LOCAL WELLHEAD PROTECTION PLAN

for

Pasquotank County, North Carolina

PWS ID # 04-70-015 and PWS ID # 60-70-000 (RO)

August 31st, 2021

Mr. David Smithson, Water Superintendent
Pasquotank County
Post Office Box 45
Elizabeth City, North Carolina 27907
252-335-2240

Table of Contents

Background

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

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

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

(1) The well shall be located on a lot so that the area within 100 feet of the well is owned or controlled by the person supplying the water. The supplier of water shall be able to protect the well lot from potential sources of pollution and to construct landscape features for drainage and diversion of pollution.

(2) The minimum horizontal separation between the well and known potential sources of pollution shall be as follows:

- (a) 100 feet from any sanitary sewage disposal system, sewer, or a sewer pipe unless the sewer is constructed of water main materials and joints, in which case the sewer pipe shall be at least 50 feet from the well;
- (b) 200 feet from a subsurface sanitary sewage treatment and disposal system designed for 3000 or more gallons of wastewater a day flows, unless the well water source is from a confined aquifer;
- (c) 500 feet from a septage disposal site;
- (d) 100 feet from buildings, mobile homes, permanent structures, animal houses or lots, or cultivated areas to which chemicals are applied;
- (e) 100 feet from surface water;
- (f) 100 feet from a chemical or petroleum fuel underground storage tank with secondary containment;
- (g) 500 feet from a chemical or petroleum fuel underground storage tank without secondary containment;
- (h) 500 feet from the boundary of a ground water contamination area;
- (i) 500 feet from a sanitary landfill or non-permitted non-hazardous solid waste disposal site;
- (j) 1000 feet from a hazardous waste disposal site or in any location that conflicts with the North Carolina Hazardous Waste Management Rules cited as 15A NCAC 13A;
- (k) 300 feet from a cemetery or burial ground; and
- (l) 100 feet from any other potential source of pollution.

(3) The Department may require greater separation distances or impose other protective measures if necessary to protect the well from pollution, taking into consideration factors such as:

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

(b) The proximity of the potential source to the well;
(c) The type of material, facility, or circumstance that poses the source or potential source of pollution;
(d) The volume or size of the source or potential source of pollution;
(e) Hydrogeological features of the site that could affect the movement of contaminants to the source water;
(f) The effect that well operation might have on the movement of contamination; and
(g) The feasibility of providing additional separation distances or protective measures.

(4) The lot shall be graded or sloped so that surface water is diverted away from the wellhead. The well shall not have greater than a one percent annual chance of flooding.

(5) If a supplier of water demonstrates that it is impracticable, taking into consideration feasibility and cost, to locate water from any other approved source and an existing well can no longer provide water that meets the requirements of this Subchapter, a representative of the Division may approve a variance for a smaller well lot and reduced separation distances to meet existing demands. Additional monitoring under this Part or other conditions shall be imposed if necessary to mitigate the increased risk from the variance

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

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

(2) Development of a public education program;

(3) Delineation of the contributing areas of the water sources;

(4) Identification of potential contamination sources within the wellhead protection area;

(5) Develop and implement wellhead protection area management actions to protect the water sources;

(6) Develop an emergency contingency plan for alternative water supply sources in the event the groundwater supply becomes contaminated and emergency response planning for incidents that may impact water quality;

(7) Conduct new water source planning to insure the protection of new water source locations and to augment current supplies.

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

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

Danny Edwards
Public Water Supply Section
1634 Mail Service Center
Raleigh, North Carolina 27699-1634
Phone: 919-707-9070
Fax: 919-715-4374

INTRODUCTION

This is an update of the Wellhead Protection Plan for Pasquotank County. Pasquotank County is located coastally between Perquimans and Camden counties. Its PWS ID# is 04-70-015 for the standard well system and 60-70-000 for the RO (Reverse Osmosis) system. The County operates thirty (30) wells conventionally and four (4) wells on the RO system; these systems serve a population of 10,653 people via 4,194 connections and 7,490 people via 2,949 connections respectively. One well is abandoned (#19) and three wells (#1, #3A, and #5) are inactive; these wells share a site with currently active wells. The County's conventional well system pumps from the Yorktown aquifer, while the RO plant pumps from the Castle Haynes aquifer. The County maintains five (5) elevated water storage tanks with one (1) containing 300,000 gallons and four (4) containing 200,000 gallons (1,100,000 gallons total), as well as a ground storage tank containing 2,000,000 gallons. The total water storage capacity of the County is 3.1 million gallons. The thirty (30) wells of the conventional system are treated combined at the Weeksville water plant with chlorine, caustic, phosphate, fluoride, potassium, ammonia, polymer, and sodium bisulfate. The four (4) RO plant wells are treated at the RO plant with antiscalant, fluoride, chlorine, corrosion inhibitor, caustic, and sodium bicarbonate. There are eight (8) certified operators for the systems, which use an average of 915,200 gallons (RO) and 790,000 gallons (conventional) per day.

I. The Wellhead Protection Committee

The following people have been designated as Pasquotank County's Wellhead Protection Committee (WPC):

Name	Position
Mr. David Smithson	Water Superintendent
Mr. Mike Harris	Assistant Superintendent (Water)
Ms. Katie Dunning	NCRWA

Ms. Katie Dunning of the North Carolina Rural Water Association provided technical assistance throughout the development of this plan update. The position responsible for implementing the plan is the Water Superintendent. He has accepted the recommendations made in the plan by the WPC. The Water Superintendent has granted the Office Manager, Melissa Jones, authority to implement the Plan. Pasquotank County will begin implementation of the plan immediately following its approval by the Public Water Supply Section of the North Carolina Division of Water Resources and will complete implementation within ninety (90) days. Upon completion of the implementation phase of the WHP Plan, the individual responsible for implementation will submit notification to the Public Water Supply Section in accordance with the schedule set forth in the approved WHP Plan.

II. DELINEATING THE WELLHEAD PROTECTION AREA

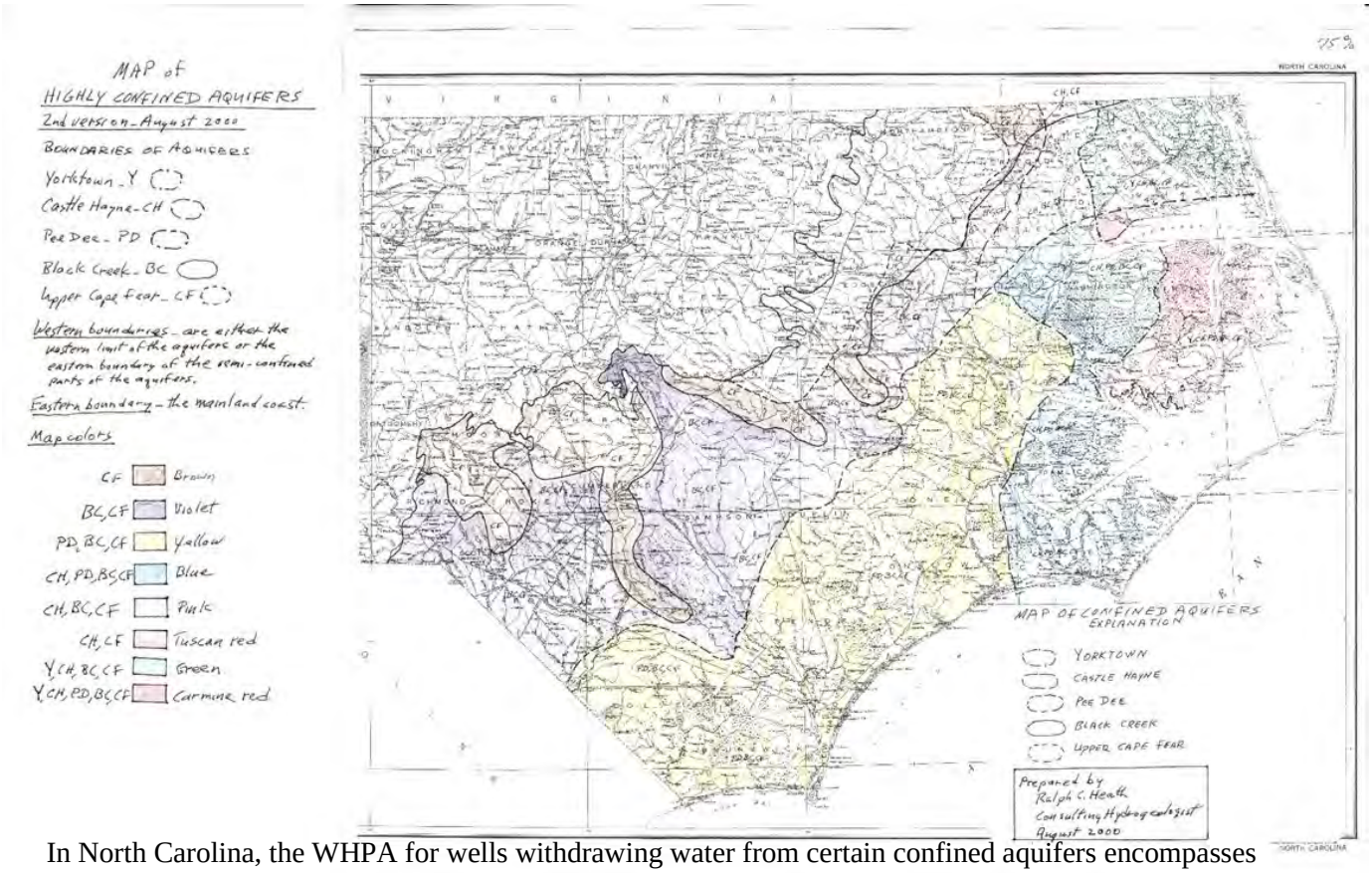
Wellhead protection is simply protection of all or part of the area surrounding a well from which the well's groundwater is drawn. This is called a Wellhead Protection Area (WHPA). The Safe Drinking Water Act (SDWA) defines a WHPA as: "the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfields".

WHPA delineation methods typically involve estimating the size of the contributing area to the well or wellfield. The contributing area is the land area from which water pumped from the well is derived. If a contaminant reaches groundwater within the well's contribution area, the contaminant can move with the groundwater into the well. If the contributing area for the well is identified, and management strategies are set in place to manage certain activities, the possibility that the well might become contaminated can be significantly reduced. This is the area where the wellhead protection (WHP) plan will apply. For a surficial, unconfined aquifer, the contributing area is the area surrounding the well in which precipitation that infiltrates to and recharges the groundwater eventually flows to and discharges from the pumping well. Stated another way, the contributing area is the area in which the rate of recharge to the aquifer equals the rate of withdrawal from the pumping well.

There are several methods that are used to delineate WHPAs. The one that is most appropriate for each well system depends upon many factors including the well's geographic location, depth, and characteristics of the subsurface geology. A type of calculated fixed radius method known as the "Recharge Method" is typically used to estimate the size of the WHPA for wells withdrawing water from unconfined surficial aquifers. However, the average recharge rate to confined and semi-confined aquifers of the coastal plain are, in general, small in comparison to the average recharge rate to unconfined surficial aquifers. WHPAs for wells withdrawing water from confined/semi-confined aquifers could potentially be unmanageably large if based on the recharge rate to these aquifers; also, because the land area in which recharge to a confined aquifer is derived may be located many miles from the pumping well, accurate determination and management of WHPAs based on recharge presents numerous technical and jurisdictional difficulties in these types of aquifers.

Data was reviewed from well records, SDWIS (Safe Drinking Water Information System), the DWR Groundwater Management Branch website (**Figure 4**), and the DWR Local Water Supply Plan for the Pasquotank County Water Systems. It was determined, from DWR's Groundwater Management Branch's website, that all wells associated with the Pasquotank County Water System (04-70-015) are withdrawing water from the Yorktown aquifer. All wells associated with the Pasquotank County RO Water System (60-70-000) are withdrawing water from the Castle Hayne aquifer. The "Map of Highly Confined Aquifers - 2nd Version August 2000" prepared by Ralph Heath (**Figure 1**) indicates that both the Yorktown and Castle Hayne aquifers are highly confined in the area of the wells.

Figure 1. Map of Confined Aquifers, North Carolina Wellhead Protection Program.



In North Carolina, the WHPA for wells withdrawing water from certain confined aquifers encompasses the area surrounding the well for which the time of travel from the outer edge of the area to the well is 10 years. A 10-year period was selected to provide time to assess the potential impact of any groundwater contamination entering the WHPA and for developing appropriate remediation and ground water protection strategies for the water supply. A WHPA based on a longer time of travel may provide a greater degree of protection to the well and allow more advance warning to respond to a contamination incident within the WHPA, but it will also expand the area to manage under the WHP Plan.

WHPAs based on a 10-year time of travel from their outer edge to the pumping well can be estimated by using the ground-water velocity or by estimating the volume of the aquifer required to supply 10 years of withdrawals (i.e., the Volumetric method). Due to the lack of site-specific information necessary to calculate the groundwater velocity, the Pasquotank Department of Utilities chose the **Volumetric Method** to delineate the WHPAs for its water supply wells.

Volumetric Method

The volume of the aquifer that supplies withdrawals for a specified period of time can be estimated with the following equation:

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

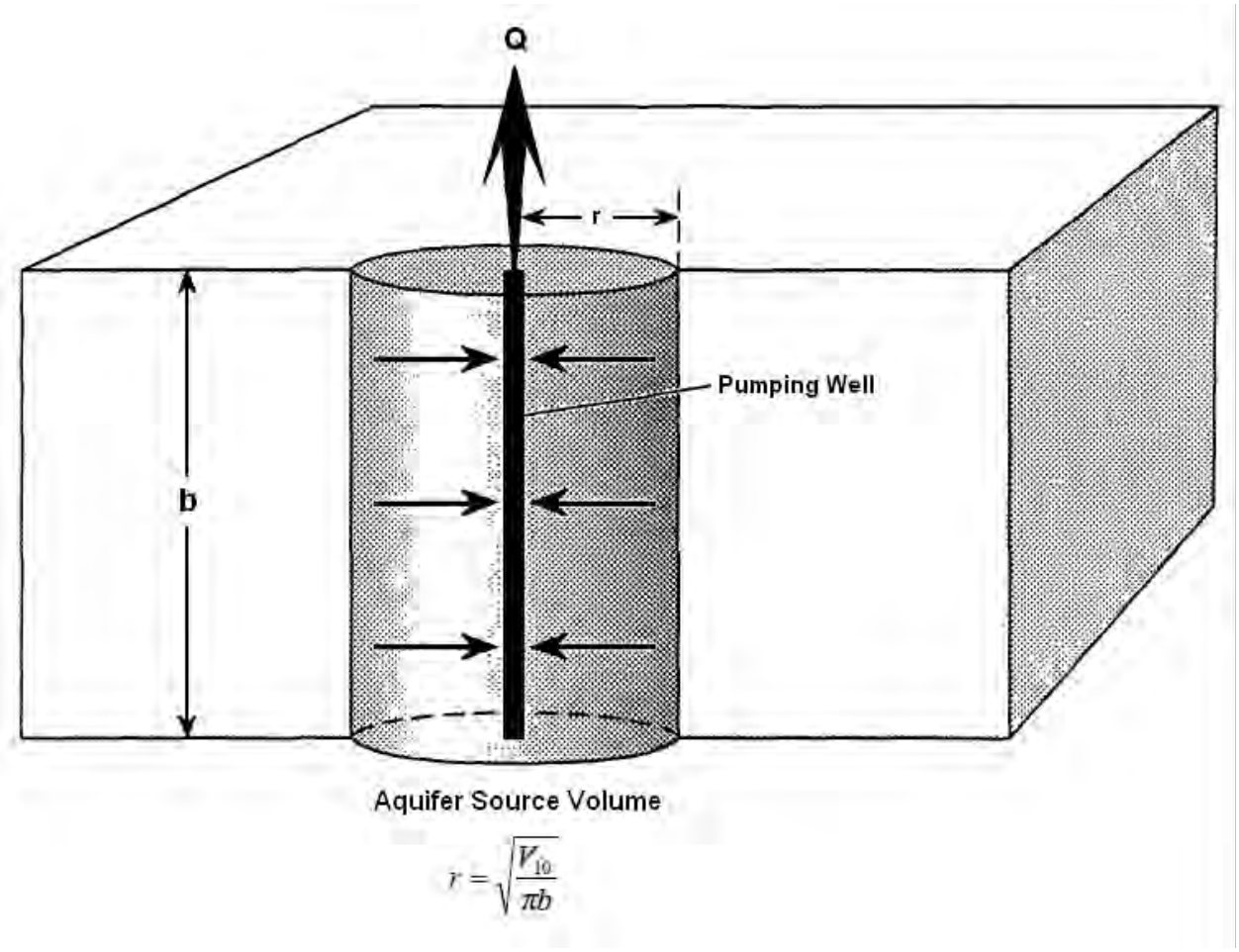
Where: V_P = the volume of aquifer in ft^3 that supplies withdrawals for period P,
Q = the well yield in gallons per minute,
t_d = the daily pumping period in minutes per day,
P = the period of withdrawals in years, and
n = the estimated porosity, dimensionless.

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

$$V_{10} = 1{,}800{,}000 \times Q$$

Where: V_{10} = the volume of aquifer in ft^3 that supplies 10 years of withdrawals.
Q = well yield in gallons per minute

For ease (convenience) in applying the Volumetric Method, it is assumed that the volume is contained in a cylinder centered on the well.



Before the radius of the cylinder, and therefore the WHPA, can be calculated, it is first necessary to determine or to estimate the thickness (b) of the aquifer (or the thickness of the part of the aquifer) that supplies water to the well. This thickness is approximated by the length of the screened portions of the well. The WHPA radius for each well is then calculated by substituting the aquifer thickness and the calculated volume (V10) into the following equation:

$$r = \sqrt{\frac{V_{10}}{\pi b}}$$

Where: r = the radius in feet,
V_{10} = the volume of the aquifer, in ft3, that supplies 10 years of withdrawals,
π = 3.1416, and
b = the aquifer thickness or the length of screened or open-hole section, in feet.

Because actual aquifer thickness may be underestimated by well screen length alone, Table 1 from the "Wellhead Protection Guidebook" - Step 2 (**Table 2**) was used to determine the radius of the individual wellhead protection areas (WHPAs). The aquifer thickness values shown in **Table 2** are based on pumping rate.

Table 1. Construction Information for all wells

Well #	Location	Depth (ft) **	Screened From (ft) ***	Maximum Yield (gpm) *	Aquifer ****
Foreman Bundy Well	Off Foreman Bundy Rd.	421	376-416	1206	Castle Hayne
Larabee Well	Off Ownley	407	380-407	950	Castle Hayne
Pike Well	Cherry Glade/Ownley	421	376-416	1200	Castle Hayne
Wesley Well 1	Cherry Glade Rd.	421	381-416	1150	Castle Hayne
Pasq Co Well #1A	Weeksville Rd.	69	44-64	90	Yorktown
Pasq Co Well #2	Weeksville Rd.	72	42-67	156	Yorktown
Pasq Co Well #3B	Folley/Weeksville	65	44-59	80	Yorktown
Pasq Co Well #4	Folley Rd.	72	47-72	172	Yorktown
Pasq Co Well #5A	Folley/Bayside	76	51-71	100	Yorktown
Pasq Co Well #6	Folley/Bayside	78	42-72	178	Yorktown
Pasq Co Well #7	Crosswinds/Jones	65	35-65	150	Yorktown
Pasq Co Well #8	Crosswinds/Owens	70	40-65	157	Yorktown
Pasq Co Well #9	Owens/Hockmeyer	72	42-67	140	Yorktown
Pasq Co Well #10	Weeksville Rd.	73	50-60	111	Yorktown
Pasq Co Well #11	Perkins Ln.	95	61-66; 70-75; 80-85	115	Yorktown
Pasq Co Well #12	Peartree/Schwarzkopf	95	75-85	126	Yorktown
Pasq Co Well #13	Ham Overman Rd.	93	65-70; 75-83	115	Yorktown
Pasq Co Well #14	Between Ham Overman and Lady Frances	95	65-85	132	Yorktown
Pasq Co Well #15	Peartree Rd.	115	71-82; 96-105	125	Yorktown
Pasq Co Well #16	Between Body and Peartree	109	67-71; 73-79; 81-84; 94-99	168	Yorktown
Pasq Co Well #17	Between Body and Peartree	122	74-84; 101-112	150	Yorktown
Pasq Co Well #18	Between Ham Overman and Lady Frances	94	70-84	115	Yorktown
Well #19A	Ham Overman/Peartree	92	56-63; 68-82	120	Yorktown
Well #20	River Rd.	87	68-82	175	Yorktown
Well #21	River Rd./Pleasant Dr.	83	63-78	175	Yorktown
Well #22	Pleasant Dr.	77	52-72	300	Yorktown
Well #23	Jessica St./Kaitlyn W.	88	70-83	256	Yorktown
Well #24	Jessica St.	89	70-84	185	Yorktown
Well #25	Sundown Dr.	85	68-80	239	Yorktown
Well #26	Rosecroft/Selby	100	73-83; 90-95	204	Yorktown
Well #27	Between Rosecroft and Body	89	74-84	250	Yorktown
Well #28	Body Rd.	89	72-84	200	Yorktown
Well #29	Crocker Hill Rd.	70	50-65	205	Yorktown
Well #30	Crocker Hill Rd.	97	82-92	125	Yorktown

*Well yield data came from a combination of the following sources: SDWIS, well records, and the approved 2013 Wellhead Protection Plan for the Pasquotank County Water Department
** Well depth data came from a combination of the following sources: SDWIS, well records, and the approved 2013 Wellhead Protection Plan for the Pasquotank County Water Department
***Well screen intervals data came from a combination of the following sources: SDWIS, well records, and the approved 2013 Wellhead Protection Plan for the Pasquotank County Water Department
****Aquifer data came from the Division of Water Resources' Groundwater Management Branch's hydrogeologic framework

Table 2. (Included for reference in Table 3) Recommended radii of WHPAs for wells withdrawing from semi-confined and highly confined aquifers. Sourced from ***Table 1 from The Wellhead Protection Guidebook.***

Table 1. Recommended radii of WHPAs for wells withdrawing from semi-confined and highly confined aquifers.

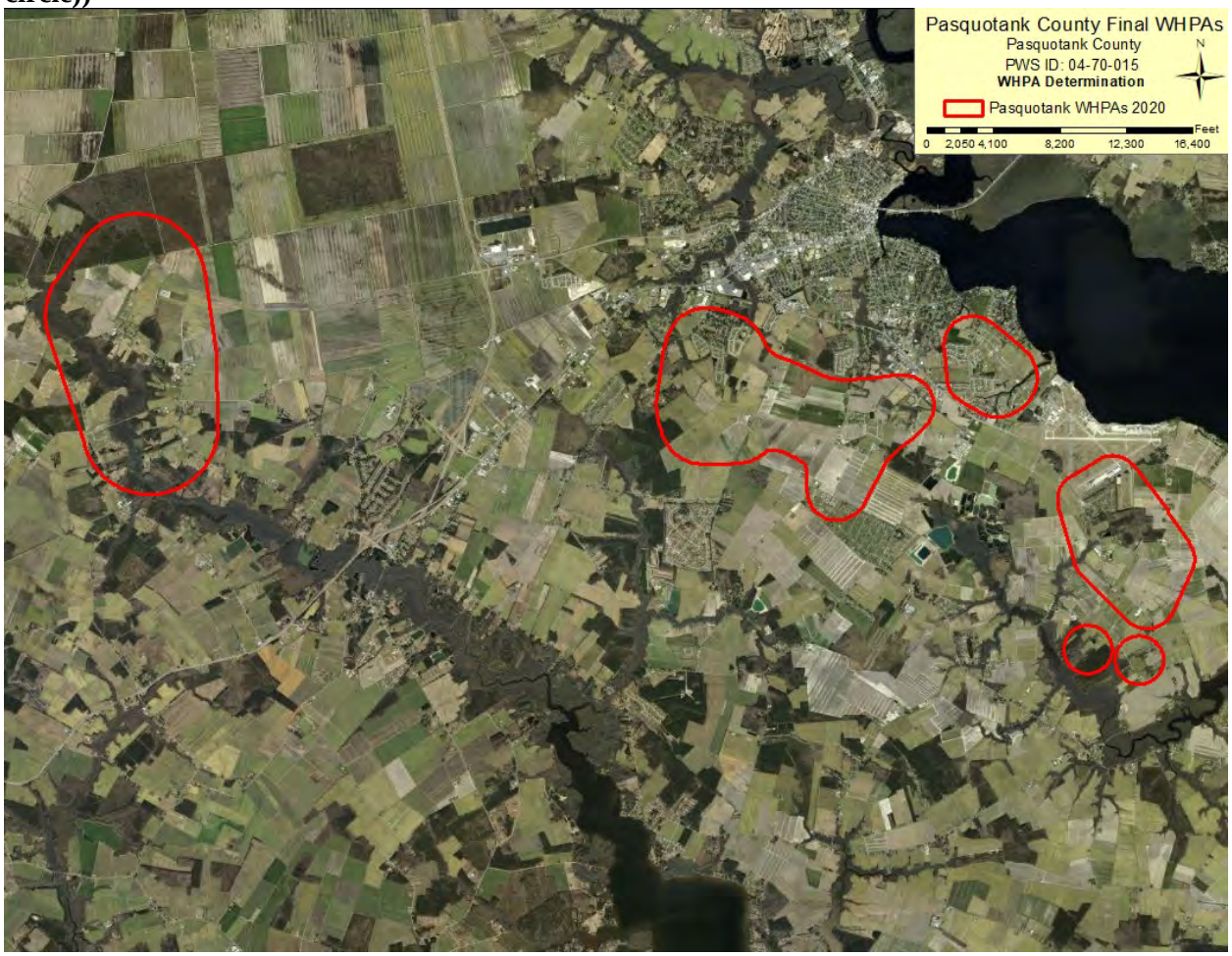
Well Yield Q[1] (gpm)	Maximum Permitted Withdrawal (Q_{MPW}[2]) (gallons)	Aquifer Thickness[3] (ft)	Radius of WHPA (ft) (rounded)
50	36,000	25	1,000
100	72,000	50	1,000
200	144,000	50	1,500
500	360,000	75	2,000
1000	720,000	75	3,000
2000	1,440,000	100	3,500

[1] Maximum sustained well yield or maximum capacity of the pump, in gallons per minute. Read as "up to" the indicated value; e.g., for a well yield of 150 gpm, use line representing 200 gpm.
[2] Maximum Permitted Withdrawal (Q_{mpw}) based on 12 hours per day of pump operation.
[3] Aquifer thickness is a value assumed on the basis of the pumping rate.

Table 3. Resulting radii for individual Wellhead Protection Areas (WHPAs)

Well #	Maximum Yield (gpm)	Individual WHPA Radii (ft)
Foreman Bundy Well	1206	3500
Larabee Well	950	3000
Pike Well	1200	3500
Wesley Well 1	1150	3500
Pasq Co Well #1A	90	1000
Pasq Co Well #2	156	1500
Pasq Co Well #3B	80	1000
Pasq Co Well #4	172	1500
Pasq Co Well #5A	100	1000
Pasq Co Well #6	178	1500
Pasq Co Well #7	150	1500
Pasq Co Well #8	157	1500
Pasq Co Well #9	140	1500
Pasq Co Well #10	111	1500
Pasq Co Well #11	115	1500
Pasq Co Well #12	126	1500
Pasq Co Well #13	115	1500
Pasq Co Well #14	132	1500
Pasq Co Well #15	125	1500
Pasq Co Well #16	168	1500
Pasq Co Well #17	150	1500
Pasq Co Well #18	115	1500
Well #19A	120	1500
Well #20	175	1500
Well #21	175	1500
Well #22	300	2000
Well #23	256	2000
Well #24	185	1500
Well #25	239	2000
Well #26	204	1500
Well #27	250	2000
Well #28	200	1500
Well #29	205	1500
Well #30	125	1500

Figure 2a. Pasquotank County Final WHPAs (WHPA #1 (far left), WHPA #2 (middle), WHPA #3 (upper right), WHPA #4 (far right), WHPA #5 (left lower circle), and WHPA #6 (right lower circle))

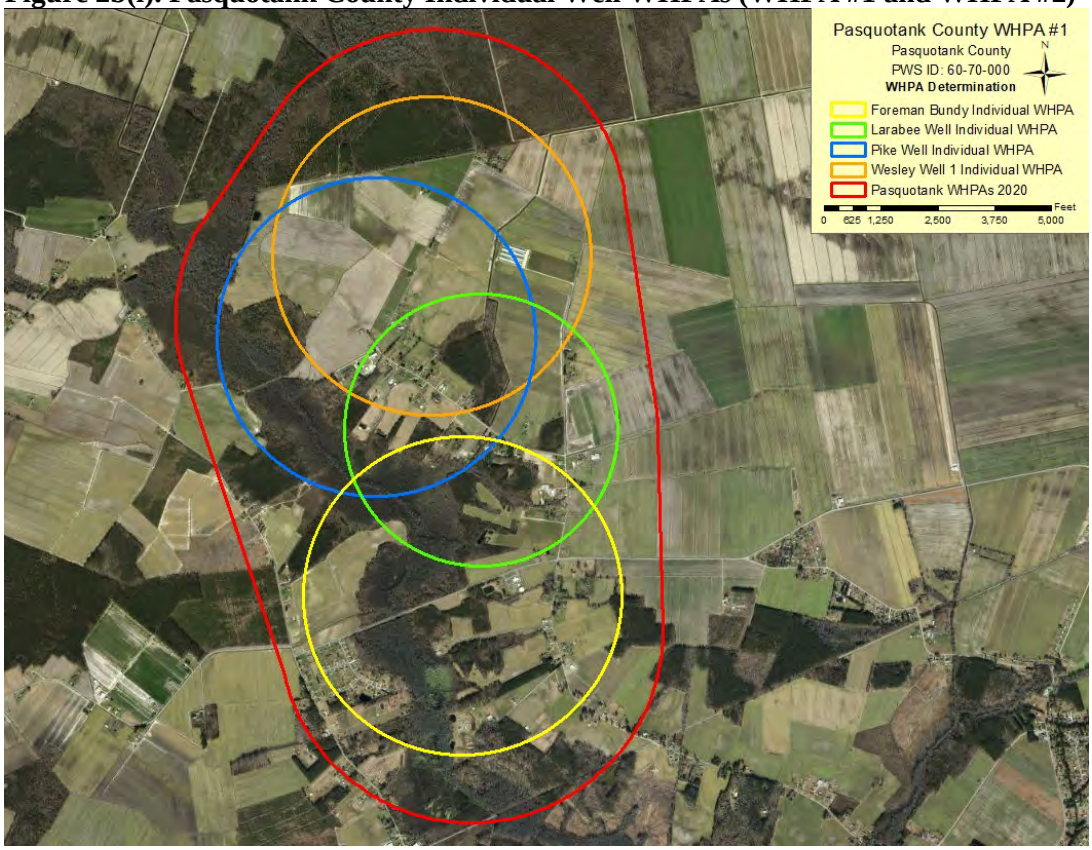


There was considerable overlap between the individual WHPAs for a majority of the wells. This overlap was addressed by creating composite wellhead protection areas that encompass all the area covered by the member WHPAs. These composite WHPAs were further enlarged to an area equal to the sum of all the member WHPA areas.

Table 4. Resulting areas for total Wellhead Protection Areas (WHPAs)

WHPA #	Area (ft^2)
1	144020890.788
2	123011357.316
3	26828392.6528
4	58998252.8855
5	7066515.58385
6	7066515.58385

Figure 2b(i). Pasquotank County Individual Well WHPAs (WHPA #1 and WHPA #2)



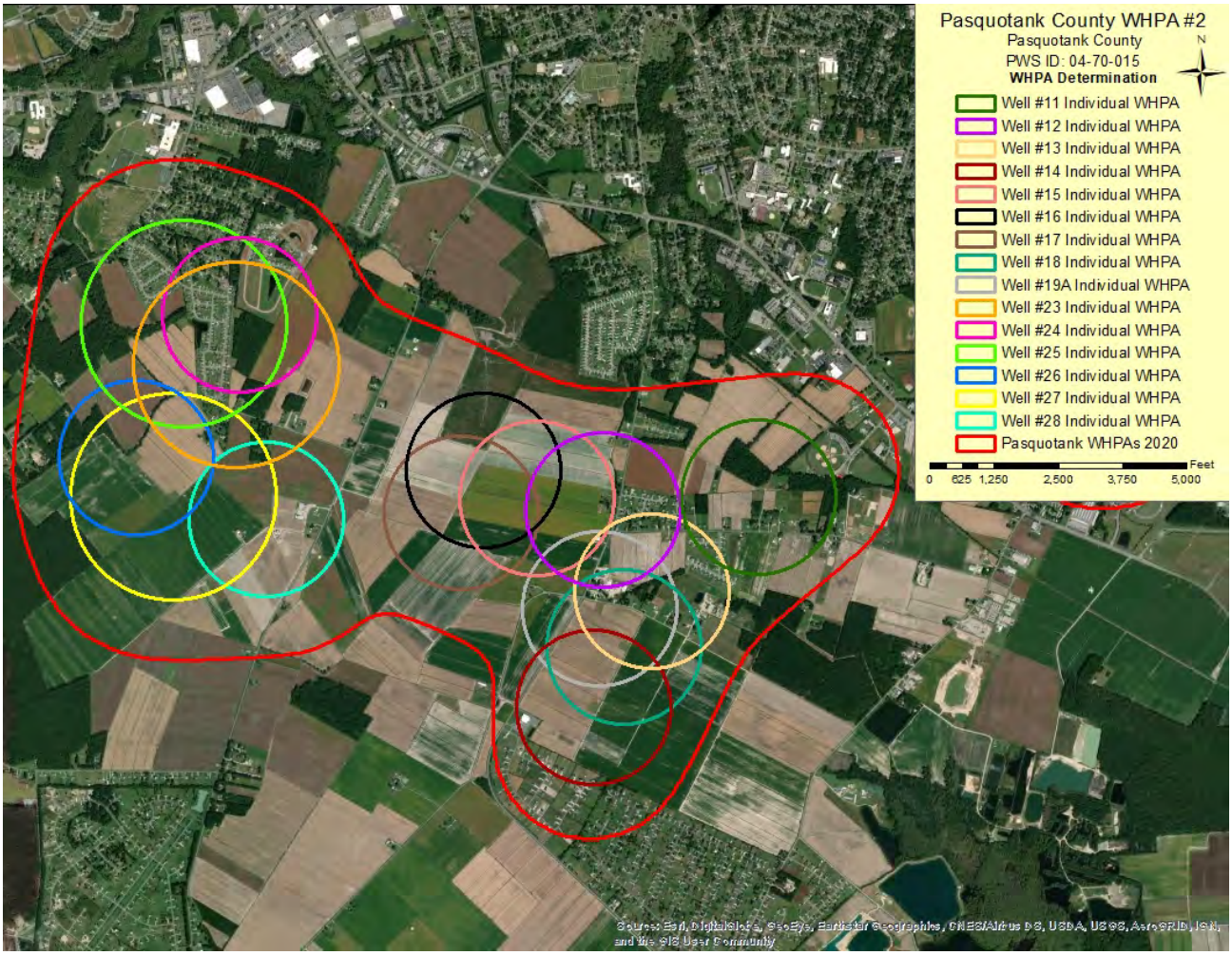
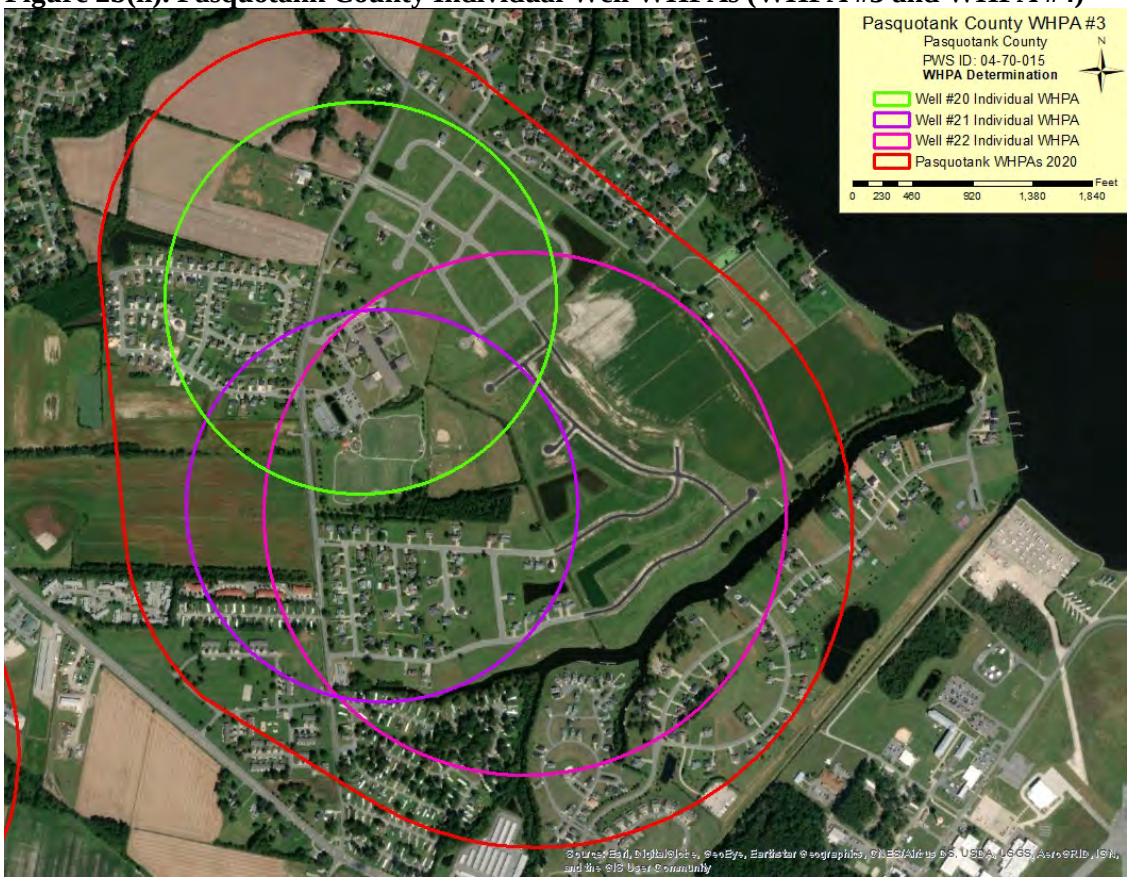


Figure 2b(ii). Pasquotank County Individual Well WHPAs (WHPA #3 and WHPA #4)



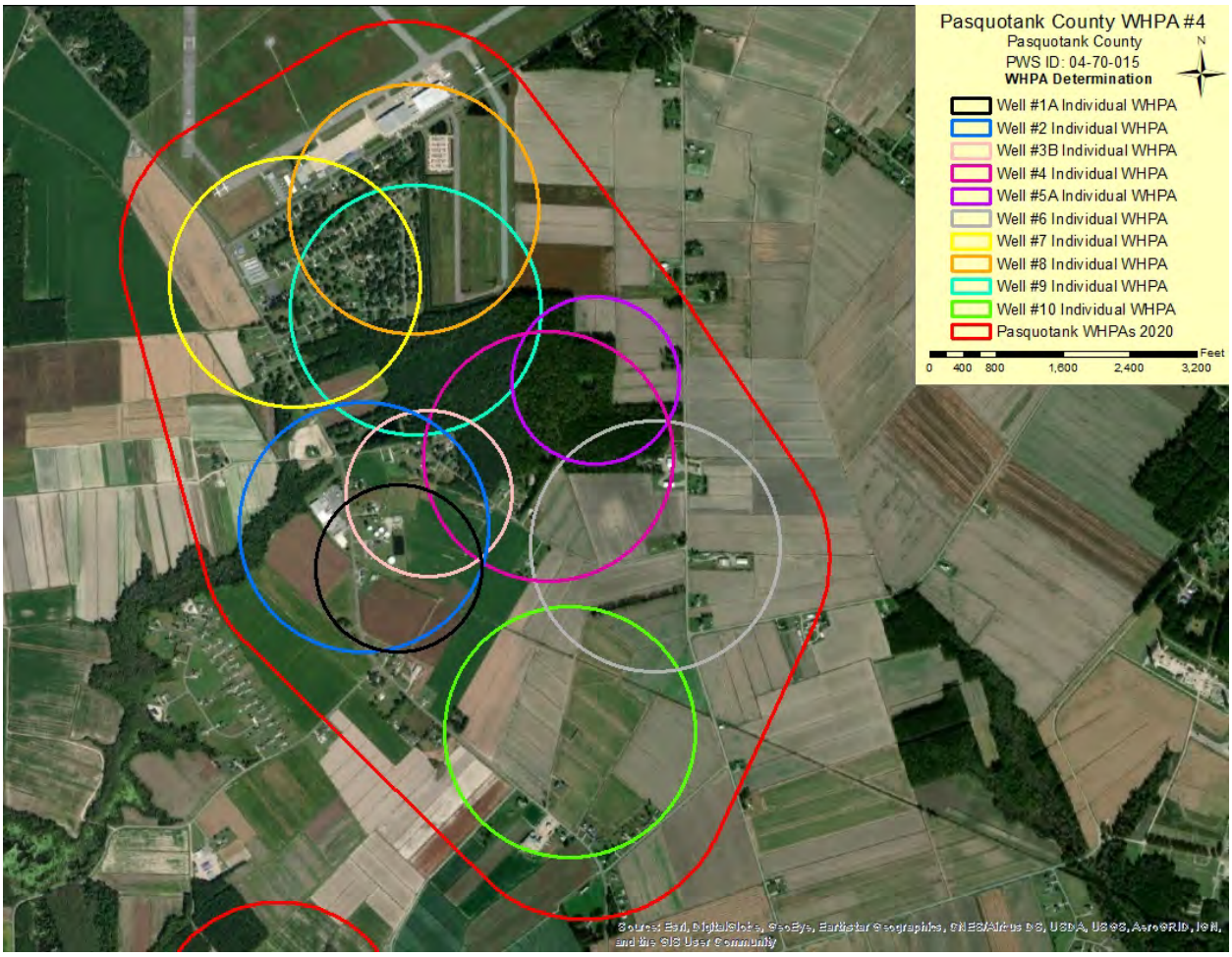
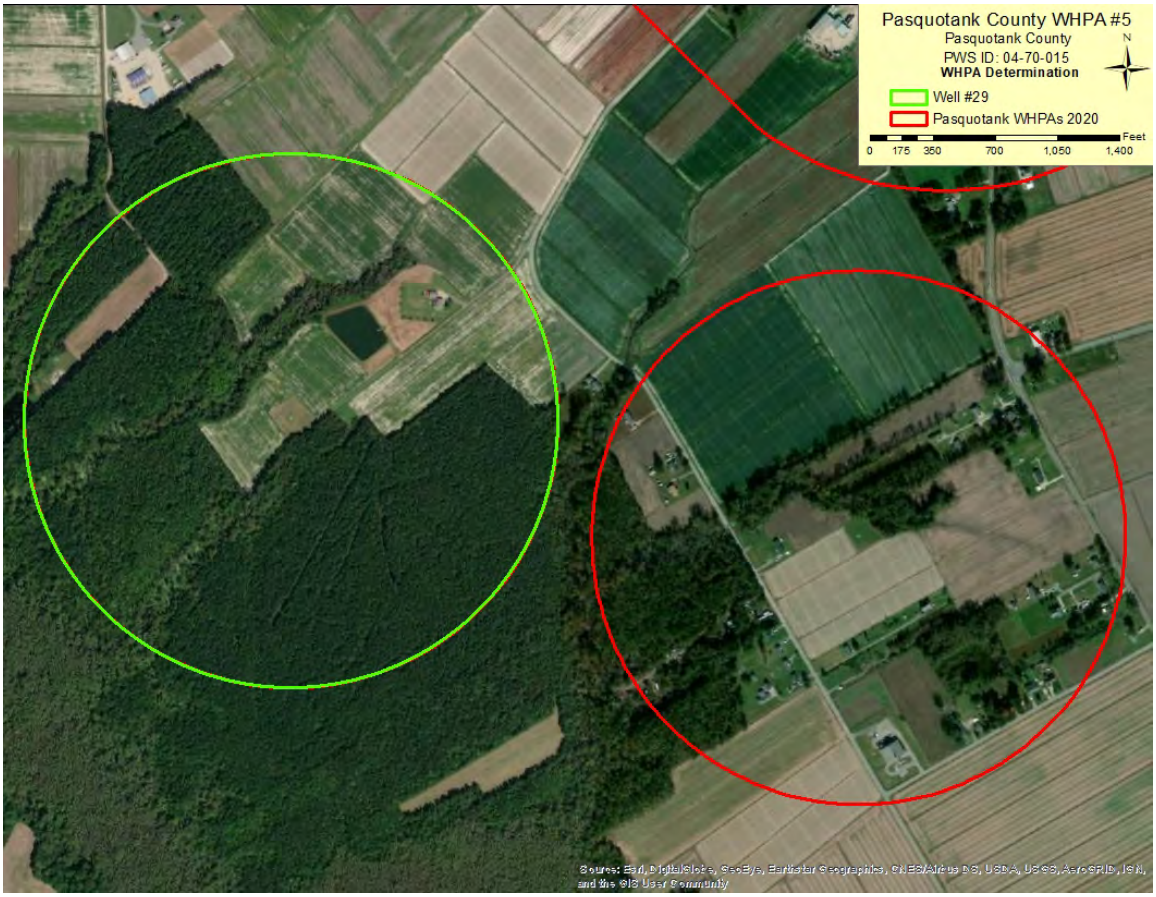


Figure 2b(iii). Pasquotank County Individual Well WHPAs (WHPA #5 and WHPA #6)



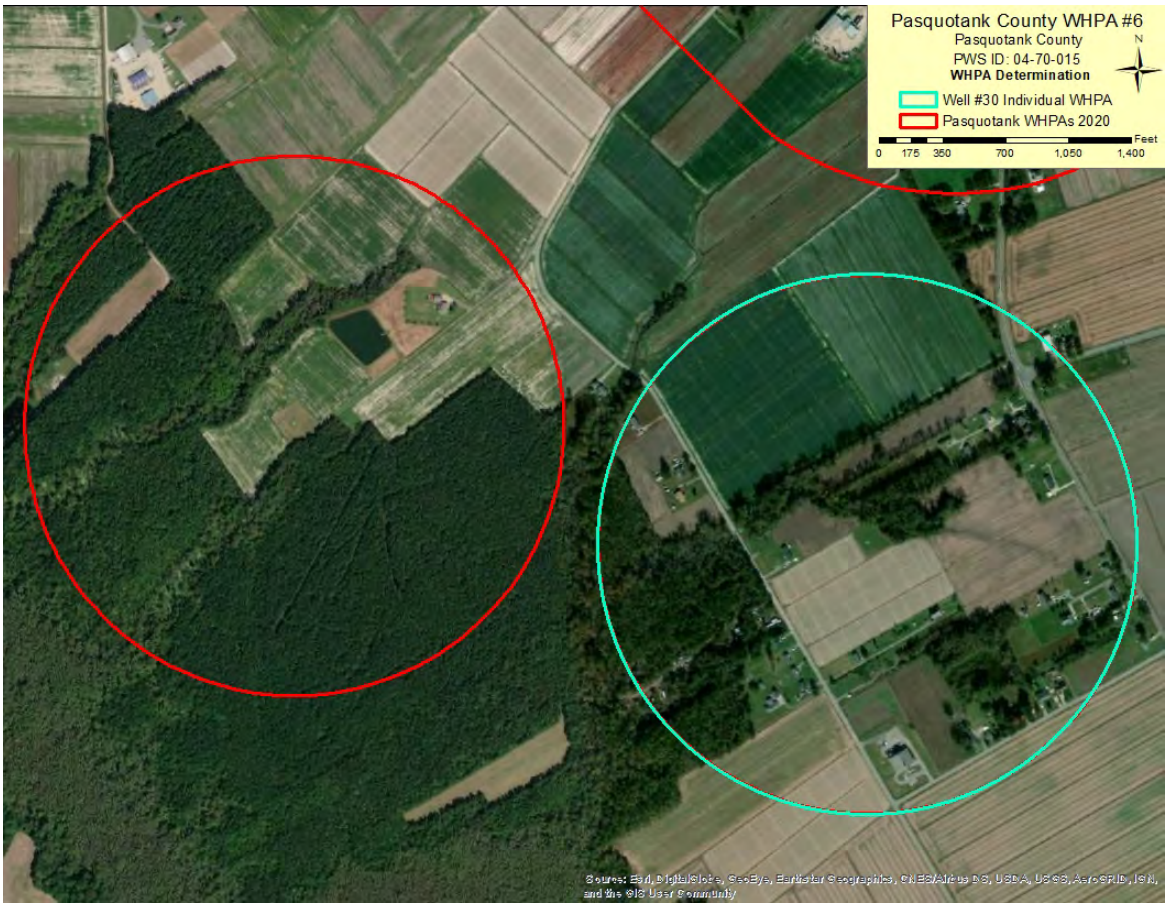


Figure 3. Pasquotank County 2020 Delineated Wellhead Protection Areas

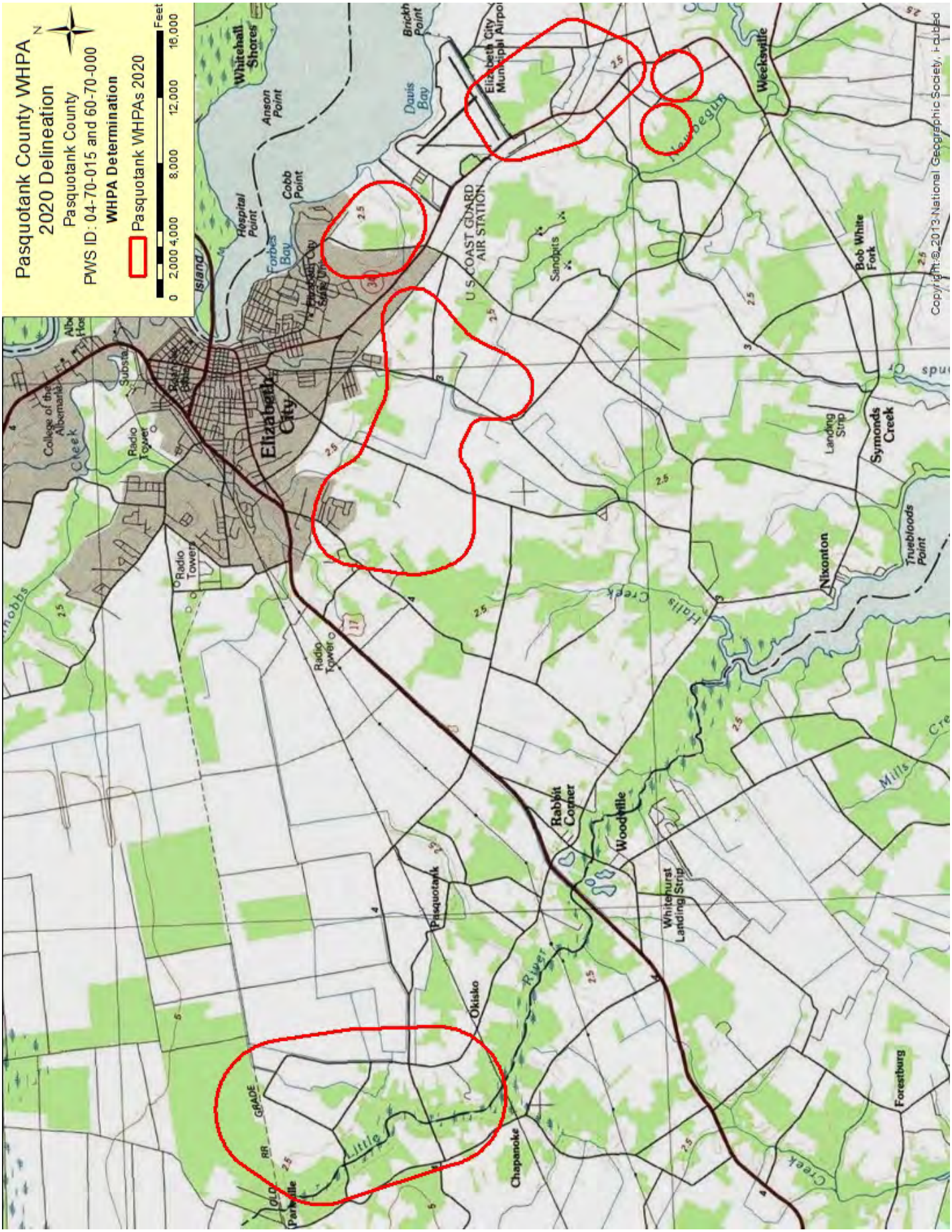


Figure 4a. Hydrogeological Framework WHPA #1: Wells Wesley 1, Pike, Larabee, and Forman Bundy. (hydrogeologic framework information provided by the NC Division of Water Resources, Groundwater Management Branch)

Wesley 1, Larabee, and Pike Wells

NED & Hydrogeologic Framework
Results for **fw-3**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	9	0
Yorktown CU	-6	15
Yorktown	-13	22
Castle Hayne CU	-315	324
Castle Hayne	-364	373
Beaufort CU	-443	452
Beaufort	-474	483
Upper Cape Fear CU	-519	528
Upper Cape Fear	-576	585
Lower Cape Fear CU	-1,116	1125
Lower Cape Fear	-1,182	1191
Lower Cretaceous CU	-1,843	1852
Lower Cretaceous	-1,913	1922
Basement rock	-2,618	2627

Forman Bundy Well

NED & Hydrogeologic Framework
Results for **fw-2**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	7	0
Yorktown CU	-8	15
Yorktown	-14	21
Castle Hayne CU	-313	320
Castle Hayne	-364	371
Beaufort CU	-444	451
Beaufort	-476	483
Upper Cape Fear CU	-521	528
Upper Cape Fear	-581	588
Lower Cape Fear CU	-1,083	1090
Lower Cape Fear	-1,149	1156
Lower Cretaceous CU	-1,857	1864
Lower Cretaceous	-1,926	1933
Basement rock	-2,625	2632

Figure 4b. Hydrogeological Framework WHPA #2: Wells #11, 12, 13, 14, 15, 16, 17, 18, 19A, 23, 24, 25, 26, 27, 28. (hydrogeologic framework information provided by the NC Division of Water Resources, Groundwater Management Branch)

Well #11

NED & Hydrogeologic Framework Results for **fw-12**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-17	25
Yorktown	-36	44
Castle Hayne CU	-426	434
Castle Hayne	-485	493
Beaufort CU	-596	604
Beaufort	-635	643
Upper Cape Fear CU	-699	707
Upper Cape Fear	-815	823
Lower Cape Fear CU	-1,274	1282
Lower Cape Fear	-1,407	1415
Lower Cretaceous CU	-2,191	2199
Lower Cretaceous	-2,264	2272
Basement rock	-3,090	3098

Wells #12, 15, 16, and 17

NED & Hydrogeologic Framework Results for **fw-10**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	9	0
Yorktown CU	-18	27
Yorktown	-37	46
Castle Hayne CU	-417	426
Castle Hayne	-472	481
Beaufort CU	-580	589
Beaufort	-618	627
Upper Cape Fear CU	-677	686
Upper Cape Fear	-788	797
Lower Cape Fear CU	-1,255	1264
Lower Cape Fear	-1,383	1392
Lower Cretaceous CU	-2,160	2169
Lower Cretaceous	-2,232	2241
Basement rock	-3,035	3044

Wells #13, 14, 18, and 19A

NED & Hydrogeologic Framework Results for **fw-13**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	10	0
Yorktown CU	-19	29
Yorktown	-38	48
Castle Hayne CU	-418	428
Castle Hayne	-475	485
Beaufort CU	-586	596
Beaufort	-625	635
Upper Cape Fear CU	-684	694
Upper Cape Fear	-805	815
Lower Cape Fear CU	-1,265	1275
Lower Cape Fear	-1,394	1404
Lower Cretaceous CU	-2,178	2188
Lower Cretaceous	-2,251	2261
Basement rock	-3,073	3083

Well #23

NED & Hydrogeologic Framework Results for **fw-8**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-17	25
Yorktown	-35	43
Castle Hayne CU	-407	415
Castle Hayne	-455	463
Beaufort CU	-558	566
Beaufort	-595	603
Upper Cape Fear CU	-649	657
Upper Cape Fear	-746	754
Lower Cape Fear CU	-1,230	1238
Lower Cape Fear	-1,351	1359
Lower Cretaceous CU	-2,111	2119
Lower Cretaceous	-2,183	2191
Basement rock	-2,950	2958

Well #24

NED & Hydrogeologic Framework Results for **fw-6**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-16	24
Yorktown	-35	43
Castle Hayne CU	-408	416
Castle Hayne	-455	463
Beaufort CU	-559	567
Beaufort	-596	604
Upper Cape Fear CU	-650	658
Upper Cape Fear	-745	753
Lower Cape Fear CU	-1,229	1237
Lower Cape Fear	-1,352	1360
Lower Cretaceous CU	-2,110	2118
Lower Cretaceous	-2,182	2190
Basement rock	-2,946	2954

Well #25

NED & Hydrogeologic Framework Results for **fw-7**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	6	0
Yorktown CU	-16	22
Yorktown	-35	41
Castle Hayne CU	-406	412
Castle Hayne	-452	458
Beaufort CU	-555	561
Beaufort	-592	598
Upper Cape Fear CU	-645	651
Upper Cape Fear	-739	745
Lower Cape Fear CU	-1,226	1232
Lower Cape Fear	-1,346	1352
Lower Cretaceous CU	-2,102	2108
Lower Cretaceous	-2,174	2180
Basement rock	-2,935	2941

Wells #26, 27, and 28

NED & Hydrogeologic Framework Results for **fw-9**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	10	0
Yorktown CU	-17	27
Yorktown	-36	46
Castle Hayne CU	-402	412
Castle Hayne	-451	461
Beaufort CU	-555	565
Beaufort	-592	602
Upper Cape Fear CU	-643	653
Upper Cape Fear	-746	756
Lower Cape Fear CU	-1,227	1237
Lower Cape Fear	-1,346	1356
Lower Cretaceous CU	-2,109	2119
Lower Cretaceous	-2,181	2191
Basement rock	-2,952	2962

Figure 4c. Hydrogeological Framework WHPAs #3, #5, and #6: Wells #20, 21, and 22 (WHPA 3) Well #29 (WHPA 5) and Well #30 (WHPA 6). (hydrogeologic framework information provided by the NC Division of Water Resources, Groundwater Management Branch)

Wells #20, 21, and 22

NED & Hydrogeologic Framework Results for **fw-11**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-15	23
Yorktown	-34	42
Castle Hayne CU	-439	447
Castle Hayne	-503	511
Beaufort CU	-617	625
Beaufort	-657	665
Upper Cape Fear CU	-729	737
Upper Cape Fear	-844	852
Lower Cape Fear CU	-1,294	1302
Lower Cape Fear	-1,436	1444
Lower Cretaceous CU	-2,225	2233
Lower Cretaceous	-2,298	2306
Basement rock	-3,152	3160

Well #29

NED & Hydrogeologic Framework Results for **fw-20**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	3	0
Yorktown CU	-37	40
Yorktown	-48	51
Castle Hayne CU	-446	449
Castle Hayne	-516	519
Beaufort CU	-643	646
Beaufort	-694	697
Upper Cape Fear CU	-761	764
Upper Cape Fear	-918	921
Lower Cape Fear CU	-1,361	1364
Lower Cape Fear	-1,499	1502
Lower Cretaceous CU	-2,315	2318
Lower Cretaceous	-2,389	2392
Basement rock	-3,359	3362

Well #30

NED & Hydrogeologic Framework Results for **fw-21**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	3	0
Yorktown CU	-39	42
Yorktown	-50	53
Castle Hayne CU	-455	458
Castle Hayne	-526	529
Beaufort CU	-656	659
Beaufort	-710	713
Upper Cape Fear CU	-780	783
Upper Cape Fear	-938	941
Lower Cape Fear CU	-1,381	1384
Lower Cape Fear	-1,522	1525
Lower Cretaceous CU	-2,340	2343
Lower Cretaceous	-2,414	2417
Basement rock	-3,414	3417

Figure 4c. Hydrogeological Framework WHPA #4: Wells #1A, 2, 3B, 4, 5A, 6, 7, 8, 9, and 10. (hydrogeologic framework information provided by the NC Division of Water Resources, Groundwater Management Branch)

Wells #1A, 2, 3B

NED & Hydrogeologic Framework Results for **fw-14**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	7	0
Yorktown CU	-24	31
Yorktown	-38	45
Castle Hayne CU	-453	460
Castle Hayne	-522	529
Beaufort CU	-648	655
Beaufort	-696	703
Upper Cape Fear CU	-767	774
Upper Cape Fear	-911	918
Lower Cape Fear CU	-1,356	1363
Lower Cape Fear	-1,498	1505
Lower Cretaceous CU	-2,308	2315
Lower Cretaceous	-2,382	2389
Basement rock	-3,341	3348

Well #4

NED & Hydrogeologic Framework Results for **fw-17**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-24	32
Yorktown	-39	47
Castle Hayne CU	-461	469
Castle Hayne	-531	539
Beaufort CU	-659	667
Beaufort	-708	716
Upper Cape Fear CU	-783	791
Upper Cape Fear	-926	934
Lower Cape Fear CU	-1,370	1378
Lower Cape Fear	-1,515	1523
Lower Cretaceous CU	-2,326	2334
Lower Cretaceous	-2,401	2409
Basement rock	-3,381	3389

Well #5A

NED & Hydrogeologic Framework Results for **fw-19**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	8	0
Yorktown CU	-22	30
Yorktown	-37	45
Castle Hayne CU	-462	470
Castle Hayne	-532	540
Beaufort CU	-659	667
Beaufort	-707	715
Upper Cape Fear CU	-783	791
Upper Cape Fear	-924	932
Lower Cape Fear CU	-1,368	1376
Lower Cape Fear	-1,513	1521
Lower Cretaceous CU	-2,324	2332
Lower Cretaceous	-2,398	2406
Basement rock	-3,376	3384

Well #6

NED & Hydrogeologic Framework Results for **fw-16**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	7	0
Yorktown CU	-27	34
Yorktown	-41	48
Castle Hayne CU	-463	470
Castle Hayne	-533	540
Beaufort CU	-662	669
Beaufort	-712	719
Upper Cape Fear CU	-787	794
Upper Cape Fear	-932	939
Lower Cape Fear CU	-1,377	1384
Lower Cape Fear	-1,521	1528
Lower Cretaceous CU	-2,334	2341
Lower Cretaceous	-2,409	2416
Basement rock	-3,400	3407

Wells #7, 8, and 9

NED & Hydrogeologic Framework Results for **fw-18**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	7	0
Yorktown CU	-18	25
Yorktown	-33	40
Castle Hayne CU	-455	462
Castle Hayne	-524	531
Beaufort CU	-648	655
Beaufort	-695	702
Upper Cape Fear CU	-769	776
Upper Cape Fear	-906	913
Lower Cape Fear CU	-1,351	1358
Lower Cape Fear	-1,494	1501
Lower Cretaceous CU	-2,301	2308
Lower Cretaceous	-2,376	2383
Basement rock	-3,324	3331

Well #10

NED & Hydrogeologic Framework Results for **fw-15**

measurements in feet	elevations	depths
Land Surface (1/3 arc sec NED)	7	0
Yorktown CU	-31	38
Yorktown	-43	50
Castle Hayne CU	-458	465
Castle Hayne	-529	536
Beaufort CU	-658	665
Beaufort	-708	715
Upper Cape Fear CU	-781	788
Upper Cape Fear	-931	938
Lower Cape Fear CU	-1,375	1382
Lower Cape Fear	-1,518	1525
Lower Cretaceous CU	-2,332	2339
Lower Cretaceous	-2,406	2413
Basement rock	-3,395	3402

III. POTENTIAL CONTAMINANT SOURCE INVENTORY

A Potential Contaminant Source (PCS) is any substance or activity that could adversely affect the quality of a drinking water supply. The PCS inventory is a complete listing, including mapped locations, of past (known contaminants/pollution incidents) and present land use activities within the Wellhead Protection Areas (WHPAs) that threaten groundwater quality.

The initial list of potential contaminants was compiled by gathering information from aerial maps and the utilization of sixteen (16) databases which are referenced in the appendix. The SWAP (Source Water Assessment Program) report provided by the Public Water Supply Section, which is defined in the report itself as "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," sections pertaining to Potential Contaminant Source Attributes were compared against the initial list. The completed list was further assessed by a windshield survey conducted by Ms. Katie Dunning of the entire WHPA to positively confirm/identify each potential contamination source (PCS) facility or activity that might exist within the WHPA. Onsite visits were made by Mr. David Smithson and his team; additional information was obtained regarding quantity and types of contaminants kept on site from each location remaining on the final list acquired from the windshield survey. The full surveys are present in the appendix and the relevant information/locations were included in the series of tables and maps included on the pages after the pg. 24 and 25 PCS inventory table/map introduction.

Due to the shape of some of the WHPAs, well clusters were assessed based on their individual WHPAs which can be seen on pgs. 15 through 17. This was necessary to complete the risk assessment, which utilizes the radius to assess risk based on proximity. Any PCSs which were present outside of the individual WHPAs, but inside of the final WHPAs, were added to their own table; these specific PCSs were not included in the risk assessment.

The sections below briefly describe contaminants with special details not contained in the tables to follow or that are more prevalent and not included individually in a table (e.g. Septic Tanks).

Septic Tanks – Septic tanks were not assessed for the County, as the County focuses on a wide area.

Abandoned Wells – There are no properly (other than municipally) or improperly abandoned wells known of at this time.

Lift Stations- Pasquotank County utilizes three (3) sewer lift stations, but they are far north of Elizabeth City. Elizabeth City utilizes fourteen (14) lift stations within the wellhead protection areas.

Tier II facilities- There is one (1) Tier II facility in the area, which is the NC Coast Guard site. The report was provided by the NC DPS.

Potential Contaminant Source Inventory: Tables and Maps

The following tables list the potential sources of contamination in Pasquotank County's Wellhead Protection Areas. The exception to this are home heating oil tanks used at many residences, and which remain off the inventory for this reason. The tables have map codes used to identify the potential sources of contamination on the PCS Inventory Maps. While the tables contain a majority of the relevant information, notes can be found on the surveys located at the back of the appendix. Where listed on the PCS Data Chart, "small quantities" refers either to unknown amounts totaling less than 100-gallons or 100-pounds or small quantities (<100 gallons or pounds combined) of many related chemicals that are fully listed in the survey section of the appendix.

Potential Contaminant Source Inventory: Pollution Incident Glossary

NFA: Notice of No further Action- Incident close-out.
NRP: Notice of Residual Petroleum- Deed recordation of petroleum remaining on-site (in soil or groundwater).
NORR: Notice of Regulatory Requirement- Letter sent by the NC DEQ regarding further incident requirements.
NOV: Notice of Violation- Letter sent by the NC DEQ regarding a violation.
MMPE: Mobile Multi-Phase Extraction- A form of pollution remediation.
MSCC: Maximum Soil Contaminant Concentration- Soil to groundwater limit for soil contamination with reference to the protection of groundwater.
MAC: Maximum Allowable Concentration- The maximum allowable concentration of contaminants that can be tolerated without threatening to harm human health.
2L: Standards for groundwater- Baseline for determining drinkability and effects on human health.
UST: Underground Storage Tank
AST: Aboveground Storage Tank
CAP: Corrective Action Plan- A plan created for approval and implementation of a remediation strategy for soil/groundwater. This is sometimes also called a Remedial Action Plan (RAP)
GCL: Gross Contamination Level- An action level for high amounts of total contamination.
TPH-GRO: Total Petroleum Hydrocarbon Gasoline-Range Organics- An analytical lab method to determine the quantity of volatile range hydrocarbons.
TPH-DRO: Total Petroleum Hydrocarbon Diesel-Range Organics- An analytical lab method to determine the quantity of semi-volatile range hydrocarbons.
RAL: Regulatory Action Level- The concentration limit of a contaminant. When exceeded, this limit triggers remediation or regulatory action.
MCL: Maximum Contaminant Level- The highest allowable level of a contaminant that may be present in drinking water.
CSA: Comprehensive Site Assessment- A document created to investigate and provide background information related to the location, soil, and groundwater.
WaRO: Washington Regional Office- The UST section that was utilized in the creation of this WHPP.
LEL: Lower Explosive Limit- The lowest percentage concentration of gas/vapors that has the capability to combust given the correct input (fire, friction, heat, etc.).
STF: State Trust Fund- A fund which provides reimbursement for remediation of pollution incidents.
EPH: Extractable Petroleum Hydrocarbons- A laboratory test to identify certain target compounds and hydrocarbons in drinking water.
LSA: Limited Site Assessment- An initial assessment with risk characterization under the guidance of 15A NCAC 2L .0405.
AFVR: Aggressive Fluid Vapor Recovery- A remediation method for dual-phase removal of hydrocarbons from groundwater.

Potential Contaminant Source Inventory: Map code list

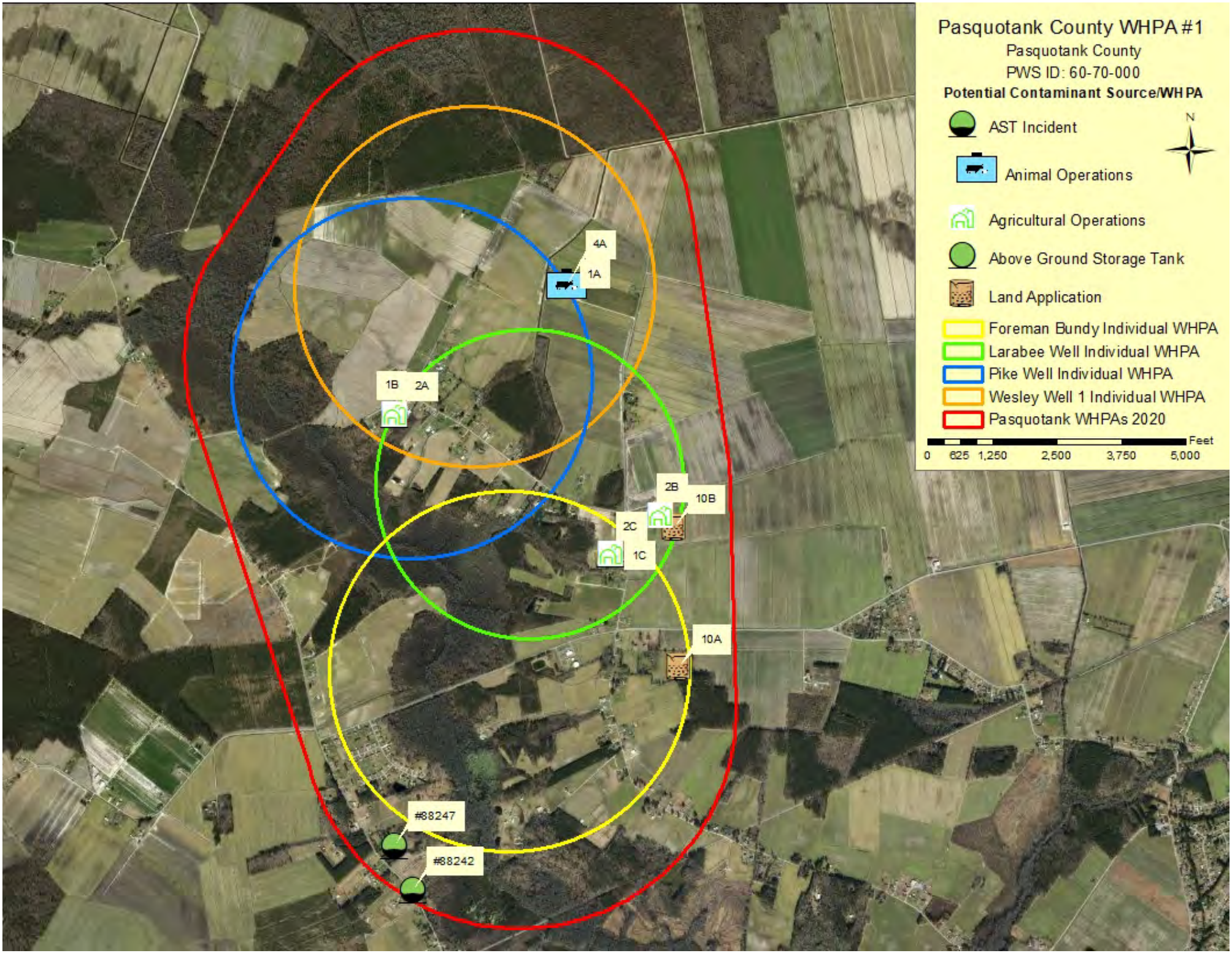
The list below shows general map/category codes of Potential Contaminant Sources (PCSs) that are present in the Wellhead Protection Areas. Each potential contaminant site present in the tables beginning on pg. 26 has been given a category code that was used to locate it on the inventory maps beginning on pg. 27. Multiple facilities in one category are assigned letters accordingly.

1	**Above ground storage tanks**
2	**Agricultural Operations**
3	**Airport**
4	**Animal Operations**
5	**Car Wash**
6	**Chemical Storage**
7	**Electrical Substation**
8	**Hazardous Waste**
9	**Highway/Major Road**
10	**Land App**
11	**Lift Station**
12	**Manufacturer**
13	**Mobile Home Park**
14	**NPDES**
15	**Recreation**
16	**Storage**
17	**Stormwater**
18	**Underground Storage Tank**

WHPA #1: Wells Foreman Bundy, Larabee, Pike, and Wesley 1			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources – None			
#88242	Warden Property (Norman L.. Jr)	Pollution Incident	
#88247	Jackson Property (John)	Pollution Incident	
Higher Risk Sources			
1A, 4A	Chicken Farm (Cherry Glade Chickens)	Animal Operations	Chickens: 100,000 (5 flocks) Chicken Feed: 100,000 lbs Generator: 500 gallon diesel
N/A See appendix for map	Pasquotank County RO Plant	Chemical Storage	Antiscalent, Fluoride, Calcium Chloride, Corrosion Inhibitor, Caustic, Bleach, and Sodium Bi Carbonate. See Appendix for manifest. Permit #NC0088480
Moderate Risk Sources			
10A	Elizabeth City Land App Field #1	Land App	WQ0002883: Class B Residual Biosolid Land Application. (In 2010) 731.5 acres utilized with 28.4 lbs of p per acre average.
10B	Elizabeth City Land App Field #2	Land App	WQ0002883: Class B Residual Biosolid Land Application. (In 2010) 731.5 acres utilized with 28.4 lbs of p per acre average.
1B, 2A	K&L Farms Inc	Agricultural Operations, AST	Tractors: 4 Silos (Grain, Corn, Soybeans): 6 Fuel tanks (unspecified): 3
2B	Larry Garage	Agricultural Operations	Tractors: 4
1C, 2C	Rogerson Farm	Agricultural Operations, AST	Fuel (Off-road/Gas/Highway Diesel): x3 at 3,000 gallons Tractors: 6
Low Risk Sources - None			

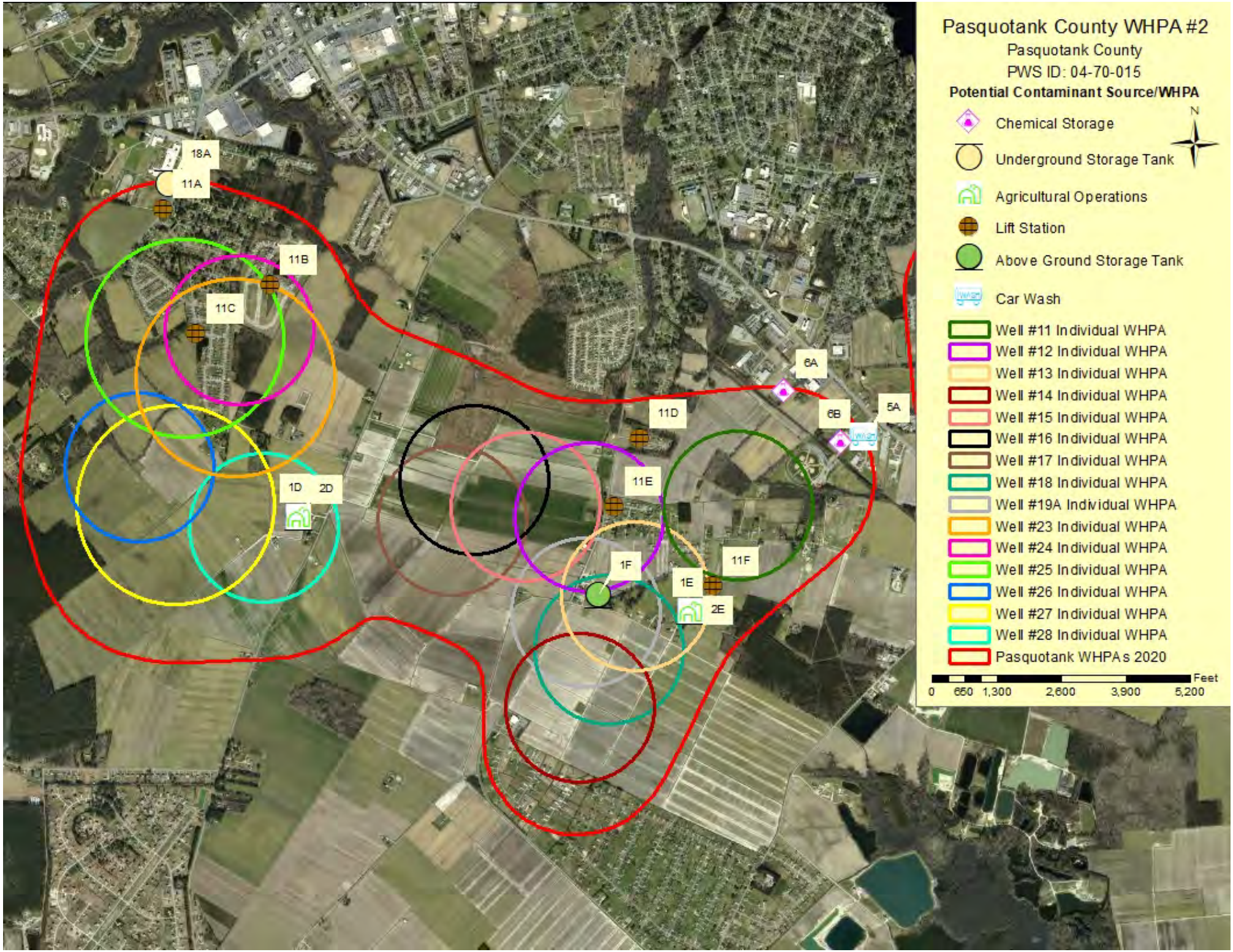
#88242 WA-88242 Warden Property (Norman L.. Jr): Petroleum complaint. No petroleum was found at the site. This incident was though to be a potential junk complaint; however, it is still ranked as a low-risk site officially.

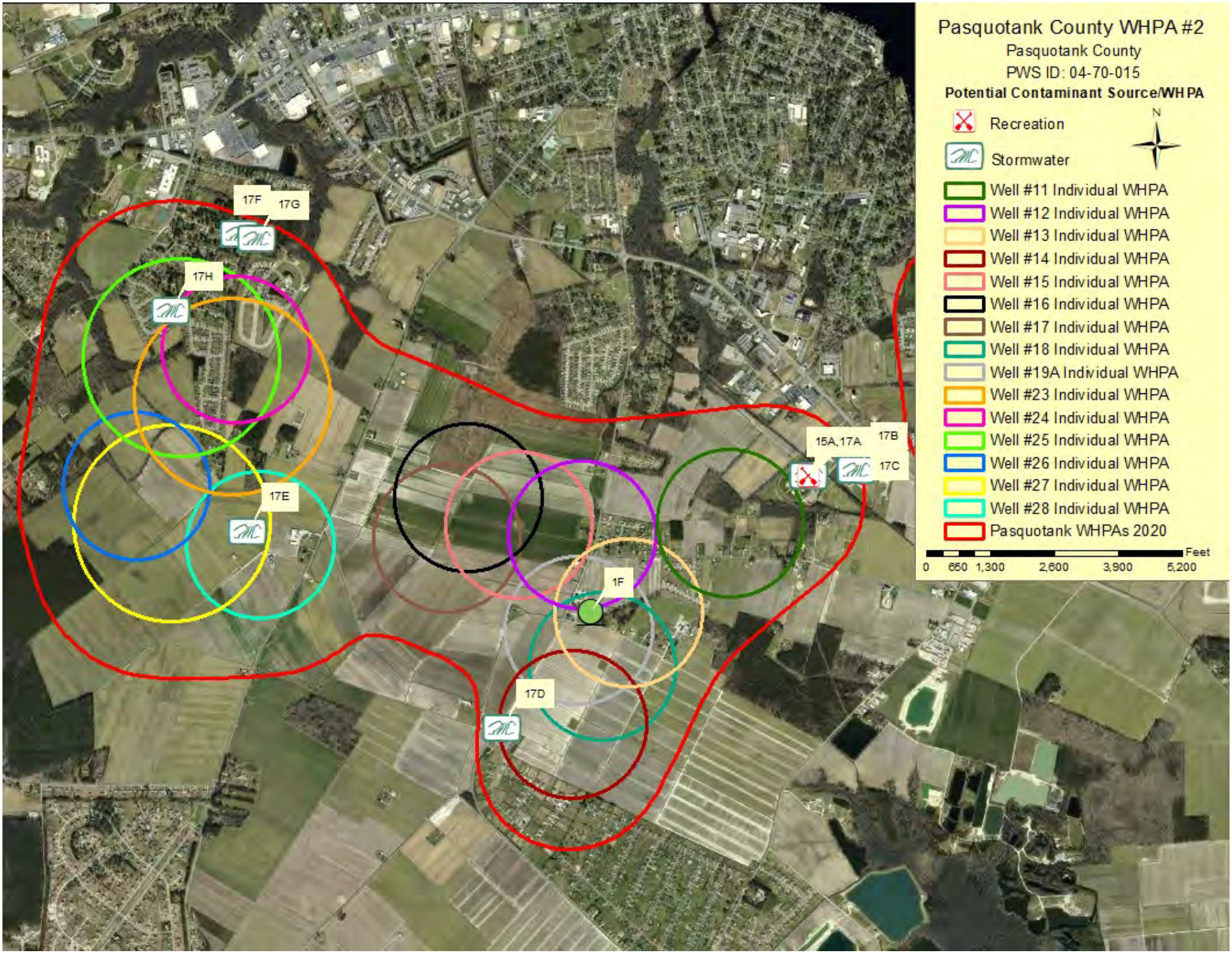
#88247 WA-88247 Jackson Property (John): Petroleum complaint (from same person as #88242). No petroleum was found at the site. This incident was though to be a potential junk complaint; however, not enough information is available to determine an official ranking.


Pasquotank County WHPA #1
Pasquotank County
PWS ID: 60-70-000
Potential Contaminant Source/WHPA
AST Incident
Animal Operations
Agricultural Operations
Above Ground Storage Tank
Land Application
Foreman Bundy Individual WHPA
Larabee Well Individual WHPA
Pike Well Individual WHPA
Wesley Well 1 Individual WHPA
Pasquotank WHPAs 2020
N
Feet
0 625 1,250 2,500 3,750 5,000
4A
1A
1B
2A
2B
10B
2C
1C
10A
#88247
#88242

WHPA #2: Wells #11, 12, 13, 14, 15, 16, 17, 18, 19A, 23, 24, 25, 26, 27, 28			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources - None			
Higher Risk Sources			
18A	Northeastern High School	UST	Heating Oil UST (x1): 4,000-gallon capacity. Integrated pest management utilized. May apply pesticides as needed to fields to maintain.
6A	Johnstone Supply	Chemical Storage	R-22: x30 30lb cylinders Nitrogen: x10 10lb cylinders Acetylene: x10 10lb cylinders Oxygen
6B	Terminix	Chemical Storage	Imaxx Dual: 2 gallons of concentrate Suspend Polyzone: 5 gallons of concentrate Crossfire: 1 gallon Termidor: 1 gallon Findona: 32 aerosol cans (1lb)
1D, 2D	Charles Gray and Sons (Farm)	Agricultural Operation, AST	Diesel tank (x1): 6,000-gallon capacity Herbicide: 1 gallon Pesticide: 0.5 gallon Fungicide: 1 gallon Silos (Grain, Corn, Soybean): 6 Tractors: 4
1E, 2E	Stevenson Sand Farm	Agricultural Operation, AST	Diesel tank (x3): 4,000-gallon capacity Gasoline tank (x2): 500-gallon capacity Nitrogen tank: 6,000 gallons Chemical Shed
Moderate Risk Sources			
5A	Big Daddy Car Wash	Car Wash	15 Gallon Bucket of Soap: 1 5 Gallon Bucket of wax: 1

15A, 17A	South Park Sports Complex	Recreation, Stormwater	Round-up: 5 gal per year Speed Zone: 4 gal per year Oxadiazon: 8 gal per year Fertilizer Application: 8 tons per year (In storage) Round-up: 2.5 gallons Speed Zone: 2.5 gallons Andro: 2 pounds SW7090224: State Stormwater - HD - Detention Pond
1F	Stevenson Sand Inc.	AST	Diesel Tank (x1): 3,000-gallon capacity Backhoe: 2 Road Grader: 1 Tractor: 2
11A	Northeast High School Lift Station	Lift Station	
11B	Hunter's Lake Lift Station	Lift Station	*Generator
11C	Summerfield Lift Station	Lift Station	
11D	Ida Acres Lift Station	Lift Station	
11E	Peachtree North Lift Station	Lift Station	
11F	Perkins Lane Lift Station	Lift Station	
N/A	Inactive Well #19	Inactive Well	
Lower Risk Sources			
17B	South Park	Stormwater	SW7970921: State Stormwater - HD - Detention Pond
17C	Big D's Restaurant, Sports Bar, and Laundromat	Stormwater	SW7100507: State Stormwater - Exempted *Restaurant, Sports Bar, and Laundromat are outside of WHPA. Coordinates put permit inside of range.
17D	Towne South Church of Christ - Addition & Parking Expansion	Stormwater	SW7140501: Towne South Church of Christ - Addition & Parking Expansion
17E	Queenswood Phase VIII & IX - Express	Stormwater	SW7060306: State Stormwater - Low Density
17F	Hunters Lake - express	Stormwater	SW7070215: State Stormwater - HD - Detention Pond
17G	Savin Woods – Express	Stormwater	SW7070212: State Stormwater - HD - Detention Pond
17H	Summerfield Phase II	Stormwater	SW7020212: State Stormwater - HD - Detention Pond


18A
11A
11B
11C
1D
2D
11D
11E
1F
1E
2E
11F
6A
6B
5A
Pasquotank County WHPA #2
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
Chemical Storage
Underground Storage Tank
Agricultural Operations
Lift Station
Above Ground Storage Tank
Car Wash
Well #11 Individual WHPA
Well #12 Individual WHPA
Well #13 Individual WHPA
Well #14 Individual WHPA
Well #15 Individual WHPA
Well #16 Individual WHPA
Well #17 Individual WHPA
Well #18 Individual WHPA
Well #19A Individual WHPA
Well #23 Individual WHPA
Well #24 Individual WHPA
Well #25 Individual WHPA
Well #26 Individual WHPA
Well #27 Individual WHPA
Well #28 Individual WHPA
Pasquotank WHPAs 2020
N
Feet
0 650 1,300 2,600 3,900 5,200


Pasquotank County WHPA #2
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
Recreation
Stormwater
N
Well #11 Individual WHPA
Well #12 Individual WHPA
Well #13 Individual WHPA
Well #14 Individual WHPA
Well #15 Individual WHPA
Well #16 Individual WHPA
Well #17 Individual WHPA
Well #18 Individual WHPA
Well #19A Individual WHPA
Well #23 Individual WHPA
Well #24 Individual WHPA
Well #25 Individual WHPA
Well #26 Individual WHPA
Well #27 Individual WHPA
Well #28 Individual WHPA
Pasquotank WHPAs 2020
Feet
0 650 1,300 2,600 3,900 5,200
17F
17G
17H
17E
15A,17A
17B
17C
1F
17D

WHPA #3: Wells #20, 21, and 22			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources-None			
Higher Risk Sources			
7A	Electrical Substation	Electrical Substation	Likely contains mineral oil proportional to the size of the substation.
Moderate Risk Sources			
15B,17I	River Road Soccer Complex	Recreation, Stormwater	SW7080205: State Stormwater - HD - Detention Pond
11G	Heron's Ridge Lift Station	Lift Station	
11H	River Road Middle School Lift Station	Lift Station	
11I	Tooley Harbor Lift Station	Lift Station	*Generator
11J	Elizabeth Gardens Lift Station	Lift Station	
11K	River Road Lift Station	Lift Station	
11L	Pelican Pointe II Lift Station	Lift Station	
Lower Risk Sources			
13A	Hickory Village Mobile Home Park	Mobile Home Park	Possible higher density septic.
13B	Riverbreeze Mobile Home Park	Mobile Home Park	Possible higher density septic.
16A	Weeksville Secure Self Storage	Storage	Storage Units: ~300
17J	Tooley Harbor Phase – 1	Stormwater	SW7041217: State Stormwater - HD - Detention Pond
17K	Harbor Bay Townhomes	Stormwater	SW7050429: State Stormwater - HD - Detention Pond


Pasquotank County WHPA #3
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
Electrical Substation
Lift Station
Recreation
Mobile Home Park
Storage
Stormwater
Well #20 Individual WHPA
Well #21 Individual WHPA
Well #22 Individual WHPA
Pasquotank WHPAs 2020
N
Feet
0 230 460 920 1,380 1,840
17J
11H
11G
17K
11I
15B
17I
13B
11J
7A
11K
13A
11L
16A

WHPA #4: Wells #1A, 2, 3B, 4, 5A, 6, 7, 8, 9, and 10			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources - None			
#38001	City Beverage Co.	Pollution Incident **(Active)**	
#31726	Elizabeth City Airport	Pollution Incident **(Close out 10/22/2015, NRP 12/11/2015)**	
Higher Risk Sources			
1G, 3A, 6C, 8A, 8B, 14A, 17L, 17M, 17N, 17O, 18B	Elizabeth City Airport/Coast Guard/DRS Technologies (All locations same complex)	AST, Airport/Military, Chemical Storage, Hazardous Waste, NPDES, Stormwater	Coast Guard: JP-5, Diesel, Gasoline, Various Paints (Chromium), Solvents, AFFF, Pesticides/Herbicides, and wastewater: see appendix for quantities. SW7091117: USCG-Replacement Mini-Mart/Exchange-Support Center Elizabeth City RCRA Part B: #NC2690308232 LQG for Heavy Maintenance Facility #NC0991302218 Fuel Oil UST (x1): 25,000-gallon capacity Airport AV Gas and Jet Fuel: See appendix for quantities. #NCG150034: COC General Permit SW7060532: State Stormwater - HD – Other SW7090412: State Stormwater - HD - Detention Pond SW7080711: State Stormwater - HD - Detention Pond

1H, 12A, 17P	City Beverage	Manufacturing, AST, Stormwater	Highway Diesel Tank (x1): 10,000-gallon capacity Regular Unleaded Gasoline (x1): 10,000-gallon capacity
N/A See appendix for map	Pasquotank County Weeksville Water Treatment Plant		Bleach, Caustic, Aqua Mag, HFS, Potassium, Ammonia, Polymer, and Sodium Bisulfate: See appendix for manifest. Permit #NC0043583
18C	Eagle Mart 3	UST	Gasoline Tank (x1): 10,000-gallon capacity Kerosene Tank (x1): 1,000-gallon capacity Kerosene Tank (x1): 3,000-gallon capacity Gasoline Tank (x2): 3,000-gallon capacity No ASTs.
1I, 2F	Newbern Farm	AST, Agricultural Operations	Fuel tank (unspecified): 1,000 gallons Chemical Storage Shed Old tractors: 10 Old farm trucks Grain storage
Moderate Risk Sources			
1J, 2G	Mercer Farm		1,000-gallon Diesel Tank: 1 Tractors: 4
1K, 2H	Brothers Farm		Silos (corn, grain, soybeans): 4 Diesel Tank (x1): 3,000-gallon capacity Highway Diesel Tank (x1): 1,000-gallon capacity
2I	Small Bulman Farm		Tractors: 6
9A(#1)	NC Hwy 344	Highway	
10C	Pasquotank County WTF Land App #1	Land Application	WQ0008008: Class B Residuals Permit. (In 2018) A total 138.50 dry tons/299,500 gallons of residuals were land applied.

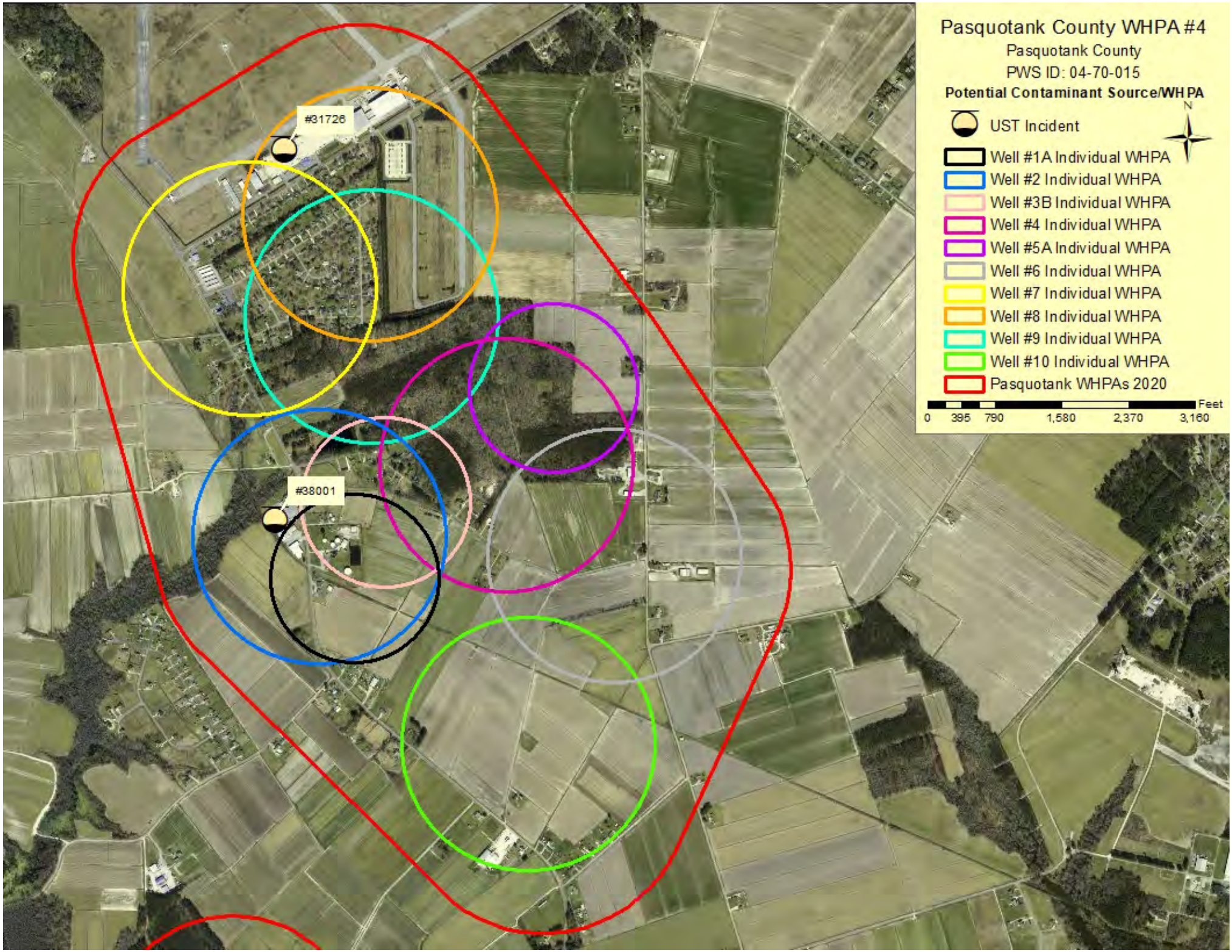
10D	Pasquotank County WTF Land App #2	Land Application	WQ0008008: Class B Residuals Permit. (In 2018) A total 138.50 dry tons/299,500 gallons of residuals were land applied.
11M	Tamsco Lift Station	Lift Station	
11N	EC Airport Lift Station (coordinates away from main buildings)	Lift Station	*Generator
1L	C&W Grading	AST	6,000-Gallon Diesel Tank: 1 Excavators: 2 Bulldozers: 2 Semi-truck: 3
N/A	Inactive Well #3A	Inactive Well	
N/A	Inactive Well #5	Inactive Well	
Lower Risk Sources			
17Q	Warehouse And Mini - Storage Complex	Stormwater	SW7030707: State Stormwater - HD - Detention Pond
16B	Magic Mini Storage	Storage	Storage Units: ~215

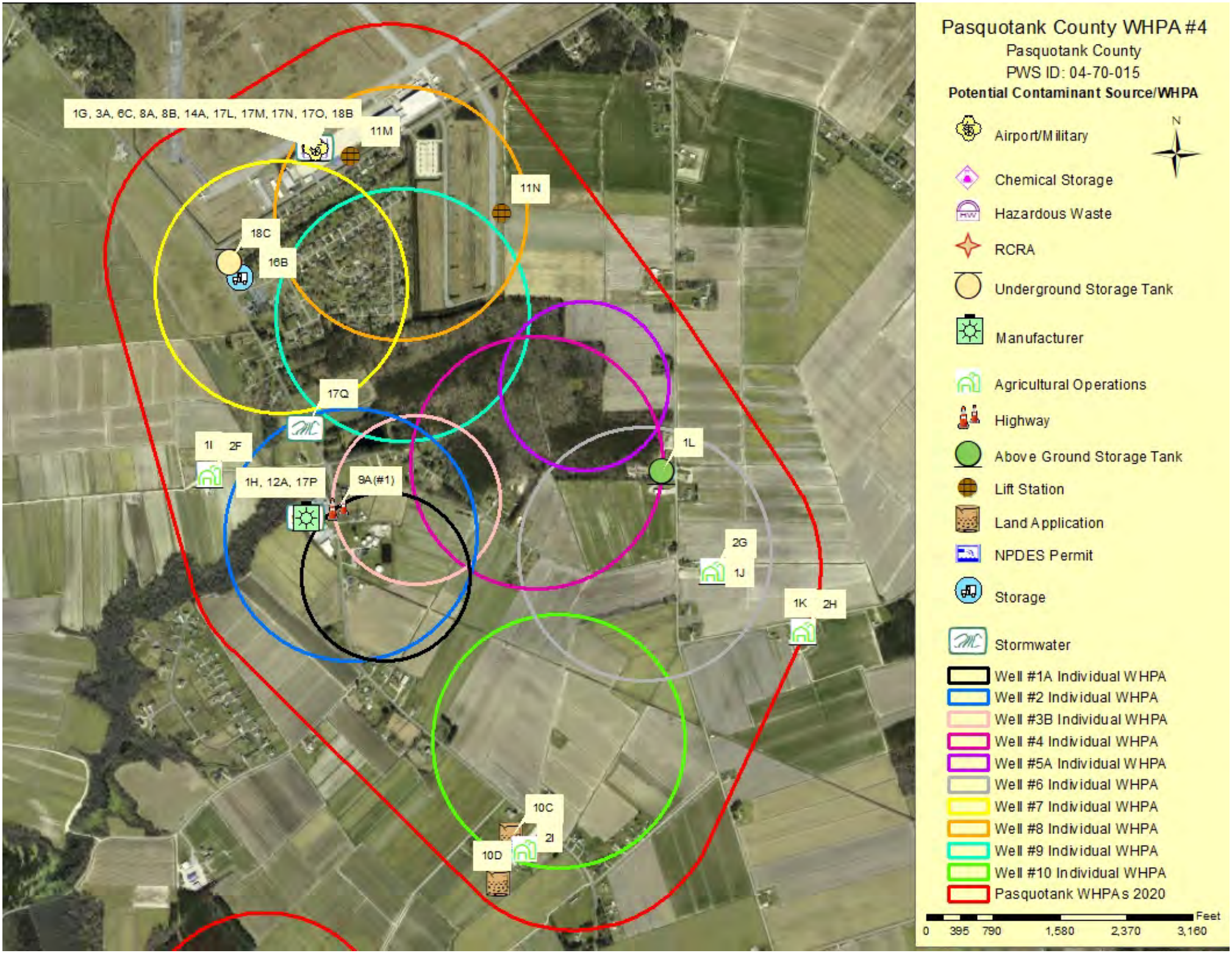
#38001 WA-26821 City Beverage Co (Active): The incident was reported in 2009 when one (1) 10,000-gallon Diesel tank and one (1) 10,000-gallon gasoline tank was removed from the site. Soil was over excavated, however groundwater was encountered and tested above GCL. A Corrective Action Plan was approved in 2014 and included two (2) Aggressive Fluid Vapor Recovery events for monitoring well #10 and semi-annual groundwater monitoring events. The most recent documentation is from January 27th, 2021 stating that groundwater is still above 2L standards.

#31726 WA-26529 Elizabeth City Airport: In 2007, two (2) Jet A Fuel USTs and one (1) aviation gasoline UST were removed. The incident was closed out on October 22nd, 2015 with an NRP on December 11th, 2015.

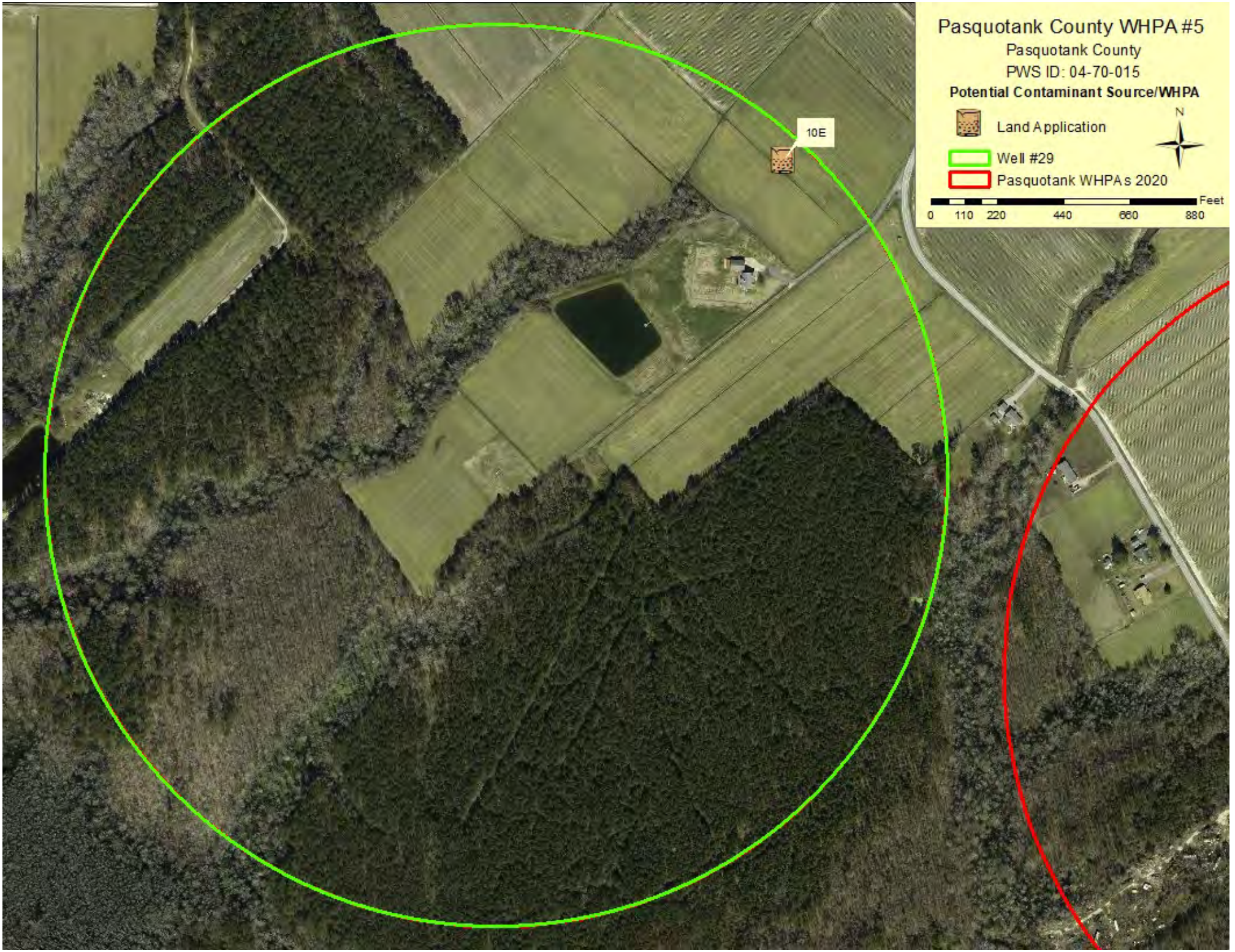
Resolved incidents that do not exceed standards (Not included in list/map/risk assessment):

#87625 WA-88287 NC DENR Division of Forestry Services (AST): In 1988, staining around a known above ground storage tank was reported. This tank was known to contain ammonium sulfate and is estimated to have leaked between 1,500 and 4,000 gallons. It was found that 800 gallons were missing from the inventory. Prompt action was taken to contain and collect the leaked chemical. The tank was on top of a cement pad and it was determined that there was no danger to groundwater in the area. The WaRO determined that no adverse impacts had occurred and the site was closed out on April 25th, 1989.


Pasquotank County WHPA #4
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
UST Incident
N
Well #1A Individual WHPA
Well #2 Individual WHPA
Well #3B Individual WHPA
Well #4 Individual WHPA
Well #5A Individual WHPA
Well #6 Individual WHPA
Well #7 Individual WHPA
Well #8 Individual WHPA
Well #9 Individual WHPA
Well #10 Individual WHPA
Pasquotank WHPAs 2020
Feet
0 395 790 1,580 2,370 3,160
#31726
#38001


1G, 3A, 6C, 8A, 8B, 14A, 17L, 17M, 17N, 17O, 18B
11M
11N
18C
16B
17Q
1I
2F
1H, 12A, 17P
9A(#1)
1L
2G
1J
1K
2H
10C
2I
10D
Pasquotank County WHPA #4
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
N
Airport/Military
Chemical Storage
Hazardous Waste
RCRA
Underground Storage Tank
Manufacturer
Agricultural Operations
Highway
Above Ground Storage Tank
Lift Station
Land Application
NPDES Permit
Storage
Stormwater
Well #1A Individual WHPA
Well #2 Individual WHPA
Well #3B Individual WHPA
Well #4 Individual WHPA
Well #5A Individual WHPA
Well #6 Individual WHPA
Well #7 Individual WHPA
Well #8 Individual WHPA
Well #9 Individual WHPA
Well #10 Individual WHPA
Pasquotank WHPAs 2020
Feet
0
395
790
1,580
2,370
3,160

WHPA #5: Well #29			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources - None			
Higher Risk Sources – None			
Moderate Risk Sources			
10E	Pasquotank County WTF Land App #3	Land Application	WQ0008008: Class B Residual Biosolid Land Application. (In 2010) 22.4 acres utilized with 3.2 lbs of p per acre average.
Lower Risk Sources - None			


Pasquotank County WHPA #5
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
Land Application
Well #29
Pasquotank WHPAs 2020
N
Feet
0
110
220
440
660
880
10E

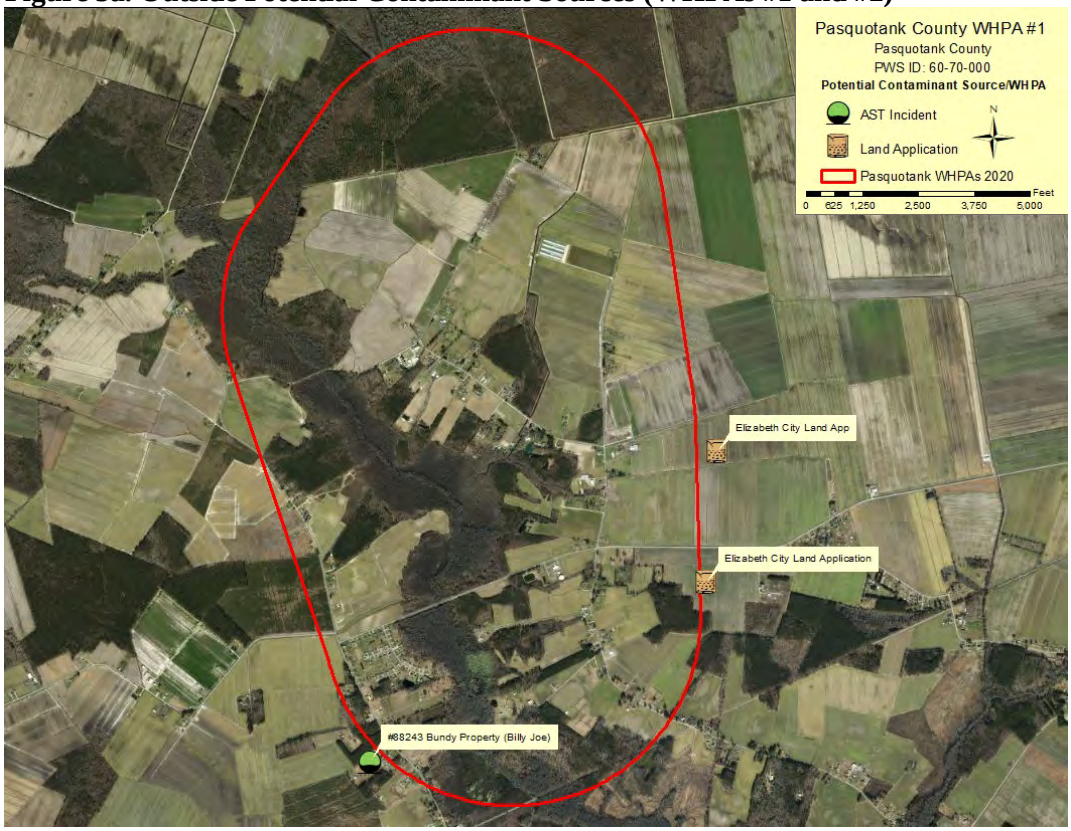
WHPA #6: Well #30			
Map Code	**PCS Site**	**Potential Contaminant**	**Quantity**
Known Risk Sources - None			
Higher Risk Sources - None			
Moderate Risk Sources			
10F	Pasquotank County WTF Land App #4	Land Application	WQ0008008: Class B Residuals Permit. (In 2018) A total 138.50 dry tons/299,500 gallons of residuals were land applied.
10G	Pasquotank County WTF Land App #5	Land Application	WQ0008008: Class B Residuals Permit. (In 2018) A total 138.50 dry tons/299,500 gallons of residuals were land applied.
9A(#2)	NC Hwy 344	Highway	
Lower Risk Sources			
17R	Union Chapel Missionary Baptist	Stormwater	SW7051031: State Stormwater - Low Density

*Magic Mini Storage is not present in this WHPA.


Pasquotank County WHPA #6
Pasquotank County
PWS ID: 04-70-015
Potential Contaminant Source/WHPA
Highway
Land Application
Stormwater
Well #30 Individual WHPA
Pasquotank WHPAs 2020
N
Feet
0
110
220
440
660
880
10G
10F
9A(#2)
17R

Risks outside of the Wellhead Protection Area

Figure 5a. Outside Potential Contaminant Sources (WHPAs #1 and #2)



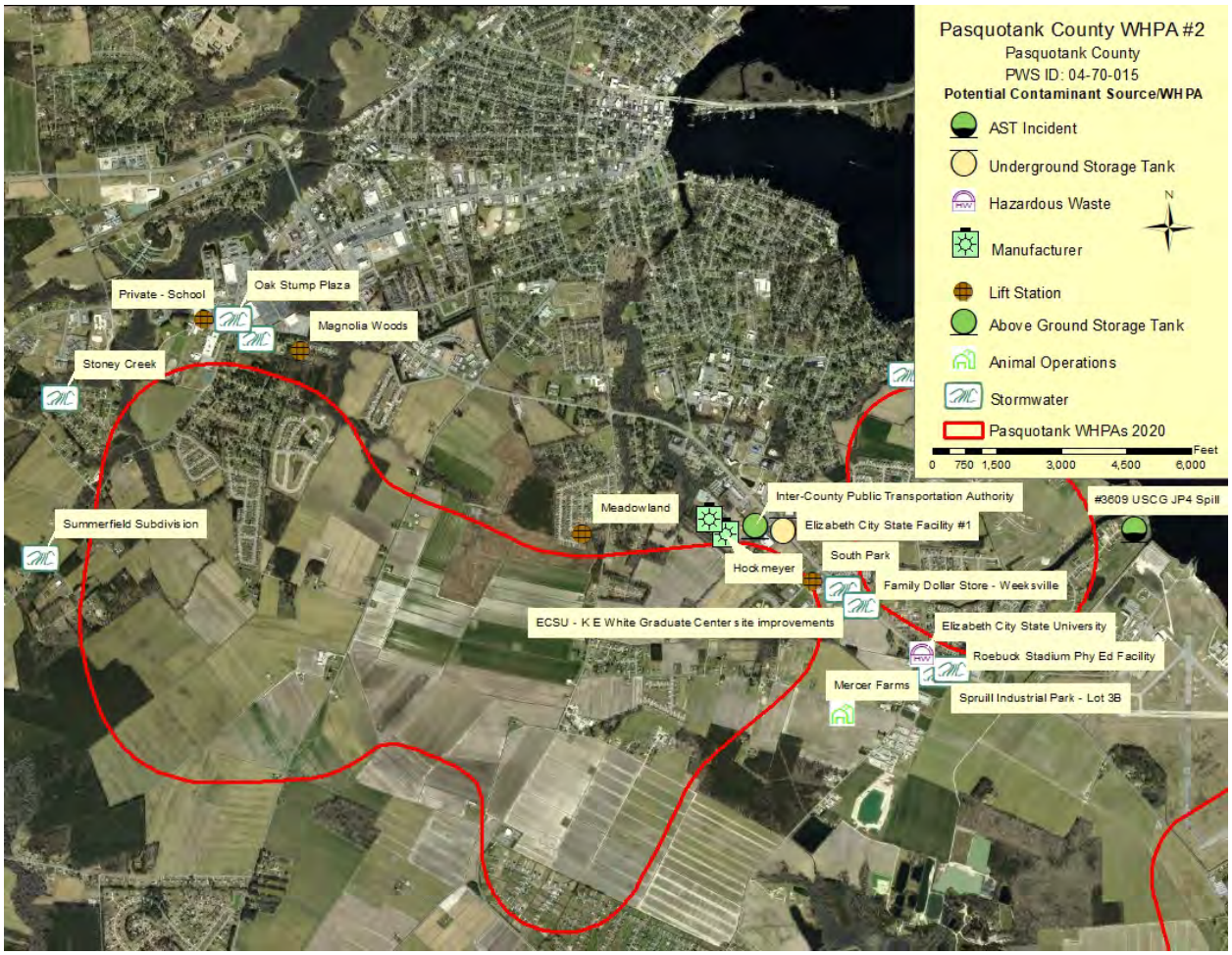
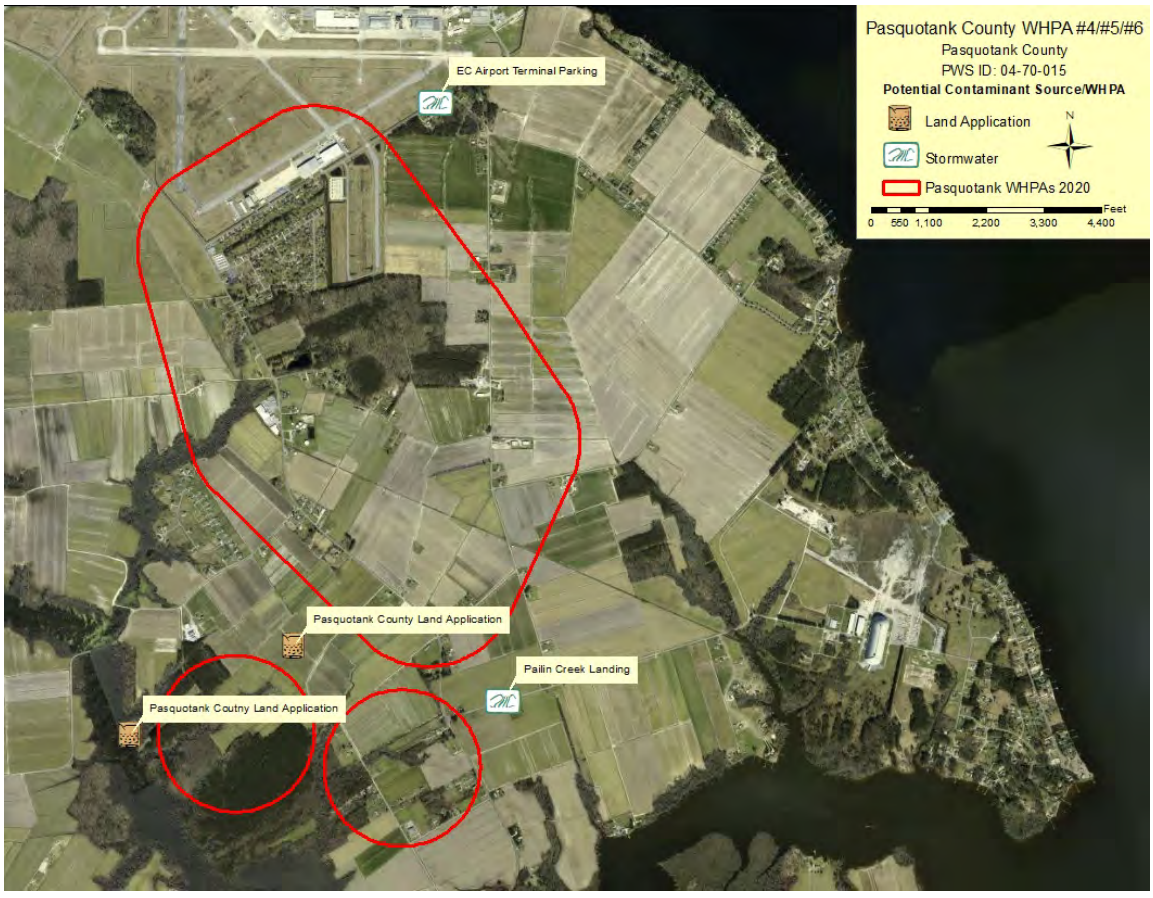


Figure 5b. Outside Potential Contaminant Sources (WHPAs #3, #4, #5, and #6)



Outside PCS Summary

#17072 M.C. Price Grocery: If this PCS were in range, it would be classified as a UST Pollution Incident and ranked as an existing risk. The site was closed out on June 2nd, 2014 with a notice and restriction recorded on May 14th, 2014.
*Only depicted in the map for WHPA #3

J&J Service Center/MST Service Center: If this PCS were in range, it would be classified as a UST Pollution Incident and ranked as an existing risk. The site was closed out on January 2nd, 2007 and a notice and restriction was filed on December 17th, 2006.
*Only depicted in the map for WHPA #3

#3829 USCG Fuel Farm Leak: If this PCS were in range, it would be classified as a UST Pollution Incident and ranked as an existing risk. This incident is active and was discovered in 1988. The last listed report was filed in 2014. A number of Corrective Action Plan amendments have been made throughout the years active; the site is currently undergoing green modifications as a form of remediation.

#3609 USCG JP4 Spill: If this PCS were in range, it would be classified as an AST Pollution Incident and ranked as an existing risk. This incident is active and was discovered in 1988. The current available data suggests that the site is undergoing remediation for benzene and MTBE with calcium peroxide injections. The last report was filed in 2012.

#68243 Bundy Property (Billy Joe): This PCS was part of a complaint series that is present in WHPA #1 likely caused by a junk complaint rather than a petroleum complaint. If this PCS were in range, it would be classified as an AST Pollution Incident and ranked as an existing risk.

Hoffman Flow Controls and Hockmeyer Equipment Corporation: These PCS sites are located on Kitty Hawk Ln in close proximity and would likely be classified as manufacturers. The sites would be ranked as high risk and could contain a variety of PCSs depending on the nature of manufacturing that the site performs. These PCSs may be present in process or in storage.

Elizabeth City State Facility #1: This PCS site is located off Weeksville Rd. and would be classified as an underground storage tank (UST). Underground storage tanks are ranked as high risk. The site contains two (2) 10,000-gallon heating oil tank and two (2) 500-gallon heating oil tank.

Elizabeth City State University: This PCS site is located off Weeksville Rd. and would be classified as a Hazardous waste facility. Hazardous waste facilities are ranked as high risk. The site has permit #NCD986215820.

Lift Stations (Private-School, Magnloia Woods, Meadowland, Grace Dr, Winfield, Winslow Acres, River View Estates, South Park, and Pelican Pointe I): These PCS sites are located in multiple locations around Elizabeth City and are owned by the City of Elizabeth City. Lift stations are ranked as moderate risk. These sites would contain wastewater and may contain generators.

Agricultural Operations (Mercer Farms): This PCS site is located on Perkins Ln. and would be classified as an agricultural operation, as well as potentially an above ground storage site. Both agricultural operations and above ground storage sites are ranked as moderate risks. A farm may contain pesticides, fertilizers, fuel tanks, silos, and other associated PCSs.

Inter-County Public Transportation Authority: This PCS site is located on Kitty Hawk Ln and would likely be classified as an above ground storage tank site. Should the site contain an above ground storage

tank for fuel due to the number of fleet vehicles onsite, the site would be ranked as a moderate risk. The numerous fleet vehicles may account for additional PCS classifications and rankings.

Pasquotank County and Elizabeth City: These sites are located in fields around WHPAs #5 and #1 respectively. Land applications sites are ranked as moderate risks. A land application site will contain treated residuals from a water or wastewater plant.

Stormwater (Summerfield Subdivision, Stoney Creek, Oak Stump Plaza, Family Dollar, ECSU - K E White, Roebuck Stadium Phy Ed, Spruill Industrial Park, Mariner's Landing Phase I, Albemarle Hospital Surgery and Emergency, EC Airport Terminal Parking, Palin Creek Landing: Stormwater permits are numerous around and inside of the WHPAs. These sites would be ranked as low risk and there are numerous reasons that a site may contain a stormwater permit. Detention ponds are one of, if not the most, common usage of stormwater permits in the area.

IV. RISK ASSESSMENT

A Risk Assessment for Pasquotank County was conducted. For each WHPA, the PCSs were ranked according to the threat each presented to the water supply well or wells. The following method was used to rank each PCS in each WHPA:

Each PCS was assigned to a risk category of higher, moderate, or lower based on information adapted from the EPA (1993), and from the Oregon Wellhead Protection Program. Each PCS was assigned a numerical "category" score to correspond with the risk category (e.g., higher (H)-3, moderate (M)-2, lower (L)-1). Sites with known soil and/or groundwater contamination were assigned a score of "4" and a symbol of "X." Each site of potential contamination was then assigned a "proximity" score calculated with the following equation:

proximity score =1-(distance from the well (or well center point for combined wells)/radius of the WHPA)

The final PCS ranking was obtained by multiplying the category score by the proximity score for each potential contaminant site. This resulted in a relative ranking of each PCS within a given WHPA according to the threat it poses to the water supply well. Assessing the relative risk of contamination within each WHPA from the PCSs it contains allows for a determination of (1) which water supply wells are at greatest risk of contamination, and (2) which PCSs should be considered first with respect to wellhead protection. Once the risk assessment is carried out, priorities can be set to more effectively manage the PCSs. **Table 5a-d** below shows the results of this assessment.

Table 5a-d. PCS Risk Score and Relative Ranking (WHPA #1)

By WHPA:

WHPA #1

Well Site: PIKE

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1B, 2A	K&L Farms	M,M	3500	779.78	0.78	4	3.12
1A, 4A	Chicken Farm	H,M	3500	3,282.49	0.06	5	0.30
						Total Risk Score	3.42

Well Site: FOREMAN BUNDY

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A (see appendix)	Pasquotank County Reverse Osmosis Plant	H,L	3500	1,226.77	0.65	4	2.60
1C, 2C	Rogerson Farm	M,M	3500	3,026.31	0.14	4	0.56
10A	Elizabeth City Land App #1	M	3500	3,311.58	0.05	2	0.10
						Total Risk Score	3.26

Well Site: WESLEY 1

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1A, 4A	Chicken Farm	H,M	3500	1,543.25	0.56	5	2.80
1B, 2A	K&L Farms	M,M	3500	2,926.47	0.16	4	0.64
						Total Risk Score	3.44

Well Site: LARABEE

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1C, 2C	Rogerson Farm	M,M	3000	2,088.72	0.30	4	1.20
2B	Larry Garage	M	3000	2,606.79	0.13	2	0.26
1B, 2A	K&L Farms	M,M	3000	2,942.41	0.02	4	0.08
10B	Elizabeth City Land App #2	M	3000	2,926.15	0.02	2	0.04
						Total Risk Score	1.58

OUTSIDE OF INDIVIDUAL WHPAS

Map Code	PCS Site	Risk
#88242	Warden Property (Norman L.. Jr)	X
#88247	Jackson Property (John)	X

Table 5b. PCS Risk Score and Relative Ranking (WHPA #2)

WHPA #2

Well Site: W11

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
15A, 17A	South Park Sports Complex*	M,L	1500	1,222.09	0.19	3	0.57
						Total Risk Score	0.57

Well Site: W12

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11E	Peachtree North Lift Station	M	1500	561.75	0.63	2	1.26
1F	Stevenson Sand	M	1500	1,262.55	0.16	2	0.32
						Total Risk Score	1.58

Well Site: W13

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1F	Stevenson Sand	M	1500	516.42	0.66	2	1.32
1E, 2E	Stevenson Sand Farm	H,M	1500	1,137.19	0.24	5	1.20
						Total Risk Score	2.52

Well Site: W14

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
17D	Towne South Church of Christ stormwater	L	1500	1,440.95	0.04	1	0.04
						Total Risk Score	0.04

Well Site: W15

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A	Inactive Well #19	M	1500	531.41	0.35	2	0.70
						Total Risk Score	0.70

Well Site: W16

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A	Inactive Well #19	M	1500	831.78	0.45	2	0.90
						Total Risk Score	0.90

Well Site: W17

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A	Inactive Well #19	M	1500	960.25	0.64	2	1.28
						Total Risk Score	1.28

Well Site: W18

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1F	Stevenson Sand	M	1500	1,128.50	0.25	2	0.50
						Total Risk Score	0.50

Well Site: W19A

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1F	Stevenson Sand	M	1500	447.39	0.70	2	1.40
						Total Risk Score	1.40

Well Site: W23

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11C	Summerfield Lift Station	M	2000	1,183.84	0.41	2	0.82
						Total Risk Score	0.82

Well Site: W24

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11C	Summerfield Lift Station	M	1500	856.45	0.43	2	0.86
11B	Hunter's Lake Lift Station	M	1500	1,104.95	0.26	2	0.52
						Total Risk Score	1.38

Well Site: W25

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11C	Summerfield Lift Station	M	2000	261.71	0.87	2	1.74
17H	Summerfield Phase II Stormwater	L	2000	973.80	0.51	1	0.51
						Total Risk Score	2.25

Well Site: W26

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
						Total Risk Score	None

Well Site: W27

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
17E	Queenswood Phase VIII & IX - Express (SW)	L	2000	1,545.77	0.23	1	0.23
						Total Risk Score	0.23

Well Site: W28

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1D, 2D	Charles Gray and Sons (Farm)	M,M	1500	731.22	0.51	4	2.04
14E	Queenswood Phase VIII & IX - Express (SW)	L	1500	371.68	0.75	1	0.75
						Total Risk Score	2.79

OUTSIDE OF INDIVIDUAL WHPAS

Map Code	PCS Site	Risk
6A	Johnstone Supply	H
6B	Terminix	H
18A	Northeastern High School	H
5A	Big Daddy Car Wash	M
11A	Northeastern High School Lift Station	M
11D	Ida Acres Lift Station	M
11F	Perkins Lane Lift Station	M
17B	South Park Sports Complex SW (#2)	L
17C	Big D's Rest., Sports Bar, and Laundry (SW)	L
17F	Hunters Lake-Express Stormwater	L
17G	Savin Woods-Express Stormwater	L

Table 5c. PCS Risk Score and Relative Ranking (WHPAs #3 and #4)

WHPA #3

Well Site: W20

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11H	River Road Middle School Lift Station	M	1500	240.99	0.84	2	1.68
15B, 17I	River Road Soccer Complex Stormwater	M,L	1500	994.28	0.34	3	1.02
17J	Tooley Harbor Phase – 1 Stormwater	L	1500	568.40	0.62	1	0.62
17K	Harbor Bay Townhomes Stormwater	L	1500	587.88	0.61	1	0.61
11G	Heron's Ridge Lift Station	M	1500	1,406.58	0.06	2	0.12
Total Risk Score							4.05

Well Site: W21

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
15B, 17I	River Road Soccer Complex	M,L	1500	718.40	0.52	3	1.56
7A	Electrical Substation	H	1500	1,310.50	0.13	3	0.39
13B	Riverbreeze Mobile Home Park *	L	1500	986.81	0.34	1	0.34
17K	Harbor Bay Townhomes Stormwater	L	1500	1,354.88	0.10	1	0.10
11H	River Road Middle School Lift Station	M	1500	1,476.92	0.02	2	0.04
13A	Hickory Village Mobile Home Park *	L	1500	1,445.03	0.04	1	0.04
11K	River Road Lift Station	M	1500	1,500.00	0.00	2	0.00
Total Risk Score							2.47

Well Site: W22

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
11I	Tooley Harbor Lift Station	M	2000	1,230.24	0.38	2	0.76
15B, 17I	River Road Soccer Complex	M,L	2000	1,138.58	0.43	3	1.29
7A	Electrical Substation	H	2000	1,859.72	0.07	3	0.21
13A	Hickory Village Mobile Home Park *	L	2000	1,733.67	0.13	1	0.13
13B	Riverbreeze Mobile Home Park *	L	2000	1,757.43	0.12	1	0.12
Total Risk Score							2.51

OUTSIDE OF INDIVIDUAL WHPAS

Map Code	PCS Site	Risk
11J	Elizabeth Gardens Lift Station	M
11L	Pelican Pointe II Lift Station	M
16A	Weeksville Secure Self Storage	L

WHPA #4

Well Site: W01A

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
#38001, 1H, 12A, 17P	City Beverage Plant*	X,H,M,L	1000	705.85	0.29	10	2.90
N/A (see appendix)	Weeksville Water Treatment Plant*	H,L	1000	360.14	0.64	4	2.56
9A(#1)	NC Highway 344*	M	1000	503.69	0.50	2	1.00
Total Risk Score							5.46

Well Site: W02

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
#38001, 1H, 12A, 17P	City Beverage Plant*	X,H,M,L	1500	346.20	0.77	10	7.70
N/A (see appendix)	Weeksville Water Treatment Plant*	H,L	1500	270.65	0.82	4	3.28
9A(#1)	NC Highway 344*	M	1500	127.89	0.91	2	1.82
N/A	Inactive Well #3A	M	1500	1,150.28	0.23	2	0.46
17Q	Warehouse/Mini - Storage Complex (SW)	L	1500	1,368.54	0.09	1	0.09
Total Risk Score							13.35

Well Site: W03B

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A (see appendix)	Weeksville Water Treatment Plant*	H,L	1000	488.49	0.51	4	2.04
N/A	Inactive Well #3A	M	1000	273.19	0.73	2	1.46
9A(#1)	NC Highway 344*	M	1000	948.36	0.05	2	0.10
Total Risk Score							3.60

Well Site: W04

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A	Inactive Well #5	M	1500	1,054.61	0.30	2	0.60
N/A	Inactive Well #3A	M	1500	1,242.48	0.17	2	0.34
1J	C&W Grading	M	1500	1,478.55	0.01	2	0.02
Total Risk Score							0.96

Well Site: W05A

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
N/A	Inactive Well #5	M	1000	16.08	0.98392	2	1.97
Total Risk Score							1.97

Well Site: W06

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
1J, 2G	Mercer Farm	M,M	1500	831.57	0.45	4	1.80
1J	C&W Grading	M	1500	994.66	0.34	2	0.68
Total Risk Score							2.48

Well Site: W07

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
#31726, 1G, 3A, 6C, 8A, 8B, 14A, 17L, 17M, 17N, 17O, 18B	EC Airport Incident, Elizabeth City Airport, Coast Guard, DRS Technologies*	X,H,H,H, H,H,H, L,L,L,L,L	1500	965.29	0.36	27	9.72
18C	Eagle Mart 3	H	1500	683.74	0.54	3	1.62
9A(#1)	NC Highway 344*	M	1500	492.46	0.67	2	1.34
16B	Magic Mini Storage	L	1500	498.81	0.67	1	0.67
Total Risk Score							13.35

Well Site: W08

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
#31726, 1G, 3A, 6C, 8A, 8B, 14A, 17L, 17M, 17N, 17O, 18B	EC Airport Incident, Elizabeth City Airport, Coast Guard, DRS Technologies*	X,H,H,H, H,H,H, L,L,L,L,L	1500	924.19	0.38	27	10.26
11M	Tamsco Lift Station	M	1500	891.98	0.41	2	0.82
11N	EC Airport Lift Station	M	1500	1,204.63	0.20	2	0.40
Total Risk Score							11.48

Well Site: W09

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
Total Risk Score							None

Well Site: W10

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
2I	Small Bulman Farm	M	1500	831.57	0.45	2	0.90
9A(#1)	NC Highway 344*	M	1500	896.72	0.40	2	0.80
10C	Pasquotank County WTF Land App #1	M	1500	1,257.75	0.16	2	0.32
Total Risk Score							2.02

OUTSIDE OF INDIVIDUAL WHPAS

Map Code	PCS Site	Risk
1I, 2F	Newbern Farm	H,M
1K, 2H	Brothers Farm	M,M
10D	Pasquotank County WTF Land App #2	M

Table 5d. PCS Risk Score and Relative Ranking (WHPAs #5 and #6)

WHPA #5

Well Site: W29

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
10E	Pasquotank County WTF Land App #3	M	1500	1,418.01	0.05	2	0.10
Total Risk Score							0.10

WHPA #6

Well Site: W30

Map Code	PCS Site	Risk	WHP Radius	Distance	Proximity Score	Category Score	Final PCS Score
10F	Pasquotank County WTF Land App #4	M	1500	713.40	0.52	2	1.04
10G	Pasquotank County WTF Land App #5	M	1500	892.21	0.41	2	0.82
9A(#2)	NC Highway 344*	M	1500	1,219.88	0.19	2	0.38
17R	Union Chapel Missionary Baptist	L	1500	1,246.56	0.17	1	0.17
Total Risk Score							2.41

Sites labeled with * are measured from imagery as opposed to set coordinates.

Risk Assessment Summary

Below are the wells ranked in order from most at risk to least at risk based on the total risk scores.

Table 6. Total risk scores for all individual WHPAs

Well	Well Grouping	Risk
#7	WHPA #4	13.35
#2	WHPA #4	13.35
#8	WHPA #4	11.48
#1A	WHPA #4	5.46
#20	WHPA #3	4.05
#3B	WHPA #4	3.60
Wesley 1	WHPA #1	3.44
Pike	WHPA #1	3.42
Foreman Bundy	WHPA #1	3.26
#28	WHPA #2	2.79
#13	WHPA #2	2.52
#22	WHPA #3	2.51
#6	WHPA #4	2.48
#21	WHPA #3	2.47
#30	WHPA #6	2.41
#25	WHPA #2	2.25
#10	WHPA #4	2.02
#5A	WHPA #4	1.97
#12	WHPA #2	1.58
Larabee	WHPA #1	1.58
#19A	WHPA #2	1.40
#24	WHPA #2	1.38
#17	WHPA #2	1.28
#4	WHPA #4	0.96
#16	WHPA #2	0.90
#23	WHPA #2	0.82
#15	WHPA #2	0.70
#11	WHPA #2	0.57
#18	WHPA #2	0.50
#27	WHPA #2	0.23
#29	WHPA #5	0.10
#14	WHPA #2	0.04
#26	WHPA #2	None
#9	WHPA #4	None

As shown in **Table 5a-d** on pgs. 47-50 and in **Table 6** above, the top five (5) wells at highest risk are: Well #7, Well #2, Well #8, Well #1A, and Well #20, which makes them the most vulnerable. The highest risk PCSs for Well #7 are: EC Airport/Coast Guard, Eagle Mart #3, NC Highway 344, and Magic Mini Storage. The highest risk PCSs for Well #2 are: City Beverage Plant, Weeksville Water Treatment Plant, NC Highway 344, Inactive Well #3, and the Warehouse/Mini Storage stormwater permit. The highest risk PCSs for Well #8 are: EC Airport/Coast Guard, Tamsco Lift Station, and EC Airport Lift Station. The highest risk PCSs for Well #1A are: City Beverage Plant, Weeksville Water Treatment Plant, and NC Highway 344. The highest risk PCSs for Well #20 are: River Road Middle School Lift Station, River Road Soccer Complex, Tooley Harbor Phase - 1 stormwater, Harbor Bay Townhomes stormwater, and Heron's Ridge Lift Station. The top (5) lowest risk wells are: Well #27, Well #29, Well #14, Well #26, and Well #9. The only risk PCS identified for Well #27 is Queenswood Phase VIII & IX – Express

stormwater. The only risk PCS identified for Well #29 is Pasquotank County WTF Land App #3. The only risk PCS identified for Well #14 is Towne South Church of Christ stormwater. Wells #9 and #26 do not have any identified PCSs in their range.

Vulnerability Assessment

A Source Water Assessment Program (SWAP) Report has been made available for Pasquotank County by the NC Public Water Supply Section. Water sources can be threatened by many potential contaminant sources, including permitted wastewater discharges, underground storage tanks, urban storm water runoff, or other types of non-point source contamination such as runoff produced by agricultural activities and land clearing for development. A source water assessment is a qualitative evaluation of the potential of a drinking water source to become contaminated by the identified potential contaminant sources (PCSs) within the delineated area. A SWAP Report consists of an assessment area delineation, a potential contaminant source inventory and map, a susceptibility rating, maps, tables and a detailed description of North Carolina's SWAP approach. The County's water source is comprised of thirty-four (34) groundwater wells, which have been assigned a qualitative susceptibility rating of Higher, Moderate, or Lower, based on a contaminant rating of Moderate or Lower and an inherent vulnerability rating of Higher, Moderate, or Lower as seen in the **Table 7a-b** on pgs. 52-53. The rating process is described in detail in Sections 3 and 6 of the SWAP Report. Pasquotank County's entire SWAP Reports for September 10th, 2020 can be found on the PWS website,

SOURCE NAME	INHERENT VULNERABILITY RATING	CONTAMINANT RATING	SUSCEPTIBILITY RATING
PASQ CO WELL #10	Higher	Lower	Moderate
PASQ CO WELL #11	Higher	Lower	Moderate
PASQ CO WELL #12	Higher	Lower	Moderate
PASQ CO WELL #13	Higher	Lower	Moderate
PASQ CO WELL #14	Higher	Lower	Moderate
PASQ CO WELL #15	Higher	Lower	Moderate
PASQ CO WELL #16	Higher	Lower	Moderate
PASQ CO WELL #17	Higher	Lower	Moderate
PASQ CO WELL #18	Higher	Lower	Moderate
PASQ CO WELL #1A	Higher	Lower	Moderate
PASQ CO WELL #2	Higher	Lower	Moderate
PASQ CO WELL #3B	Higher	Lower	Moderate
PASQ CO WELL #4	Moderate	Lower	Moderate
PASQ CO WELL #5A	Moderate	Lower	Moderate
PASQ CO WELL #6	Moderate	Lower	Moderate
PASQ CO WELL #7	Higher	Lower	Moderate
PASQ CO WELL #8	Higher	Lower	Moderate
PASQ CO WELL #9	Moderate	Lower	Moderate
WELL #19A	Higher	Lower	Moderate
WELL #20	Higher	Lower	Moderate
WELL #21	Higher	Lower	Moderate
WELL #22	Higher	Lower	Moderate
WELL #23	Moderate	Lower	Moderate
WELL #24	Moderate	Lower	Moderate
WELL #25	Moderate	Lower	Moderate
WELL #26	Moderate	Lower	Moderate

WELL #27	Higher	Lower	Moderate
WELL #28	Moderate	Lower	Moderate
WELL #29	Higher	Moderate	Higher
WELL #30	Moderate	Moderate	Moderate

Table 7a: Pasquotank County (NC0470015) SWAP Vulnerability, September 10th, 2020
The entire SWAP report including explanations for ratings can be found at:
https://www.ncwater.org/SWAP_Reports/NC0470015_SWAP_Report-20200909.pdf

Source name	inherent vulnerability rating	contaminant rating	susceptibility rating
FORMAN BUNDY WELL	Lower	Lower	Lower
LARABEE WELL	Lower	Lower	Lower
PIKE WELL	Lower	Lower	Lower
WESLEY 1 WELL	Lower	Lower	Lower

Table 7b: Pasquotank County (NC6070000) SWAP Vulnerability, September 10th, 2020
The entire SWAP report including explanations for ratings can be found at:
https://www.ncwater.org/SWAP_Reports/NC6070000_SWAP_Report-20200909.pdf

V. MANAGEMENT OF THE WELLHEAD PROTECTION AREAS

There are two methods of managing a Wellhead Protection Area. They are regulatory and non-regulatory. Pasquotank County has chosen a **non-regulatory** approach, which will include the following:

A Wellhead Protection Brochure (tri-fold) will be delivered to each resident, business, agricultural operation and industry within the wellhead protection areas. Copies of this brochure will be made available at Pasquotank County Water Department and other locations deemed necessary for public education on Wellhead Protection. In general, the brochure will convey to each citizen/business the following information:

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

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

Personnel at County owned and/or operated facilities will be educated on Wellhead Protection and steps they can take to reduce the potential for contamination (e.g., information about best management practices, standard operating procedures, waste handling practices, etc.). Pasquotank County will also contact the State Division of Environmental Assistance and Customer Service (DEACS) to investigate steps that the County can take to reduce the amount of waste released into the air and water and on the land at County owned and/or managed facilities.

Trash and Recycle

Pasquotank County does not handle trash and recycle pick-up. Scheduled hazardous waste day events can be found on the NC DEQ website.

UST

Pasquotank County will notify any individual, industry, business, or government agency installing or planning to install a regulated underground storage tank within the County's wellhead protection areas of the following regulation:

North Carolina Underground Storage Tank (UST) Regulation 15A NCAC 2N .0301 stipulates specific siting and secondary containment requirements for UST systems installed after January 1, 1991. The rule is summarized as follows:

(1) No UST system may be installed within 100 feet of a public water supply well or within 50 feet of any other well used for human consumption.

(2) Secondary containment is required for UST systems within 500 feet of a well serving a public water supply or within 100 feet of any other well used for human consumption.

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

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

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

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

AST

Owners of above ground storage tanks (ASTs) containing oil with a volume greater than 660 gallons or a combination of ASTs with an aggregate volume greater than 1320 gallons are subject to the Oil Pollution Prevention regulations contained in Federal Regulations found at 40 CFR 112. In most cases, these facilities must prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan. Pasquotank County will verify the compliance status with regard to this regulation of each subject AST located within the WHPAs. Facilities with subject ASTs found not to be in compliance with this regulation will be notified of their regulatory responsibility under this regulation and notify the NC Department of Environmental Quality, UST Section.

Pollution Incidents

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

No Further Action (NFA): For certain petroleum UST releases, a determination that no further action is required to assess or remediate soil and/or groundwater. For all releases the responsible party is required to restore soil and groundwater quality to concentration levels that are equal to or less than the standards established by State groundwater classification and water quality standards (15A NCAC 2L) before being granted No Further Action status. For the majority of releases, the groundwater contamination must be remediated, using one or more technologies, to these standard levels. However, for some releases, if stringent requirements are met, the contamination may be allowed to naturally attenuate to the standard levels or to be remediated actively to alternate concentration levels and then ·allowed to attenuate to the standard levels.

Septic Tanks and Heating Oil

All farms, residents, businesses, and industries in the WHPAs with septic tanks and heating oil tanks will be distributed a copy of the Wellhead Protection Brochure and any other information the County can obtain from County and/or State agencies on proper septic tank and heating oil tank maintenance.

Non-NPDES

Pasquotank County will contact the Division of Water Resources regarding facilities permitted to discharge wastewater to the land surface (Non-NPDES Permitted Facilities) to determine if any such operations located within the WHPA are in compliance with applicable regulatory and permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. Notification will be made to the Division of Water Resources if it is determined that the facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements.

NPDES

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

Stormwater Permits

Pasquotank County will contact the Division of Energy, Mineral and Land Resource's Washington Regional Office at 252-946-6481 regarding facilities with stormwater permits to determine that all such stormwater discharges are in compliance with applicable regulatory and permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. Notification will be made to the Division of Energy, Mineral and Land Resources if it is determined that the facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements.

Agricultural Operations (Pesticides and Fertilizers)

Pasquotank County will contact all agricultural operations within the WHPAs with pesticide storage or otherwise involved with the application of pesticides to ensure that they are pesticide operators licensed by the State of North Carolina and that proper records are maintained to ensure that all NC Pesticide Laws are adhered to. Pasquotank County will provide information to these facilities or agricultural operations on waste handling practices, best management practices, standard operating procedures, and proper waste disposal methods which could be employed to reduce the potential for ground water contamination. These facilities will also be provided with information regarding the North Carolina Division of Environmental Assistance and Customer Service (DEACS).

The County will also coordinate with the Pesticide Disposal Assistance Program (PDAP) to provide information about proper disposal of pesticides. The PDAP is a consumer services program in the North Carolina Department of Agriculture and Consumer Services. The PDAP, part of the Structural Pest Control and Pesticides Division, is a NON-REGULATORY program that provides cost-free assistance to farmers and homeowners. The goal of the Pesticide Disposal Assistance Program is to assist these citizens of North Carolina by managing and supervising the safe collection and lawful disposal of banned, out-dated, or unwanted pesticides. Additional information about the PDAP along with the current collection schedule can be located at:
http:/ /www.ncagr.gov/SPCAP /pesticides/pdap/

Pasquotank County will encourage fertilizer producers containing materials potentially hazardous to the water supply to follow all OSHA guidelines regarding safe material handling and appropriate material storage. Any fertilizer operations present in Pasquotank County will be required to stay in compliance with the groundwater standards determined by the Board of Agriculture (by the authority of Article 56. North Carolina Commercial Fertilizer Law) and enforced by the NC Department of Environmental Quality. Any fertilizer company discovered to be in non-compliance will be reported to the NC DEQ for corrective action. For federal regulations, the 40 CFR part 418 on fertilizer manufacturing may be consulted.

Animal Operations

Pasquotank County will contact the Water Quality Regional Operations Section of the Division of Water Resources concerning any lagoon, hog farm, or other permitted animal operation located within its WHPAs. The County will inform the Water Quality Regional Operations Section of the lagoon or hog farm's location within a WHPA and its proximity to a public water supply well. It will also determine if the facility is in compliance with any regulatory and permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. Notification will be made to the Division of Water Resources if it is determined that the facility has failed to maintain compliance with any regulatory and/or permit requirements pertaining to environmental protection such as routine monitoring and reporting requirements. A Wellhead Protection Brochure (trifold) will be delivered to each animal operation facility, in addition to information on best management practices.

Auto Waste

All businesses in the wellhead protection areas that produce auto wastes (oils, acids, antifreeze, etc.) will be provided information on waste handling practices, best management practices, standard operating procedures, and waste oil disposal methods which could be employed to reduce the potential for ground water contamination. They will also be provided information regarding the North Carolina Division of Environmental Assistance and Customer Service (DEACS). Owners/operators of these potential contamination sources will be encouraged to contact the DEACS. The DEACS provides free technical and other non-regulatory assistance to reduce the amount of waste released into the air and water and on the land. The DEACS serves as a central repository for waste reduction and pollution prevention information. The DEACS emphasizes waste reduction through pollution prevention, encourages companies and government agencies to go beyond compliance, and provides information about the environmental permitting process. This information is provided at no charge to North Carolina businesses, industries, government agencies, and the general public upon request. For additional information, the DEACS may be contacted at 1-877-623-6748 or to report an environmental emergency, call 1-800-858-0368. Their website is http://portal.ncdenr.org/web/deao/.

Car Wash

Pasquotank County will provide Best Management Practices to carwashes present in the Wellhead Protection Areas. For carwashes in a permanent location, North Carolina 15A NCAC 02T .0113 should be referenced. All carwashes in the WHPAs will be required to gain and maintain any permitting

required of them by the NC DEQ. If the site contains a Class V injection well, the business will be expected to demonstrate excellent compliance with all applicable federal regulations.

Cemetery

Pasquotank County will contact the North Carolina Cemetery Commission to determine if any complaints have been filed with regards to any cemeteries located in the WHPAs. Should a complaint have been filed, a record of the advice and/or resolution will be kept on file by the County. Laws regarding cemeteries may be found at the North Carolina Cemetery Commission's website.

Chemical Storage

Pasquotank County will provide information to each business, industry, and farm located within the WHPAs on chemical storage practices, best management practices for handling and disposal of chemicals, and resources for the development of spill response plans. Operators/owners of potential contaminant sources which store hazardous chemicals will be encouraged to follow all OSHA regulations and standards including proper labeling of chemicals, proper chemical storage and handling practices, and maintaining records of Safety Data Sheets (SDS) for all chemicals onsite. Businesses, industries, and agricultural operations who employ staff will be encouraged to train their employees on the proper handling and disposal of all hazardous chemicals. All owners/operators of potential contaminant sites which use, store, or handle hazardous chemicals will be provided with a contact name and number for Pasquotank County for reporting any chemical release or spill to the ground surface or if damage is found to any sewage or drain lines or chemical storage disposal containers that could potentially cause a contamination event. In the event of any large chemical release reported, the County will contact the NC Hazardous Materials Williamston Regional Response Team at 800-545-7781 or 252-792-3521.

Recreation

Pasquotank County will encourage proper maintenance of recreational facilities (buildings and grounds) to any standards upheld by State or Federal agencies. Should these facilities use pesticides, the Agricultural Operations management strategy will be followed on pgs. 56-57. If the recreational facility utilizes an Above Ground Storage tank or an Underground Storage tank, the UST and AST strategies on pg. 55 will be followed. If the facility stores chemicals on site, the Chemical Storage strategy above will be followed. Pasquotank County will distribute the EPA Best Management Strategy on Turfgrass Fertilizer Application to the sports complexes.

RCRA/Hazardous Waste

The County will frequently monitor federal databases to determine compliance of industries with special classifications (ae. RCRA, TRI, etc.). Notification will be made to the appropriate State and Federal organizations of any compliance violations with regards to special classifications (ae. RCRA, TRI, etc.). These facilities will also be encouraged to follow all applicable OSHA regulations regarding facility operations and maintenance as well as material storage and handling.

Storage (non-chemical or unknown)

Pasquotank County will encourage sites to maintain appropriate facilities and containment based on any existing OSHA or other State or Federal standards for the storage and/or handling of both unknown and known materials. An updated contact and/or tax parcel owner will be kept on file for each storage hazard of concern within the WHPA in the event of an emergency.

Land Application/Biosolids

Pasquotank County will properly maintain their biosolid land application sites and follow the guidelines set by 40 CFR part 503 regulations. Proper records of biosolid permitting and method of pathogen/vector attraction reduction will be kept. Should annual inspections reveal any violations, Pasquotank County will make timely adjustments to ensure that a consistently high quality of biosolids are being produced for

each application. Coordination will be maintained with Elizabeth City regarding their land application activities in the WHPAs. Periodic communications will be made to ensure that there are no current compliance issues regarding Elizabeth City's land application permit.

Lift Stations

Pasquotank County uses a telemetry system to monitor all of its lift stations continuously and all lift stations are visited at least once weekly. The wastewater collection system is inspected weekly and cleaned weekly.

Improperly Constructed/Abandoned Wells

Owners of improperly constructed/abandoned wells identified within the WHPAs will be provided information regarding the threat posed to the water supply by these wells. Owners of improperly constructed/abandoned wells will be encouraged to have these wells properly abandoned in accordance with N.C.'s well construction standards found at 15A NCAC 2C.0100, "Criteria and Standards Applicable to Water Supply and Certain Other Wells". If information exists that a well is improperly constructed or is contributing to the contamination of groundwater, the owner will be referred to the Groundwater Resources Section, Division of Water Resources.

Metal Finisher/Fabricator/Machine Shop

Federal information for Metal Finishers can be found in the 40 CFR Part 433. OSHA classifies Metal Finishers as "Major Group 34: Fabricated Metal Products, Except Machinery And Transportation Equipment." For technical assistance, compliance centers can be found on the NC DEQ's website under "Coaters." Metal Finishers in the area will be expected to remain in compliance with all applicable state/federal regulations. Additional information regarding effluent guidelines of machine shops and metal fabricators may be found here:
https://www.epa.gov/eg/metal-products-and-machinery-effluent-guidelines

Airport/Military

Airports/Military installments may contain a wide variety of PCS risk categories. Sites will be encouraged to be conscious of their activities and to use appropriate products and locations while cleaning aircrafts, as well as to inspect aircrafts for fuel leaks/discharges frequently. The site will be expected to maintain excellent compliance with all water quality/waste permits. Should military installments contain above ground storage tanks and/or underground storage tanks, the strategies on pg. 55 will be followed. In the event of auto maintenance or auto salvage operations, the auto waste strategy will be followed on pg. 57. If the installment has a cemetery, chemical storage, a recreational facility, and/or a RCRA classification, the strategies on pg. 58 will be followed. Reference will be made to the strategy for metal finishers/fabricators/machine shops above if any fabrication or machining is conducted onsite. Refer to the Agricultural Operations strategy on pgs. 56-57 for the application of pesticides. Pasquotank County will provide the airport/military facility located within wellhead protection area with a copy of the "Aqueous Film-Forming Foam (AFFF)" fact sheet (dated August 2020) developed by the Interstate Technology Regulatory Council (ITRC). Pasquotank County will also encourage these facilities to visit the ITRC's Fire Fighting Foams website at: https://pfas-1.itrcweb.org/3-firefighting-foams/ for additional information. Pasquotank County will distribute the EPA Best Management Strategy on Turfgrass Fertilizer Application to the airport/military installation.

Inactive Wells

Precautions will be taken to ensure the security of all inactive wells. The site buildings will remain locked at all times municipal personnel are not onsite. Checks will be conducted periodically for evidence of tampering. The sites will be reevaluated for the possibility of permanent abandonment during the next update.

Signage will be implemented onsite stating “this source has not been monitored and may not be activated without prior approval of the Public Water Supply Section.” Employees of Pasquotank County will be informed of each inactive well’s status to ensure that no accidental activations of the wells occur.

VI. Contingency Plan

The primary person responsible for implementing the emergency contingency plan is the Water Superintendent. The back-up person responsible for implementation is the Assistant Water Superintendent. The WPC may be involved in decision-making in the event that response actions are required.

Short Term Contingency Plan (less than 48 hours)
Pasquotank County water system has a total combined storage capacity of 3.1 million gallons (2,000,000 gallons in ground storage and 1,100,000 gallons in elevated tanks). Its average daily usage is approximately 0.9152 mgd (RO system) and 0.790 mgd (conventional system) per day. This confirms that the system has enough water stored for more than 24 hours, but less than 48 hours, of use under normal operating conditions. Pasquotank County maintains interconnections with the Elizabeth City Water System (PWSID #: 04-70-010), Perquimans County Water System (PWSID #: 04-70-010), South Mills Water Association (PWSID #: 04-15-010), and between the two Pasquotank County systems used for the purchase or sale of water during emergencies. With the occurrence of a brief power outage, Pasquotank County will operate from the stored water supply and/or utilize generator power, which is available by generators at all of the RO system wells and half of the conventional system wells (#4, 7, 8, 9, 10, 12, 19, 21, 22, 23, 24, and 28). If the water supply reaches the point of low pressure, the County will utilize its interconnection with Elizabeth City Water System, Perquimans County Water System, South Mills Water Association, and/or the opposite Pasquotank County water system. Minor contamination events (e.g. sulfur dioxide, discolored water due to manganese, iron or sediment) would require the County to isolate the contaminated section of the distribution system and flush the section thoroughly.

Long Term Contingency Plan
If one or more of Pasquotank County's wells were to become contaminated, they would be isolated from the rest of the public water supply system by shutting off the pump and then closing a valve. If evidence exists that a well is contaminated, it will immediately be taken offline and not returned to service until it is determined that water quality from the impacted well is in compliance with standards governing public water supplies. If it was determined that contaminated water had entered the distribution system, a notice would be posted in the newspaper, on a local television channel, on social media, and on the County website stating that the water should not be consumed until further notice is given. The Public Water Supply Section of NC DEQ would be notified immediately of the situation and assistance would be requested to help ensure safe drinking water for the residents of Pasquotank County. The next step would be to determine if all or part of the distribution system was affected by the contaminant through testing and sample analysis. The testing performed would be determined by what the contaminant was thought to be (e.g. bacteriological, SOCs, VOCs, etc.) If only a portion of the system was affected, that portion would be isolated from the rest of the system by closing valves around the contaminated section. The affected portion, or the entire system if necessary, would be systematically flushed and purged until sample results showed the contaminant was no longer present. Once sample analysis (e.g. bacteriological, SOCs, VOCs, etc.) showed the contaminant was no longer present in the public water supply system, and after consultation with the Public Water Supply Section of NC DEQ, a notice would be posted in the newspaper, on a local television channel, on social media, and on the County website stating that Pasquotank County's water supply was once again safe for consumption. Boil water advisories would be used throughout applicable contamination incidents (e.g. bacteriological) in accordance with state regulations.

It is possible, but unlikely, for all wells and all interconnections to become contaminated. Should simultaneous contamination of all water sources occur, the NC Army National Guard (600 Westover St, Elizabeth City, NC 27909) in Elizabeth City could be contacted for assistance.

Should a major oil or chemical spill occur within the wellhead protection areas, appropriate emergency agencies will be notified. The first agency contacted will be the Pasquotank-Camden-Elizabeth City Emergency Services.

Pasquotank-Camden-Elizabeth City Emergency Services: 252-335-4444

Additional emergency contact numbers and resources are listed below.

Emergency Contact Numbers and Additional Resources:

Name	**Resource**
Primary person responsible for implementing emergency contingency plan David Smithson Water Superintendent 252-335-2240	Emergency Response
Secondary person Mike Harris Assistant Water Superintendent 252-335-2240	Emergency Response
Public Water Supply Section Jamie Midgette Engineering Supervisor Washington Regional Office 943 Washington Square Mall Washington, NC 27889 Phone-252-948-3974 Pager-252-495-1389	Technical Assistance Regulatory guidance
NC Department of Environmental Quality Washington Regional Office 943 Washington Square Mall Washington, NC 27889 252-946-6481	Regional Water Quality Section, Public Water Supply Section, UST Section, Hazardous Waste Section Spills, Regulatory information and technical assistance
Department of Transportation Division Engineer Sterling Baker, PE 113 Airport Drive Suite 100 Edenton, NC 27932 252-482-1850	Division 1, District 1
NC Army National Guard 600 Westover St Elizabeth City, NC 27909 252-335-5780	Emergencies, as available: (Varies based on location) Generators, water trailers, bottled water, transportation
NC Rural Water Association Post Office Box 590 Welcome, NC 27374 336-731-6963	Technical assistance Education
North Carolina Cooperative Extension Service	Educational brochures, publications

Campus Box 7602 North Carolina State University Raleigh, NC 27695-7602 919-515-2811 www..bae.ncsu.edu	
US EPA Regional Office AST/SPCC Program Region IV 61 Forsyth Street Atlanta, GA 30365-3415 404-562-8761 www.epa.gov/oilspill	Above ground storage tank information
US EPA Regional Office GW & UIC Section Region IV Atlanta Federal Center 61 Forsythe St. Atlanta, GA 30303-8960 www.epa.gov	Educational brochures, publications
NC Division of Environmental Assistance and Customer Service (DEACS) 1639 Mail Service Center Raleigh, NC 27699-1639 877-623-6748 http://ncenvironmentalassistance.org/	Technical and non-regulatory assistance to reduce waste
National Small Flows Clearinghouse West Virginia University Post Office Box 6064 Morganton, WV 26506-6064 800-624-8301 http://www.nesc.wvu.edu/nsfc/nsfc_index.htm	Pamphlets, brochures, training aids
Elizabeth City Water System Julius Williams/Raymond Staten Public Works Supervisor /Water Plant Operator PO Box 347 410 Pritchard Street Elizabeth City, NC 27907 252-337-6628/252-337-6647 https://www.cityofec.com/index.asp?SEC=EE15CC84-7B5B-4002-9AC4-B85C124D6E51&Type=B_BASIC	Emergency Connection
Perquimans County Water System Nick Lolies Water Supervisor PO Box 45 109 Melton Grove Rd. Hertford, NC 27944 252-426-8230 https://www.perquimanscountync.gov/departments/water-department	Emergency Connection

South Mills Water Association Wayne Raper Operator in Responsible Charge PO Box 279 220 Canal Dr. South Mills, NC 27976 252-771-5260 https://smwa.biz/index.html	Emergency Connection

VII. Implementing, Maintaining, And Updating The WHP Plan

Public Participation

This plan will be available for public review during a 30 day comment period by visiting Pasquotank County Water Department. Pasquotank County will post a notice in the local newspaper, the Daily Advance, explaining to its customers what a Wellhead Protection Program is and how they have the opportunity to review the proposed WHPP and make comments. Any substantive comments received from the public will be considered for inclusion into the final version of PasquotankCounty's WHPP. Proof of Public Notice will be provided to the Public Water Supply Section upon publishing in the form of either an affidavit or a copy of the newspaper article with date visible.

New Public Water Supply Wells

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

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

Future Wellhead Protection

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

the completion of a major revision. Any amended or revised sections of the approved WHP Plan resulting from an update or revision will also be submitted upon completion.

Appendix

References

Winner, Jr. M. D., Coble, R.W. (1996). Hydrogeologic Framework of the North Carolina Coastal Plain. U.S. Geological Survey Professional Paper 1404-I. United States Government Printing Office, Washington

Pasquotank County website:
https://www.pasquotankcountync.org/

Smutko, L. Steven, Danielson, Leon E., Jennings, Gregory D., (1995). Protecting Local Underground Water Supplies, The North Carolina Wellhead Protection Guidebook, North Carolina Department of Environment, Health and Natural Resources, Division of Environmental Management, Groundwater Section, Raleigh, North Carolina, Approved March 20, 1995

North Carolina Department of Environment and Natural Resources, Division of Environmental Health, Public Water Supply Section, The North Carolina Wellhead Protection Guidebook, Developing a Local Wellhead Protection Program, 2003

North Carolina Department of Environmental Quality, Division of Waste Management, UST Section, Groundwater Section, Washington Regional Office Files, 943 Washington Square Mall, Washington, NC 27889

SWAP 2.0:
http://nc.maps.arcgis.com/apps/webappviewer/index.html?id=d93b2cf7732340399fb7df5b3ff5c287

Pasquotank County LWSP:
Weeksville: https://www.ncwater.org/WUDC/app/LWSP/report.php?pwsid=04-70-015
RO: https://www.ncwater.org/WUDC/app/LWSP/report.php?pwsid=60-70-000&year=2019

Pasquotank County Water Watch:
Weeksville:
https://www.pwss.enr.state.nc.us/NCDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=5709&tinwsys_st_code=NC&wsnumber=NC0470015
RO:
https://www.pwss.enr.state.nc.us/NCDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=23493&tinwsys_st_code=NC&wsnumber=NC6070000

Envirofacts:
https://www3.epa.gov/enviro/

Glossary of acronyms and abbreviations

AST-Above ground Storage Tank
BQL-Below Quantitation Limits
CAP-Corrective Action Plan
DEACS-Division of Environmental Assistance and Customer Service
DWM-Division of Waste Management
DWQ-Division of Water Quality
EPA-Environmental Protection Agency
GPD-gallons per day
Gpm-gallons per minute
NCDEH-North Carolina Department of Environmental Health
NCDEQ-North Carolina Department of Environment Quality
NOV-Notice of Violation
NPDES-National Pollutant Discharge Elimination System
PCS-Potential Contamination Source
Ppb-parts per billion
Ppm-parts per million
PWS-Public Water Supply
PWSS-Public Water Supply Section
SOC-Semi-volatile Organic Compound
SPCC-Spill Prevention Control and Countermeasures
UIC-Underground Injection Control
UST-Underground Storage Tank
VOC-Volatile Organic Compound
WaRO-Washington Regional Office
WHPA-Wellhead Protection Area
WHPP-Wellhead Protection Program
WPC-Wellhead Protection Committee

Databases referenced in search

Animal Operations

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

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

The data set was obtained from the DWR, Water Quality Regional Operations, Animal Feeding Operations Branch in February of 2019. For additional information about this data, contact the Animal Feeding Operations staff by phone at 919-707-9129 or visit their website at: https://deq.nc.gov/about/divisions/water-resources/water-quality-permitting/animal-feeding-operations.

CERCLA-Fed. Remediation

This data set was provided by the Federal Remediation Branch (FRB), which is part of the Superfund Section within the N.C. Division of Waste Management. It represents sites where the FRB is working with USEPA, and in some cases the Department of Defense, to investigate, assess, remediate, or monitor hazardous waste contamination. These sites are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which established authority for the government to respond to the release/threat of release of hazardous waste, including cleanup and enforcement actions. Some of these sites, which meet specific criteria set out in the USEPA's Hazard Ranking System (HRS), are included on the National Priorities List (NPL). The NPL identifies sites that appear to warrent cleanup measures. The NPL sites are eligible for remedial action financed by a federal trust fund with a state cost share or by potential responsible parties (PRP).

The data set was downloaded from the *NC Department of Environmental Quality Online GIS* website at: https://data-ncdenr.opendata.arcgis.com/datasets/federal-remediation-branch. It was dated May 23, 2019. For additional information about this data, contact the Division of Waste Management, Federal Remediation Branch by phone at 919-707-8213 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/superfund-section/federal-remediation-branch.

Hazardous Waste Sites

This data set represents the location of sites within North Carolina that are regulated by the hazardous waste portions of the Resource Conservation and Recovery Act (RCRA). This

includes large quantity generators, small quantity generators, transporters of hazardous waste, permitted treatment, storage, or disposal (TSD) facilities and TSD facilities that are under an Order or a Consent Agreement. (Note: facilities that are conditionally exempt small quantity generators may also be included if they are also a transporter or TSD facility.) The data is extracted from the USEPA RCRAInfo database.

The data set was downloaded from the *NC Department of Environmental Quality Online GIS* website at: https://data-ncdenr.opendata.arcgis.com/datasets/hazardous-waste-sites. It was dated March 19, 2019. For additional information about this data, contact the Division of Waste Management, Hazardous Waste Section staff by phone at 919-707-8202 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/hw.

Inactive Hazardous Waste Sites

This data set represents hazardous substance spill and disposal sites and includes active and inactive facilities and a variety of property types. Some of the sites are regulated under the CERCLA and are included because they do not fall under the responsibility of other environmental programs. The term "inactive" refers to the fact that cleanup was inactive at large numbers of sites at the time of program enactment. This data set includes closed remediation sites that have land use restrictions recorded as part of the remedy.

The data set was downloaded from the *NC Department of Environmental Quality Online GIS* website at: https://data-ncdenr.opendata.arcgis.com/datasets/inactive-hazardous-sites-1?geometry=-90.11%2C33.656%2C-69.379%2C36.796. It was dated November 26, 2019. For additional information about this data, contact the Division of Waste Management, Inactive Hazardous Sites Branch by phone at 919-707-8327 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/superfund-section/inactive-hazardous-sites-program.

Non-Discharge Permits

The non-discharge database identifies domestic, industrial, and municipal facilities that are permitted to apply treated wastewater effluent, reclaimed water, and residuals to the land surface.

Data was obtained from the DWR, Water Quality Permitting Section, Non-Discharge Branch in April of 2019. For additional information about this data, contact the program staff by phone at 919-707-3654 or visit their website at: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/non-discharge-permitting.

NPDES Permits

The National Pollutant Discharge Elimination System (NPDES) PCS category consists of multiple data sets identifying facilities permitted for the operation of point source discharges to surface waters in accordance with the requirements of Section 402 of the Federal Water Pollution Control Act. Point sources are discrete conveyances such as pipes or man-made ditches. The NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into public waters. This category also include facilities with active and expired State Stormwater Permits. The individual data sets that comprise this category include the following

- **NPDES Stormwater Permits**

This data set represents the location of facilities with active or expired NPDES Stormwater Permits and facilities with No Exposure Certifications. The goal of the NPDES Stormwater Permitting Program is to prevent stormwater runoff from washing harmful pollutants into surface waters. Both individual and general permits are included.

Data was obtained from the Division of Energy, Mineral, and Land Resources, Stormwater Permitting Program in February of 2019. For additional information about this data, contact the program staff by phone at 919-707-3639 or visit their website at: https://deq.nc.gov/about/divisions/energy-mineral-land-resources/stormwater.

- **NPDES Wastewater General Permits**

This data set represents the location of active wastewater treatment facilities that are permitted under the NPDES Permit Program. The listed facilities are covered by a general NPDES permit, which is written to cover multiple dischargers with similar operations and types of discharges.

Data was obtained from the DWR, Water Quality Permitting Section, NPDES Wastewater Permitting Program in February of 2019. For additional information about this data, contact the program staff by phone at 919-707-3601 or visit their website at: https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/npdes-wastewater-permits.

- **NPDES Wastewater Individual Permits**

This data set represents the location of active wastewater treatment facilities that are permitted under the NPDES Permit Program. Each listed facility is covered by an individual NPDES permit that is written to reflect the site-specific conditions of the facility based on submitted information. The individual NPDES permit is unique to the facility.

Data was obtained from the DWR, Water Quality Permitting Section, NPDES Wastewater Permitting Program in February of 2019. For additional information about this data, contact the program staff by phone at 919-707-3601 or visit their website at: https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/npdes-wastewater-permits.

- **State Stormwater Permits**

This data set contains the locations of facilities with active and expired State Stormwater Post-Construction Permits. The Post-Construction Permit Program requires subject new developments to install and maintain permanent stormwater management measures that are designed to protect surface waters from the impacts of the development's stormwater runoff after the construction process is complete.

Data was obtained from the Division of Energy, Mineral, and Land Resources, Stormwater Permitting Program in March of 2019. For additional information about this data, contact the program staff by phone at 919-707-3639 or visit their website at: https://deq.nc.gov/about/divisions/energy-mineral-land-resources/stormwater.

PCB Sites

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

The data set was obtained from the USEPA, Office of Pollution Prevention and Toxics in February of 2019. For additional information about this data, contact the PCB staff at 404-562-8512 or visit their website at: https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs.

Each record that contained a physical address that could be address matched was included in the data set. Public Water Supply Section staff performed the address matching.

Pollution Incidents

The Pollution Incidents PCS category consists of multiple data sets containing information regarding the release of pollutants into the environment that have, or are likely to have, impact on the groundwater resources of the State. The initial information regarding these releases is usually obtained from responsible parties or concerned citizens, who report a release to the NC Department of Environmental Quality. After an incident is reported, regional office staff investigate the reported incident and enter the results of their investigation into a state-wide database. The individual data sets that comprise this category include the following:

- **AST Incidents**

This data set represents sites where there has been a discharge of petroleum to the soil and/or groundwater, from a source other than an Underground Storage Tank (UST) system, e.g., Aboveground Storage Tank (AST) system, spills, dumping, etc. All included records have an incident number and have not been closed out.

This data set was downloaded from the NC Department of Environmental Quality Online GIS website at: https://data-ncdenr.opendata.arcgis.com/datasets/ast-incidents. It was dated June 13, 2019. For additional information about this data, contact the Division of Waste Management, Underground Storage Tank Section staff by phone at 919-707-8171 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/ust/ast-program.

- **Dry-Cleaning Sites - Contaminated**

This data set contains an inventory of reported incidents from sites contaminated with dry-cleaning solvents. Substances released into the environment include solvents used in the dry-cleaning process.

This data set was downloaded from the NC Department of Environmental Quality Online GIS website at: https://data-ncdenr.opendata.arcgis.com/datasets/dry-cleaning-sites-contaminated-1. It was dated May 23, 2019. For additional information contact the Division of Waste Management, Dry-Cleaning Solvent Cleanup Act Program staff by phone at 919-707-8365 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/dry-cleaning-solvent-cleanup-act-program.

- **UST Incidents**

This data set represents sites where there has been a release of petroleum to the soil and/or groundwater, from an UST system. All included records have an incident number and have not been closed out.

The data set was downloaded from the NC Department of Environmental Quality Online GIS website at: https://data-ncdenr.opendata.arcgis.com/datasets/ust-incidents?geometry=-166.201%2C-29.535%2C168.311%2C29.229. It was dated June 13, 2019. For additional information about this data, contact the Division of Waste Management, Underground Storage Tank Section staff by phone at 919-707-8171 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/ust.

Septage Disposal Sites

This data set represents all active and permitted Septage Land Application Site (SLAS) and Septage Detention and Treatment Facility (SDTF) sites in North Carolina. The Septage Management Program assures that septage (a fluid mixture of untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin that is removed from a septic tank system) is managed in a responsible, safe and consistent manner across the state.

The data set was obtained from the Division of Waste Management, Solid Waste Section in May of 2019. For additional information about this data, contact the Septage Management Program staff by phone at 919-707-8283 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/waste-management-rules/septage.

Soil Remediation Sites

This data set represents sites that have received a permit from the NC Underground Storage Tank Section, under the Petroleum Contaminated Soil Remediation Permit Program. These sites are used to bioremediate soil that has been contaminated by leaking petroleum storage tanks. Bioremediation is a treatment process that uses naturally occurring microorganisms (yeast, fungi, or bacteria) to break down, or degrade, hazardous substances. These microorganisms break down organic compounds, such as petroleum products that are hazardous to humans, into harmless products (mainly carbon dioxide and water). Sites that have been "closed out" were excluded.

The data set was obtained from the Division of Waste Management, Underground Storage Tank Section in February of 2019. For additional information about this data, contact the Underground Storage Tank Section staff by phone at 919-707-8171 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/ust.

Solid Waste Facilities

This data set represents all the permitted Municipal Solid Waste (MSW), Construction and Demolition (CDLF), Land-Clearing and Inert Debris (LCID) and Demolition (older facilities) landfill facilities. Coal Ash landfills and Tire landfills are also included. These facility types undergo inspections and groundwater monitoring as part of facility management. This data set also includes active solid waste facility types that are not designated as landfills, such as compost, household hazardous waste, incinerators, medical waste, tire processing and transfer stations.

The data set was obtained from the Division of Waste Management, Solid Waste Section in May of 2019. For additional information about this data, contact the Solid Waste Section staff by phone at 919-707-8247 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/solid-waste-section.

Tier II Sites

This data set contains an inventory of facilities that store hazardous materials and are subject to the reporting requirements of the Emergency Planning and Community Right to Know Act (EPCRA). EPCRA was authorized by Title III of the Superfund Amendments and Reauthorization Act (SARA). Tier II forms require basic facility identification information, employee contact information for both emergencies and non-emergencies, and information about chemicals stored or used at the facility including:

- The chemical name or the common name as indicated on the Safety Data Sheet (SDS);
- an estimate of the maximum amount of the chemical present at any time during the preceding calendar year and the average daily amount;
- a brief description of the manner of storage of the chemical;
- the location of the chemical at the facility; and
- an indication of whether the owner of the facility elects to withhold location information from disclosure to the public.

Data, from the 2018 reporting year, was obtained from the Department of Public Safety, Division of Emergency Management. For additional information about this data contact the Division of Emergency Management staff at 919-436-2746 or visit their website at: http://www.ncdps.gov/Emergency-Management/Hazardous-Materials/EPCRA-Tier-2.

Old Landfill Sites

This data set contains the locations of non-permitted landfills that closed prior to January 1, 1983, when waste disposal permitting regulations commenced. These sites are not currently in operation.

The data set was downloaded from the NC Department of Environmental Quality Online GIS website at: http://data-ncdenr.opendata.arcgis.com/datasets/pre-regulatory-landfill-sites-1. It was dated November 14, 2018. For additional information about this data, contact the Division of Waste Management, Pre-regulatory Landfill Program staff by phone at 919-707-8327 or visit

their website at: https://deq.nc.gov/about/divisions/waste-management/superfund-section/pre-regulatory-landfill-program.

UIC Permits

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

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

The data set was obtained from the DWR, Groundwater Protection Program in March of 2019. For additional information about this data, contact the UIC Program staff by phone at 919-807-6496 or visit their website at: https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/ground-water-protection/injection-wells.

UST Permits

A UST system is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. The federal UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances. These facilities are regulated under Subtitle I of RCRA and must be registered with the state and receive an operating permit annually. Until the mid-1980s, most USTs were made of bare steel, which is likely to corrode over time and allow UST contents to leak into the environment. Faulty installation or inadequate operating and maintenance procedures also can cause USTs to release their contents into the environment. The greatest potential hazard from a leaking UST is that the petroleum or other hazardous substance can seep into the soil and contaminate groundwater. A leaking UST can also present other health and environmental risks, including the potential for fire and explosion. The facilities included in this data set have active Underground Storage Tank systems registered with the UST Section.

Data was obtained from the Division of Waste Management, Underground Storage Tank Section in May of 2019. For additional information about this data, contact the Underground Storage Tank Section staff by phone at 919-707-8171 or visit their website at: https://deq.nc.gov/about/divisions/waste-management/ust.

Potential Contamination Sources by Risk Category

Higher Risk Potential Contamination Sources for Ground Water PWS Systems

COMMERCIAL/INDUSTRIAL

° Automobile Body shops
Gas stations
Repair shops

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

OTHER

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

AGRICULTURAL/RURAL

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

RESIDENTIAL/MUNICIPAL

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

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

Moderate Risk PCSs

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

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

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

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

Lower Risk PCSs

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

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

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

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

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

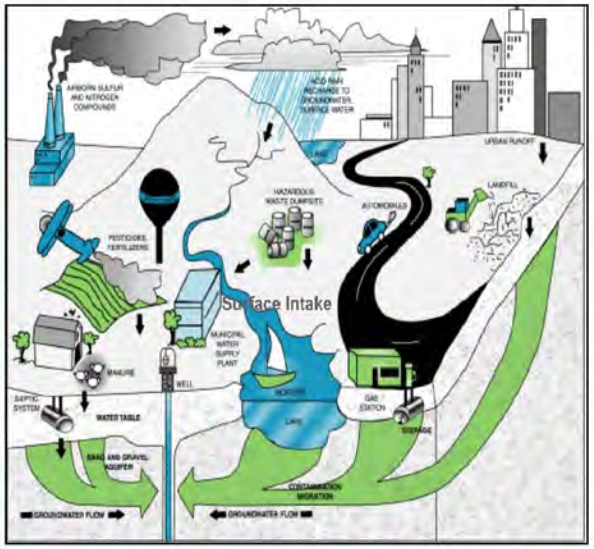
Maintain your septic Tank

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

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

Be aware of the dangers of grease

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



Pasquotank County

SEAL OF PASQUOTANK COUNTY NORTH CAROLINA
ETAT JUSTICIA

Thank you for Reading!

NEED MORE INFORMATION?

Pasquotank County

252-335-4105

NC Rural Water Association

www.ncrwa.org

Wellhead Protection Trifold

WHAT IS GROUNDWATER?

Groundwater is precipitation that has soaked into the ground and is stored in pores between the soil or in cracks in the bedrock. Pasquotank County uses groundwater it pumps from the ground using thirty-four (34) wells located in its service area.

THE WELLHEAD PROTECTION PROGRAM

Pasquotank County is updating its Wellhead Protection Program to protect its water supply from contamination. As a part of the program, it has identified vulnerable areas around its wells called "Wellhead Protection Areas". Chemicals and other pollutants spilled or dumped in these areas can be drawn into the wells, possibly contaminating our community's drinking water supply. Residents and businesses in these areas must be very careful with chemicals and other potential pollutants.

NC RWA
TRAINING SUPPORT

POLLUTION SOURCES!

Many things we do in our daily lives can pollute our surface and groundwaters. Sources of groundwater pollution include:

- Used oil, paint thinner, gasoline and other chemicals poured on the ground
- Leaking storage tanks (aboveground and underground)
- Overuse of pesticides and fertilizers on lawns, golf courses and agricultural fields
- Chemical spills at businesses, farms and along highways
- Illegal dumps and poorly managed landfills
- Failing septic tanks
- Leaking sewer lines
- Improperly abandoned wells
- Unlined waste pits, ponds and lagoons

NEED MORE INFORMATION?

Pasquotank County

252-335-2240

NC Rural Water Association

www.ncrwa.org

HOW CAN YOU HELP?

Water is our most valuable natural resource – we must protect it! You can help by doing your part to protect our supply and by supporting this program.

Here are some tips:

- Never pour used oil, paint thinner or other hazardous chemicals on the ground or down the drain. Take them to a recycling center or to a Household Hazardous Waste Collection Day. For information call the Pasquotank County Landfill.

  (252)338-7621

- Check for and fix leaks in storage tanks (i.e. home heating oil/ kerosene) at your home or business
- Inspect and pump your septic tank as needed
- Have any unused wells on your property properly abandoned
- Minimize your use of pesticides and fertilizers and store them properly
- Clean up junk and debris on your property
- Report all chemical spills immediately
- Encourage community leaders and businesses to do everything possible to protect our drinking water supply

SOLID WASTE & RECYCLING

CONTACT US:

Brad Gardner
Director of Solid Waste and Recycling
Email

Janice Browne
Recycling Coordinator
Email

Solid Waste & Recycling

Physical Address
317 Pritchard St
Elizabeth City, NC 27909
Phone: 252-335-4105
8am-5pm M-F (excluding holidays)
Pasquotank County operates 7 collection and recycling centers in the unincorporated areas of the County which may be used by any citizen of the county to dispose of residential waste and recyclable materials. For detailed information on the types of recyclables and waste accepted at the centers, call the Recycling Coordinator at 252-335-4105.

The convenience sites are located at
Newland Site: 926 US Hwy 158.
Providence Site: 1933 North Road Street (behind Providence Fire Station)
Well Field Rd Site: 944 Well Field Rd
Mount Hermon Site: 711 Methodist Church Rd
Landfill: 983 Simpson Ditch Rd
Coast Guard Site: 1577 Weeksville Rd (opposite USCG Base)
Weeksville Site: 2736 Peartree Rd

Hours:

Monday-Saturday 7am - 7pm
CLOSED THURSDAYS
Sunday 1-6pm

COLLECTION COMPANIES

Door-to-door collection of garbage in Pasquotank County can be contracted with the various waste collection companies. Residential garbage collection within the

corporate limits of the municipality of Elizabeth City is the responsibility of city government. Click here if you live within the city limits or call 252-337-6628.

TRANSFER STATION & LANDFILL & SCALE HOUSE Monday through Friday from 8a.m. to 4:30 p.m. Saturday 8am - 12 noon.

983 Simpson Ditch Rd, Elizabeth City, NC 27909
Phone: 252-338-7621

Pasquotank County operates one solid waste transfer station located at 983 Simpson Ditch Road just outside and west of Elizabeth City. The actual landfill was closed in 1992, but the site continues to be used for solid waste operations and is open To report littering, illegal dumping, or debris blowing from an uncovered vehicle, call the Pasquotank County's Sheriff's Office at 252-338-2191.

As of August 1, 2019 Pasquotank County Waste and Recycling will begin operating on the adjusted fee schedule posted below:

Subject to change without further notice
(Effective July 1, 2020)

Waste Type: Price per ton:
Residential Garbage $69.00/ton
Commercial Garbage $72.00/ton
Construction & Demolition $53.00/ton
LCID/yard waste $53.00/ton
Tires $89.00/ton
Bagged asbestos $73.50/ton
Sm. Bags $1.50 Med. Bags $2.00 Lg. Bags $3.25
Commingled recycling
(paper, plastics, steel and aluminum cans) -0-
Mixed color glass bottles -0-
Used Residential Motor Oil -0-
Used Fryer Oils -0-

Figure A1. Pasquotank County PCS Map (Pasquotank County RO Plant)

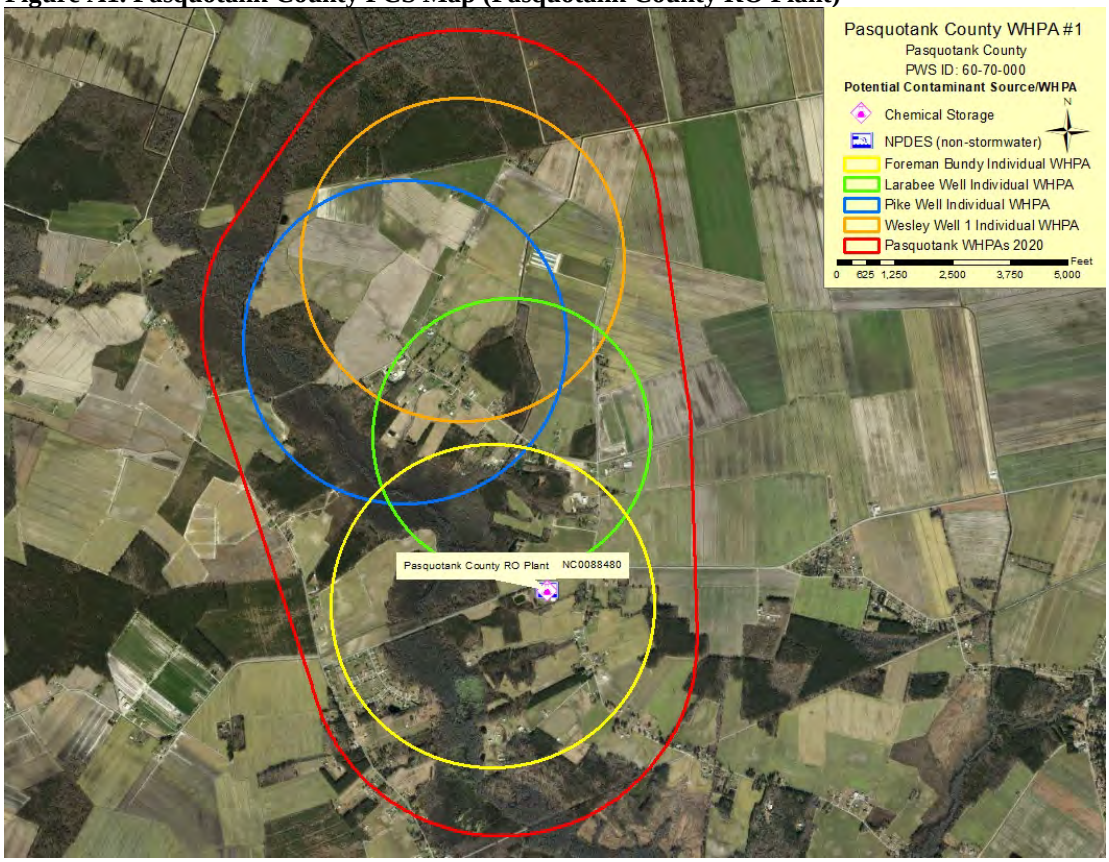
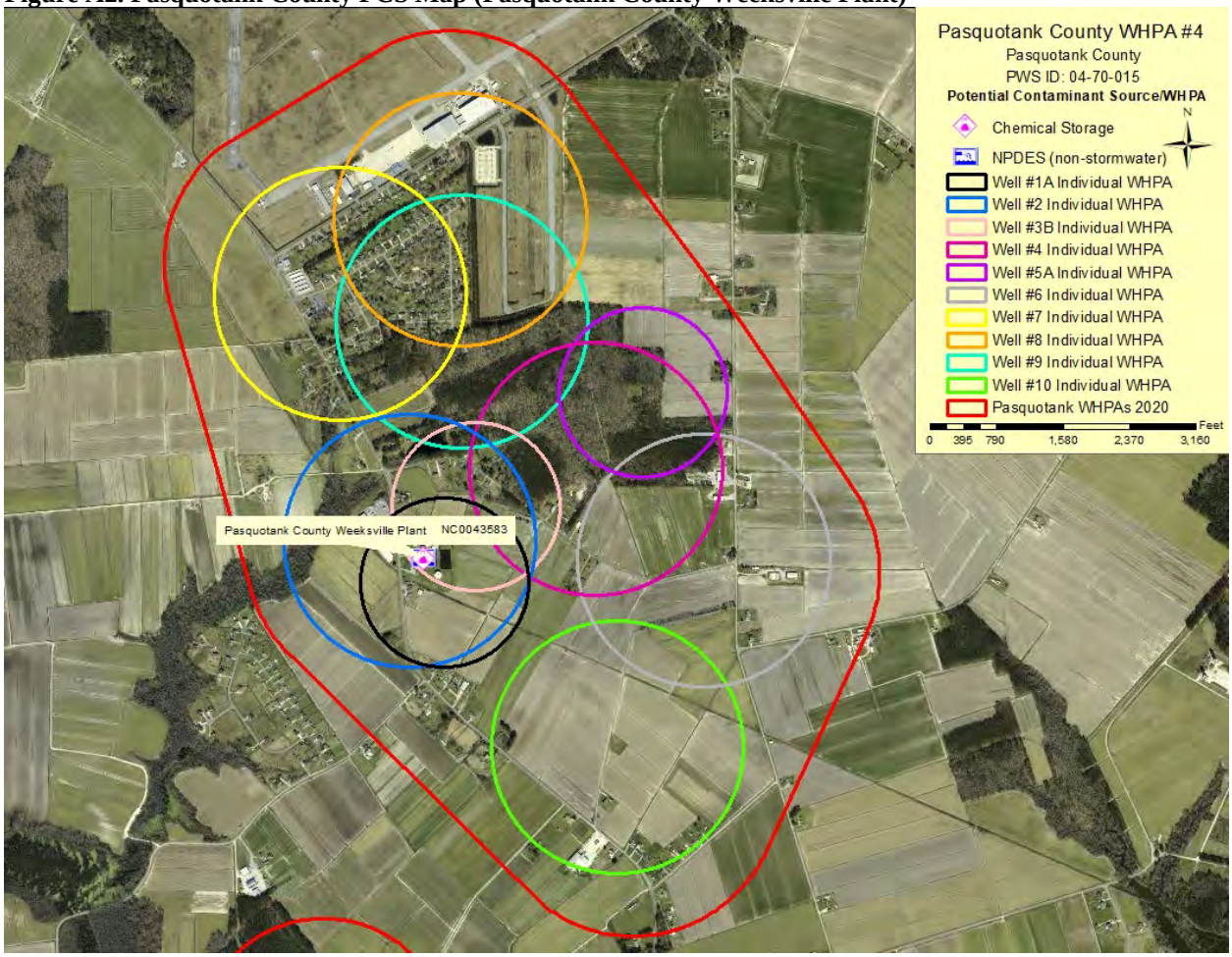


Figure A2. Pasquotank County PCS Map (Pasquotank County Weeksville Plant)



Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Facility Name	U.S. Coast Guard Base Elizabeth City	**Facility ID**	6688185
Company Name	United States Coast Guard	**Facility Email**	
Department Name		**Mailing Address**	1664 Weeksville Road, Bldg 62 , Elizabeth City , NC - 27909
Physical Address	1664 Weeksville Road , Elizabeth City, Pasquotank county , NC - 27909 , USA	**Latitude / Longitude**	36.2654582 / -76.17561409999996
Max. No. of Occupants	2500 [x] Manned [ ] Unmanned	**Emergency 24-Hour Phone Number**	
NAICS	926120 - Regulation and Administration of Transportation Programs	**Dun & Bradstreet**	N/A -
TRI Facility ID		**RMP Facility ID**	

Subject to Emergency Planning under Section 302 of EPCRA (40 CFR part 355)? [x] Yes [ ] No

Subject to Chemical Accident Prevention under Section 112(r) of CAA (40 CFR part 68, Risk Management Program)? [ ] Yes [x] No

Facility Note

Contact Information	Name (Title)	Phone	Email	Mail address
Fac. Emergency Coordinator	Matthew Goldstein (Fire Chief)	(252) 335-6257 (24-hour) (252) 335-6023 (Work)	Matthew.R.Goldstein@uscg.mil	1664 Weeksville Rd., Bldg. 48, Elizabeth City, Pasquotank COUNTY, NC - 27909, USA
Fire Department	Matthew Goldstein (Fire Chief)	(252) 335-6023 (Work) (252) 335-6257 (24-hour) (252) 267-6012 (Mobile - Cell)	Matthew.R.Goldstein@uscg.mil	1664 Weeksville Rd., Bldg. 48, Elizabeth City, Pasquotank COUNTY, NC - 27909, USA
Owner / Operator	CDR Randy F. Meador (Commanding Officer)	252-335-6537 (Work)	Randy.F.Meador@uscg.mil	1664 Weeksville Rd., Bldg 35, Elizabeth City, Pasquotank COUNTY, NC - 27909, USA
Submitter	Leilani Woods (Environmental Protection Specialist)	252-335-6114 (Work)	Leilani.L.Woods@uscg.mil	1664 Weeksville Rd, Bldg. 62, Rm 4, Elizabeth City, Pasquotank COUNTY, NC - 27909, USA
Tier II Information Contact	Leilani Woods or Chris Dunn (Environmental Protection Specialist)	252-335-6356 (Work)	Chris.A.Dunn@uscg.mil	1664 Weeksville Rd., Bldg. 62, Elizabeth City, Pasquotank COUNTY, NC - 27909, USA

Chemical Inventory Information

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
CAS 64742536 Trade Secret [ ] Chem. Name Dielectric Insulating Oil Types #10c (transformer Oil) Pure [X] Mixture [ ] Solid [ ] Liquid [X] Gas [ ] EHS [ ] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [ ] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [ ] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]	89,754 Max. Daily Amount 89,754 Avg. Daily Amount 4,331 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg. 8: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **2)** Bldg. 11: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **3)** Bldg. 35: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **4)** Bldg. 37: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **5)** Bldg. 48: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **6)** Bldg. 49: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **7)** Bldg. 51: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **8)** Bldg. 62: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					9) Bldg. 63: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **10)** Bldg. 75: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **11)** Bldg. 77: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **12)** Bldg. 78: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **13)** Bldg. 91: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **14)** Bldg. 93: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **15)** Bldg. 96: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **16)** Bldg. 97: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					17) Bldg. 100: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **18)** Bldg. 101: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **19)** Bldg. 128: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **20)** Camp Site: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **21)** Bldg. 3: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **22)** Bldg. 4: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **23)** Bldg. 5: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **24)** Bldg. 7: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					25) Bldg. 14: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **26)** Bldg. 17A: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **27)** Bldg. 23: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **28)** Bldg. 24: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **29)** Bldg. 117: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **30)** Bldg. 366: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **31)** Bldg. 981: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **32)** Bldg. 984: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					33) Bldg. 990: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **34)** Bldg. 990 Across Street: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **35)** MTU: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **36)** HMF Hangar 2: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **37)** HMF Pump House: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature
CAS 68476302 Trade Secret [ ] Chem. Name Fuel Oil Pure [ ] Mixture [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [ ] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ]	567,271 Max. Daily Amount 453,816 Avg. Daily Amount 369,000 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg. 13: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **2)** Bldg. 17: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
	Corrosive to metal [ ] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]			**3)** Bldg. 24: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **4)** Bldg. 30: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **5)** Bldg. 37: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **6)** Bldg. 48: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **7)** Bldg. 49: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **8)** Bldg. 50: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **9)** Bldg. 51: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **10)** Bldg. 55 East: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					11) Bldg. 55 North: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **12)** Bldg. 62: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **13)** Bldg. 62: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **14)** Bldg. 62: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **15)** Bldg. 63: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **16)** Bldg. 65: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **17)** Bldg. 85 East: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **18)** Bldg. 85 West: Type Above ground tank, Pressure Ambient

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					pressure, Temperature Ambient temperature **19)** Bldg. 91: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **20)** Bldg. 365: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **21)** Bldg. 63 East: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **22)** Bldg. 63 West: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **23)** Bldg. 63 West: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **24)** Bldg. 395: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **25)** Bldg. 990: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **26)** Bldg. 49: Type Above ground tank, Pressure Ambient

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					pressure, Temperature Ambient temperature **27)** Bldg. 395: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **28)** Peak Shave Generator on Consolidated Rd: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature
CAS 86290815 Trade Secret [ ] Chem. Name Gasoline Pure [ ] Mixture [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ] Below Reporting Thresholds [ ] **Chemical Exemption Information** Any motor fuel offered for retail sale at a commercial gas station. **[X]**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [ ] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [ ] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]	85,050 Max. Daily Amount 67,760 Avg. Daily Amount 25,200 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg. 990 Tank 1 @ CGX: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **2)** Bldg. 990 Tank 2 @ CGX: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **3)** Bldg. 990 Tank 3 @ CGX: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **4)** Bldg. 395: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **5)** HMF NE: Type Above ground tank, Pressure Ambient

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					pressure, Temperature Ambient temperature
CAS 7722841 Trade Secret [ ] Chem. Name Hydrogen Peroxide Solution, [> 52% Peroxide] Pure [ ] Mixture [X] Solid [ ] Liquid [X] Gas [ ] EHS [X] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [X] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [X] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [X] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [X] Serious eye damage or eye irritation [X] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]	500 Max. Daily Amount 500 Avg. Daily Amount 10 Max. Amount in largest Container 207 No. of Days On-site		**1)** Bldgs. 75, 79, 96: Type Plastic bottles or jugs, Pressure Ambient pressure, Temperature Ambient temperature
CAS 7722841 Trade Secret [ ] Chem. Name Hydrogen Peroxide, 20%-50% Pure [X] Mixture [ ] Solid [ ] Liquid [X] Gas [ ] EHS [ ] Below Reporting Thresholds [X] **Chemical Exemption Information**	Explosive [X] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [X] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [X] Serious eye damage or eye irritation [X] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ]	4,990 Max. Daily Amount 3,840 Avg. Daily Amount 4,990 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg. 77 (ODD): Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
	Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]			
CAS 8008206 Trade Secret [ ] Chem. Name Jet Fuel: JP-5 Pure [ ] Mixture [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [ ] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [ ] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]	1,942,080 Max. Daily Amount 1,553,664 Avg. Daily Amount 544,000 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg. 100: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **2)** Bldg. 77: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **3)** Bldg. 365 Fuel Farm Tank 1: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **4)** Bldg. 365 Fuel Farm Tank 2: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **5)** Bldg. 365 Fuel Farm Tank 3: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					6) Bldg. 365 Fuel Farm Reclaim Tank: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **7)** Bldg. 365 Fuel Farm Used: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **8)** Bldg 55 Blast Shield: Type Above ground tank, Pressure Ambient pressure, Temperature Ambient temperature **9)** Bldg. 77 / 75 Bowser: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **10)** Bldg. 77 / 75 Bowser: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **11)** mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **12)** mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
					13) mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **14)** mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **15)** mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature **16)** mobile fuel truck: Type Tank wagon, Pressure Ambient pressure, Temperature Ambient temperature
CAS 7439921 Trade Secret [ ] Chem. Name Lead Acid Batteries Pure [ ] Mixture [X] Solid [X] Liquid [X] Gas [ ] EHS [X] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [ ] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [X] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [X] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ]	30,000 Max. Daily Amount 30,000 Avg. Daily Amount 4,000 Max. Amount in largest Container 365 No. of Days On-site	Chemical Name-Lead (CAS 7439921) Percentage-66.0 Unit-weight Max Amount Code-02 Chemical Name-Sulfuric Acid (CAS 7664939) Percentage-11.0 Unit-weight Max Amount Code-02	**1)** Industrial Equipment Throughout Facility (Batteries): Type Battery, Pressure Ambient pressure, Temperature Ambient temperature **2)** Throughout Facility: Type Battery, Pressure Ambient pressure, Temperature Ambient temperature

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Chemical Description	Physical Hazards	Health Hazards	Inventory	Mixture components	Storage locations and codes (Non- Confidential)
	Hazard Not Otherwise Classified [ ]	Hazard Not Otherwise Classified [ ]			
CAS 7697372 Trade Secret [ ] Chem. Name Nitric Acid Pure [X] Mixture [ ] Solid [ ] Liquid [X] Gas [ ] EHS [X] Below Reporting Thresholds [ ] **Chemical Exemption Information**	Explosive [ ] Flammable (gases, aerosols, liquids, or solids) [X] Oxidizer (liquid, solid or gas) [ ] Self-reactive [ ] Pyrophoric (liquid or solid) Pyrophoric Gas [ ] Self-heating [ ] Organic peroxide [ ] Corrosive to metal [X] Gas under pressure (compressed gas) [ ] In contact with water emits flammable gas [ ] Combustible Dust [ ] Hazard Not Otherwise Classified [ ]	Acute toxicity (any route of exposure) [X] Skin corrosion or irritation [X] Serious eye damage or eye irritation [ ] Respiratory or skin sensitization [ ] Germ cell mutagenicity [ ] Carcinogenicity [ ] Reproductive toxicity [ ] Specific target organ toxicity (single or repeated exposure) [X] Aspiration hazard [ ] Simple Asphyxiant [ ] Hazard Not Otherwise Classified [ ]	1,000 Max. Daily Amount 999 Avg. Daily Amount 480 Max. Amount in largest Container 365 No. of Days On-site		**1)** Bldg 97: Type Plastic or non-metallic drum, Pressure Ambient pressure, Temperature Ambient temperature

State Specific Information

No State specific information

Additional Information

[X] I have attached a document. [ ] I have attached two or more documents.

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages one through 15, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Tier 2 Online Submission Report

E-Plan - University of Texas at Dallas

January 1, 2019 - December 31, 2019

Jacob P. Naeyaert, Environmental Protection Specialist		2020- 02- 29 20: 18: 49 UTC
Name and official title of owner/operator OR owner/operator's authorized representative	Signature	Date signed

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: DRS TECHNOLOGIES

Address: 1060 CONSOLIDATED ROAD
ELIZABETH CITY, NC 27909

Phone #: _____

Email: _____

Website: _____

Owner Information

Owner: IS NOW OWNED BY

Address: THE U.S. COAST GUARD.
THEY WILL INCLUDE THIS SITE

Phone #: IN THEIR DATA.

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:

Additional Information:

Signature/Title: _____

Date: 1.28.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: _____

Address: 537 OWNLEY ROAD

ELIZABETH CITY, NC 27909

Phone #: _____

Email: _____

Website: _____

Owner Information

Owner: _____

Address: _____

_____

Phone #: _____

Storage/Chemical/Petroleum Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
N/A	

Additional Information:

No Longer a Farm

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ Water Superintendent

Date: 1-27-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: Northeastern High School

Address: 963 Oak Stump Road
Elizabeth City, NC 27909

Phone #: 252-335-2932

Email:

Website: ECPPS - NHS

Owner Information

Owner: Elizabeth City Pasquotank Board of Education

Address: 1200 S. Hughes Blvd.
Elizabeth City NC 27909

Phone #: 252-335-2981

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:

Additional Information:

Emergency Generator onsite - Natural Gas

Please check all boxes that describe the use of the property:

- ☒ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☒ Other: School

Signature/Title: Marlene Wilkins
Maintenance Director

Date: 1/12/2021

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: LARRY LARABEE

Address: 724 CHERRY GLADE ROAD
ELIZABETH CITY NC 27909

Phone #: _____

Email: _____

Website: _____

Owner Information

Owner: LARRY LARABEE

Address: 724 CHERRY GLADE ROAD
ELIZABETH CITY NC 27909

Phone #: _____

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
TRACTORS	4

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☑ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ WATER SUPERINTENDENT Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: KEVIN BRICKHOUSE — K&L FARMS INC

Address: 987 CHERRY GLADE ROAD
ELIZABETH CITY NC 27909

Phone #: _____

Email: _____

Website: _____

Owner Information

Owner: KEVIN BRICKHOUSE

Address: 987 CHERRY GLADE ROAD
ELIZABETH CITY, NC 27909

Phone #: ~~252~~ _____

Storage/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
Tractors	4
Silo's GRAIN - CORN - SOYBEANS	6
Fuel tanks	3

Additional Information:

Signature/Title: _____ WATER SUPERINTENDENT

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☒ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: BIG DADDY CAR WASH

Address: 100 TIDEWATER WAY
ELIZABETH CITY, NC 27909

Phone #: 252 338 5599

Email: Thegreekpizza@yahoo.com

Website: _____

Owner Information

Owner: ~~Gregori Al~~ Thegreekpizza@yahoo.com

Address: _____

Phone #: 252 338 5599

Property/Potential Contaminant Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
15 gallon bucket of soap	1
5 gallon bucket of wax	1

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☑ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ WATER SUPERINTENDENT

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: South Park Sports Complex

Address: 100 Capital Tece
Elizabeth City NC 27909

Phone #: 252-335-2897

Email: jdsimpson@cityofec.com

Website: www.cityofec.com

Owner Information

Owner: City of Elizabeth City / Pasquotank County

Address: 306 E. Colonial Ave
Elizabeth City NC 27907

Phone #: 252-335-0891

Potentially Contaminating Activity Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
round up (glyphosate)	5 gal per yr
speedzone (2-4d, dicamba)	4 gal per yr
Oxadiazon	8 gal per yr
fertilizer application	8 tons per year
round up	2.5 gal
speed zone	2.5 gal
Amdro (hydramethylnon)	2 pounds

Applications

Storage

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☑ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☒ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☑ Pesticide Application
- ☐ Print/Sign Shop
- ☒ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: [signature] Superintendent of Athletics Date: 11/21/21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: SMALL BULLMAN FARMS

Address: 1379 WEEKSVILLE ROAD
ELIZABETH CITY NC 27909

Phone #: 252 339 7121

Email: _____

Website: N/A

Owner Information

Owner: John bullman

Address: 1379 Weeksville Rd

_____

Phone #: 252330 2121

Property/Chemical/Application Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
~~dddd~~ Tractors	6

Additional Information:

NO Pesticides, Herbicides, fungicides, Bulk storage tanks or silos or Animals kept on property

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☒ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ WATER SUPERINTENDENT

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: CHARLES GRAY & SONS

Address: 590 | 853 BODY ROAD
ELIZABETH CITY, NC 27909

Phone #: 252 331 5995

Email: N/A

Website: N/A

Owner Information

Owner: Charles Gray

Address: 853 Body Rd Elizabeth City
NC, 27909

Phone #: 252 331 5995

Property/Contaminant/Application Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
6000 gallon diesel tank	1
Herbicide	1 gallon
pesticide	25 gallon
Fungicides	1 gallon
6 Silos	grain, corn, soybeans
4 Tractors	4

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☑ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: [signature] WATER SUPERINTENDENT

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: BROTHERS FARM

Address: 1199 CHANCES LANE
ELIZABETH CITY, NC 27909

Phone #: 252 562 2225

Email: _____

Website: _____

Owner Information

Owner: Mickey Brothers

Address: 1199 Chances Lane
Elizabeth City NC, 27909

Phone #: 252 562 2225

Property/Chemical/Application Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
Silos - Corn - Soybeans Grain	4
3000 Diesel tank	1
1000 gallon highway diesel	1

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☑ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: [signature] WATER SUPERINTENDENT

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: CITY BEVERAGE

Address: 1471 WEEKSVILLE ROAD
ELIZABETH CITY NC 27909

Phone #: 252 330 5539

Email: _____

Website: abwholesaler.com

Owner Information

Owner: Jeff Dixon

Address: 1471 Weeksville

_____

Phone #: 252 338 2859

Potentially Contaminating Activities

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
Highway Diesel 10,000 gal	1
Regular unleaded 10,000 gal	1

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☒ Other: Beer Distributor

Signature/Title: _____ Water Superintendent

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: TERMINIX

Address: 108 CAPITAL TRCE
ELIZABETH CITY NC 27909

Phone #: 252 435 5533

Email: Drosenberger@insect.com

Website: insect.com

Owner Information

Owner: Jamie Haugh

Address: 2709 Breezewood Ave. Fayetville NC, 28303

Phone #: 910 484 6163

Chemical/Pesticide Application Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
Imaxx Dual	2 gallons of concentrate
Suspend Polyzone	5 gallons of concentrate
Crossfire	1 gallon
Termidor	1 gallon
Fipronil	32 aerosol cans 11b

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☒ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: [signature] WATER SUPERINTENDENT Date: 1-21-27

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: Johnstone Supply

Address: 111 Kitty Hawk Lane
Elizabeth City, NC 27909

Phone #: 252 621 5220

Email: pamela.doorman@Johnstone supply.com

Website: Johnstone Supply.com

Owner Information

Owner: Richard McInnis

Address: Jacksonville NC,

Phone #: 910-414-8800

Potential Contaminant/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
R-22 30lbs (Kept inside)	30-30 lb Cylinders
Nitrogen (Kept outside)	10-10 lb Cylinders
Acetaline	10-10 lb Cylinders
Oxygen	

Additional Information:

Signature/Title: [signature] Water Superintendent

Date: 1.27.21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☒ Other: Supply Company

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: River Road Middle School

Address: 1701 River Road
Elizabeth City NC 27909

Phone #: 252-333-1454

Email:

Website: ECPPS - RRMS

Owner Information

Owner: Elizabeth City Pasquotank Board of Education

Address: 1200 S. Hughes Blvd.
Elizabeth City NC 27909

Phone #: 252-335-2981

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:

Additional Information:

Soccer field is maintained by ECParks+ Rec.
No Generator onsite
No Pesticide or herbicide used near wells or pump stations.

Signature/Title: Marlene Willis
Maintenance Director

Date: 1/12/2021

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☒ Underground Tank
- ☐ Wood Processing
- ☒ Other: School

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: Elizabeth City Airport

Address: 1028 Consolidated Rd.
Elizabeth City, NC 27909

Phone #: 252-335-5634

Email: manager@ecgairport.com

Website: www.ecgairport.com

Owner Information

Owner: EC-PC Airport Authority

Address: SAME AS ABOVE

Phone #: SAME AS ABOVE

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities: (GALLONS)
AVGAS	1,200 TRUCK
	10,000 TANK
JET FUEL	3,000 TRUCK
	5,000 TRUCK
	10,000 TANK

A ALL QUANTITIES ARE MAX STORAGE, NOT WHAT'S ON HAND

Additional Information:

Please check all boxes that describe the use of the property:

- ☑ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☑ Other: AIRPORT

Signature/Title: Sfhuton, AIRPORT MANAGER Date: 1-6-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Name: Stevenson Sand Inc.

Address: 1924 Peartree Road
Elizabeth City NC 27909

Phone #: 252 338 3004

Email:

Website: Stevensonsand.com

Owner: Eddie Stevenson

Address: 1924 Peartree Rd Elizabeth City NC, 27909

Phone #: 252 339 3751

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
3000 gallon diesel tank	1
Backhoe	2
Road Grader	1
Tractor	2

Additional Information:

Signature/Title: L Smith Water Superintendent Date: 1-27-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☒ Other: Grading Contractor Septic Tank

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: C & W GRADING

Address: 661 BAYSIDE ROAD
ELIZABETH CITY NC 27909

Phone #: 252 339 0760

Email:

Website: C+W Grading.com

Owner Information

Owner: Wesley Coker + Brandon Williams

Address:

Phone #: 252 3390760 252 337 5449

Property/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
6000 gallon diesel tank	1
2 excavators	2
2 bull dozers	2
3 semi trucks	3

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☒ Other: GRADING CONTRACTOR

Signature/Title: [signature] WATER SUPERINTENDENT

Date: 1-27-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: ROGERSON FARM

Address: 711 CHERRY GLADE ROAD
ELIZABETH CITY NC 27909

Phone #: 252-312-3004

Email:

Website:

Owner Information

Owner: John Rogerson

Address: 711 Cherry Glade Rd
Elizabeth City NC, 27909

Phone #: 252-312-3004

Site Activity / Chemical Usage / Application Information

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
Fuel/off road/Gas/Highway diesel tractors	3 @ 3000 gallons c

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☑ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ Water Superintendent

Date: 1-27-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: U.S. Coast Guard BASE Elizabeth City

Address: 1664 Weeksville Rd.
Elizabeth City, NC 27909

Phone #: (252) 335-6356 Chris Dunn EPS

Email: chris.a.dunn@uscg.mil

Website: N/A

Owner Information

Owner: Commanding Officer CDR Sherman

Address: 1664 Weeksville Rd.
Elizabeth City, NC 27909

Phone #: (252) 335-6027

Survey / Chemical / Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
JP-5	250,000 gals (4)
Diesel	~ 80,000 gals
Gasoline	~ 12,000 gals
Various Paints (chromium)	~ 10,000 gals
Solvents various	~ 15,000 gals
AFFF C-6 & C-8	~ 20,000 gals
Pesticides/Herbicides	~ 1000 gals
Wastewater (Cyanide, TBUCAC, MCL)	~ 10,000 gals

Additional Information:

Active Swimmer Pool, 1.5 million gals (Treated w/ Sodium Hydroxide)
Recycle: Cardboard, Metals, Paper, Plastic, Bottles, Tonk

Please check all boxes that describe the use of the property:

- [x] Above Ground Tank
- [ ] Agriculture Operations
- [ ] Animal Boarding
- [x] Auto Repair/Sale
- [ ] Carwash
- [ ] Cell Tower
- [x] Cemetery
- [x] Chemical Storage
- [x] Demolition Site
- [x] Fertilizer Application
- [ ] Food Processing
- [ ] Funeral Home
- [ ] Golf Course
- [ ] Hardware Store
- [ ] Laundromat/Dry Cleaner
- [ ] Lumber/Parts Store
- [x] Machine Shop/Repairs
- [x] Maintenance Shop
- [ ] Manufacturing
- [x] Medical Facility
- [x] Metal Fabrication
- [x] Motor Pool
- [x] Pesticide Application
- [x] Print/Sign Shop
- [x] Recreation Facility
- [x] Salvage Yard
- [x] Septic Tank
- [x] Storage
- [x] Tier II Facility
- [ ] Underground Tank
- [ ] Wood Processing
- [ ] Other: Aircraft washing, painting, stripping, blasting, fueling, buildings maintenance (plumbing, HVAC)

Signature/Title: Environmental Protection Specialist (EPS) Chris Dunn (252) 267-9789

Date: 2/2/2021

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188

NCRWA TRAINING SUPPORT

State/Federal & Local Permits as of 2/2/2021

- Non-Significant Industrial User (waste water permit #0001
- Storm water permit (Exchange, Barracks & Galley) #SW 7091117
- Synthetic Minor Air Permit #04138R26
- RCRA Part B #NC2690308232 (BASE)
- LQG for Heavy Maintenance Facility, 1060 Consolidated Rd. #NC0991302718

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: MERCER FARMS

Address: 628 BAYSIDE ROAD
ELIZABETH CITY NC 27909

Phone #: 252 330 4387

Email: N/A

Website: N/A

Owner Information

Owner: Douglas Mercer

Address: 628 Bayside Road
Elizabeth City NC 27909

Phone #: 252-330-4387

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
1000 gallon diesel tank	1
Tractors	4

Additional Information:

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☐ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ WATER SUPERINTENDENT

Date: 2-8-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NCRWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: Cherry Glade Chickens

Address: Cherry Glade Road
Elizabeth City, NC 27909

Phone #: 252.333-0656

Email: _____

Website: _____

Owner Information

Owner: William & Judy Perry

Address: 511 Okisko Road
Elizabeth City, NC 27909

Phone #: _____

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
100K Chickens / 5 Flocks/yr	
Generator, 500 Gallons of fuel	

Additional Information:

No Chemicals, Feed - 100,000 pounds on hand, Spread manure every 30 days.

Please check all boxes that describe the use of the property:

- ☐ Above Ground Tank
- ☒ Agriculture Operations
- ☐ Animal Boarding
- ☐ Auto Repair/Sale
- ☐ Carwash
- ☐ Cell Tower
- ☐ Cemetery
- ☐ Chemical Storage
- ☐ Demolition Site
- ☐ Fertilizer Application
- ☐ Food Processing
- ☐ Funeral Home
- ☐ Golf Course
- ☐ Hardware Store
- ☐ Laundromat/Dry Cleaner
- ☐ Lumber/Parts Store
- ☐ Machine Shop/Repairs
- ☐ Maintenance Shop
- ☐ Manufacturing
- ☐ Medical Facility
- ☐ Metal Fabrication
- ☐ Motor Pool
- ☐ Pesticide Application
- ☐ Print/Sign Shop
- ☐ Recreation Facility
- ☐ Salvage Yard
- ☐ Septic Tank
- ☐ Storage
- ☐ Tier II Facility
- ☐ Underground Tank
- ☐ Wood Processing
- ☐ Other: _____

Signature/Title: _____ Director Utilities Date: 2.26.22

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: [redacted] Thomas Stevenson Jr (Stevenson Sand Inc)

Address: 1924 Peartree Rd
Elizabeth City NC 27909

Phone #: (252) 338-3004

Email: _____

Website: _____

Owner Information

Owner: Tommy Stevenson

Address: 1924 Peartree Rd
Elizabeth City, NC 27909

Phone #: (252) 333-2034

Supply/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
3-4000 gal diesel	
2-500 gal gas	
6000 gal nitrogen tank	
Chemical shed	

Additional Information:

Signature/Title: _____

Date: 8-4-21

Please check all boxes that describe the use of the property:

- [x] Above Ground Tank
- [x] Agriculture Operations
- [ ] Animal Boarding
- [ ] Auto Repair/Sale
- [ ] Carwash
- [ ] Cell Tower
- [ ] Cemetery
- [x] Chemical Storage
- [ ] Demolition Site
- [ ] Fertilizer Application
- [ ] Food Processing
- [ ] Funeral Home
- [ ] Golf Course
- [ ] Hardware Store
- [ ] Laundromat/Dry Cleaner
- [ ] Lumber/Parts Store
- [ ] Machine Shop/Repairs
- [x] Maintenance Shop
- [ ] Manufacturing
- [ ] Medical Facility
- [ ] Metal Fabrication
- [ ] Motor Pool
- [ ] Pesticide Application
- [ ] Print/Sign Shop
- [ ] Recreation Facility
- [ ] Salvage Yard
- [x] Septic Tank
- [ ] Storage
- [ ] Tier II Facility
- [ ] Underground Tank
- [ ] Wood Processing
- [ ] Other: _____

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

Map Code _____

Site Evaluation Form for Potential Contaminant Sources

Please fill out the following survey to assist with the completion of our wellhead protection program development. This information will be used to develop management strategies for the protection of our drinking water supply. Please list any state permits issued to your entity on the reverse side of this document.

Facility Information

Facility Name: Newbern Farms

Address: 1497 Weeksville Road

Phone #:

Email:

Website:

Owner Information

Owner: Jamie Newbern

Address: 1497 Weeksville Road

Phone #: 252-339-0448

Site Activity/Chemical/Application Inventory

(please attach any additional information as necessary for a complete listing)

Potential Contaminants:	Quantities:
1000 Gallon fuel tank	
Chemical Storage shed	
10 old tractors	
old farm trucks	
Grain Storage	

Additional Information:

Please check all boxes that describe the use of the property:

- [x] Above Ground Tank
- [x] Agriculture Operations
- [ ] Animal Boarding
- [ ] Auto Repair/Sale
- [ ] Carwash
- [ ] Cell Tower
- [ ] Cemetery
- [x] Chemical Storage
- [ ] Demolition Site
- [ ] Fertilizer Application
- [ ] Food Processing
- [ ] Funeral Home
- [ ] Golf Course
- [ ] Hardware Store
- [ ] Laundromat/Dry Cleaner
- [ ] Lumber/Parts Store
- [ ] Machine Shop/Repairs
- [ ] Maintenance Shop
- [ ] Manufacturing
- [ ] Medical Facility
- [ ] Metal Fabrication
- [ ] Motor Pool
- [ ] Pesticide Application
- [ ] Print/Sign Shop
- [ ] Recreation Facility
- [ ] Salvage Yard
- [ ] Septic Tank
- [x] Storage
- [ ] Tier II Facility
- [ ] Underground Tank
- [ ] Wood Processing
- [ ] Other: _____

Signature/Title: [signature]

Date: 8-4-21

For Questions please contact David Smithson, Pasquotank County, at 252-335-2240 or Katie Dunning, NCRWA, at 336-590-0188.

NC RWA TRAINING SUPPORT

	Weeksville Plant			Yearly	Totals		
	FY 18-19						
Gallon Produced / 100	**259,006**						
Cost	**673,730.69**						
Cost per Hundred	**2.60**						
Labor							
Salaries	Regular			186,747.00			
	Overtime			22,000.00			
	Part Time			0.00			
Cost							
	FICA			14,286.00			
	Retirement			13,323.00			
	Health Insurance			33,124.00			
	Worker's Comp.			6,000.00			
	Re-Health Insurance			7,200.00			
Total					275,480.00	1.06	41%
Electricity							
Plant				86,750.50			
Wells							
Total					86,750.50	0.33	13%
Chemical							
Bleach (gal)		0.00	1.2	16,027.44			
Caustic (lb)		0	0.078	10,442.48			
Aqua Mag (lb)		0.00	1.2	3,063.72			
HFS (lb)		0	0.51	3,044.46			
Potassium (lb)		0	3.23	68,509.94			
Ammonia (lb)		0	0.4	5,941.60			
Polymer			6.65	79.80			
Sodium Bisulfate (lb)		0	0.34	0.00			
Total					107,109.44	0.41	16%
Operational							
Audit				500.00			
Legal				172.50			
Engineering				5,000.00			
Uniforms				3,000.00			
Storm Water Fee				282.70			
Gas & Oil				10,000.00			
Office Supplies				2,000.00			
Depart. Supplies				5,000.00			
Water Purchase				0.00			
Safety				750.00			
Travel				1,500.00			
Training				1,500.00			
Telephone				5,000.00			
Postage				100.00			
Printing				50.00			
Maintenance							
	Building			17,175.25			
	Equipment			35,000.00			
	Office Equipment			500.00			

Pasquotank County Water System

R/O Plant December 2019

Gallon Produced / 100	**1**
Cost	**117,660.21**
Cost per Hundred	**117,660.21**

Labor						
	Salaries	Regular		0.00		
		Overtime		0.00		
		Part Time		0.00		
Cost						
		FICA		0.00		
		Retirement		0.00		
		Health Insurance		0.00		
		Worker's Comp.		616.67		
Total					616.67	616.67
Administrative Cost				1,610.38		
Total					1,610.38	1,610.38
Electricity						
	Plant			10,275.00		
	Larabee			0.00		
	Pike			0.00		
	Wesley			0.00		
	Foreman Bundy			418.00		
	Propane			0.00		
Total					10,693.00	10693.00
Chemical						
	Antiscalent (gal)	0.00	12.40	0.00		
	Fluoride (Ib)	0	0.45	0.00		
	Calcium Chloride (gal)	0.00	1.86	0.00		
	Corrosion Inhibiter (Ib)	0	1.00	0.00		
	Caustic (Ib)	0	0.82	0.00		
	Bleach (gal)	0	1.32	0.00		
Sodium Bi Carbonate (bag)		0	19.51	0.00		
				0.00		
Total					0.00	0.00
Operational						
	Audit					
	Legal			0.00		
	Engineering			0.00		
	Uniforms			0.00		
	Gas & Oil			0.00		
	Office Supplies			0.00		
	Depart. Supplies			0.00		
	Water Purchase			0.00		

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2426

1. **WELL CONTRACTOR:**

Edward Allen Jackson
Well Contractor (Individual) Name

A.C. Schultes Of Carolina
Well Contractor Company Name

STREET ADDRESS 3887 South N.C. 41

Wallace | NC | 28466
City or Town | State | Zip Code

910 | 285-7465
Area Code | Phone Number

2. **WELL INFORMATION:**

SITE WELL ID#(if applicable) Foreman Bundy

STATE WELL PERMIT #(if applicable)

DWQ or OTHER PERMIT #(if applicable)

WELL USE(Check Applicable Box) Monitoring [ ] Municipal/Public [X]
Industrial/Commercial [ ] Agricultural [ ] Recovery [ ] Injection [ ]
Irrigation [ ] Other [ ] (list use)

DATE DRILLED February 12, 2010

TIME COMPLETED 4:00 AM [ ] PM [x]

3. **WELL LOCATION:**

CITY: COUNTY: Pasquotank

557 Foreman Bundy Road
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
[ ] Slope [ ] Valley [X] Flat [ ] Ridge [ ] Other
(check appropriate box)

LATITUDE N 36 .1609.71
LONGITUDE W 76 .223101
May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: [X] GPS [ ] Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. **FACILITY** - is the name of the business where the well is located.

FACILITY ID#(if applicable)

NAME OF FACILITY Pasquotank County

STREET ADDRESS 557 Foremna Bundy Road

Elizabeth City | NC | 27909
City or Town | State | Zip Code

CONTACT PERSON John Gregory

MAILING ADDRESS P O Box 39

Elizabeth City | NC | 27909
City or Town | State | Zip Code

252 | 335-2240
Area Code | Phone Number

5. **WELL DETAILS**

a. TOTAL DEPTH: 421

b. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]

c. WATER LEVEL Below top of Casing: 15.02 FT.
(Use "+" If Above Top of Casing)

d. TOP OF CASING IS 3 FT. Above Land Surface*
* Top of casing terminated at/or below land surface may require a variance in accordance with 14A NCAC 2C.0118.

e. YIELD (gpm): 1206 METHOD OF TEST 24 Hour Pump Test

f. DISINFECTION: Type HTH Amount 10 lbs

g. WATER ZONES (depth):
From 376 to 416 From _____ to _____
From _____ to _____ From _____ to _____
From _____ to _____ From _____ to _____

6. **CASING**

	Depth			Diameter	Thickness/ Weight	Material
From	0	to 105	FT	14"	0.375	Steel
From	+3	to 376	FT	14"	SDR 17	PVC
From	416	to 421	FT	12"	304	SS

7. **GROUT:**

	Depth			Material	Method
From	0	to 105	FT	Cement	Tremmie
From	3	to 356	FT	Cement	Tremmie
From		to	FT		

8. **SCREEN**

	Depth			Dia.		Slot		Material
From	376	to 416	FT	12" PS	in	0.050	in	304 S. S.
From		to	FT		in		in	
From		to	FT		in		in	

9. **SAND/GRAVEL PACK:**

	Depth			Size	Material
From	356	to 421	FT	#3	Well Gravel
From		to	FT		
From		to	FT		

10. **DRILLING LOG**

From	To	Formation Description
0	3	Sandy clay
3	18	Sand
18	134	Sand and shell
134	346	Clay
346	376	Clay with trace of sand
376	409	Limestone and fine sand
409	410	Hard limestone
410	417	Limestone and fine sand
417	418	Hard limestone
418	423	Sand and limestone
423	433	Hard limestone
433	440+	Sand, limestone with trace of clay

11. **REMARKS:**

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE: 2/12/2010

Edward Allen Jackson
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center - Raleigh, NC 27699-1617 Phone No. (919)733-7015 ext 568

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources - Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2426

1. **WELL CONTRACTOR:**

Edward Allen Jackson
Well Contractor (Individual) Name

A.C. Schultes Of Carolina
Well Contractor Company Name

STREET ADDRESS **3887 South N.C. 41**

Wallace **NC** **28466**
City or Town State Zip Code

910 **285-7465**
Area Code Phone Number

2. **WELL INFORMATION:**

SITE WELL ID#(if applicable) **Pike Site**

STATE WELL PERMIT #(if applicable)

DWQ or OTHER PERMIT #(if applicable)

WELL USE(Check Applicable Box) Monitoring [ ] Municipal/Public [X]
Industrial/Commercial [ ] Agricultural [ ] Recovery [ ] Injection [ ]
Irrigation [ ] Other [ ] (list use)

DATE DRILLED **February 5, 2010**

TIME COMPLETED **4:00** AM [ ] PM [x]

3. **WELL LOCATION:**

CITY: COUNTY: **Pasquotank**

976 Cherry Glade Road
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
[ ] Slope [ ] Valley [X] Flat [ ] Ridge [ ] Other
(check appropriate box)

LATITUDE **N** **36** **.170775**
LONGITUDE **W** **76** **.224334**
May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: [X] GPS [ ] Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. **FACILITY** - is the name of the business where the well is located.

FACILITY ID#(if applicable)

NAME OF FACILITY **Pasquotank County**

STREET ADDRESS **976 Cherry Glade Road**

Elizabeth City **NC** **27909**
City or Town State Zip Code

CONTACT PERSON **John Gregory**

MAILING ADDRESS **P O Box 39**

Elizabeth City **NC** **27909**
City or Town State Zip Code

252 **335-2240**
Area Code Phone Number

5. **WELL DETAILS**

a. TOTAL DEPTH: **421**

b. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]

c. WATER LEVEL Below top of Casing: **17.25** FT.
(Use "+" If Above Top of Casing)

d. TOP OF CASING IS **3** FT. Above Land Surface*
* Top of casing terminated at/or below land surface may require a variance in accordance with 14A NCAC 2C.0118.

e. YIELD (gpm): **1200** METHOD OF TEST **24 Hour Pump Test**

f. DISINFECTION: Type **HTH** Amount **10 lbs**

g. WATER ZONES (depth):
From **376** to **416** From _____ to _____
From _____ to _____ From _____ to _____
From _____ to _____ From _____ to _____

6. **CASING**

Depth			Diameter	Thickness/ Weight	Material
From **0**	to **105**	FT	**14"**	**0.375**	**Steel**
From **+3**	to **376**	FT	**14"**	**SDR 17**	**PVC**
From **416**	to **421**	FT	**14"**	**304**	**SS**

7. **GROUT:**

Depth			Material	Method
From **0**	to **105**	FT	**Cement**	**Tremmie**
From **3**	to **356**	FT	**Cement**	**Tremmie**
From	to	FT		

8. **SCREEN**

Depth			Dia.		Slot		Material
From **376**	to **416**	FT	**12" PS**	in	**0.050**	in	**304 S. S.**
From	to	FT		in		in	
From	to	FT		in		in	

9. **SAND/GRAVEL PACK:**

Depth			Size	Material
From **356**	to **421**	FT	**#3**	**Well Gravel**
From	to	FT		
From	to	FT		

10. **DRILLING LOG**

From	To	Formation Description
0	2	**Topsoil**
2	6	**Clay**
6	14	**Sand**
14	44	**Sand and Shell**
44	76	**Sand, shell and trace of green clay**
76	90	**Limestone, sand, stone and shell**
90	110	**Sand and trace of clay**
110	360	**Clay**
360	378	**Hard clay with traces of sand black specs**
378	421	**Limestone and sand**
421	422+	**Limestone, hard streaks and clay**

11. **REMARKS:**

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR — DATE: 2/5/2010

Edward Allen Jackson
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center - Raleigh, NC 27699-1617 Phone No. (919)733-7015 ext 568

Form GW-1b
Rev. 7/05

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2300

1. WELL CONTRACTOR:
Samuel L Wiggins
Well Contractor (Individual) Name
Magette Well & Pump Company
Well Contractor Company Name
2342 US 13 South
Street Address
Ahoskie NC 27910
City or Town State Zip Code
(252) 332-2265
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT#
OTHER ASSOCIATED PERMIT#(if applicable)
SITE WELL ID #(if applicable) Larabee Site

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☑
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 12.11.2009

4. WELL LOCATION:
Off Ownlev Road
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Elizabeth City COUNTY Pasquotank
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐Slope ☐Valley ☑Flat ☐Ridge ☐Other
LATITUDE 36 ° 16 ' 78.0000 " DMS OR 3x.xxxxxxxx DD
LONGITUDE 76 ° 22 ' 274.0000 " DMS OR 7x.xxxxxxxx DD
Latitude/longitude source: ☑GPS ☐Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Pasquotank County Water &
Facility Name Facility ID# (if applicable)
Street Address
Elizabeth City NC 27910
City or Town State Zip Code
John Gregory
Contact Name
PO Box 56
Mailing Address
Elizabeth City NC
City or Town State Zip Code
(252) 335-2240
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 407'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
c. WATER LEVEL Below Top of Casing: 13.7 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): 950 METHOD OF TEST pump test
f. DISINFECTION: Type HTH Amount 15 pounds
g. WATER ZONES (depth):
Top 380 Bottom 407 Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top +1	Bottom 90	Ft.	24"	.375	steel
Top +3	Bottom 352	Ft.	14"	sdr 17	PVC
Top 352	Bottom 380	Ft.	12"	sch10	stainless

8. GROUT:	Depth		Material	Method
Top 0	Bottom 60	Ft.	neat cement	pump
Top 60	Bottom 90	Ft.	bentonite chip	tremie feed
Top 90	Bottom 355	Ft.	neat cement	pump
355	365		bentoniteChips	tremieFeed

9. SCREEN:	Depth		Diameter	Slot Size	Material
Top 380	Bottom 407	Ft.	12 in.	.050 in.	
Top	Bottom	Ft.	in.	in.	
Top	Bottom	Ft.	in.	in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 365	Bottom 420	Ft.	3	Ricci Brothers
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	2	top soil
2	16	clay with sand
16	60	fine sand
60	88	sand fine to med.
88	122	sand clay & shells
122	365	grey clay with shells
365	378	sand shells and clay
378	426	sand and limestone

12. REMARKS:
~~screen continued to 415' but is filled with neat cement to 407'~~

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Samuel L Wiggins
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2426 A

1. WELL CONTRACTOR:
Edward Allen Jackson
Well Contractor (Individual) Name
A. C. Schultes of Carolina, Inc.
Well Contractor Company Name
3887 S NC 41
Street Address
Wallace NC 28466
City or Town State Zip Code
(910) 285-7465
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT#
OTHER ASSOCIATED PERMIT#(if applicable)
SITE WELL ID #(if applicable) Wesley #1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☑
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4/19/11

4. WELL LOCATION:
Cherry Glade Road
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Elizabeth City COUNTY Pasquotank
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other
LATITUDE 36 Á ' " DMS **OR** 3x.xxxxxxxx DD
LONGITUDE 75 Á ' " DMS **OR** 7x.xxxxxxxx DD
Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Pasquotank Water
Facility Name Facility ID# (if applicable)
Street Address
Elizabeth City NC 27910
City or Town State Zip Code
John Gregory
Contact Name
P O Box 56
Mailing Address
Elizabeth City NC 27910
City or Town State Zip Code
(252.0 335-2240
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 421
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
c. WATER LEVEL Below Top of Casing: 16.21 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): 1150 **METHOD OF TEST** pump test
f. DISINFECTION: Type HTH **Amount** 15 lbs
g. WATER ZONES (depth):
Top 381 Bottom 416 Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top +1	Bottom 100	Ft.	24"	.375	steel
Top +2	Bottom 355	Ft.	14"	sdr 17	pvc
Top 355	Bottom 381	Ft.	12"	sch 10	s steel

8. GROUT:	Depth		Material	Method
Top 0	Bottom 356	Ft.	cement	tremmie
Top 356	Bottom 361	Ft.	bentonite chip	tremmie
Top	Bottom	Ft.		

9. SCREEN:	Depth		Diameter		Slot Size		Material
Top 381	Bottom 416	Ft.	12	in.	.50	in.	s steel
Top	Bottom	Ft.		in.		in.	
Top	Bottom	Ft.		in.		in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 361	Bottom 421	Ft.	#3	well gravel
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	clay
5	38	sand
38	55	sand and shell
55	77	sand, shell and trace of clay
77	78	hard spot
78	95	sand and shell
95	103	clay and sand
103	216	clay
216	221	fine sand
221	370	clay
370	384	clay and black sand

12. REMARKS:

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Edward Allen Jackson
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2426 A

1. WELL CONTRACTOR:
Edward Allen Jackson
Well Contractor (Individual) Name
A. C. Schultes of Carolina, Inc.
Well Contractor Company Name
3887 S NC 41
Street Address
Wallace NC 28466
City or Town State Zip Code
(910) 285-7465
Area code Phone number

2. WELL INFORMATION:
WELL CONSTRUCTION PERMIT#
OTHER ASSOCIATED PERMIT#(if applicable)
SITE WELL ID #(if applicable) Wesley #1

3. WELL USE (Check One Box) Monitoring ☐ Municipal/Public ☑
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)
DATE DRILLED 4/19/11

4. WELL LOCATION:
Cherry Glade Road
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Elizabeth City COUNTY Pasquotank
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☐ Slope ☐ Valley ☑ Flat ☐ Ridge ☐ Other
LATITUDE 36 Á ' " DMS **OR** 3x.xxxxxxxx DD
LONGITUDE 75 Á ' " DMS **OR** 7x.xxxxxxxx DD
Latitude/longitude source: ☑ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map andattached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)
Pasquotank Water
Facility Name Facility ID# (if applicable)
Street Address
Elizabeth City NC 27910
City or Town State Zip Code
John Gregory
Contact Name
P O Box 56
Mailing Address
Elizabeth City NC 27910
City or Town State Zip Code
(252.0 335-2240
Area code Phone number

6. WELL DETAILS:
a. TOTAL DEPTH: 421
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
c. WATER LEVEL Below Top of Casing: 16.21 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.
e. YIELD (gpm): 1150 **METHOD OF TEST** pump test
f. DISINFECTION: Type HTH **Amount** 15 lbs
g. WATER ZONES (depth):
Top 381 Bottom 416 Top Bottom
Top Bottom Top Bottom
Top Bottom Top Bottom

7. CASING:	Depth		Diameter	Thickness/ Weight	Material
Top +1	Bottom 100	Ft.	24"	.375	steel
Top +2	Bottom 355	Ft.	14"	sdr 17	pvc
Top 355	Bottom 381	Ft.	12"	sch 10	s steel

8. GROUT:	Depth		Material	Method
Top 0	Bottom 356	Ft.	cement	tremmie
Top 356	Bottom 361	Ft.	bentonite chip	tremmie
Top	Bottom	Ft.		

9. SCREEN:	Depth		Diameter		Slot Size		Material
Top 381	Bottom 416	Ft.	12	in.	.50	in.	s steel
Top	Bottom	Ft.		in.		in.	
Top	Bottom	Ft.		in.		in.	

10. SAND/GRAVEL PACK:

	Depth		Size	Material
Top 361	Bottom 421	Ft.	#3	well gravel
Top	Bottom	Ft.		
Top	Bottom	Ft.		

11. DRILLING LOG

Top	Bottom	Formation Description
0	5	clay
5	38	sand
38	55	sand and shell
55	77	sand, shell and trace of clay
77	78	hard spot
78	95	sand and shell
95	103	clay and sand
103	216	clay
216	221	fine sand
221	370	clay
370	384	clay and black sand

12. REMARKS:

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

SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Edward Allen Jackson
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit within 30 days of completion to: Division of Water Quality - Information Processing, 1617 Mail Service Center, Raleigh, NC 27699-161, Phone : (919) 807-6300

Form GW-1b
Rev. 2/09

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned
Source Code: W 01
Well Name (If purchase, name of seller): Well No. 1

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:
Source Begin Date MM - YY: 03-79
Direct Influence Date MM - DD - YY:
Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): @ rear of WTP yard

Latitude (N) Deg. Min Sec: 36-14-24.49420
Longitude (W) Deg Min Sec: 76-10-15.59860
How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)
GPS File Name:
If purchase, use seller's primary source lat/long)
MM - DD - YY:

Vulnerable VOC's: Y / N
Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned
Entry Point Code: E 02
Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)
Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)
Entry Point Begin Date MM / YY: 06-79
Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:
Sources of pollution/distance: Back wash lagoon appx 200'

Surface water within 200'? Y (Y/N) If yes, actual distance 175' If yes, bact. samples collected? Y (Y/N)
Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED
Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 6"(relined) Type: gravel packed Yield (gpm): 130 Properly sealed? Y (Y,N)
Properly vented? Y (Y,N) Casing Depth 41 ft (If unknown, put 'UNK') Well depth: 71' Meter available? Y (Y,N)
Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 41' - 66' Size: 6' x 8'
Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 62 HP: 5 Pump intake depth: 44' Auxiliary Power? Y (Y,N)
Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: 300,000 Hydro: 0,000 Ground: 1,000,000
If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)
High service pumps: 1. 1000 gpm 100.0 hp four pumps @ 1000 gpm ea. Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.
If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)
If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 02

Well Name (If purchase, name of seller): Well No. 2

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 02-79

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): @ front/side of WTP yard

Latitude (N) Deg. Min Sec: 36-14-29.53257

Longitude (W) Deg Min Sec: 76-10-20.52197

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

Vulnerable VOC's: Y / N

Assessment Date (MM - DD - YY):

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 140 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 42 ft (If unknown, put 'UNK') Well depth: 72 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 42' - 67' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 90 HP: 5 Pump intake depth: 42' Auxiliary Power? Y (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: 300,000 Hydro: 0,000 Ground: 1,000,000

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp four pumps @ 1000 gpm ea. Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 03

Well Name (If purchase, name of seller): Well No. 3 (A)

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 08-80

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off SR 1130; 0.5 mi from NC 34

Latitude (N) Deg. Min Sec: 36-14-34.81062

Longitude (W) Deg Min Sec: 76-10-08.08297

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 6" Type: gravel packed Yield (gpm): 100 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 37 ft (If unknown, put 'UNK') Well depth: 78 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 37' - 62' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 75 HP: 5 Pump intake depth: 45' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp 2. gpm hp 3. gpm hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97) 10/92 -- Sleeved to 6" SSt casing x 42'; then 4" SSt screen to 78'
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 04

Well Name (If purchase, name of seller): Well No. 4

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 06-79

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off SR 1130; .25 miles into woods

Latitude (N) Deg. Min Sec: 36-14-37.29362

Longitude (W) Deg Min Sec: 76-09-46.09205

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 172 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 47 ft (If unknown, put 'UNK') Well depth: 72 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 47' - 72' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 100 HP: 5 Pump intake depth: 47' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp 2. gpm hp 3. gpm hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

4/90 -- RE-LINED W/ 4" SSt SCREENS @ 47' - 78'

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned
Source Code: W 05
Well Name (If purchase, name of seller): Well No. 5
Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)
If purchase, seller ID#:
Source Begin Date MM - YY: 06-79
Direct Influence Date MM - DD - YY:
Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)
Location of well within the system (If purchase, location of master meter): Off SR 1130; .75 miles into woods
Latitude (N) Deg. Min Sec: 36-14-46.16600
Longitude (W) Deg Min Sec: 76-09-46.09205
How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)
GPS File Name:
If purchase, use seller's primary source lat/long)
MM - DD - YY:
Vulnerable VOC's: [ ] Y N
Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned
Entry Point Code: E 02
Entry Point Name: Pasquotank Co. WTP
Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)
Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)
Entry Point Begin Date MM / YY: 06-79
Entry Point End Date MM / YY:
Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:
Sources of pollution/distance: Site needs drainage improvements
Surface water within 200'? N (Y,N) If yes, actual distance: If yes, bact. samples collected? (Y/N)
Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok
Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED
Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure
Well: Diameter: * 6" Type: gravel packed Yield (gpm): 118 Properly sealed? Y (Y,N)
Properly vented? Y (Y,N) Casing Depth: 50 ft (If unknown, put 'UNK') Well depth: 85 Meter available? Y (Y,N)
Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 50' - 85' Size: 6' x 8'
Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)
Pumps: Capacity: GPM: 75 HP: 5 Pump intake depth: 45' Auxiliary Power? N (Y,N)
Type pump: Submersible Height above floor (pump/casing): 6" /
Storage at well site: Elev: Hydro: Ground:
If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)
High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)
Is water treated? Y (Y,N) If yes, complete back of form.
If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)
If purchase, retreat? (Y/N) If yes, complete back of form.

* 4/90 - 6" SSt. Casing x 64' w/ 4" SSt screen to 85'

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned
Source Code: W 06
Well Name (If purchase, name of seller): Well No. 6

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:
Source Begin Date MM - YY: 04-79
Direct Influence Date MM - DD - YY:
Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): off SR 1130; .25 mi. to SR 1129

Latitude (N) Deg. Min Sec: 36-14-26.24676
Longitude (W) Deg Min Sec: 76-09-38.00921
How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)
GPS File Name:
If purchase, use seller's primary source lat/long)

Vulnerable VOC's: [ ] Y / N
Assessment Date MM - DD - YY:

ENTRY POINT INFORMATION

Owner Assigned
Entry Point Code: E 02
Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)
Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)
Entry Point Begin Date MM / YY: 06-79
Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:
Sources of pollution/distance: Site needs drainage improvements
Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)
Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok
Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED
Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure
Well: Diameter: 8" Type: gravel packed Yield (gpm): 130 Properly sealed? Y (Y,N)
Properly vented? Y (Y,N) Casing Depth: 42 ft (If unknown, put 'UNK') Well depth: 78 Meter available? Y (Y,N)
Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 42' - 72' Size: 6' x 8'
Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)
Pumps: Capacity: GPM: 100 HP: 5 Pump intake depth: 48' Auxiliary Power? N (Y,N)
Type pump: Submersible Height above floor (pump/casing): 6" /
Storage at well site: Elev: Hydro: Ground:
If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)
High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)
Is water treated? Y (Y,N) If yes, complete back of form.
If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)
If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned
Source Code: W 07
Well Name (If purchase, name of seller): Well No. 7

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:
Source Begin Date MM - YY: 06-79
Direct Influence Date MM - DD - YY:
Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): First well off NC Hwy 34 @ Church; Jones Dr. @ Crosswind Dr.

Latitude (N) Deg. Min Sec: 36-14-58.79750
Longitude (W) Deg Min Sec: 76-10-29.61722
How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)
GPS File Name:
If purchase, use seller's primary source lat/long)

Vulnerable VOC's: [ ] Y / N
Assessment Date MM - DD - YY:

ENTRY POINT INFORMATION

Owner Assigned
Entry Point Code: E 02
Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)
Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)
Entry Point Begin Date MM / YY: 06-79
Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:
Sources of pollution/distance: Site needs drainage improvements
Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)
Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok
Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED
Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure
Well: Diameter: 8" Type: gravel packed Yield (gpm): 150 Properly sealed? Y (Y,N)
Properly vented? Y (Y,N) Casing Depth: 35 ft (If unknown, put 'UNK') Well depth: 65' Meter available? Y (Y,N)
Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 35' - 65' Size: 6' x 8'
Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)
Pumps: Capacity: GPM: 100 HP: 5 Pump intake depth: 44' Auxiliary Power? N (Y,N)
Type pump: Submersible Height above floor (pump/casing): 6" /
Storage at well site: Elev: Hydro: Ground:
If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)
High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)
Is water treated? Y (Y,N) If yes, complete back of form.
If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)
If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned
Source Code: W 08
Well Name (If purchase, name of seller): Well No. 8

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:
Source Begin Date MM - YY: 08-79
Direct Influence Date MM - DD - YY:
Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter)
Second well off NC Hwy 34 @ Church; Crosswind Dr. @ Hockmeyer Dr.

Latitude (N) Deg. Min Sec: 36-15-07.05962
Longitude (W) Deg Min Sec: 76-10-11.92593
How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)
GPS File Name:
If purchase, use seller's primary source lat/long)
MM - DD - YY:

Vulnerable VOC's: [ ] Y N
Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned
Entry Point Code: E 02
Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)
Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)
Entry Point Begin Date MM / YY: 06-79
Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:
Sources of pollution/distance: Site needs drainage improvements

Surface water within 200'? N (Y,N) If yes, actual distance: If yes, bact. samples collected? (Y/N)
Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok
Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED
Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure
Well: Diameter: 8" Type: gravel packed Yield (gpm): 157 Properly sealed? Y (Y,N)
Properly vented? Y (Y,N) Casing Depth: 40 ft (If unknown, put 'UNK') Well depth: 70' Meter available? Y (Y,N)
Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 40' - 65' Size: 6' x 8'
Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)
Pumps: Capacity: GPM: 85 HP: 5 Pump intake depth: 44' Auxiliary Power? N (Y,N)
Type pump: Submersible Height above floor (pump/casing): 6" /
Storage at well site: Elev: Hydro: Ground:
If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)
High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)
Is water treated? Y (Y,N) If yes, complete back of form.
If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)
If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

New Genset on site

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 09

Well Name (If purchase, name of seller): Well No. 9

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date MM - YY: 03-79

Direct Influence Date MM - DD - YY:

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Third well off NC Hwy 34 @ Church; Owens Dr @ Hockmeyer Rd.

Latitude (N) Deg. Min Sec: 36-14-55.08460

Longitude (W) Deg Min Sec: 76-10-12.09475

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date MM / YY: 06-79

Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 140 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 42 ft (If unknown, put 'UNK') Well depth: 72' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 42' - 67' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 70 HP: 5 Pump intake depth: 44' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

New Genset on site

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 10

Well Name (If purchase, name of seller): Well No. 10

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 03-80

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): South of NC Hwy 34 near WTP

Latitude (N) Deg. Min Sec: 36-14-04.58545

Longitude (W) Deg Min Sec: 76-09-51.27194

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

Vulnerable VOC's: [ ] Y / N

Assessment Date (MM - DD - YY):

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance: Agricultural operations w/in 100'

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 100 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 50 ft (If unknown, put 'UNK') Well depth: 73' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 50' - 60' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 115 HP: 5 Pump intake depth: 44' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 11

Well Name (If purchase, name of seller): Well No. 11

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 04-89

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 1133 @ Harrell Residence

Latitude (N) Deg. Min Sec: 36-15-59.08127

Longitude (W) Deg Min Sec: 76-13-00.03488

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 115 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 61 ft (If unknown, put 'UNK') Well depth: 95' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 61'-66'; 70'-75'; 80'-85' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 110 HP: 15 Pump intake depth: 50' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 12

Well Name (If purchase, name of seller): Well No. 12

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 03-89

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 1101 @ SR 1133

Latitude (N) Deg. Min Sec: 36-15-57.45983

Longitude (W) Deg Min Sec: 76-13-36.86361

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: [ ] Y N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 122 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 75 ft (If unknown, put 'UNK') Well depth: 95' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 75' - 85' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 120 HP: 15 Pump intake depth: 60' Auxiliary Power? Y (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

Portable Genset on site

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 13

Well Name (If purchase, name of seller): Well No. 13

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 02-89

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): No. of SR 1183; W of SR 1101

Latitude (N) Deg. Min Sec: 36-15-41.52464

Longitude (W) Deg Min Sec: 76-13-25.89875

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 115 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 65 ft (If unknown, put 'UNK') Well depth: 93' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 65' -70'; 75' - 83' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 100 HP: 15 Pump intake depth: 50' Auxiliary Power? Y (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 14

Well Name (If purchase, name of seller): Well No. 14

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date MM - YY: 04-89

Direct Influence Date MM - DD - YY:

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): East SR 1101 @ So. SR 1183 (in field)

Latitude (N) Deg. Min Sec: 36-15-19.52963

Longitude (W) Deg Min Sec: 76-13-40.49650

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date MM / YY: 06-79

Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance: Agricultural operations encroaching on well site

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: Gravel packed Yield (gpm): 115 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 65 ft (If unknown, put 'UNK') Well depth: 95' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 65' - 85' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 130 HP: 15 Pump intake depth: 55 Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 15

Well Name (If purchase, name of seller): Well No. 15

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 05-93

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): NW of SR 1101 (appx. 1000 ft)

Latitude (N) Deg. Min Sec: 36-15-59.90545

Longitude (W) Deg Min Sec: 76-13-52.60820

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 125 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 71 ft (If unknown, put 'UNK') Well depth: 115 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 71' - 82'; 96' -115' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 120 HP: 15 Pump intake depth: 66 Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 16

Well Name (If purchase, name of seller): Well No. 16

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 06-93

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): NW of SR 1101 (2000 ft)

Latitude (N) Deg. Min Sec: 36-16-05.60659

Longitude (W) Deg Min Sec: 76-14-05.05164

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 150 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 67 ft (If unknown, put 'UNK') Well depth: 109 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 67'- 71';73-79;81-84;94-99 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 135 HP: 15 Pump intake depth: 62 Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: **01/29/07**

PWS: **04-70-015**

Owner Assigned Source Code: **W 17**

Well Name (If purchase, name of seller): **Well No. 17**

Code: **G** (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): **06-93**

Direct Influence Date (MM - DD - YY):

Availability: **P** (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): **NW of SR 1101 (3000 ft)**

Latitude (N) Deg. Min Sec: **36-15-57.60493**

Longitude (W) Deg Min Sec: **76-14-10.59859**

How Determined: **D** (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: **E 02**

Entry Point Name: **Pasquotank Co. WTP**

Use Code: **C** (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: **P** (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): **06-79**

Entry Point End Date (MM / YY):

Location: **N.C. Hwy 34 - 1466 Weeksville Rd.**

Well Site: Owned or controlled? **Y** (Y,N) Control Area (100' radius?) **Y** (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? **N** (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? **Y** (Y,N) Flooding? **N** (Y,N) Maintenance: **ok**

Well House: Free of stored materials? **Y** (Y,N) Properly drained? **Y** (Y,N) Locked? **Y** (Y,N) FENCED

Condition of house: **fiberglass enc./ tilt over type** Type of freeze protection: **insulated enclosure**

Well: Diameter: **8"** Type: **gravel packed** Yield (gpm): **150** Properly sealed? **Y** (Y,N)

Properly vented? **Y** (Y,N) Casing Depth: **74** ft (If unknown, put 'UNK') Well depth: **122** Meter available? **Y** (Y,N)

Concrete slab adequate? **Y** (Y,N) If no, explain: **Screens @ 74' - 84'; 101' - 112'** Size: **6' x 8'**

Size of blow-off: **2"** Sample tap?: Before treatment? **Y** (Y,N) After Treatment? **Y** (Y,N)

Pumps: Capacity: GPM: **90 w/valve** HP: **15** Pump intake depth: **70'** Auxiliary Power? **N** (Y,N)

Type pump: **Submersible** Height above floor (pump/casing): **6"** /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. **1000** gpm **100.0** hp Auxiliary power? **Y** (Y,N)

Is water treated? **Y** (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? **Water Plant (WT1)**

If purchase, retreat? (Y/N) If yes, complete back of form.

PUMP OPERATING WITH RESTRICTOR VALVE OR ORIFICE

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 18

Well Name (If purchase, name of seller): Well No. 18

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date MM - YY: 12-92

Direct Influence Date MM - DD - YY:

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SW of SR 1101 on SR 1183

Latitude (N) Deg. Min Sec: 36-15-31.02769

Longitude (W) Deg Min Sec: 76-13-32.80081

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date MM / YY: 06-79

Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance: Agricultural operations encroaching on well site

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 110 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 70 ft (If unknown, put 'UNK') Well depth: 94' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 70' - 84' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 110 HP: 15 Pump intake depth: 67' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

Note: well casing failed (thermal collapse), replaced on site w/st.steel casing

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 19

Well Name (If purchase, name of seller): Well No. 19

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 12-99

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SW of SR 1101 off SR 1183 (1000 ft)

Latitude (N) Deg. Min Sec: 36-15-38.44934

Longitude (W) Deg Min Sec: 76-13-38.49330

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 120 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 56 ft (If unknown, put 'UNK') Well depth: 92' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 56' - 63'; 68 - 82' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 110 HP: 15 Pump intake depth: 55' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 20

Well Name (If purchase, name of seller): Well No. 20

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 06-97

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 1169 (River Rd); No. of Middle School

Latitude (N) Deg. Min Sec: 36-16-36.97310

Longitude (W) Deg Min Sec: 76-11-53.33695

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 175 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 68 ft (If unknown, put 'UNK') Well depth: 87' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 68' - 82' ; Sp.Cap 6.56 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 175 HP: 15 Pump intake depth: 62' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

Note: well casing failed (thermal collapse), replaced on site w/ st.steel

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 21

Well Name (If purchase, name of seller): Well No. 21

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 11-95

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 1169 (River Rd); South of Middle School

Latitude (N) Deg. Min Sec: 36-16-21.18920

Longitude (W) Deg Min Sec: 76-11-51.92290

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: (Y/N)

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 175 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 63 ft (If unknown, put 'UNK') Well depth: 83' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 63' - 78' ; Sp.Cap 4.56 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 140 HP: 15 Pump intake depth: 58' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 22

Well Name (If purchase, name of seller): Well No. 22

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 12-95

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 1169 (River Rd); South of Middle School {S.E. of Well 21}

Latitude (N) Deg. Min Sec: 36-16-20.27064

Longitude (W) Deg Min Sec: 76-11-38.54899

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: [ ] Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance: Open drainage ditch adjacent to well

Surface water within 200'? Y (Y/N) If yes, actual distance 125 ' If yes, bact. samples collected? [ ] (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 300 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 52 ft (If unknown, put 'UNK') Well depth: 77' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 52' - 72' ; Sp.Cap 3.91 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 95 HP: 15 Pump intake depth: 49' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? [ ] (Y/N) If yes, complete back of form.

Portable Genset connection

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 23

Well Name (If purchase, name of seller): Well No. 23

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 8/96

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Selby Rd; Tatum A

Latitude (N) Deg. Min Sec: 36-16-27.27632

Longitude (W) Deg Min Sec: 76-15-02.95881

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 256 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 70 ft (If unknown, put 'UNK') Well depth: 88' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 70' - 83':swl -14.9' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 220 HP: 20 Pump intake depth: 65' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

Portable Genset connection

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 24

Well Name (If purchase, name of seller): Well No. 24

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#: .

Source Begin Date MM - YY: 8/96

Direct Influence Date MM - DD - YY:

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Selby Rd; Tatum B

Latitude (N) Deg. Min Sec: 36-16-36.78437

Longitude (W) Deg Min Sec: 76-15-01.78665

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date MM / YY: 06-79

Entry Point End Date MM / YY:

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 175 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 70 ft (If unknown, put 'UNK') Well depth: 89' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 70' - 84':swl -15.4' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 175 HP: 15 Pump intake depth: 65' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

Portable Genset connection

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 25

Well Name (If purchase, name of seller): Well No. 25

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 6/96

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Selby Rd; Hutto A

Latitude (N) Deg. Min Sec: 36-16-35.45666

Longitude (W) Deg Min Sec: 76-15-15.26371

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 175 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 80 ft (If unknown, put 'UNK') Well depth: 85 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 68' - 80':swl -14.5' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 175 HP: 15 Pump intake depth: 63' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 26

Well Name (If purchase, name of seller): Well No. 26

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 6/96

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Selby Rd; Hutto C

Latitude (N) Deg. Min Sec: 36-16-09.88477

Longitude (W) Deg Min Sec: 76-15-27.33742

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 175 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 73 ft (If unknown, put 'UNK') Well depth: 100 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 73'-83'/90-95':swl -14.55' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 175 HP: 15 Pump intake depth: 65' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 27

Well Name (If purchase, name of seller): Well No. 27

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 6/96

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Selby Rd; Hutto D

Latitude (N) Deg. Min Sec: 36-16-02.26865

Longitude (W) Deg Min Sec: 76-15-18.68825

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: [ ] Y N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y,N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 250 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 74 ft (If unknown, put 'UNK') Well depth: 89' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 74'-84':swl -14.55';spcp 7.82 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 250 HP: 20 Pump intake depth: 62' Auxiliary Power? Y (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 28

Well Name (If purchase, name of seller): Well No. 28

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 8/96

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Body Rd; Scott Well

Latitude (N) Deg. Min Sec: 36-15-57.35083

Longitude (W) Deg Min Sec: 76-14-57.01733

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 200 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 72 ft (If unknown, put 'UNK') Well depth: 89' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 72'-84':swl -15' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 200 HP: 15 Pump intake depth: 65' Auxiliary Power? Y (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? Y (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

Portable Genset connection

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 29

Well Name (If purchase, name of seller): Well No. 29

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 6/98

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Ball Rd; Bulman A

Latitude (N) Deg. Min Sec: 36-13-30.58395

Longitude (W) Deg Min Sec: 76-10-35.09583

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY:

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 205 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 50 ft (If unknown, put 'UNK') Well depth: 70' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 50'-65':swl -5.28' Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 110 HP: 7 1/2 Pump intake depth: 47' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? n (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

DENR 3803 (Revised 9-97)
Public Water Supply Section (Review 9-00)

Note: this well operates with a restrictor valve or orifice plate

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

PASQUOTANK COUNTY

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 01/29/07

PWS: 04-70-015

Owner Assigned Source Code: W 30

Well Name (If purchase, name of seller): Well No. 30

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY): 8/98

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): Off Ball Rd; Bulman A

Latitude (N) Deg. Min Sec: 36-13-23.19939

Longitude (W) Deg Min Sec: 76-09-56.41640

How Determined: D (G=GPS, M=Map, S=Surveyed, D=Differential GPS, O=Owner)

GPS File Name:

If purchase, use seller's primary source lat/long)

MM - DD - YY

Vulnerable VOC's: Y / N

Assessment Date:

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E 02

Entry Point Name: Pasquotank Co. WTP

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY): 06-79

Entry Point End Date (MM / YY):

Location: N.C. Hwy 34 - 1466 Weeksville Rd.

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: ok

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N) FENCED

Condition of house: fiberglass enc./ tilt over type Type of freeze protection: insulated enclosure

Well: Diameter: 8" Type: gravel packed Yield (gpm): 125 Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 82 ft (If unknown, put 'UNK') Well depth: 97' Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Screens @ 82'-92':swl -7';sp cap 2.24 Size: 6' x 8'

Size of blow-off: 2" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 100 HP: 5 Pump intake depth: 78' Auxiliary Power? N (Y,N)

Type pump: Submersible Height above floor (pump/casing): 6" /

Storage at well site: Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. 1000 gpm 100.0 hp Auxiliary power? n (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where? Water Plant (WT1)

If purchase, retreat? (Y/N) If yes, complete back of form.

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	14.00	36	IN	AB	421.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			376.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	1200.000	GPM
APPC	950.000	GPM
PUMP	950.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
STWL	12.000	FT
APPH	100.000	HP
ACPH	100.000	HP
PUII	180.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
WSAP	YES	06/29/2007	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	14.00	24	IN	AB	420.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			380.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	950.000	GPM
APPC	950.000	GPM
PUMP	950.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	420.000	FT
GRDP	365.000	FT
STWL	16.000	FT
APPH	100.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
WSAP	YES	04/08/2008	
SWCC	NO		
EMER	YES		

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	14.00	36	IN	AB	421.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			376.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	1200.000	GPM
APPC	950.000	GPM
PUMP	950.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	421.000	FT
GRDP	351.000	FT
STWL	17.000	FT
APPH	100.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
WSAP	YES	04/08/2008	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1		14.00	24	IN	AB	421.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			381.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	1150.000	GPM
PUMP	950.000	GPM
APPC	950.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	421.000	FT
STWL	16.000	FT
APPH	100.000	HP
ACPH	100.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
WSAP	YES	03/04/2010	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	24	IN	AB	44.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			44.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	90.000	GPM
APPC	82.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	69.000	FT
GRDP	29.000	FT
STWL	5.000	FT
APPH	3.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
WSAP	YES	04/21/2014	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	72.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				42.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	90.000	GPM
YLD	140.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	72.000	FT
WLDM	8.000	IN
PUII	42.000	FT
ACPH	5.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
WHPP	YES	06/17/2005	
NSGW	YES		

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	24	IN	AB	44.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				44.0	SLOTTED

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	80.000	GPM
APPC	66.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	65.000	FT
GRDP	28.000	FT
APPH	3.000	HP
STWL	6.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
SWCC	NO		
WSAP	YES	04/21/2014	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	72.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				47.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	100.000	GPM
YLD	172.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	72.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	47.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/10/1978	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	STEEL	8.00	24	IN	AB	51.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1	SLOTTED			51.0	

Add Change Delete

Flow Rates

Type	Qty	UOM
YLD	100.000	GPM
APPC	95.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	76.000	FT
GRDP	35.000	FT
STWL	8.000	FT
APPH	5.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
SWCC	NO		
WSAP	YES	04/21/2014	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	STEEL	8.00	6	IN	AB	78.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				42.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	100.000	GPM
YLD	130.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	78.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	48.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/10/1978	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	STEEL	8.00	6	IN	AB	65.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				35.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	100.000	GPM
YLD	150.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	65.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	44.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/10/1978	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	70.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				40.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	85.000	GPM
YLD	157.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	70.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	44.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
NSGW	YES		
WSAP	YES	07/10/1978	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	72.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				42.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	70.000	GPM
YLD	140.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	72.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	44.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/10/1978	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	73.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				50.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	115.000	GPM
YLD	100.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	73.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	44.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	SS	8.00	6	IN	AB	95.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				61.0	YORKTOWN
2				70.0	YORKTOWN
3				80.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	110.000	GPM
YLD	115.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	95.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	50.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	8.00	6	IN	AB	95.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				75.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	120.000	GPM
YLD	122.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	95.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	60.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	93.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				65.0	YORKTOWN
2				75.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	100.000	GPM
YLD	115.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	93.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	50.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STAINLESS STEEL	8.00	6	IN	AB	95.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				65.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	130.000	GPM
YLD	115.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	95.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	55.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WSAP	YES	02/28/2008	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	8.00	6	IN	AB	115.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				71.0	YORKTOWN
2				96.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	120.000	GPM
YLD	125.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	115.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	66.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	08/15/1990	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	109.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				67.0	YORKTOWN
2				73.0	YORKTOWN
3				81.0	YORKTOWN
4				94.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	135.000	GPM
YLD	150.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	109.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	62.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	08/15/1990	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	122.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				74.0	YORKTOWN
2				101.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	90.000	GPM
YLD	150.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	122.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	70.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	08/15/1990	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	94.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				70.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	110.000	GPM
YLD	110.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	94.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	67.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WSAP	YES	08/15/1990	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	92.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				56.0	YORKTOWN
2				68.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	110.000	GPM
YLD	120.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	92.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	55.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
SWCC	NO		
NSGW	YES		
WSAP	YES	12/29/1997	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	STEEL	8.00	6	IN	AB	87.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				68.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	175.000	GPM
YLD	175.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	87.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	62.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	8.00	6	IN	AB	83.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				63.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	140.000	GPM
YLD	175.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	83.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	58.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	77.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				52.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	95.000	GPM
YLD	300.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	77.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	49.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	88.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				70.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	220.000	GPM
YLD	256.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	88.000	FT
WLDM	8.000	IN
ACPH	20.000	HP
PUII	65.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	09/05/1995	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	8.00	6	IN	AB	89.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				70.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	175.000	GPM
YLD	175.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	89.000	FT
WLDM	8.000	IN
ACPH	20.000	HP
PUII	65.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/03/1995	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	85.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				68.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	175.000	GPM
YLD	175.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	85.000	FT
WLDM	8.000	IN
ACPH	15.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
WSAP	YES	07/03/1995	
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	100.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				73.0	YORKTOWN
2				90.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	175.000	GPM
YLD	175.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	100.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	65.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WSAP	YES	07/03/1995	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	89.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				74.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	250.000	GPM
YLD	250.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	89.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	62.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WHPP	YES	06/17/2005	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Meas	BD Measur
1	PLASTIC	8.00	6	IN	AB	89.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				72.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	200.000	GPM
YLD	200.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	89.000	FT
WLDM	8.000	IN
ACPH	15.000	HP
PUII	65.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	YES		
NSGW	YES		
SWCC	NO		
WSAP	YES	09/05/1995	

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	70.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				50.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	110.000	GPM
YLD	205.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	70.000	FT
WLDM	8.000	IN
ACPH	5.000	HP

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WSAP	YES	12/29/1997	

Add Change Delete

Casings

Casing ID	Type	Diameter	Top Measure	TM Unit	TM Relati	Bottom Depth Measu	BD Measur
1	PLASTIC	8.00	6	IN	AB	97.0	FT

Add Change Delete

Screens

ID	Type	Aquifer Type	Confinement Ind.	Screen Depth	USGS Aquifer Name
1				82.0	YORKTOWN

Add Change Delete

Flow Rates

Type	Qty	UOM
PUMP	100.000	GPM
YLD	125.000	GPM

Add Change Delete

Measures

Type	Qty	UOM
DPCP	97.000	FT
WLDM	8.000	IN
ACPH	5.000	HP
PUII	78.000	FT

Add Change Delete

Indicators

Type	Value	Date	End Date
EMER	NO		
NSGW	YES		
SWCC	NO		
WSAP	YES	12/29/1997	

Add Change Delete

United States Environmental Protection Agency
Office of Water (4606)
EPA 816-F-01-031
July 2001

Source Water Protection Practices Bulletin

Managing Small-Scale Application of Pesticides to Prevent Contamination of Drinking Water

Pesticides (including insecticides, herbicides, and fungicides) contain a variety of chemicals used to control pests, insects, and weeds. They are used in many applications to reduce the damage to plants by insects and other pests, and to control overgrowth of undesirable plant species. This fact sheet describes measures to prevent contamination of drinking water sources from small-scale pesticide application (i.e., on lawns, golf courses, cemeteries, parks, and roadways); see also the fact sheet on prevention measures for large-scale pesticide application for agricultural or farm conditions.

SOURCES OF PESTICIDES

Pesticides are used in a variety of applications in areas with green spaces. They are used by homeowners, in commercial establishments such as golf courses and cemeteries, and along roadways. Homeowners use pesticides in lawn care and gardening activities. Many homeowners plant non-native plant species, which require pesticides, fertilizers, and watering to keep them healthy.

Golf courses and recreational areas such as parks and other open spaces use pesticides for similar purposes. Shorter grasses typical of golf courses are less resistant to insects and require application of pesticides to keep them healthy. Pesticides are also used to maintain lawns in cemeteries and commercial areas. Herbicides are used along roadways and transportation and utility corridors to limit vegetation growth and increase visibility for drivers or access to power lines.

Excess rain can wash pesticides from plants and soil. This can, in turn, run off into streams. Pesticides can leach into the soil if plants are watered or rainfall occurs soon after application. Some pesticides resist degradation by microbes in the soil and will eventually leach into the ground water. Pesticides can reach ground water through drains, sink holes, and other conduits as well.

WHY IS IT IMPORTANT TO MANAGE SMALL SCALE APPLICATION OF PESTICIDES NEAR THE SOURCES OF YOUR DRINKING WATER?

Pesticides contain a variety of organic and inorganic compounds. By nature, they are poisonous, and while they can be safely used if manufacturers' usage directions are followed, they can, if

mismanaged, seep into surface water and ground water supplies. They can be difficult and expensive to remove, and, if inhaled or consumed, be hazardous to human health. The synthetic organic chemicals in pesticides have been linked to serious health problems, including cancer, liver and kidney damage, reproductive difficulties, and nervous system effects.

Once a water supply becomes contaminated with a pesticide, it can be very difficult and costly to treat. Treating the water supply is a lengthy process and is not always successful. Using an alternative water source may also be costly and impractical. For example, it would be very expensive to connect to another public water system, and drilling new wells does not necessarily guarantee that the new ground water source will not be contaminated.

AVAILABLE PREVENTION MEASURES TO ADDRESS SMALL-SCALE PESTICIDE APPLICATION

Prevention measures are available to protect source water from pesticide contamination. They range from simple, common-sense activities (e.g., reading the label) to more complex activities such as properly storing and disposing pesticides. Most prevention measures for small-scale application of pesticides tend to be easy, low cost activities. The most effective pesticide contamination prevention measures encompass both simple and complex practices to reduce the potential for pesticides to move into source water. Prevention measures can be divided into those that protect surface water from pesticide runoff and those that protect ground water from leaching or percolation.

Please keep in mind that individual prevention measures may or may not be adequate to prevent contamination of source waters. Most likely, individual measures should be combined in an overall prevention approach that considers the nature of the potential source of contamination, the purpose, cost, operational, and maintenance requirements of the measures, the vulnerability of the source waters, the public's acceptance of the measures, and the community's desired degree of risk reduction. The following are the more conventional prevention measures used to avoid contamination from small-scale application.

There are many options available to minimize the need for pesticides. ***Integrated Pest Management (IPM)*** is the use of all means of pest control (chemical and non-chemical) in a compatible fashion to reduce pesticide use. Pesticides are the last line of defense and are used only when pest levels are causing sufficient damage to offset the expense of the application. IPM includes ***regular monitoring*** to check levels of pest populations and their damage to determine management needs, be it pesticide application or other management actions. Monitoring can be accomplished by a trained employee such as a facility manager. IPM also includes ***non-chemical control measures*** such as mechanical, cultural and biological controls, sanitation, and pesticide-resistant plants are highly recommended. Where possible ***alternate plants***, select ***pest-resistant plant varieties***, and mulch the gardens or flower beds to reduce weeds. Maximize the benefits of naturally occurring ***biological controls*** by using pesticides only when necessary. Many insecticides are broad spectrum materials and affect beneficial insects and other arthropods as well as pests. If pesticides must be used, select those that are designed specifically for the pests you wish to control, and are ***low-persistent*** in the environment.

Ladybugs are a natural control for aphids

Proper Pesticide Application

Reading the label on the pesticide container is one of the simplest and most important prevention measures. The label indicates the proper use, rate of application, whether the pesticide is broad spectrum or selective (i.e., kills everything or only a certain type of insect), and proper handling of the pesticide. The label also provides information on proper storage and disposal, and emergency contact numbers, if accidentally ingested. In cases where the pesticide is highly toxic, the label will contain special warnings and use restrictions, such as ***setbacks*** for mixing and application away from wells or drinking water sources. Reading the label and following the directions will ensure that pesticides are ***not over-used*** and are used in a way that is ***consistent*** with the pest problem.

Proper application of pesticides reduces the amount of chemicals applied to the ground and saves landowners money by reducing the amount of pesticides purchased. Calibrate application equipment to allow correct application, follow pesticide manufacturers' directions, and select leaching-resistant or "slow release" pesticides. Apply in large droplets to resist carrying away by the wind. Mix and load pesticides only over impervious surfaces, such as cement, that do not contain floor drains or storm water drain inlets; these drains may convey spills to ground water sources. Check the pesticide label for pesticide application procedures; do not over-apply the pesticide.

Pesticides should not be applied immediately before or after rainfall, as this may cause soil runoff at the application site and the need to reapply the pesticide. The soil in the runoff can carry the pesticide to the local storm water drain, and contaminate local source waters.

Ways to Reduce Pesticide Use

Select healthy seeds and seedlings that are known to resist diseases and are suited to the climate. Strong seeds are likely to produce mature plants with little need for pesticides. Planting pest-resistant plant varieties and local plant species will also reduce pesticide needs.

Alternate your plants each year; plants will not be vulnerable to the pests that survive the winter. Insects will move to another location where they can find nutrients, and weeds will remain dormant until their nutrient source is replenished.

Manual activities such as spading, hoeing, hand-picking weeds and pests, setting traps, and mulching are all good ways to get rid of pests without using pesticides. Homeowners have a tendency to over-use pesticides, and should take care to use only what they need.

Proper ***plant management*** can improve plant health, reduce the need for pesticides, and reduce runoff and infiltration. Use mowing and watering techniques that maintain a healthy lawn and minimize the need for chemical treatment. Maintain proper drainage and aeration to encourage the growth of microbes that can degrade pesticides. Reduce watering to control seepage of pesticides to the ground water; this conserves water and reduces runoff.

Use of ***biological controls*** reduces the need for chemical pesticides. Plants that attract predatory species, such as birds and bats, can enhance landscaping and naturally reduce pests.

Proper Pesticide Storage and Handling

Proper storage is important in preventing both surface water and ground water contamination. Store pesticides in intact containers in a shed or covered structure on an impermeable surface such as concrete. You must follow directions for storage on pesticide labels, although the directions are usually general, such as "Do not contaminate water, food, or feed by storage or disposal." Do not store pesticides in areas prone to flooding. Keep pesticides in their original containers; if the label is unreadable, properly dispose of the product.

Spill clean up is another important prevention measure. Promptly sweep up dry spills and reuse the pesticides as intended; dry spills are usually easier to clean. For liquid spills, recover as much of the spill as possible and reuse it as intended. It may be necessary to remove some contaminated soil. Have cat litter or other absorptive materials available to absorb unrecovered liquid from the floor. Be sure to have an emergency contact number to call for help, if necessary. Be sure to check the label for proper handling of the chemicals.

Disposal of pesticide containers can lead to ground water contamination if the containers are not stored or cleaned properly. Chemical residues from these containers can leak onto the ground. Homeowners and other users may have smaller quantities of pesticides and empty containers and different disposal options than farmers.

Homeowners usually use nonreturnable containers, and have the option of participating in their local community household hazardous waste collection events. Partially-full and empty containers may be given to household hazardous waste collection. Homeowners should only triple rinse pesticide containers if they are able to use the rinse water immediately, e.g., on plants that require pesticides. Rinse water should never be disposed down a drain or into a sewer system. Recycle plastic and metal containers whenever possible, keeping in mind that non-hazardous container recycling programs may refuse to take pesticide containers. Empty containers may be disposed in regular trash. Shake out bags, bind or wrap them to minimize dust, and put them in regular trash. Do not bury or burn pesticide containers or bags on private property. Homeowners may give unused pesticides to a neighbor rather than throw them away.

Farmers and users of larger quantities of pesticides (e.g., golf course managers) may have larger quantities of pesticides to store and dispose, and are often prohibited from participating in community household hazardous waste collection events. To prevent ground water contamination, use returnable containers as often as possible and take them back to the dealer. For non-returnable containers, pressure-rinse or triple-rinse containers immediately after they are empty, since residue can be difficult to remove after it dries, and apply the rinse water appropriately (i.e., on plants that require pesticides). Most States have collection programs for farmers and other pesticide users with unwanted pesticides, often referred to as Clean Sweep programs. Many States also have pesticide container and recycling programs. Puncture nonreturnable containers and store them in a covered area until they can be disposed according to your State's guidelines. Shake out bags, bind or wrap them to minimize dust, and take them to a permitted landfill. Do not bury or burn pesticide containers or bags on private property. Contact your State Department of Agriculture or Department of Environmental Quality for information. If containers are full or partially full and the pesticide is in good condition, it may be given to another pesticide user. However, if the pesticide is labeled a restricted use pesticide, it can only be distributed and used by certified applicators.

FOR ADDITIONAL INFORMATION

These sources contain information on pesticide management measures. All of the documents listed are available for free on the Internet. Contact local government authorities in your area to see if there are ordinances in place to manage pesticides.

AgSafe Coalition. *Safely Handling Pesticides*. Retrieved February 15, 2001, from the World Wide Web: http://www.agsafe.org/series_1/pesticide.html.

California Environmental Protection Agency, Department of Pesticide Regulation. *Tips for Handling Pesticides Safely*. Retrieved March 12, 2001, from the World Wide Web: http://www.cdpr.ca.gov/docs/factshts/safeuse.htm.

EXTOXNET FAQs. *Pesticides: How They Affect You and The Environment*. Retrieved March 8, 2001, from the World Wide Web: http://ace.orst.edu/info/extoxnet/faqs/.

Florida Department of Agriculture and Consumer Services and Florida Department of Environmental Protection. Best Management Practices for Agrichemical Handling and Farm Equipment Maintenance. (1998, May) Retrieved May 30, 2001, from the World Wide Web: http://www.dep.state.fl.us/water/slerp/nonpoint_stormwater/documents/pubinfo.htm#Best Management Practices

Home*A*Syst. *National Home*A*Syst Program.* Retrieved May 22, 2001, from the World Wide Web: http://www.uwex.edu/homeasyst/index.html.

Massachusetts Department of Food and Agriculture, Pesticide Bureau. *A Homeowner's Guide to Environmentally Sound Lawncare.* Retrieved June 4, 2001, from the World Wide Web: http://www.massdfa.org/pesticides/publications/homeowner.htm

Massachusetts Department of Food and Agriculture, Pesticide Bureau. Pesticide Storage and Handling Practices in the home. Retrieved June 15, 2001, from the World Wide Web: http://www.massdfa.org/pesticides/publications/publications_storage_home.htm

Massachusetts Department of Food and Agriculture, Pesticide Bureau. *Storage, Mixing and Loading of Pesticides: Guidelines.* Retrieved May 30, 2001, from the World Wide Web: http://www.massdfa.org/pesticides/waste/index.htm

National Pesticides Telecommunications Network. *Pesticide Fact Sheets.* Retrieved June 4, 2001, from the World Wide Web: http://nptn.orst.edu/nptnfact.htm

Natural Resources Defense Council. *Pesticide Exposure and Toxicity to Infants and Children*. March 1998. http://www.nrdc.org/health/kids/cdw0398.asp.

New England Interstate Water Pollution Control Commission. *Source Protection: A Guidance Manual for Small Surface Water Supplies in New England*. March 1996.

Pesticide Watch. *Pesticides and Human Health.* Retrieved March 12, 2001, from the World Wide Web: http://www.pesticidewatch.org/Html/PestProblem/HumanHealth.htm.

Schueler, Thomas R. and Heather K. Holland. "Toward a Low-Input Lawn." *The Practice of Watershed Protection: Techniques for protecting our nation's streams, lakes, rivers and estuaries* 2(1): 254-264.

The Northwest Coalition for Alternatives to Pesticides. *Alternatives Fact Sheets.* Retrieved January 24, 2001, from the World Wide Web: http://www.pesticide.org/factsheets.html#alternatives.

Toxic Alert. *Poison In The Grass: The Hazards And Consequences Of Lawn Pesticides*. Retrieved March 12, 2001, from the World Wide Web: http://www.cqs.com/elawn.htm.

United States Environmental Protection Agency, Office of Environmental Health Hazard Assessment. *Pesticide Programs*. Retrieved January 23, 2001, from the World Wide Web: http://www.oehha.ca.gov/pesticides/programs/index.html.

U.S. EPA, Office of Prevention, Pesticides, and Toxic Substances. *Healthy Lawn, Healthy Environment - Caring for Your Lawn in an Environmentally Friendly Way*. 700-K-92-005. June 1992. Retrieved January 24, 2001, from the World Wide Web: http://www.epa.gov/oppfead1/Publications/lawncare.pdf.

U.S. EPA, Office of Prevention, Pesticides, and Toxic Substances. *Citizen's Guide to Pest Control and Pesticide Safety*. Retrieved January 24, 2001, from the World Wide Web: http://www.epa.gov/OPPTpubs/Cit_Guide/citguide.pdf.

United States Geological Survey, National Water Quality Assessment Pesticide National Synthesis Project. *Pesticides in Ground Water*. Retrieved January 23,2001, from the World Wide Web: http://water.wr.usgs.gov/pnsp/gw/index.html.

United States
Environmental Protection
Agency

Office of Water
(4606)

EPA 816-F-01-029
July 2001

Source Water Protection Practices Bulletin

Managing Turfgrass and Garden Fertilizer Application to Prevent Contamination of Drinking Water

Fertilizers are made up of organic and inorganic materials that are added to soil to supply nutrients required for plant growth. If improperly managed, fertilizer elements, specifically phosphorus (P) and nitrogen (N), can run off into surface water or leach into ground water. This fact sheet focuses on the management of small-scale fertilizer applications to prevent contamination of drinking water sources (ground water and surface water used as public drinking water supplies); see the fact sheets on pesticide application and storm water for other preventative measures related to lawn and garden care.

FERTILIZER USE IN TURFGRASS AND GARDENS

The care of landscaped areas can contribute to the pollution of surface water and ground water. Heavily landscaped areas include residential yards, commercial lawns, golf courses, ball fields, and parks. The soils in many of these areas require frequent fertilization to maintain their turf grass. Because excess fertilizer use and poor application methods can cause fertilizer movement into sources of drinking water, the increased application of lawn and garden fertilizers in recent years has raised concern over the pollution of surface water and ground water.

The two main components of fertilizer that are of the greatest concern to source water quality are nitrogen and phosphorus. Nitrogen is used to promote green, leafy, vegetative growth in plants. Plants with nitrogen deficiency show stunted growth. Phosphorus promotes root growth, root branching, stem growth, flowering, fruiting, seed formation, and maturation.

A recent nonpoint source loading analysis from a New Jersey study indicated that ten percent of the nitrogen and four percent of the phosphorus applied annually in a 193-square-mile area of landscaped residential development ended up in surface waters as a result of over-application. Another study (South Jersey Resource Conservation and Development Council, Inc.) found that more than 50 percent of the nitrogen in fertilizer leaches from lawns when improperly applied. This kind of nutrient loss can be reduced by following the prevention measures given in this fact sheet.

WHY IS IT IMPORTANT TO MANAGE FERTILIZER USE NEAR THE SOURCES OF YOUR DRINKING WATER?

Improper or excessive use of fertilizer can lead to nitrate pollution of ground or surface water. Nitrogen fertilizer, whether organic or inorganic, is biologically transformed to nitrate that is highly soluble in water.

Use of nitrogen-containing fertilizers can contribute to nitrates in drinking water. Consumption of nitrates can cause methemoglobinemia (blue baby syndrome) in infants, which reduces the ability of the blood to carry oxygen. If left untreated, methemoglobinemia can be fatal for affected infants. Due to this health risk, EPA set a drinking water maximum contaminant level (MCL) of 10 milligrams per liter (mg/l) or parts per million (ppm) has been set for nitrate measured as nitrogen.

Phosphorus is the other element of concern in fertilizer. Under certain conditions phosphorus can be readily transported with the soil. In fact, 60 to 90 percent of phosphorus moves with the soil. Phosphorus is the major source of water quality impairments in lakes nationwide. Even though regulations that affect the taste and odor of water are not Federally enforceable under the Safe Drinking Water Act, municipalities often must treat their drinking water supplies for these aesthetic reasons.

AVAILABLE PREVENTION MEASURES TO ADDRESS TURFGRASS AND GARDEN APPLICATIONS OF FERTILIZER

This section discusses some of the most often used prevention measures, but is not an exhaustive list of all known measures. For information on additional prevention measures, see the documents referenced in the last section of this fact sheet. Please keep in mind that individual prevention measures may or may not be adequate to prevent contamination of source waters. Most likely, individual measures should be combined in an overall prevention approach that considers the nature of the potential source of contamination, the purpose, cost, operational, and maintenance requirements of the measures, the vulnerability of the source water, the public's acceptance of the measures, and the community's desired degree of risk reduction.

Ways to Eliminate Excess Fertilizer Use

Fertilizer applications should be based on ***soil tests*** to avoid the economic and environmental costs that can be incurred with excess fertilizer use. A soil test will show the levels of phosphorus and potassium present in the lawn; however, soil tests for nitrogen are rare. Nitrogen is highly mobile in the soil and tests generally provide little useful information relative to lawns. Most newly planted areas should be tested during initial planting and every one or two years following that. A minimum of three to four weeks after the last fertilization should pass before sampling. For sampling, 15 to 20 cores should be taken at about three to four inches in depth and mixed in a plastic container. Samples can be tested using readily available field kits or submitted to a private laboratory or extension office for testing and interpretation.

Selecting the appropriate fertilizer is the next crucial step after receiving soil testing results. Most homeowners use blended fertilizers that list percentages of nitrogen, phosphorus, and potassium in the fertilizer. For example, a 100-pound bag of 10-5-10 would contain ten pounds of nitrogen, five pounds of phosphorus, and ten pounds of potassium. The remainder of the bag contains micronutrients and filler materials that allow for an even application of nutrients. If the soil test shows phosphorus is high, then a fertilizer with a low percentage of phosphorus should be chosen (such as 20-0-10 or 24-3-8). Most lawns contain adequate phosphorus, and continuous use of fertilizers high in phosphorus can result in excessive buildups. These lawns are more likely to contribute high levels of phosphorus to surface water during storm runoff events. The use of organic nutrient sources, such as manure, can supply all or part of the

nitrogen, phosphorus, and potassium needs for turfgrass and gardens. However, organic fertilizers can also cause excessive nutrient loads if improperly applied.

Nitrogen should be applied as recommended for the type of grass being grown. It is often recommended that 1,000 square feet of lawn requires 0.5 pounds of nitrogen per month of active growth. A good rule is never to apply more than one pound of nitrogen fertilizer per 1,000 square feet of lawn in any one application. For vegetable and flower gardens only 0.1 to 0.2 pounds of nitrogen per 100 square feet should be applied per year, although corn, tomatoes, and cole crops may require more.


Mulching lawnmower

To help maintain a healthy lawn it is best to mow frequently at a height of 2.5 to 3 inches. ***Grass clippings should remain*** on the lawn to decompose and recycle nutrients back to the lawn. By leaving grass clippings on the lawn, nitrogen applications can be reduced by 30 to 40 percent.


Native plants

Wherever possible, ***low maintenance, native plants and grasses should be planted*** to minimize the use of fertilizer. Plants that are adapted to the local soils require less fertilization and watering (for example, xeriscaping is a landscaping method to minimize the use of water in dry climates). In fact, these practices can reduce required lawn maintenance up to 50 percent. Local planting suggestions may be obtained from State and county extension offices and Web sites.

Proper Fertilizer Application

The use of an ***appropriate form of nitrogen*** fertilizer can reduce the potential for leaching and runoff problems. Quick-release fertilizers should be used on heavy clay or compacted soils, because the longer a fertilizer granule remains intact, the greater the chances it will be washed away into surface water. On sandy soils, however, nitrogen can leach through the soil quickly. On these soils, slow-release nitrogen sources provide soluble nitrogen over a period of time so a large concentration of nitrogen is not made available for leaching. Fertilizer bags are generally labeled as a ratio of water-insoluble nitrogen (WIN) slow-release fraction, to water-soluble nitrogen (WSN) quick-release fraction. A large WIN/WSN ratio indicates a high percentage of slow-release nitrogen is contained in the product.

While the ***proper time of year to fertilize*** varies by location, applying a smaller amount of fertilizer at a higher frequency is often best. Eliminating excess nutrients in soil reduces the chances of polluting surface runoff and ground water. Ideally, fertilizer application should be timed to coincide as closely as possible to the period of maximum uptake and growth. The most active growth periods are spring and fall in cool climates and early and late summer in warm climates. Avoid fertilizer applications before heavy rains.

Core compacted soils before ***applying fertilizer to insure incorporation***. In all types of soil, it is always best to incorporate organic fertilizers into the lawn. When the phosphorus in organic fertilizer remains on top of the soil it has an increased chance of washing away during heavy

rains. Fertilizer should never be applied to frozen ground, and also should be limited on slopes and areas with high runoff or overland flow.

It is important to ***irrigate*** with ¼ to ½ inch of water immediately after application of phosphorus or water-soluble nitrogen fertilizer. Afterwards, the key is to add only enough water to compensate for that removed by plant uptake and evaporation; this will minimize potential pollution problems from runoff and leaching. Over-watering can increase nitrogen loss five to 11 times the amount lost when proper watering strategies are used. Soaker hoses and trickle or drip irrigation systems are preferred alternatives to sprinkler systems. These systems deliver water at lower rates, which can conserve water, increase the volume infiltrated, and reduce surface runoff.

To ensure the proper amount of fertilizer is applied, ***spreaders should be properly calibrated***. As spreaders get older, settings gradually change because of wear and tear. Regular cleaning and lubrication of the spreader will help it perform properly. Labels on fertilizer bags often list the proper spreader settings for different types of spreaders. In general, drop spreaders are slower and more precise than rotary spreaders. Drop spreaders should be used near bodies of water because rotary spreaders can easily cast granules into the water bodies.

Buffer strips or filter strips can be created to slow runoff and help filter nitrogen and phosphorus from runoff. Buffers to runoff can be created simply by avoiding consistent mowing near water bodies. Additionally, natural deep-rooted vegetation can be planted to enhance nutrient filtering. Soil is held in place by the root systems of these plants. This decreases the velocity of runoff and helps prevent erosion near sources of surface water. The vegetation and soil strain and filter sediments, nutrients, and chemicals. For more information on buffer strips and filter strips see the fact sheet on storm water runoff.

Fertilizer Storage and Handling

Closely follow label directions when storing and handling fertilizer and when disposing empty containers. Stored dry fertilizer poses little threat to ground water as long as it is kept dry. Therefore, stored fertilizer should be kept covered to keep precipitation off. Keep bags on pallets to reduce the possibility of water damage.

Fill spreaders on hard or paved surfaces where spills can be cleaned up easily by sweeping or scooping up the spilled granules.

Additional Prevention Measures for Golf Courses

Golf course fairways, tees, and greens should be located where the seasonal water table is not excessively high. Fertilizer movement will be lowest on these sites.

State or local governments can produce guidelines for the design and maintenance of golf courses. These guidelines can require golf course developers and managers to submit plans for approval that show how they intend to lessen the impact of the site on the natural resources of the area. Plan requirements could include ground water and surface water monitoring, and design specifications, such as vegetative buffers or erosion controls.

FOR ADDITIONAL INFORMATION

These documents contain information on fertilizer use and best management practices. All sources are available for free on the Internet. See EPA's Guide to Source Water Information at www.epa.gov/safewater/protect/sources.html for a listing of resources on management measures. You can also contact your local Extension Service for more information.

Contact local government authorities in your area to see if there are ordinances in place to manage fertilizer use. Numerous examples of local source water protection-related ordinances for various potential contaminant sources can be found at:
http://www.epa.gov/r5water/ordcom/
http://www.epa.gov/owow/nps/ordinance/
http://www.epa.gov/owow/nps/ordinance/links.htm

The following documents provide more detailed information on prevention measures for fertilizer use in lawns and gardens.

Home*A*Syst - University of Wisconsin. Retrieved May 22, 2001 from the World Wide Web: http://www.uwex.edu/homeasyst/

North Carolina Cooperative Extension Service. *Water Quality and Professional Lawn Care* (WQWM-155). (1995, September). Retrieved February 9, 2001 from the World Wide Web: http://www.ces.ncsu.edu/TurfFiles/pubs/wqwm155.html

Purdue University Extension Service. *Beneficial Lawn Care and Chemical Management*. (n.d). Retrieved February 12, 2001 from the World Wide Web: http://pasture.ecn.purdue.edu/~epados/lawn/src/title.htm

South Jersey Resource Conservation and Development Council, Inc. *Non-Point Pollution Prevention – Homeowner*. (n.d.). Retrieved February 9, 2001 from the World Wide Web: http://www.sjrcd.org/ce/erosion3.htm

University of Idaho, College of Agriculture. *Fertilizer BMPs for Your Lawn*. (1994, April). Water Quality Update, volume 4, number 2. Retrieved February 9, 2001 from the World Wide Web: http://www.uidaho.edu/wq/wqu/wqu42.html

University of Maryland – Cooperative Extension. *Information Central – Greenhouse, Nursery, Landscape, & Turf.* Retrieved May 22, 2001 from the World Wide Web: http://www.agnr.umd.edu/CES/greennursury.html

University of Minnesota Extension Service. *Fertilizer – Phosphorus and Water Pollution* (282). (1992). Retrieved February 12, 2001 from the World Wide Web: http://www.extension.umn.edu/info-u/environment/BD282.html

University of Minnesota Extension Service. *Preventing Pollution Problems from Lawn and Garden Fertilizers* (FO-2923-GO). (1999). Retrieved February 12, 2001 from the World Wide Web: http://www.extension.umn.edu/distribution/horticulture/DG2923.html

University of Minnesota Extension Service. *Turfgrass Management for Protecting Surface Water Quality* (BU-5726-GO). (1997). Retrieved February 12, 2001 from the World Wide Web: http://www.extension.umn.edu/distribution/horticulture/DG5726.html

University of Wisconsin – Extension. *Lawn and Garden Fertilizers* (GWQ002). (1999). Retrieved January 23, 2001 from the World Wide Web: http://www.clean-water.uwex.edu/pubs/stewards/index.html

University of Wisconsin – Extension. *Step in the Right Direction with Proper Lawn Fertilizing*. (n.d.). Retrieved January 23, 2001 from the World Wide Web: http://www.clean-water.uwex.edu/pubs/stewards/index.html

University of Wisconsin – Extension. *Steps for Maintaining Healthy Lawns and Quality Waters.* (n.d.). Retrieved January 23, 2001 from the World Wide Web: http://www.clean-water.uwex.edu/pubs/stewards/index.html

The following documents are examples of local guidelines for the design and maintenance of golf courses:

Baltimore County Environmental Protection and Resource Management. *Environmental Guidelines for the Design and Maintenance of Golf Courses.* (n.d.). Retrieved May 17, 2001 from the World Wide Web: http://www.epa.gov/owow/nps/ordinance/golf.htm

Worcester County Department of Planning, Permits & Inspections. *Voluntary Guidelines Recommended for Golf Courses in Worcester County & the Delmarva Peninsula.* (n.d.). Retrieved May 18, 2001 from the World Wide Web: http://www.dnr.state.md.us/bay/tribstrat/golf.html

The following University of Florida website details their outreach program to reduce non-point source pollution, which includes proper nutrient management techniques: http://hort.ufl.edu/fyn/

Aqueous Film-Forming Foam (AFFF)

1 Introduction

Aqueous film-forming foam (AFFF) is a highly effective firefighting product intended for fighting high-hazard flammable liquid fires. AFFF products are synthesized by combining hydrocarbon foaming agents with fluorinated surfactants to achieve a product that has been used at military installations, civilian airports, petroleum refineries, bulk storage facilities, and chemical manufacturing plants (Hu et al. 2016; CONCAWE 2016).

This fact sheet is targeted to local, state, and federal regulators and tribes in environmental, health and safety roles as well as AFFF users at municipalities, airports, and industrial facilities. This fact sheet is not intended to replace manufacturer specifications or industry guidance for AFFF use, or to discuss alternatives in detail. It is only intended to educate users on AFFF use to reduce and eliminate potential harm to human health and the environment. Additional information is available in the Guidance Document.

ITRC has developed a series of fact sheets that summarize recent science and emerging technologies regarding PFAS. The information in this and other PFAS fact sheets is more fully described in the ***ITRC PFAS Technical and Regulatory Guidance Document (Guidance Document)*** (*https://pfas-1.itrcweb.org/*).

This fact sheet outlines methods to properly identify, handle, store, capture, collect, manage, and dispose of AFFF to limit potential environmental impacts, and includes:

- Definition of AFFF
- Best Management Practices for AFFF use
- Regulations Affecting Sale and Use
- Foam Research and Development

2 What is AFFF?

Class B firefighting foams are commercial surfactant solutions that are designed and used to combat Class B flammable fuel fires. All Class B foams are not the same. Although not usually categorized this way from a fire protection viewpoint, they can be divided into two broad categories from a per- and polyfluoroalkyl substances (PFAS) perspective: fluorinated foams that contain PFAS and fluorine-free foams (F3) that do not contain PFAS.

There are six groups of Class B foams that contain PFAS and four groups of Class B foams that do not contain PFAS. Figure 1 illustrates all categories of Class B foams. This fact sheet focuses on AFFF only as these are the primary foams that contain fluorosurfactants.

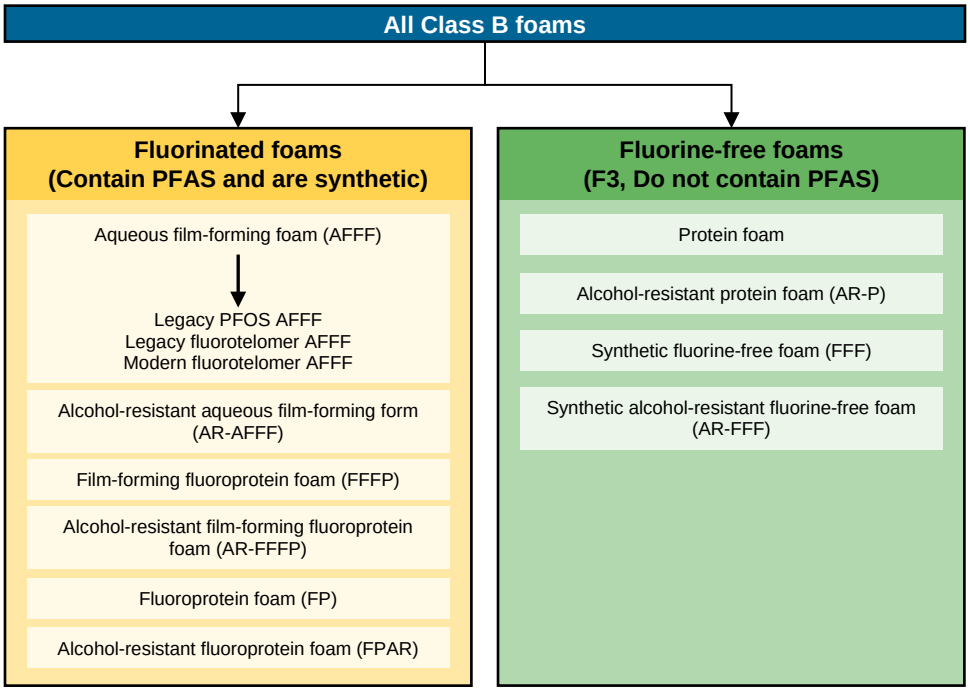


Figure 1. Types of Class B foams.
Source: S. Thomas, Wood, PLC. Used with permission.

Aqueous Film-Forming Foam (AFFF) *continued*

AFFF is considered a fluorinated foam and when mixed with water, the resulting solution achieves the interfacial tension characteristics needed to produce an aqueous film that spreads across the surface of a hydrocarbon fuel (petroleum greases, tars, oils and gasoline; and solvents and alcohols) to extinguish the fire and to form a vapor barrier between the fuel and atmospheric oxygen to prevent re-ignition. This film formation is the defining feature of AFFF.

AFFF has been used at chemical plants, flammable liquid storage and processing facilities, merchant operations (oil tankers, offshore platforms), municipal services (fire departments, firefighting training centers), oil refineries, terminals, and bulk fuel storage farms, aviation operations (aircraft rescue and firefighting, hangars), in some industrial fire extinguishers, and military facilities.

There are three possible types of AFFF, each is presented in Figure 1:

- legacy PFOS AFFF (manufactured in the US from the late1960s through 2002)
- legacy fluorotelomer AFFF (contain some long-chain PFAS) (manufactured in the US from the 1970s until 2016)
- modern fluorotelomer AFFF (short-chain PFAS became the predominant fluorochemicals used in manufacturing in response to USEPA 2010/2015 voluntary PFOA Stewardship Program)

Most foam manufacturers now produce Class B F3s. Performance of these foams should be evaluated carefully as future purchasing decisions are made. Organizations should determine whether a Class B F3 can achieve the required performance specifications for their specific flammable liquid hazards as part of pre-planning for replacement materials (FFFC 2016). As of publication, F3s do not meet the performance requirements of the Mil-Spec and therefore are not used at federal- and FAA-regulated facilities (FAA 2020). A mandate within the FAA Reauthorization Act of 2018 (enacted October 5, 2018) directs the FAA to stop requiring the use of fluorinated foam no later than 3 years from the date of enactment (October 4, 2021), so F3 use is anticipated at FAA-regulated facilities in the near future. The National Defense Authorization Act of fiscal Year 2020 (signed into law Dec 20, 2019) requires the DOD to phase out its use of AFFF at all military installations by Oct. 1, 2024, with limited exceptions, and immediately stop military training exercises with AFFF. The secretary of the Navy must publish specifications for PFAS-free firefighting foam at all military installations and ensure that the foam is available for use by Oct. 1, 2023.

3 Best Management Practices (BMPs) for Class B AFFF Use

Firefighting foams are an important tool to protect human health and property from flammable liquid fire threats. Proper management and usage strategies combined with the ongoing refinement of environmental regulations will allow an informed selection of the viable options to sustainably use firefighting foams. BMPs should be established for the use of any firefighting foam to prevent possible releases to the environment that can lead to soil, groundwater, surface water, and potentially drinking water contamination. The discharge of firefighting foams to the environment is of concern because of the potential negative impact they can have on ecosystems and biota. AFFF, due to the presence of PFAS, poses a unique challenge to protecting the environment when it is released. Specifically, for AFFF, the amount of PFAS from foam that may enter groundwater depends on the type and amount of foam used, the degree of containment, when and where the foam was used, the type of soil and the depth to groundwater. AFFF is typically discharged on land but can run off into surface water or stormwater or infiltrate to groundwater. A conceptual site model (CSM) is presented in Figure 2.

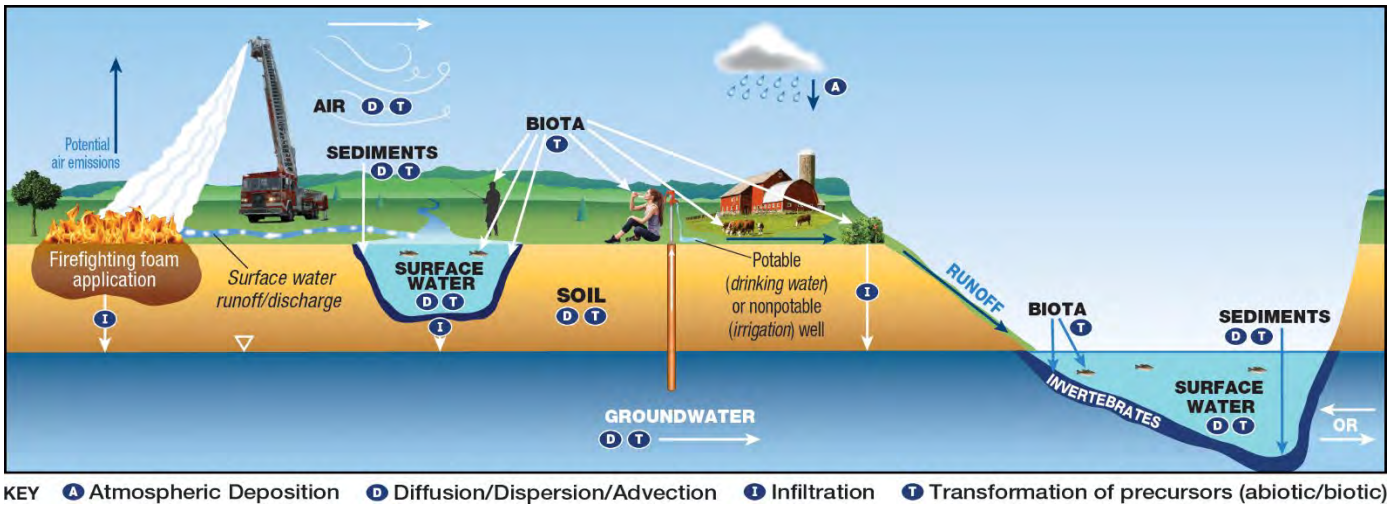


Figure 2. CSM for fire training areas.

Source: Adapted from figure by L. Trozzolo, TRC. Used with permission.

BMPs should consider the entire life cycle for AFFF, including procurement and inventory, foam systems and operations, emergency firefighting operations, immediate investigative and clean-up actions, treatment and disposal and system replacement.

The procurement and inventory of foam should be carefully considered. Foams should be selected that meet the performance specification requirements governing the use. Foams procured should be documented, labelled clearly and adequately contained. Foam use and disposal should be carefully tracked and recorded.

When evaluating foam systems and operations, from fixed-system testing, mobile firefighting equipment testing and appropriate training exercises, engineering and administrative controls as well as personal protective equipment (PPE) should be carefully evaluated. During emergency firefighting operations following a release of firefighting foam, PPE should be used correctly, maintained, and decontaminated routinely. Immediate investigative and clean-up actions include initial mitigation efforts such as source control, containment tactics, and recovery tactics.

BMPs start with pre-planning and deciding which foam to keep in stock. The team should consider key factors such as these:

- Whether F3 alternatives can meet site-specific performance requirements
- Site-specific evaluation of likely fire hazards and potential risks for life, public safety, and property
- Potential environmental, human health, and financial liabilities associated with AFFF releases
- Site constraints, including existing equipment retrofit requirements to adapt to alternate foams

The treatment and disposal of AFFF products and environmental media impacted with PFAS can be complex, time consuming, and costly. Practitioners should be aware of approved and available disposal options prior to the generation of PFAS-impacted waste or the start of an AFFF replacement project to avoid potentially lengthy waste storage timeframes. Currently, available disposal options for AFFF and PFAS-impacted materials are limited and each option has its advantages and disadvantages. More information is included in the Guidance Document.

Firefighting foam replacement is complex and could require a complete system review and, potentially, redesign and modification of system components to meet the new objectives or material and performance requirements. Foam replacement should include an evaluation of specific hazards and application objectives, a review of applicable performance standards, an understanding of engineering requirements for foam product storage and application, and a check to ensure that the foam product is approved for use for the specific hazards being mitigated.

4 Regulations Affecting the Sale and Use of AFFF

There are many State, Federal, and International regulations and guidance documents governing the procurement, use, and disposal of AFFF. Activities range from AFFF take-back programs and prohibition of manufacture, sale, use, and import of AFFF through to restrictions and requirements for disposal. Refer to the Guidance Document for further information.

Figure 3. Life cycle considerations for AFFF.
Source: S. Thomas, Wood, PLC. Used with permission.

5 Foam Research and Development

A substantial amount of research related to AFFF alternatives and replacement chemistries has recently been completed and/or is being considered at the time of publication. For more information related to this topic, please refer to the Guidance Document. Several organizations globally have made investments in research and development around AFFF from the assessment of their use, environmental impacts, as well as socioeconomic impacts of transiton to and performance specifications of F3 alternatives.

6 References and Acronyms

The references cited in this fact sheet and further references can be found at https://pfas-1.itrcweb.org/references/.
The acronyms used in this fact sheet and in the Guidance Document can be found at https://pfas-1.itrcweb.org/acronyms/.

Per- and Polyfluoroalkyl Substances (PFAS) Team Contacts

Robert Mueller • New Jersey Department of Environmental Protection
609-940-4018 • Bob.Mueller@dep.nj.gov

Kate Emma Schlosser • New Hampshire Department of Environmental Services
603-271-2910 • KateEmma.Schlosser@des.nh.gov

August 2020