Source Water Protection Plan

Town of Mineral

Louisa County, Virginia

Mission statement: ***To protect and preserve the quantity and quality of surface and groundwater resources within town limits and surrounding services areas. To identify and mitigate potential sources of contamination stemming from residential, commercial, industrial, agricultural or transportation sources. To cooperate with County and State entities in carrying out the provisions of the Safe Drinking Water Act.***

Table of Contents

1.0 INTRODUCTION

Protection of drinking water resources is of critical importance to the current and future residents of the Town of Mineral. Clean and reliable public drinking water supply is the foundation from which all social and economic prosperity originate. Developing and maintaining a Water System is a significant investment in the health and economic strength of the community.

The Source Water Protection Process aims to reduce the potential risk of contamination for public drinking water sources. Contamination usually occurs in the form of microbiological or chemical and can impact both surface and groundwater sources. Most often, contamination events are entirely preventable. When they do occur, remediation of the water source can be tremendously expensive or even impossible. Chemical contamination can result in permanent impairment of some water resources.

The financial cost of drinking water contamination can be tremendous. Potential costs can be incurred for dozens of reasons including: Treatment upgrades, development of new sources, use of employee resources/ overtime, emergency replacement water (Tanker trucks or bottled), legal fees and countless other potential reasons.

1.1 Background

In 1974 the United States Congress enacted the Safe Drinking Water Act (SDWA) with the goal of providing safe drinking water for public water supplies and their users. The SDWA gave the U.S. Environmental Protection Agency (EPA) the authority to develop a uniform national drinking water protection program, and to establish standards for known or suspected drinking water contaminants. In 1986, Congress amended the SDWA to reflect a growing awareness of potential

biological and chemical threats to drinking water. The amendments to the SDWA authorized two new provisions for groundwater protection. One of these is the Wellhead Protection Program. The SDWA allowed states to design and implement their own wellhead protection programs in order to maximize effectiveness at the local level.

In May 2005, the U. S. Environmental Protection agency approved a formal process for Virginia's Groundwater Protection Program. It was designed by the Virginia Department of Environmental Quality (DEQ) and the Virginia Department of Health (VDH). Groundwater Protection is a local government and/or system effort and remains voluntary in Virginia. The Virginia Groundwater Protection Steering Committee provides resources that include model ordinances for local governments, case studies, and information on funding. The VDH provides the Source Water Assessments, completed for all systems by 2003.

The Source Water Protection Program is overseen by the United States Department of Agriculture (USDA) and the Farm Service Agency (FSA). The program requires a minimum of fifteen entities and sources to be evaluated and protected each calendar year. This ensures that local political and governmental entities become involved in the process of protecting their drinking water.

The Virginia Rural Water Association (VRWA) helps create and implement protection plans for both ground water and surface water sources. The protection specialist works with the system staff, its governing body, and an action committee. The committee is responsible for deciding on and completing the recommended protection activities and updating remains the plan as necessary. The protection specialist "on call' to assist in the future.

The VRWA source water protection specialist will assist the Town of Mineral with creating and implementing a Source Water Protection Plan. The VRWA Specialist may help with reviews and amendments as the land use and drinking water sources in the area change.

1.2 Purpose:

The purpose of a Source Water Protection Plan is to provide an organized approach to effectively protect public water supplies from contamination. There are several important reasons for protecting the drinking water sources:

- Safeguard health of water users.
- Prevent financial burdens caused by contamination should it occur.
- Ensure drinking water quality for future generations and for present and future growth.

To create the Source Water Protection Plan for the Town of Mineral Water System. The committee followed a six-step plan as recommended by the Virginia Rural Water Association and formulated in the state plan approved by the EPA.

Step 1 – *Form an Action Committee*

Step 2 – *Identify the protection areas*

Step 3 – *List potential sources of contamination*

Step 4 – *Create a protection plan*

Step 5 – *Create a contingency plan*

Step 6 – *Assign responsibilities and initiate implementation*

1.3 Source Water Protection Committee:

- **Scott McNally** - Source Water Protection Specialist, Virginia Rural Water Association
    - Email: Smcnally@vrwa.org
    - Phone: 908-642-1579

- **Michelle Covert** – Water and Sewer Committee Chair, Town of Mineral
    - Email: mcvcovert@gmail.com
    - Phone: 703-328-2407

- **Nicole Washington** – Town Manager, Town of Mineral
    - Email: nwashington@townofmineral.net
    - Phone: 540-894-5183

- **Ken Talley** – Water Circuit Rider, Virginia Rural Water Association
    - Email: ktalley@vrwa.org
    - Phone: 540-817-8125

1.4 Mission Statement:

To protect and preserve the quantity and quality of surface and groundwater resources within town limits and surrounding services areas. To identify and mitigate potential sources of contamination stemming from residential, commercial, industrial, agricultural or transportation sources. To cooperate with County and State entities in carrying out the provisions of the Safe Drinking Water Act.

2.0 DESCRIPTION OF SOURCE WATER PROTECTION AREAS

2.1 Current and Potential Water Sources

Historically, the Town of Mineral independently operated 4 wells and one spring. The spring was deemed unsuitable for source water by the Virginia Department of Health and was subsequently removed from production. In 2011 there was an earthquake in Louisa County that compromised the integrity of some wellheads. As a result, the production capacity of the wells slowly diminished. Currently only Well #4 is online but can only be intermittently operated due to limited supply. At present time, the Louisa County Water Authority provides the majority of Mineral's water supply from the Northeast Creek Reservoir.

As part of the Source Water Protection process, the Town is exploring options to develop new water sources and to perform studies to see if Wells #4, #5 and #6 have the potential to be brought back online to full capacity.

2.2 Wellhead Protection Area

The Wellhead Protection Area (WHPA), also known as the Source Water Protection Area, is an area of focus for protecting groundwater resources. According to the EPA, "A wellhead protection area is defined 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." The Virginia Department of Health Office of Drinking Water has defined the WHPA under the Source Water Assessment Program. In this, the WHPA was split into two different zones

- Zone 1: 1,000 foot radius around the wellhead.
- Zone 2: A one-mile radius around the wellhead.

Zone 1 is considered the priority WHPA. Any major source of contamination within a 1,000 foot radius has a high likelihood of adversely affecting the aquifer. This area should also be carefully managed to exclude any potential chemical or microbiological contaminates to the greatest extent possible. Even potential contaminates that may seem innocuous such as backyard chickens, excessive dog waste, urban pesticide and fertilizer application, can contaminate the aquifer. During a rainfall event, runoff can potentially transport these contaminates directly to the wellhead. Through a process called preferential flow, contaminated runoff can soak into the ground and flow along the well casing, potentially contaminating the aquifer.

Zone 2 is the outer portion of the entire WHPA. Zone 2 is in place as a reasonable estimate for the boundary of the recharge zone. The recharge zone is the area of land on the surface where water infiltrating into the ground will eventually flow into the aquifer supplying the well. If a well is deemed to be strongly under the influence of surface water, a more in-depth study can be done to determine the exact boundary of the recharge zone. Pollution occurring in the recharge zone has a much high change of contaminating the well than if it occurred outside this boundary.

2.3 Protection Zone for Surface Water Sources

The Source Water Protection Zones for surface water sources also fall under the distinction of two zones. There are various surface water sources used for public drinking water supply but for the most part these consist of: Rivers, streams, lakes and reservoirs.

- Zone 1: Encompasses the watershed within 1 mile of the intake
- Zone 2: Encompasses the entire watershed.

2.4 Source Water Assessments

The following pages will show the Source Water Assessments for Well #4 (Operated by Town of Mineral) and the Northeast Creek Reservoir (Operated by Louisa County Service Authority).

- Well #4: Zone 1 is represented by the black and white line at the center of the map with Zone 2 being represented by the outer yellow line.
- Northeast Creek Reservoir: The entire watershed for the reservoir is represented by the outer white and black line.

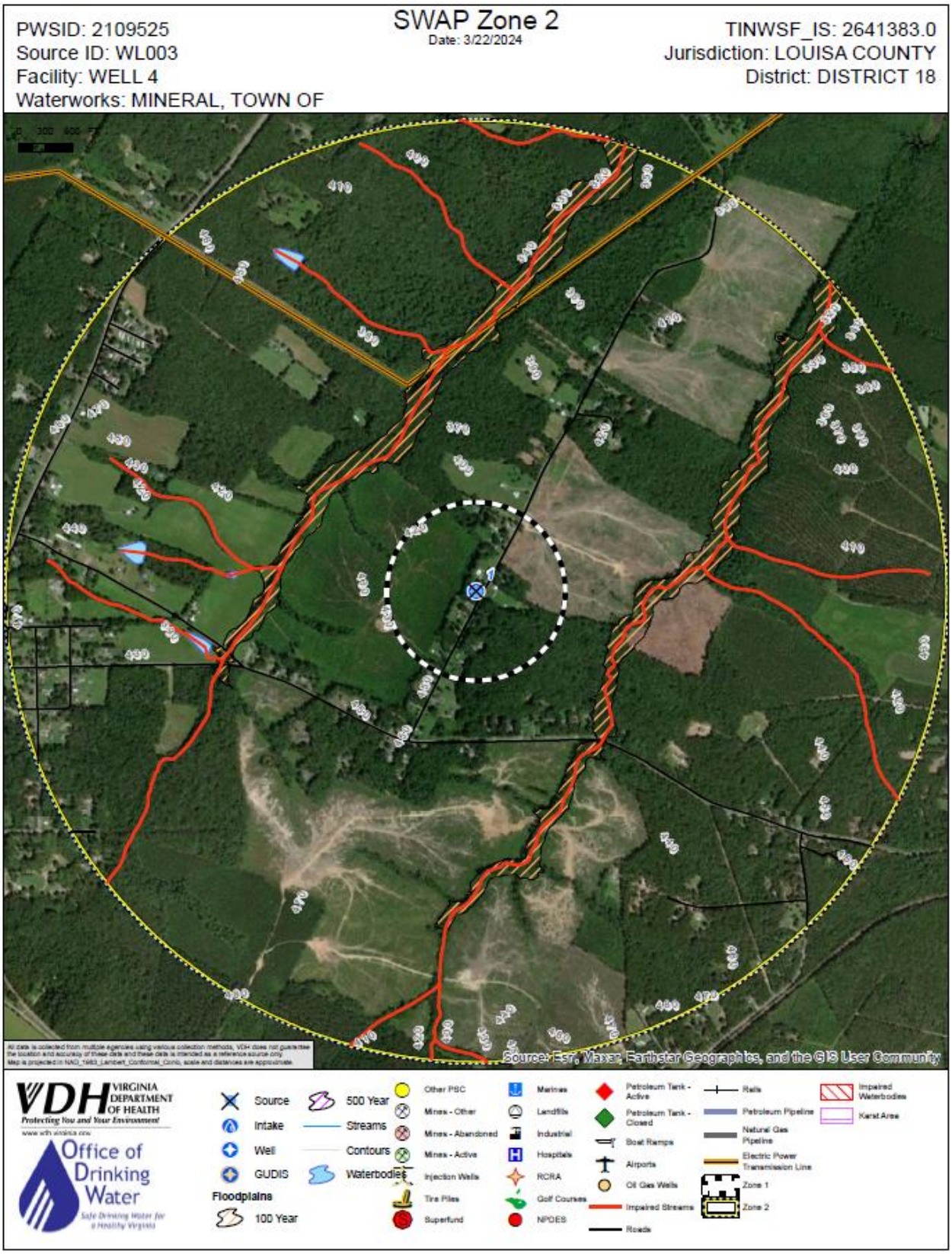


Figure 1: Town of Mineral Well #4

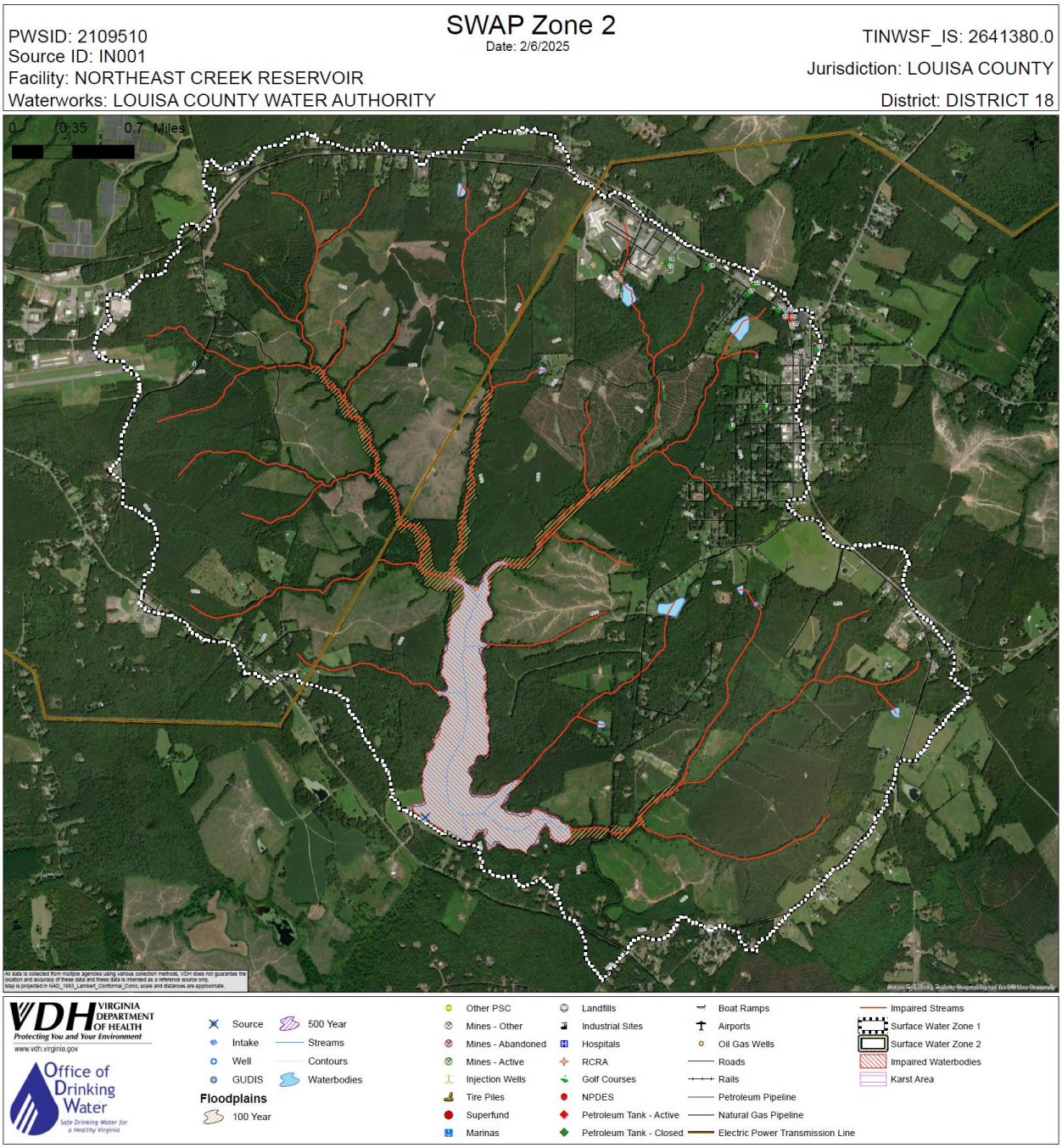


Figure 2 Northeast Creek Reservoir

2.4 PHYSICAL CHARACTERISTICS OF SOURCE WATER PROTECTION ZONE

2.3.1 Land Use Overview

The type of land use on the surface is a critical factor in determining an aquifer's susceptibility to contamination. Part of the VDH Source Water Assessment program involves a land use survey within the Source Water Protection Zones. Land is labeled under one of 12 different uses, show below in Figure 3. In this section, the implications for Source Water Protection of each type of Land Use will be discussed.

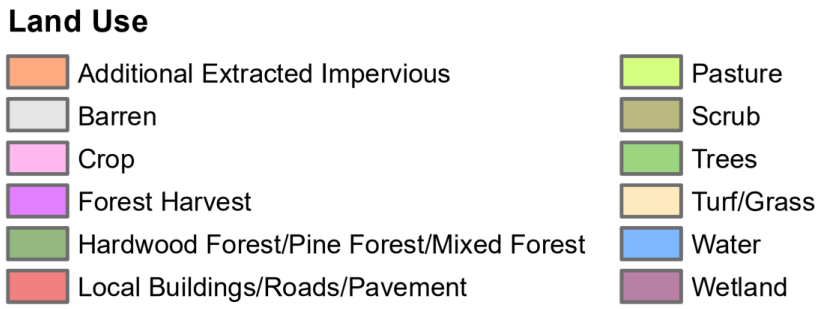


Figure 3

- Additional Extracted Impervious & Local Buildings/Roads/Pavement: For the purposes of this document both categories referring to various surfaces that do not allow water to flow through will be referred to as *Impervious Surfaces.* Impervious surfaces pose numerous issues in terms of Source Water Protection. Buildings, roads and parking lots are the most common urban surfaces that do not allow rain or snowmelt to flow into the ground. During dry times, there are countless pollutants that are deposited or settle on these surfaces. Grease, oils, gasoline, particulates from brake pads and tires all accumulate on a dry road surface. Particulate matter from internal combustion engines and powerplants settle on rooftops and parking lots. During a precipitation event, all of these pollutants are picked up by stormwater to flow into local waterbodies or contaminate groundwater. These pollutants are part of what are broadly referred to as Urban Runoff.

- Barren: Barren land referred to sites that are void of vegetation with soil or bedrock exposed. Land in this state is usually the result of human activities

and would not be commonly encountered in a natural setting; Particularly in Virginia. Barren land is less than ideal in terms of surface and groundwater protection. One the positive side, it is not entirely impervious which would allow water and snowmelt to soak into the ground. Vegetative cover serves as a barrier to erosion as well as a type of biological filter for water that soaks into the ground. Lacking a vegetative cover there will inevitably be erosion that can harm surface water and polluted water has more potential to harm groundwater.

- Crop: In general, the effects that crop production may have on water quality depends on if that farm is properly managed for soil health. Unfortunately, in the United States, only about 3% of farmland is actively managed for soil health. Thus, it is a safe assumption that any Land Use as Crop will have detrimental effects on surface and groundwater sources. Improperly managed farmland is first and foremost highly vulnerable to erosion. Modern agricultural techniques also involve heavy inputs of all sorts of chemicals. Fertilizers, herbicides and pesticides all become mobile when picked up by water runoff. They can, and very often do, pollute both surface and groundwater resources.

    - Cropland that is properly managed will often utilize no till practices and other techniques to prevent erosion. Application of chemicals will also be carefully planned as to prevent overuse and prevent excess runoff.

- Forest Harvest: Forest Harvest ultimately will have detrimental effects on water quality compared to a standing healthy forest. The effects are particularly detrimental during the time of harvest. Forest harvest requires the construction of roads, heavy machinery along with heavy compaction and exposure of the soil to erosion. This heavily disturbs the hydrologic cycle affecting surface and groundwater in a negative capacity.
    - Unlike barren land, there is typically woody debris left strewn about the land which serves to protect the soil from erosion in some capacity. Land that has undergone Forest Harvest does recover to an extent but it is a process that take longer than normal due to soil

compaction. Heavily compacted roads are often much slower to recover and remain exposed to erosion for a longer period of time.

- Hardwood Forest/Pine Forest/ Mixed Forest: Standing Forest is by far the most ideal Land Use for surface and groundwater quality. The easiest and cheapest way to perform Source Water Protection is to simply let standing forest remain as it is. Scientific data has continuously shown that healthy forests are the key to the highest quality of surface and groundwater. Forests serve to both replenish and cleanse our water supply. The effects of standing forest extend well beyond the localized area and have a positive rippling effect throughout the watershed and beyond.
    - Beyond Source Water Protection, Forests also promote greater health for both humans and wildlife. When sustainably utilized they provide us with an abundance of natural resources and recreational opportunities.

- Pasture: Pasture typically refers to land populated by grass or small shrubs that is used for grazing livestock or for production of hay. Pasture, much like land use under Crop, will have a varying effect on water quality depending on the agricultural practices of that particular farmer. As stated earlier, most farmland in the United State is not properly managed for soil health. With that being said, the majority of pasture in the United States would be considered overgrazed with portions of that being heavily overgrazed. Overgrazed pasture culminates in high degree of soil compaction, erosion and nutrient/bacteria rich runoff. This compromises the quality of surface and groundwater resources.
    - Pasture can actually be beneficial to water quality when properly managed. When livestock are properly rotated, it can facilitate a situation that promotes greater soil and ecological health. Manure, when deposited in an ideal distribution can spur vigorous plant growth and biological activity in the soil.

- Scrub & Trees & Turf/Grass: For the purposes of this plan the two categories *Scrub*, and *Trees* will be combined. They all present similar

effects on ground and surface water quality. The Scrub and Trees categories essentially indicate that there is additional plant matter on top grass. The addition of shrubs and trees would provide further opportunity for the vegetation reduce erosion and sequester rainwater for replenishing groundwater.

- Turf/Grass: A ground cover consisting of grass would be the most basic vegetative cover for what would otherwise be exposed soil. While grass is not as effective for Source Water Protection as forest, it still serves a lot of the basic functions that help protect surface and groundwater resources. First and foremost, grass will protect the soil from erosion. It will also serve as a buffer to slow down precipitation, providing time and space for water to soak into the ground. It should be noted that grass, particularly in residential and commercial settings is often sprayed with fertilizers and pesticides. These chemicals can contaminate both ground and surface water.

- Water: A body of water is only as healthy as the surrounding land, or watershed, allows it to be. Urban areas often have drastic negative effects on surface and groundwater quality. Intelligent urban landscape design that heavily incorporates BMPs (Best Management Practices) can offset some of the effects the urban landscape has on water quality. Unfortunately, these practices are well outside the scope of concern for the vast majority of municipalities in the United States. Even in more rural areas poor land management, particularly in the agricultural sector, are often very hazardous to surface and groundwater resources.

- Wetland: Similar to surface water resources, wetlands are at the mercy of the surrounding landscape. However, wetlands provide many services that help promote water quality. For one they provide a large holding and sequestration capacity for water from precipitation events. Wetlands also have a high degree of biological activity with a diverse ecology of plant, insect and animal species. These factors can help buffer and filter pollutants that may enter the wetland from surrounding areas or further up in the watershed.

2.3.2 Land Use Surrounding Well #4

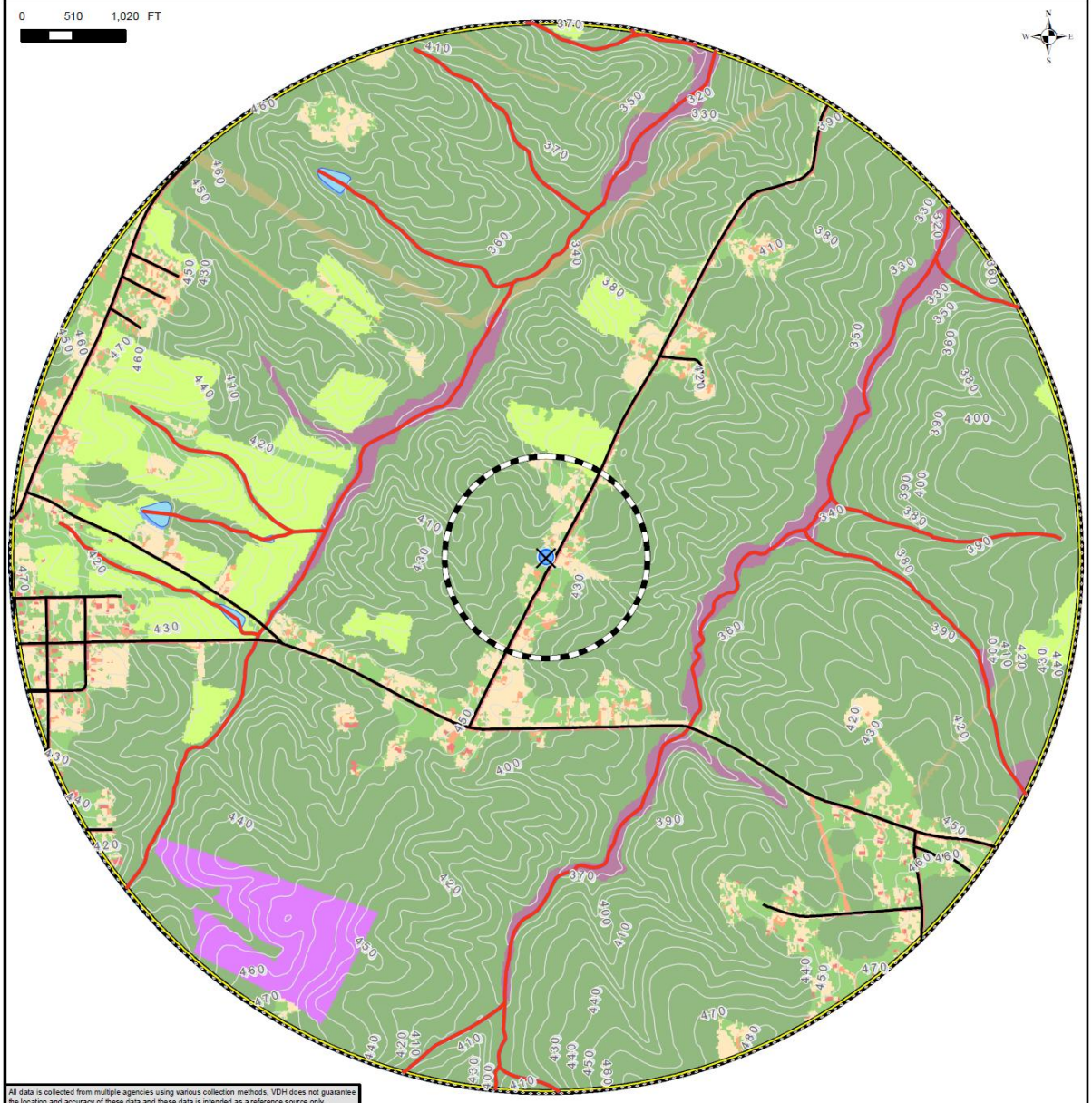
Figure 3 on the following page shows the Land Use map surrounding Well #4. The well is located in an ideal location for the region. It is isolated from main roads that carry that majority of tractor trailer traffic through the area. The well is located on a residential street but confined to its own forested lot. Zone 1 does contain a few residential lots but forest makes up the vast majority of land use. Looking outward to Zone 2 the majority of Land use also falls under the category of forest. As stated in the earlier section this is the best land use category for protecting water quality and quantity. There is a significant amount of land under Pasture but this is mostly for hay production. The outer portion of Zone 2 does incorporate small portion of the Town of Mineral.

PWSID: 2109525
Source ID: WL003
Facility: WELL 4
Waterworks: MINERAL, TOWN OF

SWAP Zone 2 Land Use

Date: 3/22/2024

TINWSF_IS: 2641383.0
Jurisdiction: LOUISA COUNTY
District: DISTRICT 18



All data is collected from multiple agencies using various collection methods. VDH does not guarantee the location and accuracy of these data and these data is intended as a reference source only. Map is projected in NAD_1983_Lambert_Conformal_Conic, scale and distances are approximate.

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment
www.vdh.virginia.gov
Office of Drinking Water
Safe Drinking Water for a Healthy Virginia

- Source
- Intake
- Well
- GUDIS
- Zone 1
- Zone 2

- Roads
- Rails
- Impaired Streams
- Streams
- Contours
- Impaired Waterways
- Waterbodies

Land Use

- Additional Extracted Impervious
- Barren
- Crop
- Forest Harvest
- Hardwood Forest/Pine Forest/Mixed Forest
- Local Buildings/Roads/Pavement
- Pasture
- Scrub
- Trees
- Turf/Grass
- Water
- Wetland

2.3.3 Land Use Surrounding Northeast Creek Reservoir

Figure 4 on the following page shows the Land Use map for the Northeast creek Reservoir. Generally surface waters are more susceptible to contamination as polluted runoff can easily enter the water source. The reservoir itself is surrounded mostly by forest which is good but the main concern are the numerous small creeks that feed the reservoir. While the majority of the watershed is forested, many of the creeks stretch into area that are urbanized with a high percentage of impervious surfaces. There are numerous main roads and train tracks that run through the watershed. A long stretch of Rt 208 runs through the protection zone which, along with the train tracks, does invite the possibility of tractor trailers or train cars spills containing chemicals or other possible contaminates.

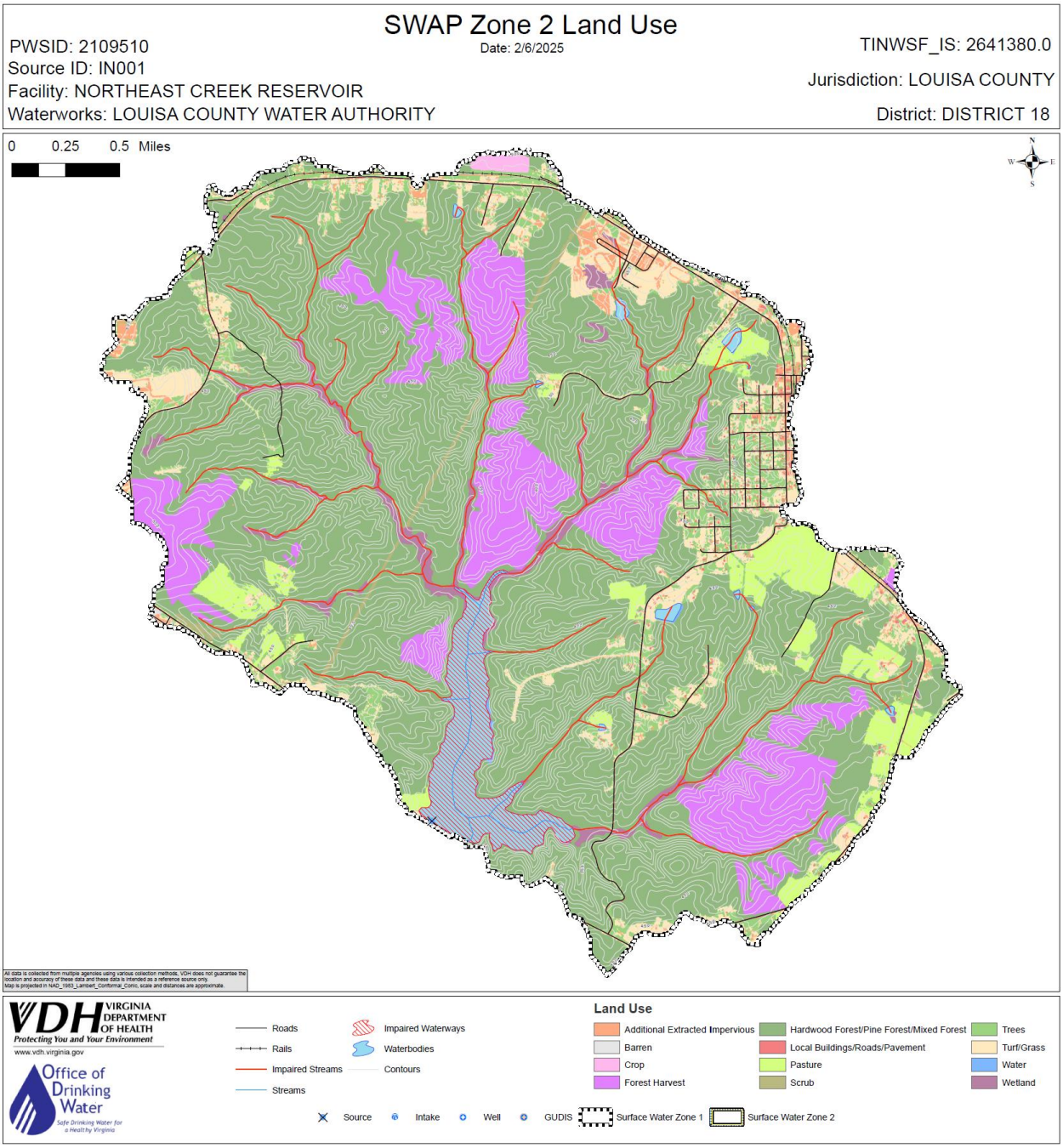


Figure 4 Northeast Creek Reservoir Land Use

3.0 POTENTIAL SOURCES OF CONTAMINATION

3.1 METHODS FOR IDENTIFYING POTENTIAL SOURCES OF CONTAMINATION

Proper identification of Potential Sources of Contamination (PSOC) is a critical step for the source water protection process. There are multiple methods for identifying PSOC but the process begins with consulting the Source Water Assessments, produced by the VDH for each public water source.

The Source Water Assessment Program was developed by the Virginia Department of Health Office of Drinking Water in 1999. The Assessment Program serves as a precursor the Source Water Protection Program. The Source Water Assessments (SWA) look at each public water source throughout the state and inventory any potential sources of contamination within the Zone 1 and Zone 2 Protection Zones for all groundwater sources.

Identifying PSOCs should be an ongoing process that continues even after implementation of the Source Water Protection Plan. The SWAs are used a general baseline and further identification of PSOCs is done from there. This can be accomplished by direct visual observation by “boots on the ground” and “windshield surveys”. The Source Water Specialist and system employees should keep an ongoing inventory.

Remote surveys for PSOCs using satellite imagery can also be used. Google Earth is a commonly used for this purpose to observe land use and other sources that could directly contribute to contamination of a water source. Remote PSOC surveys are especially useful for areas that may not be readily accessible on foot.

3.2 POTENTIAL SOURCE OF CONTAMINATION INVENTORY

- Any Potential Sources of Contamination to the Town of Mineral Water System can be listed in this section. This can include anything that poses a threat to surface and groundwater such as: petroleum (gas stations, fuel storage tanks, etc.), businesses that store and use various chemicals, agricultural operations, residential fuel storage and chemical use and general runoff from impervious surfaces in urban areas.

3.2.1 Well #4: Prevalent Potential Sources of Contamination within Zone 2 Protection Zone.

- Residential
    - Residential Pesticide and Fertilizer use: Overuse and incorrect application of pesticide and fertilizer products can potentially enter groundwater.
    - Residential Chemical use: Improper use, storage and disposal of chemicals can harm surface and groundwater sources. The list of substances includes but are not limited to gasoline, paint, cleaning agents and automotive chemicals.
    - Residential Heating Oil: Outdoor heating oil tanks are often not well maintained and can be prone to leaking after decades of exposure to the elements. Residential heating oil contains numerous additives that are extremely harmful to surface and groundwater sources. All outdoor heating oil tanks should be regarded as a potential source of contamination.

- Agricultural
    - Pesticide and Fertilizer: Overuse and incorrect application can negatively impact surface and groundwater quality.
    - Livestock Runoff: Overgrazing can lead to runoff that is high in fecal bacteria, impairing surface and groundwater.

- Roadway
    - Roadways are of particular concern for source water protection. Automobile pollutants such as grease, oils, fuel, brake pad dust and tire dust collect on road surfaces. During rain fall events these substances can contaminate surface and groundwater. Accidents, particularly those involving tractor trailers can lead to spills of fuel and other hazardous materials.

- Duke Oil Company
    - A commercial refueling facility is located adjacent to Elizabeth Trace Walton Park in the Town of Mineral. This facility can pose a major threat to groundwater contamination in the event of a fuel spill. Currently there are no curbs to act as containment barriers in the event of a spill

3.2.2 Northeast Creek Resaved Potential Sources of Contamination

- Generally surface water sources are more extensive treatment when compared to groundwater. This is because surface water is more

susceptible to contamination from a wider array of sources. This includes runoff from urban, residential and agricultural sources which can contain both chemical and microbiological contaminates. Surface water sources are also exposed to contaminates from airborne deposition. Additionally for surface water sources the protection zones are generally much larger because it encompasses the entire watershed.

- Residential
    - Residential Pesticide and Fertilizer use: Overuse and incorrect application of pesticide and fertilizer products can pollute surface water through runoff.
    - Residential Chemical use: Improper use, storage and disposal of chemicals can harm surface and groundwater sources. The list of substances includes but are not limited to gasoline, paint, cleaning agents and automotive chemicals.
- Agricultural
    - Pesticide and Fertilizer: Overuse and incorrect application can negatively impact surface water quality through runoff.
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Accidents, particularly those involving tractor trailers can lead to spills of fuel and other hazardous materials.

- Railroad
    - A portion of a heavily trafficked rail line runs through the Eastern and Northern portion of the protection zone. Overturned train cars can pollute both surface and ground water. Severity of the contamination depends on the contents of the train cars and degree of turnover. Coal and various chemicals are commonly transported by rail throughout the region, both of which can cause significant contamination of surface water resources.

4.0 SOURCE WATER PROTECTION PLAN

This section will discuss actions that can be taken to implement this Source Water Protection Plan. Implementing these measures will ensure that the water supply for the Town of Mineral is protected to the greatest extent possible. These actions can occur through both regulatory measures and non-regulatory, voluntary measures involving the public

4.1 CURRENT SOURCE WATER PROTECTION MEASURES

- Water Conservation Program involving proactive leak detection.
- Security measures. Wellheads are properly housed or fenced to prevent vandalism.

4.2 RECCOMENDED IMPLEMENTATION MEASURES

4.2.1 Public Education & Outreach

When protecting any natural resource, especially water, it is critical to involve the public and educate them on the issues at hand. Surface and groundwater protection are multifaceted issues influenced by a myriad of factors. Since human being are most often the sources of water pollution, it is crucial to educate the public on ways they can mitigate their impact on these resources.

Methods for Public Education can include:

1. Brochures on Source Water Protection that educate the public on a number of different topics. These can be distributed with water bills and at community events. These include but are not limited to:
    a. Importance of septic system maintenance and pump outs.
    b. Proper disposal and use of household and commercial chemicals.
    c. The water cycle and how groundwater resources are vulnerable to pollution from the surface.

d. Water Conservation tips for preserving water resources.

2. Signs along the roadway that inform citizens that they are in a Drinking Water Protection Zone, with a phone number for spill reporting.
3. Educate the public on any cost share assistance programs for Best Management Practices available through the Thomas Jefferson Soil & Water conservation District. This includes residential citizens and farmers that work land within the Protection Zones.
4. Promote public education at any town of county festivals. An education booth could be set up in partnership with Thomas Jefferson Soil & Water Conservation District.
5. Public Education Measures focused on Water Conservation Efforts to reduce pressure on the Water Source.

4.2.2 Town and County Planning and Policy

6. Officially designate a Drinking Water Protection Zone in the Zone 2 Protection Zone that supports the public water supply.
    a. This would ideally prohibit major logging and tree removal projects within the watershed for Northeast Creek Reservoir and within Zone 2 for any established wellheads.

7. Implement a well-abandonment program to properly abandon wells within the protection zone. Wells that are deeper and in closer proximity to the producing wells should be prioritized first. Soil and Water Conservation districts often have funding to assist with this process.

8. Form a relationship with the Thomas Jefferson Soil and Water Conservation District (TJSWCD)
    a. The TJSWCD has a wide range of programs to cover the cost of Best Management Practices implemented for agriculture and residential land.

b. Create policy to work with farmers and landowners within the protection zones to establish Best Management Practices that preserve the integrity of surface and groundwater.
    i. Encourage all landowners to maintain as much tree cover as possible and install landscape features such as rain gardens and riparian buffers.

9. Contact railroad and discuss pesticide and herbicide application practices. Encourage minimum spraying within the protection zones. Request that wellhead protection training be included in chemical applicator certification classes for railroad crews.

10. Coordinate with Fire Department and VDOT to create a spill response plan in the event that there is a hazardous chemical spill. Wells in immediate area of spill should be shut down until a full assessment of contamination can be performed.

11. Manage Household Hazardous Waste (HHW)
    a. Inform residents of Loudoun County Hazardous Waste Disposal Days to ensure proper disposal of residential hazardous waste.
    b. Educational brochures on management and disposal of HHW.

12. Install Pet Waste Stations in areas with frequent dog walking.

13. Annually Review and Update the Source Water Protection Plan

Contingency Plan

Source Water/Wellhead Protection Contingency Plan for Providing Alternative Drinking Water Supplies

For
Town of Mineral, Virginia
Public Water System
PWS I.D. # 2109525

Blank
Primary Contact

Chief Contact Position

Chief Contact Address

Work Phone:
Alternate Phone:

Date: 1/1/2024

Review and Update Annually

Date Reviewed	Reviewer	Changes or Comments

5.1 PURPOSE OF CONTINGENCY PLAN

The Contingency Plan for the Town of Mineral will explore short and long-term strategies for drinking water supply replacement in the event of severe contamination or a physical disruption of water supply. Contingency planning is an essential component of Emergency Preparedness for any water system. Proper planning will ensure that vulnerable customers have access to clean water for essential uses in the rare event that a natural or man-made disaster makes the source water unavailable or unusable.

5.2 EMERGENCY RESPONSE PERSONNEL

The Town of Mineral has designated an Emergency Response Leader and Alternate that will be the first point of contact for emergency situations concerning the source water. The following emergency response personal should be contacted immediately in the event of a water emergency.

	Emergency Response Leader	1st Alternate
Name		
Title		
Phone		
Cell		

Organization	Contact Persons	Received copy of plan Y/N	Work Phone	24 Hour Emergency Phone
Mineral Town Manager				
Mineral Chief Water Operator				
Virginia Department of Health Richmond Field Office			804-864-7409	
Department of Environmental Quality			703-583-3800	
Louisa County Emergency Operations Center				
Louisa County Sheriffs Office				
Bulk Water Supplier				
VA Emergency Management Asst.				
Federal Emergency Management Asst.				
Local Hospital				
Local Rescue Squad				
Va. Rural Water Association			540-261-7178	

5.3 ALTERNATIVE WATER SUPPLY OPTIONS

- Bulk Water Suppliers: In an emergency situation, bulk water can be purchased and be used to fill the systems storage tanks.
    - Bruce and Son Water Hauling: 804-357-7112

- Emergency Bottled Water Distribution.
    - Water can be obtained from Walmart at Zions Crossroads and distributed at the Mineral Firehouse

5.4 EMERGENCY DUE TO SOURCE WATER SHORTAGE

In the event access to source water is cut off, due to drought, equipment failure or other emergency situations, follow the following steps:

1. Notify the Virginia Department of Health Office of Drinking Water Richmond Field Office of the water shortage at (804) 864 7409
2. Implement systemwide emergency water conservation measures. Immediately notify all customers that all non-critical use of water is immediately suspended due to emergency water shortage.
3. Contact alternative water supply options listed in section 5.3.

5.4 EMERGENCY DUE TO SOURCE WATER CONTAMINATION

It is crucial to develop a thorough Emergency Response Plan in preparation for possible source water contamination events. It is important to protect both surface and groundwater from contamination as they are both connected. Surface water contamination tends to happen immediately whereas groundwater contamination can be a slower process as contaminates have to move through the soil column. Listed below are following actions that could be taken to mitigate the threat any contamination event poses to the water supply.

1. Contact Fire Department or appropriate law enforcement agency for spill containment assistance.

2. Notify the Virginia Department of Health Office of Drinking Water Richmond Field Office of the water shortage at (804) 864 7409
3. Cease pumping water from any source that may be at risk from the contamination event.
4. Fill all available water storage tanks using water sources that are not at risk.
5. If contaminated water has made it into the distribution system, immediately notify the public to cease use of public water supply.
    a. Isolate contaminated sections of distribution lines.
    b. Provide alternative water supply options to public.
    c. Advise public of ongoing efforts to restore service.