
Di-n-butylphthalate	59.8	10	µg/L	100		59.8	1-118	16.5		
1,3-Dichlorobenzene	56.8	5.0	µg/L	100		56.8	1-172	15.3		
1,4-Dichlorobenzene	56.7	5.0	µg/L	100		56.7	20-124	17.0		
1,2-Dichlorobenzene	57.6	5.0	µg/L	100		57.6	32-129	16.4		
3,3-Dichlorobenzidine	67.9	10	µg/L	100		67.9	1-262	11.0		
2,4-Dichlorophenol	59.2	10	µg/L	100		59.2	39-135	14.7		
Diethylphthalate	56.0	10	µg/L	100		56.0	1-114	14.3		
2,4-Dimethylphenol	57.7	10	µg/L	100		57.7	32-119	12.6		
Dimethylphthalate	58.6	10	µg/L	100		58.6	1-112	10.6		
4,6-Dinitro-2-methylphenol	74.7	10	µg/L	100		74.7	1-181	14.5		V-04, V-20
2,4-Dinitrophenol	81.4	10	µg/L	100		81.4	1-191	4.20		V-19, V-20
2,4-Dinitrotoluene	69.4	10	µg/L	100		69.4	39-139	10.8		
2,6-Dinitrotoluene	72.8	10	µg/L	100		72.8	50-158	10.8		
Di-n-octylphthalate	67.5	10	µg/L	100		67.5	4-146	18.7		
1,2-Diphenylhydrazine (as Azobenzene)	64.8	10	µg/L	100		64.8	40-140	14.2		
Bis(2-Ethylhexyl)phthalate	59.3	10	µg/L	100		59.3	8-158	23.4		
Fluoranthene	60.1	5.0	µg/L	100		60.1	26-137	6.09		
Fluorene	54.9	5.0	µg/L	100		54.9 *	59-121	9.60		L-07
Hexachlorobenzene	55.5	10	µg/L	100		55.5	1-152	13.5		
Hexachlorobutadiene	50.3	10	µg/L	100		50.3	24-116	15.5		
Hexachlorocyclopentadiene	53.9	10	µg/L	100		53.9	40-140	15.7		
Hexachloroethane	58.8	10	µg/L	100		58.8	40-113	16.9		
Indeno(1,2,3-cd)pyrene	58.2	5.0	µg/L	100		58.2	1-171	12.0		
Isophorone	66.8	10	µg/L	100		66.8	21-196	14.8		
Naphthalene	53.7	5.0	µg/L	100		53.7	21-133	12.8		
Nitrobenzene	62.7	10	µg/L	100		62.7	35-180	12.5		
2-Nitrophenol	66.7	10	µg/L	100		66.7	29-182	11.6		
4-Nitrophenol	35.0	10	µg/L	100		35.0	1-132	4.52		
N-Nitrosodimethylamine	40.8	10	µg/L	100		40.8	40-140	8.33		
N-Nitrosodiphenylamine	71.9	10	µg/L	100		71.9	40-140	13.6		
N-Nitrosodi-n-propylamine	62.0	10	µg/L	100		62.0	1-230	20.8		
Pentachlorophenol	61.2	10	µg/L	100		61.2	14-176	15.0		
2-Methylnaphthalene	56.8	5.0	µg/L	100		56.8	40-140	13.8	20	
Phenanthrene	56.1	5.0	µg/L	100		56.1	54-120	9.79		
2-Methylphenol	56.4	10	µg/L	100		56.4	30-130	17.2	20	
Phenol	28.8	10	µg/L	100		28.8	5-112	16.9		
3/4-Methylphenol	52.6	10	µg/L	100		52.6	30-130	18.2	20	
Pyrene	51.8	5.0	µg/L	100		51.8 *	52-115	22.0		L-07
1,2,4-Trichlorobenzene	56.0	5.0	µg/L	100		56.0	44-142	13.7		
2,4,6-Trichlorophenol	60.5	10	µg/L	100		60.5	37-144	11.1		
Surrogate: 2-Fluorophenol	86.4		µg/L	200		43.2	15-110			
Surrogate: Phenol-d6	60.6		µg/L	200		30.3	15-110			
Surrogate: Nitrobenzene-d5	67.7		µg/L	100		67.7	30-130			
Surrogate: 2-Fluorobiphenyl	61.4		µg/L	100		61.4	30-130			
Surrogate: 2,4,6-Tribromophenol	125		µg/L	200		62.5	15-110			
Surrogate: p-Terphenyl-d14	56.3		µg/L	100		56.3	30-130			

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QUALITY CONTROL

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186688 - SW-846 3510C

Blank (B186688-BLK1)

Prepared: 09/20/17 Analyzed: 09/22/17

No TICs Found	0.0		µg/L							
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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186803 - SW-846 3510C

Blank (B186803-BLK1)

Prepared: 09/21/17 Analyzed: 09/22/17

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	71.7		µg/L	99.8		71.8	40-140			
Surrogate: o-Terphenyl (OTP)	78.5		µg/L	100		78.5	40-140			
Surrogate: 2-Bromonaphthalene	78.7		µg/L	100		78.7	40-140			
Surrogate: 2-Fluorobiphenyl	88.2		µg/L	100		88.2	40-140			

LCS (B186803-BS1)

Prepared: 09/21/17 Analyzed: 09/25/17

C9-C18 Aliphatics	437	100	µg/L	600		72.8	40-140			
C19-C36 Aliphatics	746	100	µg/L	800		93.2	40-140			
Acenaphthene	68.1	2.0	µg/L	100		68.1	40-140			
Acenaphthylene	64.6	2.0	µg/L	100		64.6	40-140			
Anthracene	70.4	2.0	µg/L	100		70.4	40-140			
Benzo(a)anthracene	71.8	2.0	µg/L	100		71.8	40-140			
Benzo(a)pyrene	70.9	2.0	µg/L	100		70.9	40-140			
Benzo(b)fluoranthene	72.9	2.0	µg/L	100		72.9	40-140			
Benzo(g,h,i)perylene	72.8	2.0	µg/L	100		72.8	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186803 - SW-846 3510C

LCS (B186803-BS1)

Prepared: 09/21/17 Analyzed: 09/25/17

Benzo(k)fluoranthene	67.5	2.0	µg/L	100		67.5	40-140			
Chrysene	68.5	2.0	µg/L	100		68.5	40-140			
Dibenz(a,h)anthracene	75.1	2.0	µg/L	100		75.1	40-140			
Fluoranthene	70.8	2.0	µg/L	100		70.8	40-140			
Fluorene	70.3	2.0	µg/L	100		70.3	40-140			
Indeno(1,2,3-cd)pyrene	72.1	2.0	µg/L	100		72.1	40-140			
2-Methylnaphthalene	64.2	2.0	µg/L	100		64.2	40-140			
Naphthalene	56.2	2.0	µg/L	100		56.2	40-140			
Phenanthrene	72.0	2.0	µg/L	100		72.0	40-140			
Pyrene	71.7	2.0	µg/L	100		71.7	40-140			
n-Decane	47.8	2.0	µg/L	100		47.8	40-140			
n-Docosane	74.6	2.0	µg/L	100		74.6	40-140			
n-Dodecane	56.3	2.0	µg/L	100		56.3	40-140			
n-Eicosane	74.7	2.0	µg/L	100		74.7	40-140			
n-Hexacosane	75.3	2.0	µg/L	100		75.3	40-140			
n-Hexadecane	71.5	2.0	µg/L	100		71.5	40-140			
n-Hexatriacontane	80.3	2.0	µg/L	100		80.3	40-140			
n-Nonadecane	72.2	2.0	µg/L	100		72.2	40-140			
n-Nonane	38.4	2.0	µg/L	100		38.4	30-140			
n-Octacosane	75.1	2.0	µg/L	100		75.1	40-140			
n-Octadecane	74.4	2.0	µg/L	100		74.4	40-140			
n-Tetracosane	75.3	2.0	µg/L	100		75.3	40-140			
n-Tetradecane	66.7	2.0	µg/L	100		66.7	40-140			
n-Triacontane	77.1	2.0	µg/L	100		77.1	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	75.0		µg/L	99.8		75.2	40-140			
Surrogate: o-Terphenyl (OTP)	79.7		µg/L	100		79.7	40-140			
Surrogate: 2-Bromonaphthalene	83.5		µg/L	100		83.5	40-140			
Surrogate: 2-Fluorobiphenyl	89.8		µg/L	100		89.8	40-140			

LCS Dup (B186803-BSD1)

Prepared: 09/21/17 Analyzed: 09/25/17

C9-C18 Aliphatics	503	100	µg/L	600		83.8	40-140	14.0	25	
C19-C36 Aliphatics	916	100	µg/L	800		115	40-140	20.5	25	
Acenaphthene	76.8	2.0	µg/L	100		76.8	40-140	12.0	25	
Acenaphthylene	73.1	2.0	µg/L	100		73.1	40-140	12.4	25	
Anthracene	78.1	2.0	µg/L	100		78.1	40-140	10.4	25	
Benzo(a)anthracene	79.9	2.0	µg/L	100		79.9	40-140	10.7	25	
Benzo(a)pyrene	79.2	2.0	µg/L	100		79.2	40-140	11.1	25	
Benzo(b)fluoranthene	81.6	2.0	µg/L	100		81.6	40-140	11.2	25	
Benzo(g,h,i)perylene	81.8	2.0	µg/L	100		81.8	40-140	11.6	25	
Benzo(k)fluoranthene	75.5	2.0	µg/L	100		75.5	40-140	11.2	25	
Chrysene	76.2	2.0	µg/L	100		76.2	40-140	10.6	25	
Dibenz(a,h)anthracene	84.7	2.0	µg/L	100		84.7	40-140	12.0	25	
Fluoranthene	78.4	2.0	µg/L	100		78.4	40-140	10.2	25	
Fluorene	78.6	2.0	µg/L	100		78.6	40-140	11.0	25	
Indeno(1,2,3-cd)pyrene	81.4	2.0	µg/L	100		81.4	40-140	12.2	25	
2-Methylnaphthalene	73.4	2.0	µg/L	100		73.4	40-140	13.4	25	
Naphthalene	64.4	2.0	µg/L	100		64.4	40-140	13.6	25	
Phenanthrene	79.8	2.0	µg/L	100		79.8	40-140	10.2	25	
Pyrene	79.3	2.0	µg/L	100		79.3	40-140	10.1	25	
n-Decane	57.3	2.0	µg/L	100		57.3	40-140	18.1	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B186803 - SW-846 3510C										
LCS Dup (B186803-BSD1)										
					Prepared: 09/21/17 Analyzed: 09/25/17					
n-Docosane	89.9	2.0	µg/L	100		89.9	40-140	18.5	25	
n-Dodecane	67.0	2.0	µg/L	100		67.0	40-140	17.3	25	
n-Eicosane	88.9	2.0	µg/L	100		88.9	40-140	17.4	25	
n-Hexacosane	93.6	2.0	µg/L	100		93.6	40-140	21.7	25	
n-Hexadecane	84.5	2.0	µg/L	100		84.5	40-140	16.7	25	
n-Hexatriacontane	94.1	2.0	µg/L	100		94.1	40-140	15.9	25	
n-Nonadecane	85.6	2.0	µg/L	100		85.6	40-140	17.0	25	
n-Nonane	45.7	2.0	µg/L	100		45.7	30-140	17.5	25	
n-Octacosane	93.8	2.0	µg/L	100		93.8	40-140	22.1	25	
n-Octadecane	88.2	2.0	µg/L	100		88.2	40-140	16.9	25	
n-Tetracosane	92.2	2.0	µg/L	100		92.2	40-140	20.1	25	
n-Tetradecane	78.1	2.0	µg/L	100		78.1	40-140	15.8	25	
n-Triacontane	95.3	2.0	µg/L	100		95.3	40-140	21.1	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	85.1		µg/L	99.8		85.2	40-140			
Surrogate: o-Terphenyl (OTP)	82.2		µg/L	100		82.2	40-140			
Surrogate: 2-Bromonaphthalene	83.7		µg/L	100		83.7	40-140			
Surrogate: 2-Fluorobiphenyl	90.5		µg/L	100		90.5	40-140			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186735 - MA VPH

Blank (B186735-BLK1)

Prepared & Analyzed: 09/21/17

Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	34.2		µg/L	40.0		85.5	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.6		µg/L	40.0		96.4	70-130			

LCS (B186735-BS1)

Prepared & Analyzed: 09/21/17

Benzene	94.9	1.0	µg/L	100		94.9	70-130			
Butylcyclohexane	96.8	1.0	µg/L	100		96.8	70-130			
Decane	102	1.0	µg/L	100		102	70-130			
Ethylbenzene	91.9	1.0	µg/L	100		91.9	70-130			
Methyl tert-Butyl Ether (MTBE)	95.7	1.0	µg/L	100		95.7	70-130			
2-Methylpentane	103	1.0	µg/L	100		103	70-130			
Naphthalene	98.4	5.0	µg/L	100		98.4	70-130			
Nonane	98.9	1.0	µg/L	100		98.9	70-130			
Pentane	74.6	1.0	µg/L	100		74.6	70-130			
Toluene	88.9	1.0	µg/L	100		88.9	70-130			
1,2,4-Trimethylbenzene	110	1.0	µg/L	100		110	70-130			
2,2,4-Trimethylpentane	115	1.0	µg/L	100		115	70-130			
m+p Xylene	199	2.0	µg/L	200		99.4	70-130			
o-Xylene	101	1.0	µg/L	100		101	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	36.9		µg/L	40.0		92.1	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	41.3		µg/L	40.0		103	70-130			

LCS Dup (B186735-BS1)

Prepared & Analyzed: 09/21/17

Benzene	93.8	1.0	µg/L	100		93.8	70-130	1.12	25	
Butylcyclohexane	95.0	1.0	µg/L	100		95.0	70-130	1.95	25	
Decane	101	1.0	µg/L	100		101	70-130	0.775	25	
Ethylbenzene	91.6	1.0	µg/L	100		91.6	70-130	0.412	25	
Methyl tert-Butyl Ether (MTBE)	95.6	1.0	µg/L	100		95.6	70-130	0.0837	25	
2-Methylpentane	100	1.0	µg/L	100		100	70-130	2.59	25	
Naphthalene	98.1	5.0	µg/L	100		98.1	70-130	0.265	25	
Nonane	96.8	1.0	µg/L	100		96.8	70-130	2.20	25	
Pentane	71.7	1.0	µg/L	100		71.7	70-130	4.04	25	
Toluene	88.9	1.0	µg/L	100		88.9	70-130	0.0112	25	
1,2,4-Trimethylbenzene	110	1.0	µg/L	100		110	70-130	0.553	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B186735 - MA VPH

LCS Dup (B186735-BSD1)

Prepared & Analyzed: 09/21/17

2,2,4-Trimethylpentane	112	1.0	µg/L	100		112	70-130	2.35	25	
m+p Xylene	197	2.0	µg/L	200		98.6	70-130	0.822	25	
o-Xylene	100	1.0	µg/L	100		100	70-130	0.888	25	
Surrogate: 2,5-Dibromotoluene (FID)	37.5		µg/L	40.0		93.8	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	41.0		µg/L	40.0		103	70-130			

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - L-07 Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
 - S-07 One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
 - V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-19 Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.
 - V-20 Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 602 in Water	
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NC
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	MA,RI,NC
o-Xylene	MA,RI,NC
EPA 625 in Water	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC,ME
Naphthalene	CT,NC,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
MADEP-VPH-04-1.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018



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810700411066

Ship date:
Mon 9/18/2017

Actual delivery:
Tue 9/19/2017 9:10 am



Delivered

RAL US

MA US

Signed for by: P.BLAKE

Travel History

Date/Time	Activity	Location
9/19/2017 - Tuesday		
9:10 am	Delivered	MA
8:11 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
8:03 am	At local FedEx facility	WINDSOR LOCKS, CT
6:43 am	At destination sort facility	EAST GRANBY, CT
3:27 am	Departed FedEx location	MEMPHIS, TN
9/18/2017 - Monday		
8:04 pm	Left FedEx origin facility	WILMINGTON, NC
5:13 pm	Picked up	WILMINGTON, NC

Shipment Facts

Tracking number	810700411066	Service	FedEx Priority Overnight
Weight	26 lbs / 11.79 kgs	Dimensions	24x14x14 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	26 lbs / 11.79 kgs	Terms	Third Party
Shipper reference	PANTRY 3125	Packaging	Your Packaging
Special handling section	Deliver Weekday	Standard transit	9/19/2017 by 10:30 am



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Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client ATC Assoc.
 Received By WCG Date 9/19/17 Time 9:10
 How were the samples received? In Cooler T No Cooler On Ice T No Ice
 Direct from Sampling Ambient Melted Ice
 Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.6°C
 By Blank # Actual Temp -
 Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified?
 Are there Rushes? F Who was notified?
 Are there Short Holds? F Who was notified?
 Is there enough Volume? T
 Is there Headspace where applicable? T MS/MSD? N/A
 Proper Media/Containers Used? T Is splitting samples required? N/A
 Were trip blanks received? N/A On COC? N/A
 Do all samples have the proper pH? Acid T Base N/A

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	<u>4</u>	1 Liter Plastic		16 oz Amb.	
HCL-	<u>6</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

November 28, 2017

Maureen Jackson
ATC Group Services LLC - Raleigh NC
2725 East Millbrook Road, Ste 121
Raleigh, NC 27604

Project Location: Pantry 3125- Jacksonville, NC
Client Job Number:
Project Number: Pantry 3125
Laboratory Work Order Number: 17K1050

Enclosed are results of analyses for samples received by the laboratory on November 16, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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ATC Group Services LLC - Raleigh NC
 2725 East Millbrook Road, Ste 121
 Raleigh, NC 27604
 ATTN: Maureen Jackson

REPORT DATE: 11/28/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: Pantry 3125

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17K1050

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Pantry 3125- Jacksonville, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-3	17K1050-01	Ground Water		EPA 602 EPA 625 MADEP-EPH-04-1.1 MADEP-VPH-04-1.1	
MW-4	17K1050-02	Ground Water		EPA 602 EPA 625 MADEP-EPH-04-1.1 MADEP-VPH-04-1.1	

EXECUTIVE SUMMARY

Client ID: **MW-3**

Lab ID: **17K1050-01**

Analyte	Results/Qual	DL	RL	Units	Method
Benzene	1.1	0.31	1.0	µg/L	EPA 602
m+p Xylene	0.56 J	0.52	2.0	µg/L	EPA 602
Methyl tert-Butyl Ether (MTBE)	1.3	0.18	1.0	µg/L	EPA 602
Toluene	0.82 J	0.27	1.0	µg/L	EPA 602

Client ID: **MW-4**

Lab ID: **17K1050-02**

Analyte	Results/Qual	DL	RL	Units	Method
Benzene	5.8	0.31	1.0	µg/L	EPA 602
Ethylbenzene	1.6	0.28	1.0	µg/L	EPA 602
m+p Xylene	3.2	0.52	2.0	µg/L	EPA 602
Methyl tert-Butyl Ether (MTBE)	2.2	0.18	1.0	µg/L	EPA 602
o-Xylene	1.9	0.39	1.0	µg/L	EPA 602
Toluene	0.81 J	0.27	1.0	µg/L	EPA 602

Con-Test does not accept liability for the consequences of any actions taken solely on the basis of the information provided in the Executive Summary section of this report. Users must review this report in its entirety to determine data usability and assessment.

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

For method MA EPH, only hydrocarbon ranges were requested and reported.

EPA 625**Qualifications:****L-04**

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Benzidine**

17K1050-01[MW-3], 17K1050-02[MW-4], B191380-BLK1, B191380-BS1, B191380-BSD1

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:**2,4,6-Tribromophenol**

17K1050-01[MW-3]

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:**Benzidine**

17K1050-01[MW-3], 17K1050-02[MW-4], B191380-BLK1, B191380-BS1, B191380-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Benzidine**

17K1050-01[MW-3], 17K1050-02[MW-4], B191380-BLK1, B191380-BS1, B191380-BSD1

Hexachlorocyclopentadiene

17K1050-01[MW-3], 17K1050-02[MW-4], B191380-BLK1, B191380-BS1, B191380-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

17K1050-01[MW-3], 17K1050-02[MW-4], B191380-BLK1, B191380-BS1, B191380-BSD1

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MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-04-1.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	1.1	1.0	0.31	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
Chlorobenzene	ND	1.0	0.25	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
1,2-Dichlorobenzene	ND	1.0	0.24	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
1,3-Dichlorobenzene	ND	1.0	0.34	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
1,4-Dichlorobenzene	ND	1.0	0.37	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
Ethylbenzene	ND	1.0	0.28	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
Methyl tert-Butyl Ether (MTBE)	1.3	1.0	0.18	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
Toluene	0.82	1.0	0.27	µg/L	1	J	EPA 602	11/21/17	11/21/17 13:21	EEH
m+p Xylene	0.56	2.0	0.52	µg/L	1	J	EPA 602	11/21/17	11/21/17 13:21	EEH
o-Xylene	ND	1.0	0.39	µg/L	1		EPA 602	11/21/17	11/21/17 13:21	EEH
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
1-Chloro-3-fluorobenzene		99.7	81.1-133						11/21/17 13:21	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.8	3.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Acenaphthylene	ND	4.8	4.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Anthracene	ND	4.8	4.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Benzidine	ND	19	9.1	µg/L	1	V-04, V-05, L-04	EPA 625	11/19/17	11/26/17 23:02	CDT
Benzo(a)anthracene	ND	4.8	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Benzo(a)pyrene	ND	4.8	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Benzo(b)fluoranthene	ND	4.8	4.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Benzo(g,h,i)perylene	ND	4.8	3.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Benzo(k)fluoranthene	ND	4.8	2.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
4-Bromophenylphenylether	ND	9.6	1.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Butylbenzylphthalate	ND	9.6	2.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
4-Chloro-3-methylphenol	ND	9.6	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Bis(2-chloroethoxy)methane	ND	9.6	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Bis(2-chloroethyl)ether	ND	9.6	4.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Bis(2-chloroisopropyl)ether	ND	9.6	2.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2-Chloronaphthalene	ND	9.6	2.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2-Chlorophenol	ND	9.6	1.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
4-Chlorophenylphenylether	ND	9.6	4.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Chrysene	ND	4.8	2.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Dibenz(a,h)anthracene	ND	4.8	4.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Di-n-butylphthalate	ND	9.6	4.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
1,3-Dichlorobenzene	ND	4.8	1.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
1,4-Dichlorobenzene	ND	4.8	1.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
1,2-Dichlorobenzene	ND	4.8	1.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
3,3-Dichlorobenzidine	ND	9.6	2.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2,4-Dichlorophenol	ND	9.6	4.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Diethylphthalate	ND	9.6	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2,4-Dimethylphenol	ND	9.6	2.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Dimethylphthalate	ND	9.6	4.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
4,6-Dinitro-2-methylphenol	ND	9.6	5.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2,4-Dinitrophenol	ND	9.6	6.4	µg/L	1	V-19	EPA 625	11/19/17	11/26/17 23:02	CDT
2,4-Dinitrotoluene	ND	9.6	5.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2,6-Dinitrotoluene	ND	9.6	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Di-n-octylphthalate	ND	9.6	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	9.6	2.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Bis(2-Ethylhexyl)phthalate	ND	9.6	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Fluoranthene	ND	4.8	4.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Fluorene	ND	4.8	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Hexachlorobenzene	ND	9.6	4.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Hexachlorobutadiene	ND	9.6	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Hexachlorocyclopentadiene	ND	9.6	5.8	µg/L	1	V-05	EPA 625	11/19/17	11/26/17 23:02	CDT
Hexachloroethane	ND	9.6	1.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Indeno(1,2,3-cd)pyrene	ND	4.8	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Isophorone	ND	9.6	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Semivolatle Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	ND	4.8	1.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Nitrobenzene	ND	9.6	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2-Nitrophenol	ND	9.6	1.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
4-Nitrophenol	ND	9.6	2.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
N-Nitrosodimethylamine	ND	9.6	1.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
N-Nitrosodiphenylamine	ND	9.6	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
N-Nitrosodi-n-propylamine	ND	9.6	4.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Pentachlorophenol	ND	9.6	3.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2-Methylnaphthalene	ND	4.8	1.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Phenanthrene	ND	4.8	2.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2-Methylphenol	ND	9.6	2.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Phenol	ND	9.6	2.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
3/4-Methylphenol	ND	9.6	4.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
Pyrene	ND	4.8	2.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
1,2,4-Trichlorobenzene	ND	4.8	1.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT
2,4,6-Trichlorophenol	ND	9.6	3.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:02	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual	Date/Time Analyzed
2-Fluorophenol	50.1	15-110		11/26/17 23:02
Phenol-d6	34.2	15-110		11/26/17 23:02
Nitrobenzene-d5	89.1	30-130		11/26/17 23:02
2-Fluorobiphenyl	92.8	30-130		11/26/17 23:02
2,4,6-Tribromophenol	118	* 15-110	S-07	11/26/17 23:02
p-Terphenyl-d14	111	30-130		11/26/17 23:02

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			EPA 625	11/22/17	11/28/17 12:04	BGL

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:03	PJG
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:03	PJG
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:03	PJG
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:03	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	47.4		40-140				11/27/17 15:03		
o-Terphenyl (OTP)	83.6		40-140				11/27/17 15:03		
2-Bromonaphthalene	107		40-140				11/27/17 15:03		
2-Fluorobiphenyl	109		40-140				11/27/17 15:03		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-3

Sampled: 11/16/2017 11:15

Sample ID: 17K1050-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 1:31	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 1:31	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 1:31	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 1:31	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 1:31	EEH
Surrogates		% Recovery		Recovery Limits	Flag/Qual				
2,5-Dibromotoluene (FID)		81.0		70-130				11/22/17 1:31	
2,5-Dibromotoluene (PID)		79.2		70-130				11/22/17 1:31	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	5.8	1.0	0.31	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
Chlorobenzene	ND	1.0	0.25	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
1,2-Dichlorobenzene	ND	1.0	0.24	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
1,3-Dichlorobenzene	ND	1.0	0.34	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
1,4-Dichlorobenzene	ND	1.0	0.37	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
Ethylbenzene	1.6	1.0	0.28	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
Methyl tert-Butyl Ether (MTBE)	2.2	1.0	0.18	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
Toluene	0.81	1.0	0.27	µg/L	1	J	EPA 602	11/21/17	11/21/17 13:57	EEH
m+p Xylene	3.2	2.0	0.52	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
o-Xylene	1.9	1.0	0.39	µg/L	1		EPA 602	11/21/17	11/21/17 13:57	EEH
Surrogates		% Recovery	Recovery Limits			Flag/Qual				
1-Chloro-3-fluorobenzene		99.8	81.1-133						11/21/17 13:57	

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Semivolatle Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	4.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Acenaphthylene	ND	5.0	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Anthracene	ND	5.0	5.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Benzidine	ND	20	9.4	µg/L	1	L-04, V-04, V-05	EPA 625	11/19/17	11/26/17 23:25	CDT
Benzo(a)anthracene	ND	5.0	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Benzo(a)pyrene	ND	5.0	4.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Benzo(b)fluoranthene	ND	5.0	5.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Benzo(g,h,i)perylene	ND	5.0	4.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Benzo(k)fluoranthene	ND	5.0	2.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
4-Bromophenylphenylether	ND	10	2.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Butylbenzylphthalate	ND	10	3.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
4-Chloro-3-methylphenol	ND	10	4.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Bis(2-chloroethoxy)methane	ND	10	4.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Bis(2-chloroethyl)ether	ND	10	4.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Bis(2-chloroisopropyl)ether	ND	10	3.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2-Chloronaphthalene	ND	10	2.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2-Chlorophenol	ND	10	1.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
4-Chlorophenylphenylether	ND	10	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Chrysene	ND	5.0	2.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Dibenz(a,h)anthracene	ND	5.0	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Di-n-butylphthalate	ND	10	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
1,3-Dichlorobenzene	ND	5.0	1.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
1,4-Dichlorobenzene	ND	5.0	1.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
1,2-Dichlorobenzene	ND	5.0	1.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
3,3-Dichlorobenzidine	ND	10	2.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2,4-Dichlorophenol	ND	10	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Diethylphthalate	ND	10	4.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2,4-Dimethylphenol	ND	10	2.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Dimethylphthalate	ND	10	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
4,6-Dinitro-2-methylphenol	ND	10	5.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2,4-Dinitrophenol	ND	10	6.7	µg/L	1	V-19	EPA 625	11/19/17	11/26/17 23:25	CDT
2,4-Dinitrotoluene	ND	10	5.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2,6-Dinitrotoluene	ND	10	4.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Di-n-octylphthalate	ND	10	4.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	2.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	4.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Fluoranthene	ND	5.0	4.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Fluorene	ND	5.0	4.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Hexachlorobenzene	ND	10	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Hexachlorobutadiene	ND	10	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Hexachlorocyclopentadiene	ND	10	6.0	µg/L	1	V-05	EPA 625	11/19/17	11/26/17 23:25	CDT
Hexachloroethane	ND	10	1.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	4.2	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Isophorone	ND	10	1.8	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	ND	5.0	1.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Nitrobenzene	ND	10	4.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2-Nitrophenol	ND	10	2.0	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
4-Nitrophenol	ND	10	2.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
N-Nitrosodimethylamine	ND	10	1.3	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
N-Nitrosodiphenylamine	ND	10	1.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
N-Nitrosodi-n-propylamine	ND	10	4.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Pentachlorophenol	ND	10	3.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2-Methylnaphthalene	ND	5.0	1.4	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Phenanthrene	ND	5.0	2.9	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2-Methylphenol	ND	10	2.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Phenol	ND	10	2.5	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
3/4-Methylphenol	ND	10	4.1	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
Pyrene	ND	5.0	2.6	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
1,2,4-Trichlorobenzene	ND	5.0	1.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1		EPA 625	11/19/17	11/26/17 23:25	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual
2-Fluorophenol	34.6	15-110	11/26/17 23:25
Phenol-d6	22.4	15-110	11/26/17 23:25
Nitrobenzene-d5	79.4	30-130	11/26/17 23:25
2-Fluorobiphenyl	78.2	30-130	11/26/17 23:25
2,4,6-Tribromophenol	108	15-110	11/26/17 23:25
p-Terphenyl-d14	99.7	30-130	11/26/17 23:25

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			EPA 625	11/22/17	11/28/17 12:04	BGL

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Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:22	PJG
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:22	PJG
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:22	PJG
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	11/26/17	11/27/17 15:22	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Chlorooctadecane (COD)	48.4		40-140				11/27/17 15:22		
o-Terphenyl (OTP)	73.3		40-140				11/27/17 15:22		
2-Bromonaphthalene	99.1		40-140				11/27/17 15:22		
2-Fluorobiphenyl	101		40-140				11/27/17 15:22		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Pantry 3125- Jacksonville, NC

Sample Description:

Work Order: 17K1050

Date Received: 11/16/2017

Field Sample #: MW-4

Sampled: 11/16/2017 12:15

Sample ID: 17K1050-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 2:00	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 2:00	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 2:00	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 2:00	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-04-1.1	11/21/17	11/22/17 2:00	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
2,5-Dibromotoluene (FID)	83.0		70-130				11/22/17 2:00		
2,5-Dibromotoluene (PID)	82.2		70-130				11/22/17 2:00		

Sample Extraction Data

Prep Method: EPA 602-EPA 602

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1050-01 [MW-3]	B191534	5	5.00	11/21/17
17K1050-02 [MW-4]	B191534	5	5.00	11/21/17

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1050-01 [MW-3]	B191380	1040	1.00	11/19/17
17K1050-02 [MW-4]	B191380	1000	1.00	11/19/17

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1050-01 [MW-3]	B191597	1000	1.00	11/22/17
17K1050-02 [MW-4]	B191597	1000	1.00	11/22/17

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1050-01 [MW-3]	B191745	1000	2.00	11/26/17
17K1050-02 [MW-4]	B191745	1000	2.00	11/26/17

Prep Method: MA VPH-MADEP-VPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17K1050-01 [MW-3]	B191532	5	5.00	11/21/17
17K1050-02 [MW-4]	B191532	5	5.00	11/21/17

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191534 - EPA 602										
Blank (B191534-BLK1)										
Prepared & Analyzed: 11/21/17										
Benzene	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1-Chloro-3-fluorobenzene	14.7		µg/L	15.0		98.2	81.1-133			
LCS (B191534-BS1)										
Prepared & Analyzed: 11/21/17										
Benzene	20.3	1.0	µg/L	20.0		101	80.1-119			
Chlorobenzene	20.7	1.0	µg/L	20.0		104	82.5-112			
1,2-Dichlorobenzene	20.7	1.0	µg/L	20.0		104	83.9-116			
1,3-Dichlorobenzene	20.7	1.0	µg/L	20.0		103	84.5-112			
1,4-Dichlorobenzene	20.8	1.0	µg/L	20.0		104	84.4-114			
Ethylbenzene	19.8	1.0	µg/L	20.0		99.1	85.6-115			
Methyl tert-Butyl Ether (MTBE)	20.8	1.0	µg/L	20.0		104	78.1-123			
Toluene	20.4	1.0	µg/L	20.0		102	84.4-112			
m+p Xylene	39.8	2.0	µg/L	40.0		99.6	85-114			
o-Xylene	20.4	1.0	µg/L	20.0		102	78.5-110			
Surrogate: 1-Chloro-3-fluorobenzene	16.1		µg/L	15.0		108	81.1-133			
LCS Dup (B191534-BSD1)										
Prepared & Analyzed: 11/21/17										
Benzene	19.5	1.0	µg/L	20.0		97.6	80.1-119	3.81	10	
Chlorobenzene	19.9	1.0	µg/L	20.0		99.4	82.5-112	4.02	10	
1,2-Dichlorobenzene	19.7	1.0	µg/L	20.0		98.6	83.9-116	4.84	10	
1,3-Dichlorobenzene	19.8	1.0	µg/L	20.0		99.0	84.5-112	4.39	10	
1,4-Dichlorobenzene	19.8	1.0	µg/L	20.0		99.2	84.4-114	4.54	10	
Ethylbenzene	19.0	1.0	µg/L	20.0		95.2	85.6-115	4.00	10	
Methyl tert-Butyl Ether (MTBE)	20.0	1.0	µg/L	20.0		100	78.1-123	4.00	10	
Toluene	19.5	1.0	µg/L	20.0		97.4	84.4-112	4.49	10	
m+p Xylene	38.0	2.0	µg/L	40.0		94.9	85-114	4.78	10	
o-Xylene	19.5	1.0	µg/L	20.0		97.7	78.5-110	4.31	10	
Surrogate: 1-Chloro-3-fluorobenzene	15.4		µg/L	15.0		102	81.1-133			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191380 - SW-846 3510C

Blank (B191380-BLK1)

Prepared: 11/19/17 Analyzed: 11/26/17

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-19
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							V-05
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
Batch B191380 - SW-846 3510C										
Blank (B191380-BLK1)										
Prepared: 11/19/17 Analyzed: 11/26/17										
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	62.1		µg/L	200		31.0	15-110			
Surrogate: Phenol-d6	40.0		µg/L	200		20.0	15-110			
Surrogate: Nitrobenzene-d5	78.0		µg/L	100		78.0	30-130			
Surrogate: 2-Fluorobiphenyl	78.1		µg/L	100		78.1	30-130			
Surrogate: 2,4,6-Tribromophenol	208		µg/L	200		104	15-110			
Surrogate: p-Terphenyl-d14	87.5		µg/L	100		87.5	30-130			
LCS (B191380-BS1)										
Prepared: 11/19/17 Analyzed: 11/26/17										
Acenaphthene	64.5	5.0	µg/L	100		64.5	47-145			
Acenaphthylene	63.7	5.0	µg/L	100		63.7	33-145			
Anthracene	71.0	5.0	µg/L	100		71.0	27-133			
Benzidine	35.6	20	µg/L	100		35.6 *	40-140			L-04, V-04, V-05
Benzo(a)anthracene	73.5	5.0	µg/L	100		73.5	33-143			
Benzo(a)pyrene	73.5	5.0	µg/L	100		73.5	17-163			
Benzo(b)fluoranthene	69.1	5.0	µg/L	100		69.1	24-159			
Benzo(g,h,i)perylene	69.4	5.0	µg/L	100		69.4	1-219			
Benzo(k)fluoranthene	68.2	5.0	µg/L	100		68.2	11-162			
4-Bromophenylphenylether	82.2	10	µg/L	100		82.2	53-127			
Butylbenzylphthalate	81.2	10	µg/L	100		81.2	1-152			
4-Chloro-3-methylphenol	74.2	10	µg/L	100		74.2	22-147			
Bis(2-chloroethoxy)methane	77.7	10	µg/L	100		77.7	33-184			
Bis(2-chloroethyl)ether	72.2	10	µg/L	100		72.2	12-158			
Bis(2-chloroisopropyl)ether	74.5	10	µg/L	100		74.5	36-166			
2-Chloronaphthalene	64.0	10	µg/L	100		64.0	60-118			
2-Chlorophenol	65.2	10	µg/L	100		65.2	23-134			
4-Chlorophenylphenylether	80.5	10	µg/L	100		80.5	25-158			
Chrysene	69.2	5.0	µg/L	100		69.2	17-168			
Dibenz(a,h)anthracene	79.6	5.0	µg/L	100		79.6	1-227			
Di-n-butylphthalate	74.8	10	µg/L	100		74.8	1-118			
1,3-Dichlorobenzene	67.0	5.0	µg/L	100		67.0	1-172			
1,4-Dichlorobenzene	67.5	5.0	µg/L	100		67.5	20-124			
1,2-Dichlorobenzene	68.9	5.0	µg/L	100		68.9	32-129			
3,3-Dichlorobenzidine	75.8	10	µg/L	100		75.8	1-262			
2,4-Dichlorophenol	76.9	10	µg/L	100		76.9	39-135			
Diethylphthalate	73.2	10	µg/L	100		73.2	1-114			
2,4-Dimethylphenol	64.8	10	µg/L	100		64.8	32-119			
Dimethylphthalate	74.8	10	µg/L	100		74.8	1-112			
4,6-Dinitro-2-methylphenol	82.6	10	µg/L	100		82.6	1-181			
2,4-Dinitrophenol	89.1	10	µg/L	100		89.1	1-191			V-19
2,4-Dinitrotoluene	90.6	10	µg/L	100		90.6	39-139			
2,6-Dinitrotoluene	91.3	10	µg/L	100		91.3	50-158			
Di-n-octylphthalate	78.0	10	µg/L	100		78.0	4-146			
1,2-Diphenylhydrazine (as Azobenzene)	67.1	10	µg/L	100		67.1	40-140			
Bis(2-Ethylhexyl)phthalate	84.1	10	µg/L	100		84.1	8-158			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191380 - SW-846 3510C

LCS (B191380-BS1)

Prepared: 11/19/17 Analyzed: 11/26/17

Fluoranthene	74.1	5.0	µg/L	100		74.1	26-137			
Fluorene	68.4	5.0	µg/L	100		68.4	59-121			
Hexachlorobenzene	82.6	10	µg/L	100		82.6	1-152			
Hexachlorobutadiene	79.1	10	µg/L	100		79.1	24-116			
Hexachlorocyclopentadiene	53.2	10	µg/L	100		53.2	40-140			V-05
Hexachloroethane	69.0	10	µg/L	100		69.0	40-113			
Indeno(1,2,3-cd)pyrene	79.2	5.0	µg/L	100		79.2	1-171			
Isophorone	77.0	10	µg/L	100		77.0	21-196			
Naphthalene	65.8	5.0	µg/L	100		65.8	21-133			
Nitrobenzene	71.0	10	µg/L	100		71.0	35-180			
2-Nitrophenol	84.6	10	µg/L	100		84.6	29-182			
4-Nitrophenol	48.8	10	µg/L	100		48.8	1-132			
N-Nitrosodimethylamine	43.4	10	µg/L	100		43.4	40-140			
N-Nitrosodiphenylamine	90.9	10	µg/L	100		90.9	40-140			
N-Nitrosodi-n-propylamine	67.8	10	µg/L	100		67.8	1-230			
Pentachlorophenol	61.0	10	µg/L	100		61.0	14-176			
2-Methylnaphthalene	73.2	5.0	µg/L	100		73.2	40-140			
Phenanthrene	69.6	5.0	µg/L	100		69.6	54-120			
2-Methylphenol	58.4	10	µg/L	100		58.4	30-130			
Phenol	26.6	10	µg/L	100		26.6	5-112			
3/4-Methylphenol	54.1	10	µg/L	100		54.1	30-130			
Pyrene	73.5	5.0	µg/L	100		73.5	52-115			
1,2,4-Trichlorobenzene	77.2	5.0	µg/L	100		77.2	44-142			
2,4,6-Trichlorophenol	78.6	10	µg/L	100		78.6	37-144			
Surrogate: 2-Fluorophenol	82.3		µg/L	200		41.2	15-110			
Surrogate: Phenol-d6	55.3		µg/L	200		27.6	15-110			
Surrogate: Nitrobenzene-d5	77.2		µg/L	100		77.2	30-130			
Surrogate: 2-Fluorobiphenyl	79.1		µg/L	100		79.1	30-130			
Surrogate: 2,4,6-Tribromophenol	202		µg/L	200		101	15-110			
Surrogate: p-Terphenyl-d14	86.8		µg/L	100		86.8	30-130			

LCS Dup (B191380-BSD1)

Prepared: 11/19/17 Analyzed: 11/26/17

Acenaphthene	63.9	5.0	µg/L	100		63.9	47-145	0.934		
Acenaphthylene	63.3	5.0	µg/L	100		63.3	33-145	0.646		
Anthracene	68.4	5.0	µg/L	100		68.4	27-133	3.77		
Benzidine	20.2	20	µg/L	100		20.2	*	40-140	55.0	L-04, V-04, V-05
Benzo(a)anthracene	71.6	5.0	µg/L	100		71.6	33-143	2.62		
Benzo(a)pyrene	71.4	5.0	µg/L	100		71.4	17-163	2.95		
Benzo(b)fluoranthene	66.9	5.0	µg/L	100		66.9	24-159	3.23		
Benzo(g,h,i)perylene	67.0	5.0	µg/L	100		67.0	1-219	3.46		
Benzo(k)fluoranthene	66.0	5.0	µg/L	100		66.0	11-162	3.34		
4-Bromophenylphenylether	77.3	10	µg/L	100		77.3	53-127	6.18		
Butylbenzylphthalate	77.9	10	µg/L	100		77.9	1-152	4.13		
4-Chloro-3-methylphenol	73.1	10	µg/L	100		73.1	22-147	1.49		
Bis(2-chloroethoxy)methane	74.7	10	µg/L	100		74.7	33-184	3.91		
Bis(2-chloroethyl)ether	70.6	10	µg/L	100		70.6	12-158	2.23		
Bis(2-chloroisopropyl)ether	74.4	10	µg/L	100		74.4	36-166	0.134		
2-Chloronaphthalene	67.0	10	µg/L	100		67.0	60-118	4.44		
2-Chlorophenol	66.5	10	µg/L	100		66.5	23-134	2.04		
4-Chlorophenylphenylether	78.7	10	µg/L	100		78.7	25-158	2.29		
Chrysene	67.1	5.0	µg/L	100		67.1	17-168	3.02		
Dibenz(a,h)anthracene	77.2	5.0	µg/L	100		77.2	1-227	3.01		

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191380 - SW-846 3510C										
LCS Dup (B191380-BSD1)										
					Prepared: 11/19/17 Analyzed: 11/26/17					
Di-n-butylphthalate	70.8	10	µg/L	100		70.8	1-118	5.41		
1,3-Dichlorobenzene	67.0	5.0	µg/L	100		67.0	1-172	0.0149		
1,4-Dichlorobenzene	68.4	5.0	µg/L	100		68.4	20-124	1.32		
1,2-Dichlorobenzene	69.3	5.0	µg/L	100		69.3	32-129	0.550		
3,3-Dichlorobenzidine	72.7	10	µg/L	100		72.7	1-262	4.20		
2,4-Dichlorophenol	74.7	10	µg/L	100		74.7	39-135	2.92		
Diethylphthalate	72.1	10	µg/L	100		72.1	1-114	1.57		
2,4-Dimethylphenol	61.8	10	µg/L	100		61.8	32-119	4.74		
Dimethylphthalate	73.8	10	µg/L	100		73.8	1-112	1.43		
4,6-Dinitro-2-methylphenol	79.0	10	µg/L	100		79.0	1-181	4.46		
2,4-Dinitrophenol	90.2	10	µg/L	100		90.2	1-191	1.26		V-19
2,4-Dinitrotoluene	90.1	10	µg/L	100		90.1	39-139	0.576		
2,6-Dinitrotoluene	90.5	10	µg/L	100		90.5	50-158	0.946		
Di-n-octylphthalate	74.0	10	µg/L	100		74.0	4-146	5.26		
1,2-Diphenylhydrazine (as Azobenzene)	65.4	10	µg/L	100		65.4	40-140	2.63		
Bis(2-Ethylhexyl)phthalate	80.2	10	µg/L	100		80.2	8-158	4.81		
Fluoranthene	73.1	5.0	µg/L	100		73.1	26-137	1.33		
Fluorene	67.4	5.0	µg/L	100		67.4	59-121	1.46		
Hexachlorobenzene	78.7	10	µg/L	100		78.7	1-152	4.80		
Hexachlorobutadiene	77.0	10	µg/L	100		77.0	24-116	2.61		
Hexachlorocyclopentadiene	47.7	10	µg/L	100		47.7	40-140	10.8		V-05
Hexachloroethane	70.1	10	µg/L	100		70.1	40-113	1.60		
Indeno(1,2,3-cd)pyrene	77.0	5.0	µg/L	100		77.0	1-171	2.79		
Isophorone	74.3	10	µg/L	100		74.3	21-196	3.65		
Naphthalene	64.4	5.0	µg/L	100		64.4	21-133	2.18		
Nitrobenzene	69.5	10	µg/L	100		69.5	35-180	2.19		
2-Nitrophenol	82.5	10	µg/L	100		82.5	29-182	2.42		
4-Nitrophenol	47.0	10	µg/L	100		47.0	1-132	3.61		
N-Nitrosodimethylamine	44.2	10	µg/L	100		44.2	40-140	1.74		
N-Nitrosodiphenylamine	87.4	10	µg/L	100		87.4	40-140	3.95		
N-Nitrosodi-n-propylamine	68.6	10	µg/L	100		68.6	1-230	1.16		
Pentachlorophenol	56.2	10	µg/L	100		56.2	14-176	8.24		
2-Methylnaphthalene	71.3	5.0	µg/L	100		71.3	40-140	2.64	20	
Phenanthrene	67.5	5.0	µg/L	100		67.5	54-120	3.01		
2-Methylphenol	59.8	10	µg/L	100		59.8	30-130	2.44	20	
Phenol	26.5	10	µg/L	100		26.5	5-112	0.528		
3/4-Methylphenol	54.8	10	µg/L	100		54.8	30-130	1.19	20	
Pyrene	70.2	5.0	µg/L	100		70.2	52-115	4.54		
1,2,4-Trichlorobenzene	74.4	5.0	µg/L	100		74.4	44-142	3.69		
2,4,6-Trichlorophenol	78.3	10	µg/L	100		78.3	37-144	0.382		
Surrogate: 2-Fluorophenol	80.9		µg/L	200		40.5	15-110			
Surrogate: Phenol-d6	54.6		µg/L	200		27.3	15-110			
Surrogate: Nitrobenzene-d5	74.7		µg/L	100		74.7	30-130			
Surrogate: 2-Fluorobiphenyl	75.9		µg/L	100		75.9	30-130			
Surrogate: 2,4,6-Tribromophenol	192		µg/L	200		96.0	15-110			
Surrogate: p-Terphenyl-d14	80.8		µg/L	100		80.8	30-130			

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QUALITY CONTROL

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191597 - SW-846 3510C

Blank (B191597-BLK1)

Prepared: 11/21/17 Analyzed: 11/28/17

No TICs Found	0.0		µg/L							
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191745 - SW-846 3510C

Blank (B191745-BLK1)

Prepared: 11/26/17 Analyzed: 11/27/17

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	76.4		µg/L	99.8		76.6	40-140			
Surrogate: o-Terphenyl (OTP)	88.2		µg/L	100		88.2	40-140			
Surrogate: 2-Bromonaphthalene	108		µg/L	100		108	40-140			
Surrogate: 2-Fluorobiphenyl	105		µg/L	100		105	40-140			

LCS (B191745-BS1)

Prepared: 11/26/17 Analyzed: 11/27/17

C9-C18 Aliphatics	447	100	µg/L	600		74.5	40-140			
C19-C36 Aliphatics	676	100	µg/L	800		84.5	40-140			
Acenaphthene	83.1	2.0	µg/L	100		83.1	40-140			
Acenaphthylene	78.7	2.0	µg/L	100		78.7	40-140			
Anthracene	88.5	2.0	µg/L	100		88.5	40-140			
Benzo(a)anthracene	87.0	2.0	µg/L	100		87.0	40-140			
Benzo(a)pyrene	83.9	2.0	µg/L	100		83.9	40-140			
Benzo(b)fluoranthene	86.4	2.0	µg/L	100		86.4	40-140			
Benzo(g,h,i)perylene	87.1	2.0	µg/L	100		87.1	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191745 - SW-846 3510C

LCS (B191745-BS1)

Prepared: 11/26/17 Analyzed: 11/27/17

Benzo(k)fluoranthene	85.1	2.0	µg/L	100		85.1	40-140			
Chrysene	87.8	2.0	µg/L	100		87.8	40-140			
Dibenz(a,h)anthracene	90.0	2.0	µg/L	100		90.0	40-140			
Fluoranthene	88.6	2.0	µg/L	100		88.6	40-140			
Fluorene	85.0	2.0	µg/L	100		85.0	40-140			
Indeno(1,2,3-cd)pyrene	82.5	2.0	µg/L	100		82.5	40-140			
2-Methylnaphthalene	83.2	2.0	µg/L	100		83.2	40-140			
Naphthalene	71.8	2.0	µg/L	100		71.8	40-140			
Phenanthrene	90.2	2.0	µg/L	100		90.2	40-140			
Pyrene	89.9	2.0	µg/L	100		89.9	40-140			
n-Decane	52.5	2.0	µg/L	100		52.5	40-140			
n-Docosane	74.9	2.0	µg/L	100		74.9	40-140			
n-Dodecane	62.2	2.0	µg/L	100		62.2	40-140			
n-Eicosane	77.2	2.0	µg/L	100		77.2	40-140			
n-Hexacosane	72.9	2.0	µg/L	100		72.9	40-140			
n-Hexadecane	76.8	2.0	µg/L	100		76.8	40-140			
n-Hexatriacontane	76.7	2.0	µg/L	100		76.7	40-140			
n-Nonadecane	77.5	2.0	µg/L	100		77.5	40-140			
n-Nonane	42.0	2.0	µg/L	100		42.0	30-140			
n-Octacosane	70.9	2.0	µg/L	100		70.9	40-140			
n-Octadecane	80.9	2.0	µg/L	100		80.9	40-140			
n-Tetracosane	73.8	2.0	µg/L	100		73.8	40-140			
n-Tetradecane	73.0	2.0	µg/L	100		73.0	40-140			
n-Triacontane	72.4	2.0	µg/L	100		72.4	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	75.4		µg/L	99.8		75.5	40-140			
Surrogate: o-Terphenyl (OTP)	87.1		µg/L	100		87.1	40-140			
Surrogate: 2-Bromonaphthalene	111		µg/L	100		111	40-140			
Surrogate: 2-Fluorobiphenyl	110		µg/L	100		110	40-140			

LCS Dup (B191745-BS1)

Prepared: 11/26/17 Analyzed: 11/27/17

C9-C18 Aliphatics	455	100	µg/L	600		75.8	40-140	1.71	25	
C19-C36 Aliphatics	674	100	µg/L	800		84.2	40-140	0.303	25	
Acenaphthene	83.6	2.0	µg/L	100		83.6	40-140	0.578	25	
Acenaphthylene	79.2	2.0	µg/L	100		79.2	40-140	0.595	25	
Anthracene	89.2	2.0	µg/L	100		89.2	40-140	0.811	25	
Benzo(a)anthracene	87.6	2.0	µg/L	100		87.6	40-140	0.717	25	
Benzo(a)pyrene	84.6	2.0	µg/L	100		84.6	40-140	0.791	25	
Benzo(b)fluoranthene	86.7	2.0	µg/L	100		86.7	40-140	0.381	25	
Benzo(g,h,i)perylene	87.5	2.0	µg/L	100		87.5	40-140	0.461	25	
Benzo(k)fluoranthene	85.6	2.0	µg/L	100		85.6	40-140	0.567	25	
Chrysene	88.4	2.0	µg/L	100		88.4	40-140	0.688	25	
Dibenz(a,h)anthracene	90.5	2.0	µg/L	100		90.5	40-140	0.565	25	
Fluoranthene	89.2	2.0	µg/L	100		89.2	40-140	0.671	25	
Fluorene	85.8	2.0	µg/L	100		85.8	40-140	0.946	25	
Indeno(1,2,3-cd)pyrene	83.0	2.0	µg/L	100		83.0	40-140	0.583	25	
2-Methylnaphthalene	83.1	2.0	µg/L	100		83.1	40-140	0.0698	25	
Naphthalene	71.1	2.0	µg/L	100		71.1	40-140	0.941	25	
Phenanthrene	91.1	2.0	µg/L	100		91.1	40-140	1.00	25	
Pyrene	90.3	2.0	µg/L	100		90.3	40-140	0.464	25	
n-Decane	52.5	2.0	µg/L	100		52.5	40-140	0.0381	25	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B191745 - SW-846 3510C										
LCS Dup (B191745-BSD1)										
					Prepared: 11/26/17 Analyzed: 11/27/17					
n-Docosane	76.8	2.0	µg/L	100		76.8	40-140	2.59	25	
n-Dodecane	63.0	2.0	µg/L	100		63.0	40-140	1.18	25	
n-Eicosane	79.3	2.0	µg/L	100		79.3	40-140	2.64	25	
n-Hexacosane	74.5	2.0	µg/L	100		74.5	40-140	2.11	25	
n-Hexadecane	79.5	2.0	µg/L	100		79.5	40-140	3.39	25	
n-Hexatriacontane	78.6	2.0	µg/L	100		78.6	40-140	2.51	25	
n-Nonadecane	79.7	2.0	µg/L	100		79.7	40-140	2.76	25	
n-Nonane	41.8	2.0	µg/L	100		41.8	30-140	0.401	25	
n-Octacosane	72.6	2.0	µg/L	100		72.6	40-140	2.35	25	
n-Octadecane	83.4	2.0	µg/L	100		83.4	40-140	3.14	25	
n-Tetracosane	75.6	2.0	µg/L	100		75.6	40-140	2.37	25	
n-Tetradecane	75.0	2.0	µg/L	100		75.0	40-140	2.66	25	
n-Triacontane	74.4	2.0	µg/L	100		74.4	40-140	2.69	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	76.2		µg/L	99.8		76.3	40-140			
Surrogate: o-Terphenyl (OTP)	87.1		µg/L	100		87.1	40-140			
Surrogate: 2-Bromonaphthalene	101		µg/L	100		101	40-140			
Surrogate: 2-Fluorobiphenyl	104		µg/L	100		104	40-140			

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191532 - MA VPH

Blank (B191532-BLK1)

Prepared & Analyzed: 11/21/17

Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	33.7		µg/L	40.0		84.3	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	33.0		µg/L	40.0		82.4	70-130			

LCS (B191532-BS1)

Prepared & Analyzed: 11/21/17

Benzene	96.3	1.0	µg/L	100		96.3	70-130			
Butylcyclohexane	81.0	1.0	µg/L	100		81.0	70-130			
Decane	85.1	1.0	µg/L	100		85.1	70-130			
Ethylbenzene	97.6	1.0	µg/L	100		97.6	70-130			
Methyl tert-Butyl Ether (MTBE)	110	1.0	µg/L	100		110	70-130			
2-Methylpentane	86.2	1.0	µg/L	100		86.2	70-130			
Naphthalene	90.7	5.0	µg/L	100		90.7	70-130			
Nonane	79.8	1.0	µg/L	100		79.8	70-130			
Pentane	79.4	1.0	µg/L	100		79.4	70-130			
Toluene	97.7	1.0	µg/L	100		97.7	70-130			
1,2,4-Trimethylbenzene	95.0	1.0	µg/L	100		95.0	70-130			
2,2,4-Trimethylpentane	84.6	1.0	µg/L	100		84.6	70-130			
m+p Xylene	194	2.0	µg/L	200		97.0	70-130			
o-Xylene	94.6	1.0	µg/L	100		94.6	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	32.9		µg/L	40.0		82.3	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	32.5		µg/L	40.0		81.2	70-130			

LCS Dup (B191532-BSD1)

Prepared & Analyzed: 11/21/17

Benzene	94.7	1.0	µg/L	100		94.7	70-130	1.64	25	
Butylcyclohexane	78.5	1.0	µg/L	100		78.5	70-130	3.07	25	
Decane	82.1	1.0	µg/L	100		82.1	70-130	3.63	25	
Ethylbenzene	95.9	1.0	µg/L	100		95.9	70-130	1.80	25	
Methyl tert-Butyl Ether (MTBE)	111	1.0	µg/L	100		111	70-130	0.350	25	
2-Methylpentane	82.9	1.0	µg/L	100		82.9	70-130	3.94	25	
Naphthalene	92.7	5.0	µg/L	100		92.7	70-130	2.15	25	
Nonane	77.7	1.0	µg/L	100		77.7	70-130	2.61	25	
Pentane	74.6	1.0	µg/L	100		74.6	70-130	6.21	25	
Toluene	96.6	1.0	µg/L	100		96.6	70-130	1.17	25	
1,2,4-Trimethylbenzene	93.5	1.0	µg/L	100		93.5	70-130	1.67	25	

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B191532 - MA VPH

LCS Dup (B191532-BSD1)

Prepared & Analyzed: 11/21/17

2,2,4-Trimethylpentane	80.9	1.0	µg/L	100		80.9	70-130	4.44	25	
m+p Xylene	191	2.0	µg/L	200		95.6	70-130	1.50	25	
o-Xylene	93.5	1.0	µg/L	100		93.5	70-130	1.25	25	
Surrogate: 2,5-Dibromotoluene (FID)	34.4		µg/L	40.0		86.0	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	33.5		µg/L	40.0		83.8	70-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- J Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
 - L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - S-07 One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
 - V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
 - V-19 Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 602 in Water	
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NC
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	MA,RI,NC
o-Xylene	MA,RI,NC
EPA 625 in Water	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
Dibenz(a,h)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA 625 in Water</i>	
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodiphenylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC,ME
Naphthalene	CT,NC,ME,NH-P

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
MADEP-VPH-04-1.1 in Water	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2018
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2018
RI	Rhode Island Department of Health	LAO00112	12/30/2017
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

Company Name: **ARC Associates**
 Address: **2725 E. Millbrook Suite 121**
 Phone: **919-876-0999**
 Project Name: **Pantry 3125**
 Project Location: **Jacksonville, NC**
 Project Number:
 Project Manager: **Mamreen Jackson**
 Con-Test Quote Name/Number:
 Invoice Recipient:
 Sampled By: **Frank Beecher**

Requested Turnaround Time:
 7-Day 10-Day
 Due Date:
 Rush-Approval Required
 1-Day 3-Day
 2-Day 4-Day
 Data Delivery
 Format: PDF EXCEL
 Other:
 CLP Like Data Pkg Required:
 Email To:
 Fax To #:

Con-Test Work Order #	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code
01	MW-3	11/15/17	11/15/17		GW	GW	U
02	MW-4	11/15/17	11/15/17		GW	GW	U

ANALYSIS REQUESTED

Field Filtered
 Lab to Filter

Field Filtered
 Lab to Filter

1 Matrix Codes:
 GW = Ground Water
 WW = Waste Water
 DW = Drinking Water
 A = Air
 S = Soil
 SL = Sludge
 SOL = Solid
 O = Other (please define)

2 Preservation Codes:
 I = Iced
 H = HCL
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium Bisulfate
 X = Sodium Hydroxide
 T = Sodium Thiosulfate
 O = Other (please define)

3 Container Codes:
 A = Amber Glass
 G = Glass
 P = Plastic
 ST = Sterile
 V = Vial
 S = Summa Canister
 T = Tedlar Bag
 O = Other (please define)

Comments: **FF Rates**

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Program Information

DSCA UST/Trust Fund REC
 SWS Landfill
 IHSB Orphaned Landfill
 State Lead
 Other:

Project Entity

Government Municipality
 Federal Brownfield
 City School

Other: Chromatogram **AIHA-LAP, LLC**

Month Carolina Detection Limit Requirements

2L GWPC
 SWSL
 IHSB
 MSCC
 Other:

Delivered by: (signature) **Frank Beecher** Date/Time: **11-16-17 12:47**

Received by: (signature) **4.9** Date/Time: **11/17/17 1:46**

Delivered by: (signature) Date/Time:

Received by: (signature) Date/Time:

Delivered by: (signature) Date/Time:

Received by: (signature) Date/Time:



Sign In

LOGGED OUT

411359776344

Ship date:
Thu 11/16/2017
Wilmington, NC US



Actual delivery:
Fri 11/17/2017 9:26 am
East Longmeadow, MA US

Returns

Travel History

Date/Time	Activity	Location
11/17/2017 - Friday		
9:26 am	Delivered	East Longmeadow, MA
7:50 am	On FedEx vehicle for delivery	WINDSOR LOCKS, CT
7:41 am	At local FedEx facility	WINDSOR LOCKS, CT
6:28 am	At destination sort facility	EAST GRANBY, CT
4:44 am	Departed FedEx location	INDIANAPOLIS, IN
11/16/2017 - Thursday		
7:59 pm	Left FedEx origin facility	WILMINGTON, NC
5:24 pm	Picked up	WILMINGTON, NC
11/08/2017 - Wednesday		
12:47 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	411359776344	Service	FedEx Priority Overnight
Weight	10 lbs / 4.54 kgs	Dimensions	24x14x15 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	10 lbs / 4.64 kgs	Return reason	
Terms	Third Party	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	Standard transit	11/17/2017 by 10:30 am

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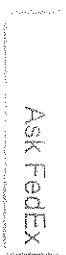
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con-test[®]
 ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client ATC
 Received By RAP Date 11/17/17 Time 926
 How were the samples received? In Cooler T No Cooler On Ice T No Ice
 Direct from Sampling Ambient Melted Ice
 Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 4.9
 By Blank # Actual Temp -
 Was Custody Seal Intact? NA Were Samples Tampered with? NA
 Was COC Relinquished? T Does Chain Agree With Samples? T
 Are there broken/leaking/loose caps on any samples? F
 Is COC in ink/ Legible? T Were samples received within holding time? T
 Did COC include all pertinent Information? Client T Analysis T Sampler Name T
 Project T ID's T Collection Dates/Times T
 Are Sample labels filled out and legible? T
 Are there Lab to Filters? F Who was notified?
 Are there Rushes? F Who was notified?
 Are there Short Holds? F Who was notified?
 Is there enough Volume? T
 Is there Headspace where applicable? F MS/MSD? F
 Proper Media/Containers Used? T Is splitting samples required? F
 Were trip blanks received? F On COC? F
 Do all samples have the proper pH? Acid T Base

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.	8	1 Liter Plastic	16 oz Amb.
HCL-	12	500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Unused Media

Vials	#	Containers:	#	#	#
Unp-		1 Liter Amb.		1 Liter Plastic	16 oz Amb.
HCL-		500 mL Amb.		500 mL Plastic	8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	4oz Amb/Clear
Bisulfate-		Col./Bacteria		Flashpoint	2oz Amb/Clear
DI-		Other Plastic		Other Glass	Encore
Thiosulfate-		SOC Kit		Plastic Bag	Frozen:
Sulfuric-		Perchlorate		Ziplock	

Comments: