Town of Abingdon, Virginia
Year 4 VSMP Annual Report
Permit No. VAR040137

In Compliance with the
Virginia Stormwater Management Program General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems

September 27, 2022

Department of Public Works and Engineering
PO BOX 789
133 W Main Street
Abingdon, VA 24210

Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Heagon Gill	Engineering Technician	09/27/2022
Name	Title	Date

1. Introduction

The Town of Abingdon, Virginia Department of Public Works and Engineering has prepared this Year 4 Annual Report in accordance with the requirements of the Virginia Stormwater Management Program (VSMP) General Permit for Discharges of Stormwater from Municipal Separate Storm Sewer Systems (9VAC25-870 *et seq*). The Town was issued initial coverage under the General Permit VAR040137 on August 1, 2014.

Under the terms of the General Permit, the Town of Abingdon has developed a Municipal Separate Storm Sewer System (MS4) Program Plan to implement six minimum control measures aimed at reducing the discharge of pollutants to the "maximum extent practicable". The minimum control measures are shown in Table 1.

Table 1. MS4 Minimum Control Measures

1. Public Education and Outreach	*4. Construction Site Runoff Control*
2. Public Participation and Involvement	*5. Post-Construction Runoff Control*
3. Illegal Discharge Detection and Elimination	*6. Pollution Prevention & Good Housekeeping*

The General Permit requires that the Town submit annual reports no later than October 1st covering the reporting period of the preceding July 1st through June 30th. This Year 4 Annual Report covers the period of July 1, 2021 through June 30, 2022.

MCM #1. Public Education and Outreach

The public education and outreach plan was developed by Town staff and was made effective on July 1, 2017. The plans contents have were evaluated and no changes have been made during this permit year. The high-priority issued listed in the plan are as follows:

- Proper Disposal of Hazardous Wasted
- Recycling and Trash Management
- Good Housekeeping and Pollution Prevention Practices

Links are maintained on the website for information on proper disposal of hazardous waste and recycling and trash management. We have included additional information with building permit applications to target developers for good housekeeping and pollution prevention practices.

The Town made educational literature available to the public regarding the impacts of stormwater pollution and ways that citizens of the Town can help prevent pollution to the stormwater system.

The Town has included additional information with all building permit applications to target developers for good housekeeping and pollution prevention practices. The Town issued 97 building permits during the permit year and applicants received information of good housekeeping and pollution prevention for their respective work sites.

The Town coordinates, through social media and emailing lists, public participation events such as collection of electronic waste and household hazardous waste. There were 70,307 visitors to the Town's website during the permit year. There were 171 visits to the Stormwater Information Page.

Stormwater related information is available on the Town's website for the general public. The site contains links related to stormwater pollution and MS4 documents. The Town's stormwater management ordinance, MS4 Program Plan and annual reports are also posted on the website.

https://abingdon-va.gov/featured/departments/sewer-department/stormwater-information/

MCM #2. Public Involvement and Participation

The Town maintains a reporting form on the Stormwater Information page to identify and report illicit discharges. There were no illicit discharges identified during the permit year.

The Town continues to maintain links on the Town's stormwater webpage that allow access to the MS4 Program Plan and Annual Report for each permit year as well as other stormwater related material. The Town did not receive any public input regarding the MS4 program during the permit year.

The Town continues to collaborate with Sustain Abingdon on various stream clean-up/trash collection event days. The Town assisted Sustain Abingdon on the following events:

- Local Stream Clean-up – October 24, 2021
    - 24 people participated
    - 21 Adults, 3 Children
    - Collected 12 bags of litter and bulky items
    - Collected 6 bags of bottles and cans, taken to be recycled
    - Top 10 litter type items collected:
      160 – Plastic beverage bottles
      86 – Beverage cans
      68 – Food wrappers
      65 – Plastic / Other foam packaging
      50 – Foam takeout containers
      45 – Foam cups and plates
      24 – Glass beverage bottles
      14 – Plastic takeout containers
      13 – Foam cups and plates
      12 – Tobacco packaging / wrappers

- America Recycles Day – November 13, 2021
    - 54 vehicles participated
    - Collected 378 cubic feet of cardboard
    - Collected 162 cubic feet of E-Waste
    - Collected 4,500lbs of documents / shredding
    - Collected 15 cubic feet of Aluminum cans

- Earthday – April 23, 2022
    - 2,000 People attended
    - Collected 1,024 cubic feet of E-Waste
    - Collected 64 cubic feet of cardboard
    - Collected 4,5000lbs of document shredding
    - Collected 96 cubic feet / 75lbs of plastic

- Abingdon Recycle Day – August 28, 2021
    - Four Public Works employees attended
    - Sustain Abingdon Members who attended: Sarita Moore, Rick Statzer, Kevin Worley, Ashby Dickerson, and Debbie Robinson
    - Collected 136 cubic feet of document shredding
    - Collected 1,088 cubic feet of E-Waste
    - Collected 12 cubic feet of Aluminum Cans

MCM #3. Illicit Discharge Detection and Elimination

The Town continued to monitor and update the stormwater outfall map as new outfalls are identified. All 46 outfalls were screened during the permit year and the MS4 map and information table have been updated to reflect any changes that have occurred during the permit year.

Written procedures for screening and inspection timeframes have been developed. Town staff continues to monitor and update the stormwater outfall map. Town staff has completed reconnaissance of the Town Creek, Wolf Creek, and Fifteen Mile Creek drainage basins and have discovered no additional outfall locations in the Town limits. There were no illicit discharges reported or detected during the permit year.

The Town's Collection Department evaluates publicly served sanitary sewer lines and appurtenances using smoke testing, in-line camera work, and visual inspection. During PY4, the Town contracted these services with a local engineering firm. The firm began smoke testing during June, CCTV work is on schedule to begin August 2022, and the engineer's report of study data is on schedule for the month of September 2022. Based on the evaluation, each item is placed on a schedule for maintenance. The Town routinely clears blockages and flushes lines to prevent overflows and sewage backups that my result in an illicit discharge. The Town continues to implement its preventative maintenance program for all publicly maintained sanitary sewer lines and repairing lines based on inspection.

MCM #4. Construction Site Stormwater Runoff Control

The Town of Abingdon utilizes its legal authority, such as ordinances, permits, orders, specific contract language, and inter-jurisdictional agreements, to address discharges entering the MS4 from regulated construction site stormwater runoff. The Town has adopted a Virginia Erosion and Sediment Control Program (VESCP), and implements the VESCP consistent with the Virginia Erosion and Sediment Control Law (§ 62.1 – 44.15:51 et seq. of the Code of Virginia) and Virginia Erosion and Sediment Control Regulations (9VAC25-840).

The land disturbing projects that occurred during the reporting period have been conducted in accordance with the current department approved standards and specifications for erosion and sediment control. A total of 102 inspections were conducted during the permit year and 5 Notice-To-Comply orders issued. The Town did not issue any other type of enforcement action during the permit year.

MCM #5. Post-Construction Stormwater Management in New Development and Redevelopment

The Town addresses post-construction stormwater runoff that enters the MS4 from land disturbing activities by implementing a post-construction stormwater runoff management program. The Town has an approved Virginia Stormwater Management Program (VSMP) and implements the VSMP consistent with the Virginia Stormwater Management Act (§ 62.1 – 44.15:24 et seq. of the Code of Virginia) and VSMP Regulations (9VAC25-870).

Town staff conducted inspections on four privately owned BMPs during the permit year based on the PY4 inspection schedule. No issues were observed during any of the inspections.

Town staff conducted inspections on four Town owned stormwater management. The Town performed no significant maintenance, repair, or retrofit activities on the stormwater management facilities owned or operated.

The Town confirms that it has submitted stormwater management facility information through the Virginia Construction Stormwater General Permit database for those land disturbing activities for which were required to obtain coverage under the General VPDES Permit for Discharges of Stormwater from Construction Activities in accordance with Part I E 5.

MCM #6. Pollution Prevention/Good Housekeeping for Municipal Operation

The Town continued to implement its pollutant reduction programs during the permit year that included solid waste collection, seasonal leaf pick-up, brush pick-up, monthly pick-up of discarded larger items, and street sweeping. The Town collected 3,931 tons of solid waste, 374 loads of brush, 97 bags of leaves, 122 bags of roadside litter and performed 4,535 miles of street sweeping during the permit year.

The SWPPP for the Town Shop and Fire Department was not modified during the permit year.

The Town currently has a turf and landscape nutrient management plan in place for the Russell Road baseball fields, Latture Field, as well as the Meadows Sports Complex. The Meadows Sports Complex turf and landscape nutrient management plan was developed during the permit year. These new Sports Complex Plan and existing plans are attached.

The Town conducted fertilizer and pesticide management training during the permit year for full-time employees. The Town currently has 8 Registered Technicians and 4 Certified Commercial Applicators with the Virginia Department of Agriculture and Consumer Services (VDACS). During the Permit Year, the Town had one Program Administrator, 1 Plan Reviewer, and two Inspectors certified under the Virginia Erosion and Sediment Control Law and its attendant regulations. The Town had one Combined Administrator and two Inspectors certified under the Virginia Stormwater Management Act and its attendant regulations.

2. Evaluation of the MS4 Program Plan Implementation

Town staff have reviewed each Minimum Control Measure and evaluated the implementation and effectiveness of the plan. No recommended plan modifications or additions were considered during the permit year. Any changes will be reflected in the next annual report.

Appendix

APPENDIX A

Pollution Prevention Starts With You

Did you know the average household contains between three and ten gallons of materials that are hazardous to human health or to the natural environment? There are obvious things, such as paint thinner, car batteries, and cleaners, but beyond clearly hazardous materials, substances such as polishes, greases, and even prescription medicines and personal care products can affect the environment if disposed of improperly. Every time someone dumps a can of paint thinner down the sink, flushes medicine down the toilet or throws an old car battery out with the trash, they can impact our water quality – and it doesn't have to happen. You can prevent pollution before it starts through proper disposal, educated product choices, and the desire to contribute to sustainability or the continued environmental health of our planet.

What Is A Hazardous Material?

Many government environmental agencies consider a substance hazardous if it can catch fire, react or explode when mixed with other substances, if it is corrosive, or if it is toxic. This definition includes many things that you probably are storing right now in your garage, basement, bathroom, or kitchen. And while they aren't considered technically hazardous, other common household materials such as fats, oils and greases can cause serious damage to your wastewater treatment system and the environment.

The improper disposal of household wastes can cause problems for the entire community. Wastes can be explosive or highly flammable. Sewers have exploded and garbage trucks have burned because people have carelessly discarded flammable or reactive wastes. Wastewater infrastructure has been clogged by fats, oils and greases. And water quality can be affected by improper disposal of medicines and personal care products.

Where Do We Put Them?

One of the worst ways to dispose of many household wastes is to "just dump them down the drain." Wastewater treatment plants and septic systems are not designed to handle most hazardous wastes. Moreover, disposing of such wastes in a landfill is not an effective solution. Without special design, sanitary landfills are not equipped to accept hazardous wastes, and when they are sent to landfills, hazardous wastes can pollute the environment through the groundwater, surface water and air.

If the public cannot dispose of most wastes in the sewer system or a landfill, what can be done? This brochure describes some preventive measures you can take in your home to reduce the quantity of waste you generate. The Household Waste Chart inside shows you ways of dealing with most common waste materials found in the home.

See inside for the Household Waste Chart!

What You Can Do In Your Community

Community members can work together to plan and create effective systems for managing wastes. Many communities sponsor household hazardous wastes collection days. These efforts help reduce the amount of hazardous waste and build public awareness of the problem.

Successful collection efforts in many cities help officials protect their local wastewater treatment plants and groundwater from hazardous waste contamination. Many communities are able to collect large quantities of hazardous materials in just a one or two-day program. If your community has a program for disposal of hazardous wastes, please support it. If not, we encourage you to speak to local officials about starting one.

We also encourage you to:

- Learn as much as you can about your wastewater treatment plant and share that information with your family and friends. Clean water is for everyone.
- Learn about your community's landfill system and special programs for the disposal of hazardous wastes. If you have the time, get involved in your community's programs.
- Contact your area's hazardous waste agency. They can provide information on companies which are licensed to handle hazardous wastes along with possible funding sources for such efforts.

Thinking Ahead to a Sustainable Future

Billions of dollars have been spent to improve wastewater treatment facilities and clean up our rivers and streams. Many millions more have been spent to build and maintain adequate sanitary sewers. Despite these great efforts, we cannot just dump our wastes into the air or send them to a landfill without thinking about the [illegible] environmental consequences. If I pour down your sink or into your trash, it goes into the environment!

That's why it is so important to think about how you dispose of household waste. What it comes to clean water and a healthier environment, sustainability really does start at your sink.

Water Environment Federation
[illegible]
Tel [illegible]
Fax [illegible]
www.wef.org

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Sustainability starts at your sink.

How To Dispose of Household Waste

Do Your Part for A Sustainable Planet! Here's How to Manage Household Waste

FIRST: REDUCE THE AMOUNT

You can reduce the amount of wastes from your home by simply reducing the amount you need. Here are some suggestions to help:

- Before you buy a product, read the label and make sure that it will do what you want. Once you buy something, you are responsible for disposing of it properly.
- Do not buy more than you need. That way you will not need to dispose of the surplus.
- Read and follow directions on how to use a product and how to dispose of the container. (There is a good reason why the labels say "do not incinerate" or "do not mix with bleach;" serious injury or even death can result)
- Use safer or environmentally friendlier substitutes when available.

SECOND: TAKE CARE OF THE WASTES

Even if you reduce your wastes, there is still the question of what to do with what is left over. Recycling is an excellent way of handling some hazardous wastes. Used motor oil, paint thinners, and some other solvents can be refined and reused just as aluminum cans are. Local civic groups can help you identify recycling programs.

Municipal or commercial incineration is another effective way to deal with some hazardous wastes. However, a specially designed incinerator is needed to destroy hazardous materials. "Incinerators" at your home, such as your fireplace, woodstove, or "burn barrel", cannot get hot enough to destroy hazardous wastes and should never be used for that purpose.

Take your hazardous household wastes to a licensed contractor or recycling agency, which can be found on the Internet. If such a group does not exist near you, your local wastewater treatment operator may be able to give you more information on the disposal of liquid wastes. Your local sanitation department may be able to give you more information on the disposal of solid wastes.

This Household Waste Chart will guide you in disposing of potentially hazardous materials and waste found around your home. You should display this chart in a convenient location. Remember never to dump hazardous wastes on the ground or down the drain. Always check the chart before disposing of waste.

HOUSEHOLD WASTE CHART*

The following chart from the Water Environment Federation will show you effective ways to dispose of household waste and contribute to a sustainable clean environment.

Blue waves ≈ indicate products which can be poured down the drain with plenty of water. If you have a septic tank, additional caution should be exercised when dumping these items down the drain. In fact, because septic systems rely on healthy bacteria, there are certain chemical substances that cannot be used with them. Be sure to read the labels to determine if a product could damage septic systems.

Yellow triangles ▼ indicate materials which should not be poured down the drain, but can be safely disposed of in a sanitary landfill or incinerator. Note that medicines can often be taken to a community drug take-back program or mixed with undesirable substances such as kitty litter or coffee grounds. Pills (except narcotics) can also be dissolved and mixed with regular trash. Be sure the material is properly contained before it is put out for collection or carried to the landfill. The red octagons ⊗ indicate hazardous wastes or materials that should be saved for a community-wide collection day or given to a licensed hazardous waste contractor when left over or unused. (Even the empty containers should be taken to a licensed contractor if one is available.)

Green leaves 🍃 indicate material that can be recycled or reused or shared with neighbors or family members. If there is a recycling program in your area, take the materials there. If not, encourage local officials to start a recycling program.

***The information contained in this chart is intended as a general guideline. Laws and regulations may vary from state to state. For more information on the safest way to dispose of these and other products, contact your area's solid and hazardous waste department or federal or state environmental agency. Check manufacturer's label for specific disposal guidelines.**

KITCHEN	Pour Down Drain	Sanitary Landfill	Hazardous Waste	Recycle, Reuse, Share
Aluminum cleaners		▼		
Ammonia-based cleaners	≈			
Bug sprays			⊗	
Drain cleaners			⊗	
Egg shells		▼		
Floor care products			⊗	
Furniture polish			⊗	
Metal polish with solvent			⊗	
Window cleaner		▼		
Oven cleaner (lye based)			⊗	
Fats, oils and grease (including oil from turkey fryers)		▼		
BATHROOM				
Bathroom cleaners		▼		
Diapers (baby wipes)		▼		
Disinfectants		▼		
Toilet bowl cleaner		▼		
Tub and tile cleaners			⊗	
Pharmaceutical products or drugs (expired or used)		▼		
Personal care products (aftershaves, perfumes, deodorants, permanent or other creams, hair relaxers, nail polish, dyes, waxes)		▼		
Sharps (needles for diabetics)			⊗	
GARDEN				
Fertilizer			⊗	
Fungicide			⊗	
Herbicide			⊗	
Insecticide			⊗	
Rat poison			⊗	
Weed killer			⊗	

GARAGE	Pour Down Drain	Sanitary Landfill	Hazardous Waste	Recycle, Reuse, Share
Antifreeze			⊗	🍃
Automatic transmission fluid			⊗	🍃
Auto body repair products			⊗	
Battery acid (or battery)			⊗	🍃
Brake fluid			⊗	
Car wax with solvent			⊗	
Diesel fuel			⊗	🍃
Fuel additives			⊗	
Fuel oil			⊗	🍃
Gasoline			⊗	🍃
Kerosene			⊗	🍃
Metal polish with solvent			⊗	
Motor oil			⊗	🍃
Other oils			⊗	
WORKSHOP				
Cutting oil			⊗	
Deck cleaners/stains			⊗	
Glue (solvent based)			⊗	
Glue (water based)	≈			
Paint (latex)		▼		🍃
Paint (oil based)			⊗	
Paint (aerosol)			⊗	
Paint (model)			⊗	
Paint brush cleaner with solvent			⊗	🍃
Paint brush cleaner with TSP	≈			
Paint stripper			⊗	
Paint stripper (lye based)			⊗	
Paint thinner			⊗	🍃
Primer			⊗	
Rust remover (with phosphoric acid)			⊗	

WORKSHOP (Cont.)	Pour Down Drain	Sanitary Landfill	Hazardous Waste	Recycle, Reuse, Share
Turpentine			⊗	🍃
Varnish			⊗	
Wood preservative			⊗	
MISCELLANEOUS				
Aerosol cans (empty)		▼		🍃
Aerosol cans (not empty)			⊗	
Ammunition			⊗	
Artists' paints (acrylic)		▼		🍃
Artists' paints (oil based)			⊗	
Cat litter		▼		
Cellular phones			⊗	🍃
Dry cleaning solvents			⊗	🍃
Fiberglass epoxy			⊗	
Gun cleaning solvents			⊗	🍃
Lighter fluid			⊗	
Mercury batteries			⊗	🍃
Moth balls			⊗	
Old fire alarms			⊗	
Fluorescent light bulbs			⊗	
Pet care products (flea and tick repellent)		▼		
Photographic chemicals			⊗	
Shoe polish			⊗	
Swimming pool chemicals			⊗	
White-out (used for corrections)		▼		

≈ — Can be poured down the drain with plenty of water

▼ — Cannot be poured down the drain, but can be safely disposed of in a sanitary landfill or incinerator

⊗ — Hazardous wastes.

🍃 — Recycle, reuse, or share.

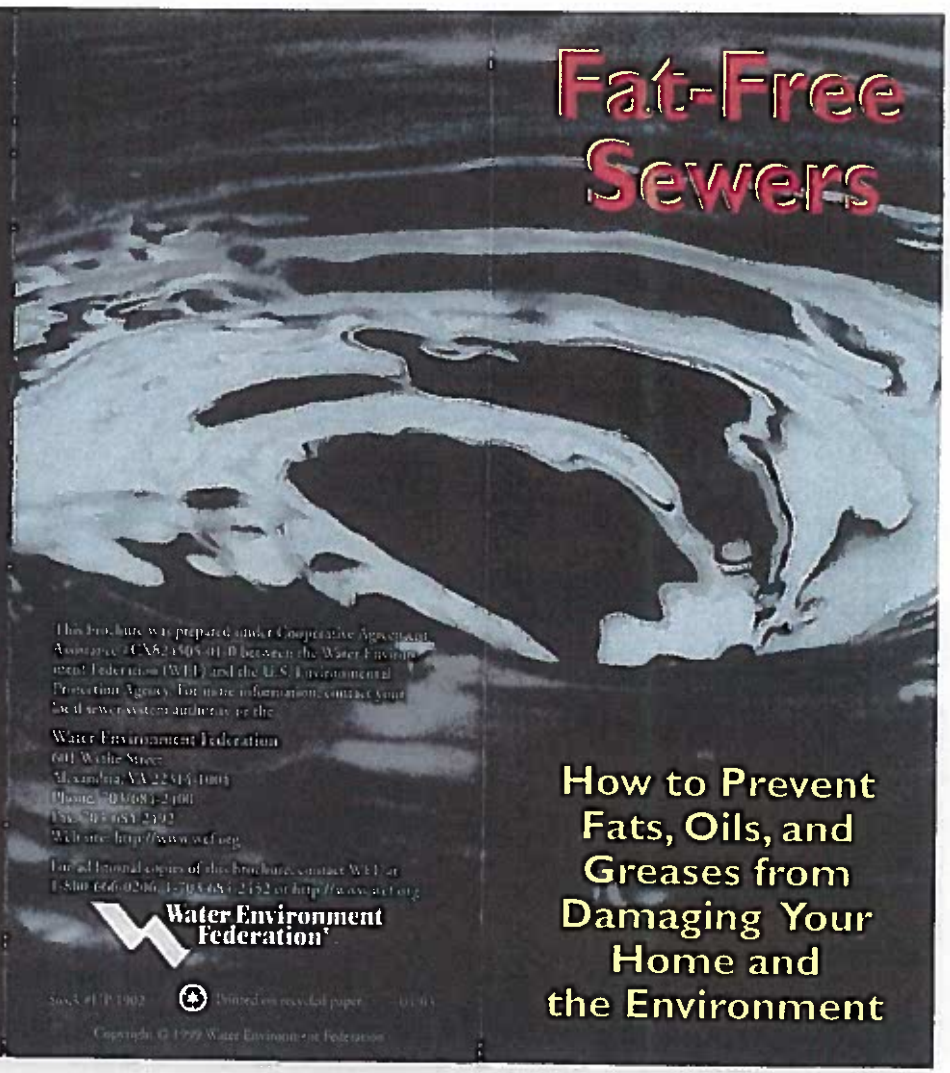
What Restaurant and Building Owners Need to Know About Grease Traps or Interceptors

Restaurants, large buildings, such as apartment complexes and other commercial establishments must have grease traps or interceptors that keep grease out of the sewer system. For a grease trap or interceptor to work correctly, it must be properly:

1. Designed (sized and manufactured to handle the amount that is expected),
2. Installed (level, vented, etc.), and
3. Maintained (cleaned and serviced on a frequent basis).

Solids should never be put into grease traps or interceptors. Routine, often daily, maintenance of grease traps and interceptors is needed to ensure that they properly reduce or prevent blockages.

Be cautious of chemicals and additives (including soaps and detergents) that claim to dissolve grease. Some of these additives simply pass grease down pipes where it can clog the sewer lines in another area.



This brochure was prepared under Cooperative Agreement Assistance (CA82-1505-01-0) between the Water Environment Federation (WEF) and the U.S. Environmental Protection Agency. For more information, contact your local sewer system authority or the:

Water Environment Federation
601 Wythe Street
Alexandria, VA 22314-1994
Phone: 703-684-2400
Fax: 703-684-2492
Web site: http://www.wef.org

For additional copies of this brochure, contact WEF at 1-800-666-0206, 1-703-684-2452 or http://www.wef.org

Water Environment Federation

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Fat-Free Sewers

How to Prevent Fats, Oils, and Greases from Damaging Your Home and the Environment

Fats, Oils, and Greases aren't just bad for your arteries and your waistline; they're bad for sewers, too.

Sewer overflows and backups can cause health hazards, damage home interiors, and threaten the environment. An increasingly common cause of overflows is sewer pipes blocked by grease. Grease gets into the sewer from household drains as well as from poorly maintained grease traps in restaurants and other businesses.

Where does the grease come from?

Most of us know grease as the byproduct of cooking. Grease is found in such things as:

- Meat fats
- Lard
- Cooking oil
- Shortening
- Butter and margarine
- Food scraps
- Baking goods
- Sauces
- Dairy products

Too often, grease is washed into the plumbing system, usually through the kitchen sink. Grease sticks to the insides of sewer pipes (both on your property and in the streets). Over time, the grease can build up and block the entire pipe.

Home garbage disposals do not keep grease out of the plumbing system. These units only shred solid material into smaller pieces and do not prevent grease from going down the drain.

Commercial additives, including detergents, that claim to dissolve grease may pass grease down the line and cause problems in other areas.

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The results can be:

- Raw sewage overflowing in your home or your neighbor's home;
- An expensive and unpleasant cleanup that often must be paid for by **you, the homeowner;**
- Raw sewage overflowing into parks, yards, and streets;
- Potential contact with disease-causing organisms; and
- An increase in operation and maintenance costs for local sewer departments, which causes higher sewer bills for customers.

© NYCDEP

What we can do to help

The easiest way to solve the grease problem and help prevent overflows of raw sewage is to keep this material out of the sewer system in the first place.

There are several ways to do this.

1) Never pour grease down sink drains or into toilets.
2) Scrape grease and food scraps from trays, plates, pots, pans, utensils, and grills and cooking surfaces into a can or the trash for disposal (or recycling where available).
3) Do not put grease down garbage disposals. Put baskets/strainers in sink drains to catch food scraps and other solids, and empty the drain baskets/strainers into the trash for disposal.
4) Speak with your friends and neighbors about the problem of grease in the sewer system and how to keep it out. Call your local sewer system authority if you have any questions.

Proper steps for disposal of unused pharmaceuticals include:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

Drug-Free Drains

You can help protect our water from pharmaceuticals and personal care products!

Water Environment Federation
[illegible]
601 Wythe Street
Alexandria, Virginia
22314-1994 USA

Tel. 1-800-666-0206
Fax. 703-684-0462
www.wef.org

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[illegible] 6/2006

Pollution Prevention Starts With You

Did you know that every day the average adult uses nine personal care products containing 126 unique compounds that could end up in our water? In addition to traces of products like shampoo, toothpaste, perfume, sunscreens, and cosmetics, minute amounts of prescriptions and over-the-counter drugs make their way into water. They should be limited or prevented from entering our environment.

Often the products we use and the medications we take are not entirely absorbed by our bodies. Any excess is excreted or washed off into our sewers, and then into our wastewater and surface waters. Moreover, many people dispose of prescription and over-the-counter drugs incorrectly by flushing them down the toilet.

Using advanced analytical equipment, scientists can detect these compounds in all types of water: groundwater, streams, wastewater, and drinking water. Comparatively speaking, these minute traces are as tiny as a pinch of salt in 10 tons of potato chips. While there is no evidence to suggest risk to human health, scientists can sometimes find interference with aquatic organisms, and studies continue. Meanwhile it's prudent to control what we put into water, and everyone's help is important.

Whenever possible, it's important to keep pharmaceutical and personal care products (PPCPs) out of our water. PPCPs include:

- Prescription and over-the counter therapeutic drugs
- Fragrances
- Cosmetics
- Sunscreen products
- Insect repellent
- Vitamins
- Veterinary drugs

PPCPs also include antibacterial hand and dish soap. According to a Food and Drug Administration panel, antibacterial soaps and washes are no more effective than regular soap and water at fighting infection in everyday use.

While some PPCPs are easily broken down and processed by the human body or degrade quickly in the environment, others are not. They can pass through sewers to treatment plants in very minute amounts and find their way into our creeks, rivers and streams. **Controlling what goes down the drain is the easiest and most effective way to protect the environment.**

Help Keep Our Drains Drug-Free!

One important way consumers can help is through proper disposal of unused pharmaceuticals* or over-the-counter and prescription drugs such as antibiotics, analgesics, anti-inflammatories, antidepressants, and oral contraceptives.

*Source: The White House Office of National Drug Control Policy consumer guidance for the Proper Disposal of Prescription Drugs at http://www.whitehousedrugpolicy.gov/drugfact/factsht/proper_disposal.html

For more information on how to dispose of household products, please visit:

http://www.wef.org/AboutWater/ForThePublic/FactSheets/FactSheetDocuments/HouseholdWaste.htm

You Can Be a Solution to Stormwater Pollution

Pollution prevention at the source is essential to keeping our water resources clean. The storm drain is for RAIN ONLY! If everyone works to stop pollution from entering storm drains, communities everywhere will benefit from cleaner water and a healthier environment. Here are a few simple things you can do to make a big difference in the water you drink or the places you swim, fish, or just enjoy visiting:

Not Rain, No Drain

Leaves, trash, and grass clippings should be swept up and collected, not pushed or poured down the nearest storm drain. Many communities collect yard waste to make mulch and compost, and you can also make compost yourself. *If it's not rainwater, it doesn't belong in a storm drain.* Even soapy or dirty water from washing your car can go down the drain and into your water. Be sure to use environmentally safe cleansers, and wash your car on the grass at home or use a car wash.

Pick Up After Your Pet

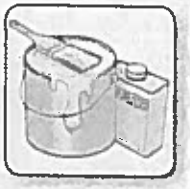
Pet waste left on the ground will eventually contaminate local water with harmful bacteria. Using a pet waste bag (biodegradable if possible) simply pick up your pet's contribution and place it in a trash can or flush it down the toilet without the bag.

Reduce Fertilizer Use

Whenever you fertilize the lawn or garden, excess nutrients can get washed through storm drains and into your local water body. The fertilizer that helps your garden grow also promotes harmful algae growth that takes oxygen out of water, chokes aquatic life, and clogs waterways. Use natural fertilizers and pesticides according to directions.

Recycle Motor Oil

In addition to community collection centers, many auto supply stores and gas stations accept used oil. That's a good thing because oil floats on water, sticks to everything, and lasts a long time in the environment. Cars and lawn equipment that leak oil onto the ground also pollute, so be sure to fix oil leaks!



Recycle Household Waste

Recycling is an excellent way to handle some household wastes such as paints, solvents, and related products, which should never go down the storm drain and into your water. Read and follow directions on how to use a product and recycle what's left over. If recycling is not an option, check with your local community collection center, water/wastewater utility, or sanitary landfill to learn how to properly dispose of your household waste.

Stormwater Runoff... Take it personally!

If you don't want to drink it, swim in it, or fish in it, don't put it in the water. Share the message with your family and friends and even consider volunteering to label storm drains in your neighborhood so it's obvious they drain straight into your water. Remember: Not Rain? No Drain!

Don't Pollute Your (Storm) Water!

When it rains, whatever doesn't soak into the ground runs off roofs and yards, down streets, into storm drains and then directly into rivers, lakes, creeks, and other local water bodies. If that runoff is polluted, it's most likely that our own actions caused the problem, and we are contaminating our water.

Clean Water Starts With You

Polluted stormwater closes beaches, kills wildlife, poisons drinking water resources, and destroys fish and shellfish habitat. Well-meaning people also contribute to stormwater pollution by doing little things every day that add up big. Too much fertilizer in lawns and gardens, unattended pet waste, littering, improper disposal of household waste and chemicals, and even poorly maintained or leaking septic systems can all pollute stormwater runoff that ends up in our water. This major threat to clean water can be personally prevented by folks like you.

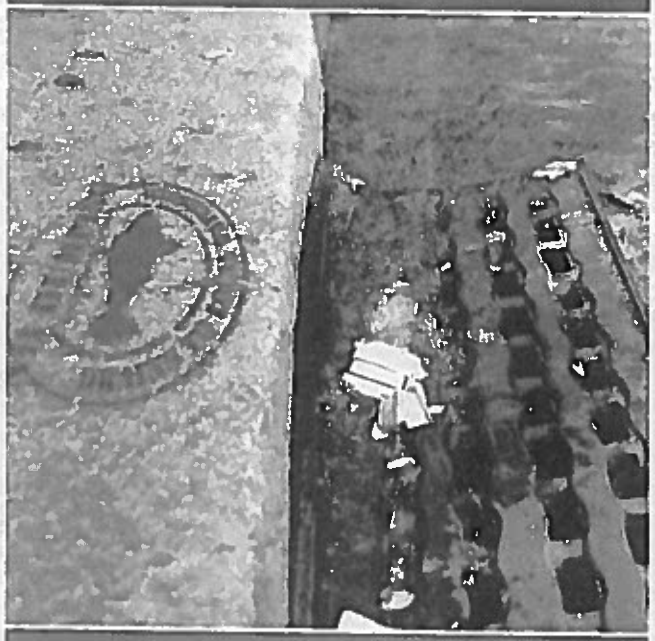
RECYCLED
Paper made from recycled material
FSC® C068104

Water Environment Federation
the water quality people
601 Wythe Street
Alexandria, Virginia
22314-1994 USA
Tel. 1-800-666-0206
Fax. 1-703-684-2492
www.wef.org

HS1809 7/2011

Stormwater Runoff:

Take It Personally!



Be the Solution to Stormwater Pollution.

What Is Groundwater?

Groundwater fills the cracks and pore spaces in rocks and soils that lie beneath the surface of the earth. Groundwater can be contaminated by pollutants that seep in from poorly constructed landfills, septic tank systems, salted roads, livestock areas, household chemicals, and many other sources. It is a vulnerable resource that is easy to pollute.

Many communities whose groundwater drinking source has become contaminated have had to spend millions of dollars for cleanup, which is effective but can double or triple the cost of the water. It is far better to prevent contamination in the first place.

Here are some ways you can guard groundwater:

- If you have a *well,* test it for contaminants regularly; many local environmental agencies provide testing services, and commercial water testing laboratories are located near most larger towns and cities.

- If your property includes an *abandoned well,* have a qualified water well contractor plug it by filling it from top to bottom with an appropriate cementing agent. Don't ever use a well for waste disposal.

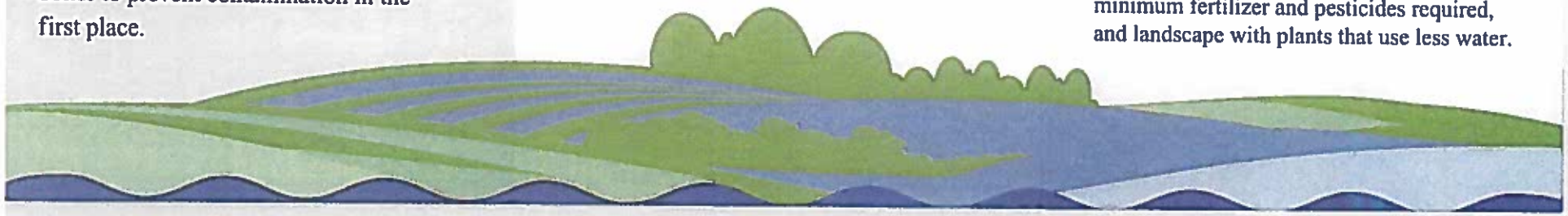
- If you have a *septic system,* pump it out every one to three years. Don't abuse your system by flushing grease, solvents, paint thinners, other hazardous materials, or non-biodegradable objects. To install a new septic system, make sure soil conditions are suitable and use a licensed installer such as a plumber. Septic discharges can be significant sources of groundwater pollution.

- Any leaking *underground storage tank* on your property should be removed or replaced with an above ground tank or an underground storage tank with leak detection and a liner for secondary containment. (Federal law requires this.)

- If you own a farm, control manure storage and distribution so that runoff is not excessive. Don't over-apply chemicals to your crops. Use pesticides that are less likely to leach into groundwater, and don't use pesticides near a drinking water well.

- If your community sponsors a household hazardous waste disposal or recycling program, participate! For example, oil can be recycled through programs like these. Never dump such wastes—or their containers—on the ground.

- For lawn care, make sure to apply the minimum fertilizer and pesticides required, and landscape with plants that use less water.



Why Protect Groundwater?

More than 90% of the world's total supply of drinkable water is groundwater. Everyone uses groundwater for household needs, for industry, for commerce, or for the irrigation of crops. Half of the people in the United States use groundwater for drinking water.

With the increased use of chemicals in the 20th century, the contamination of groundwater has become a growing concern. Once contaminated, groundwater is very difficult and very costly to clean.

For more information on groundwater protection, contact your local health department or environmental agency.

Water Environment Federation®
Preserving & Enhancing the Global Water Environment

601 Wythe Street
Alexandria, VA 22314-1994
Phone: 1 (703) 684-2400
Fax: 1 (703) 684-2492
E-mail: public_education@wef.org
Web site: http://www.wef.org

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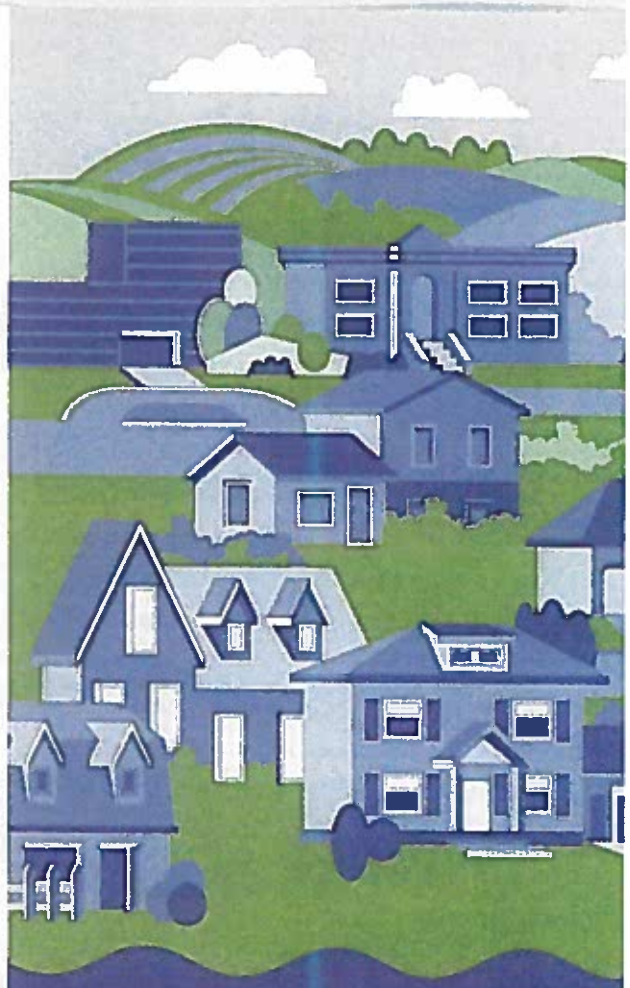


Guard Your Groundwater!

Best Management Practices for Good Housekeeping

Follow these BMPs to control pollutant discharges. The objectives are: 1) to keep pollutants from contacting rain, and 2) to keep pollutants from being dumped or poured into the storm drains. The goal is "only rain in the storm drain."

Activities	Best Management Practices
Pavement Cleaning	• Sweep parking lots and other paved areas periodically to remove debris. Dispose of debris in the garbage. • If outdoor pavement cleaning with detergent is required, collect wash water and dispose in indoor sinks or drains for discharge to the sanitary sewer. Contact your local wastewater treatment agency.
Litter Control	• Provide an adequate number of trash receptacles for your customers and employees. This helps keep trash from overflowing the receptacles. • Pick up litter and other wastes daily from outside areas including storm drain inlet grates.
Waste Disposal*	• Inspect dumpsters and other waste containers periodically. Repair or replace leaky dumpsters and containers. • Cover dumpsters and other waste containers. • Never dispose of waste products in storm drain inlets. • Recycle wastes or dispose properly.
Materials Storage*	• Store materials such as grease, paints, detergents, metals, and raw materials in appropriate, labeled containers. • Make sure all outdoor storage containers have lids, and that the lids are adequately closed. • Store stockpiled materials inside a building, under a roof, or covered with a tarp to prevent contact with rain.
Training	• Train employees regularly on good housekeeping practices. • Assign a person to be responsible for effective implementation of BMPs.
Equipment/Vehicle Cleaning	• Maintain equipment and vehicles regularly. Check for and fix leaks. • Use drip pans to collect leaks or spills during maintenance activities. • Wash equipment/vehicles in a designated and/or covered area where the wash water is collected to be recycled or discharged to the sanitary sewer. Contact your local wastewater treatment agency.

Some Facilities will require structural control BMPs if simpler operation ones are not adequate for keeping pollutant discharges from the storm drains.

* Hazardous materials must comply with hazardous materials storage and disposal requirements.

APPENDIX B

ABINGDON RECYCLE DAY

Saturday, August 28, 2021

314 Depot Square

Abingdon, VA

9AM—12PM

—Town of Abingdon Residents and Businesses ONLY—

FREE — ELECTRONIC WASTE RECYCLING

FREE — DOCUMENT SHREDDING

ABINGDON'S ALUMINUM CAN RECYCLING BINS

Dispose of your cans for free

Keep Southwest Virginia Beautiful

KEEP AMERICA BEAUTIFUL AFFILIATE

www.facebook.com/sustainabingdon

SUSTAIN ABINGDON

THINK GREEN, LIVE GREEN

ABINGDON RECYCLING

ACCEPTING CARDBOARD AND ALUMINUM CANS!

CARDBOARD DROP OFF LOCATIONS:

Old Landfill Site - 27263 Porter Lane, Abingdon

Coomes Recreation Center - 300 Stanley Street, Abingdon

Must be flattened and all plastic/Styrofoam removed.
Place in the two bright-green containers marked GFL.

For inquiries and concerns: call the Washington County Solid Waste Department at 276-623-1044

ALUMINUM CANS DROP OFF LOCATION:

Coomes Recreation Center - 300 Stanley Street, Abingdon

Place in bright-blue container.

For inquiries and concerns: call the Town of Abingdon Public Works Department at 276-628-2361

Also serving Abingdon:

Revolution Curbside Recycling

www.revolutioncurbsiderecycling.com
info@revolutioncurbsiderecycling.com
276-591-7093
(Requires subscription service)

Stay Up to Date - find, like and follow us!

Like us on Facebook

AMERICA RECYCLES DAY

Saturday, November 13, 2021
Abingdon Police Station - 425 W. Main St.
9AM—12PM

—Town of Abingdon Residents and Businesses ONLY—
(Must bring a form of ID or utility bill for proof of address)

- FREE -

Electronic Recycling
Document Shredding
Aluminum Cans
Cardboard

Sponsors:

SUSTAIN ABINGDON
THINK GREEN, LIVE GREEN

Keep SOUTHWEST VIRGINIA Beautiful
KEEP AMERICA BEAUTIFUL AFFILIATE

- Donations Accepted -

*Pet Supplies: food, treats, toys, blankets, towels, bleach, cat litter, carriers, gently used beds, and Dawn detergent.

*Non-Perishable Food Items

*Gently Used Shoes

FREE T-shirt for all donations
(while supplies last)

www.facebook.com/sustainabingdon

Earth Day Celebration

"Rethinking Recycling"

JOIN US!

April 23rd, 2022

Fields Penn House

(Across from the Farmer's Market)

Corner of Main St. & Cummings St.

Abingdon, VA

9am – 1pm

Kid Zone

Face Painting
Games
Crafts

KIDS Bring this Flyer in for a **FREE GIFT**

(While supplies last!)

Educational exhibit booths from Local Businesses and Green Organizations
Food Vendors On-site and Farmers Market Vendors nearby!

FREE Rain Barrels – Make your own! (**Registration Required** Please Email uppertnriver@yahoo.com w/ Rain Barrel in the subject line)
Seeking donations of gently used shoes!

FREE E-Waste Recycling & **FREE** Document Shredding (Depot Square) Earth Day T-Shirts for sale

Donate 2 Cans of food and receive a **FREE GIFT** (One per family while supplies last!)

FREE YOGA CLASS 10:30-11:15a @ Lois H. Humphrey's Park

FOLLOW US ON facebook

SUSTAIN ABINGDON

Rethink Your Choices | Refuse Single use | Re-Use Every-Thing! | Re-Purpose Whenever Possible | Repair Before you Replace | Recycle As a last Option

E-Waste & Plastic Recycling

After you drop off your E Waste---

Come Join the **EARTH DAY Activities** at the Fields-Penn House on the Corner of Main St. & Cummings St

Drop off your recyclables!

April 23rd, 2022

310 Depot Square

(Between Arts Depot & The Post Office)

Abingdon, VA

9am – 1pm

SUSTAIN ABINGDON

FOLLOW US ON facebook

#1 & #2 Plastics Accepted by Revolution Recycling!!

Accepted Electronics for Recycling

Personal computers, CPUs, Monitors, Keyboards, Mouse, Peripherals, Answering Machines, Camcorders, CD Players, Copiers, Duplicators, Fax Machines, Hard Drives, Laptops, Mainframe Computer Equipment, Microwaves, Mobile Phones, Modems, Pagers, Printers, Printed Circuit boards, radios, Remote Controls, Scanners, Stereos, Tape Players, Telephones & Telephone Equipment, Televisions, Transparency Makers, Power Supply, VCRs, Word Processors, Calculators, Routers, Rechargeable Batteries, Etc.

Rethink Your Choices | Refuse Single use | Re-Use Every-Thing! | Re-Purpose Whenever Possible | Repair Before you Replace | Recycle As a last Option

Grab a bag – or bucket – and help!

Sustain Abingdon, Upper Tennessee River Roundtable & Keep Southwest Virginia Beautiful

Annual Muster Grounds Stream Cleanup

Sunday, October 24, 2021 from 2-4 p.m.

Meet at the Cul-de-Sac at the end of French Moore Blvd.

- Drive past VHCC, SW VA Higher Education Center, Washington County Administration Bldg., and Small Business Incubator to the cul-de-sac.

Supplies provided:

- Trash bags, reusable gloves, reusable buckets from Clean Virginia Waterways through a donation to Keep Southwest Virginia Beautiful.
- Additional bags, T-shirts from Sustain Abingdon.
- Masks, hand sanitizer from Upper Tennessee River Roundtable through CARES Act funding from Washington County.

Data collection:

- Litter data will be collected and shared with the International Coastal Cleanup. The Clean Swells App may be used instead of paper.

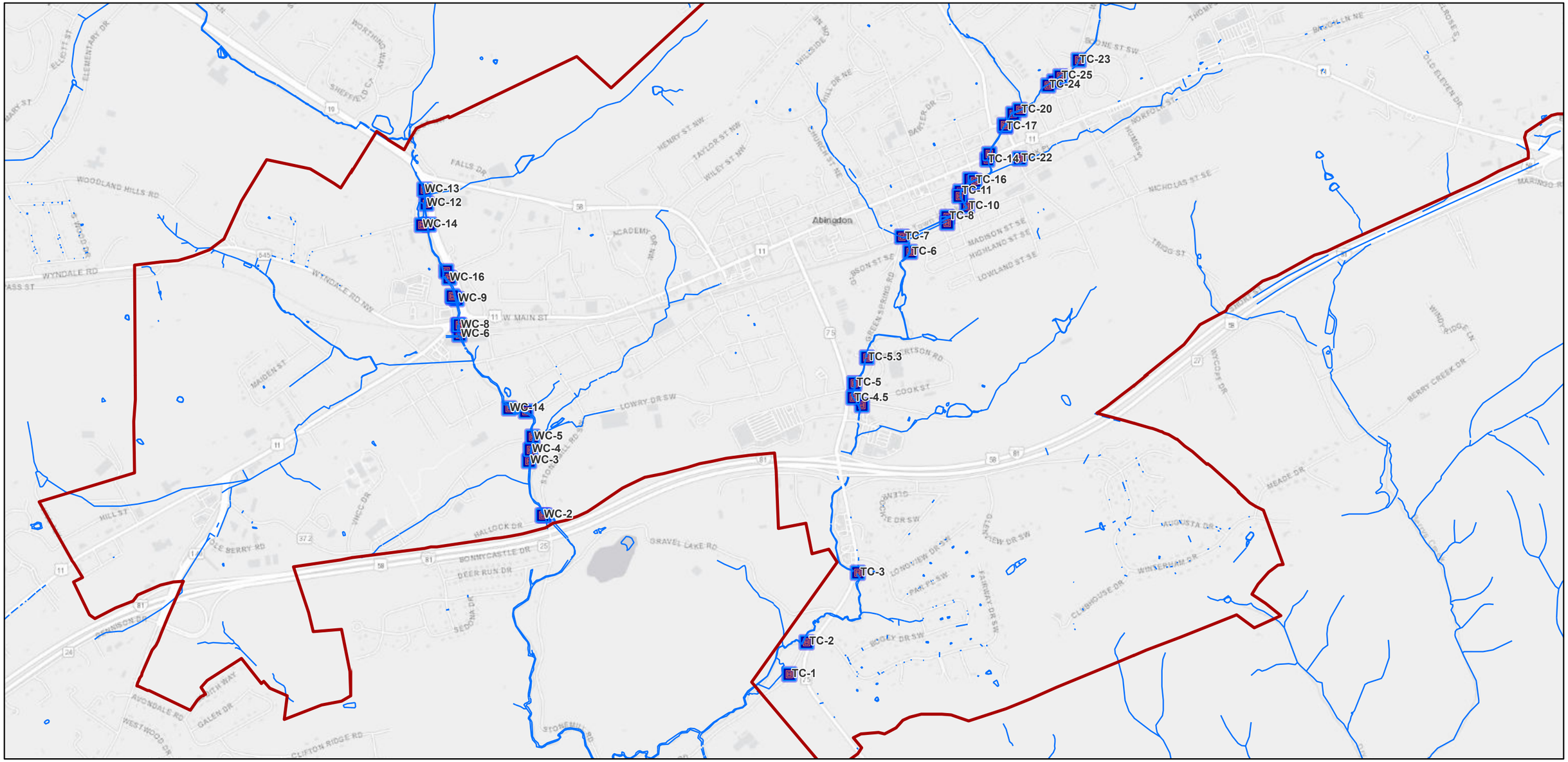
Buckets provided by Clean Virginia Waterways and Lowe's

Sign up:

- Contact KSVB and UTRR by emailing uppertnriver@yahoo.com. Put Muster Grounds in message line.
- You may leave a message at 276-628-1600 (office is still closed).

APPENDIX C

ArcGIS Web Map



9/29/2021, 1:48:13 PM

- Corporate Limits
- Streams
- MS4 Outfalls
- Survey Point

1:24,000

0 1,000 2,000 4,000 ft

0 375 750 1,500 m

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, Esri, HERE

ArcGIS Web AppBuilder

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA | Esri, HERE |

Outfall ID	Latitude	Longitude	Access	Flows to	Acreage Served	Predominant Land Use	HUC	Receiving Surface Water	Impaired - 2014 303(d)/305(b) WQAIR	TMDL
TC-1	36.6902	-81.9773	Clear	Stream	53	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-2	36.6916	-81.9764	Steep	Stream	317	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-3	36.6948	-81.9735	Clear	Stream	396	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-4	36.7023	-81.9733	Steep	Stream	8	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-4.5	36.7026	-81.9737	Steep	Stream	4	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-5	36.7033	-81.9737	Steep	Stream	41	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-5.3	36.7045	-81.9730	Clear	Stream	6	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-6	36.7092	-81.9706	Clear	Stream	60	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-7	36.7099	-81.9710	Clear	Stream	165	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-8	36.7108	-81.9685	Clear	Stream	9	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-9	36.7105	-81.9685	Clear	Ditch	8	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-10	36.7113	-81.9674	Clear	Stream	10	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-10.5	36.7117	-81.9678	Clear	Streat	5	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-11	36.7119	-81.9677	Clear	Stream	2	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-12	36.7123	-81.9671	Clear	Stream	17	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-13	36.7125	-81.9672	Clear	Stream	27	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-14	36.7134	-81.9663	Clear	Stream	3	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-15	36.7136	-81.9661	Clear	Stream	4	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-16	36.7124	-81.9670	Clear	Stream	65	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-17	36.7149	-81.9653	Clear	Stream	21	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-18	36.7149	-81.9653	Clear	Stream	21	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-19	36.7155	-81.9648	Clear	Stream	256	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-20	36.7156	-81.9644	Clear	Stream	116	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-21	36.7169	-81.9625	Clear	Stream	4	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-22	36.7134	-81.9644	Clear	Pipe	417	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-23	36.7178	-81.9611	Clear	Pipe	48	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-24	36.7167	-81.9628	Clear	Stream	8	Urban	060101020402 (TH-16)	Town Creek	Yes	No
TC-25	36.7171	-81.9621	Clear	Stream	1	Urban	060101020402 (TH-16)	Town Creek	Yes	No
WC-1	36.6973	-81.9912	Clear	Stream	32	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-2	36.6975	-81.9912	Steep	Stream	19	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-3	36.6998	-81.9920	Clear	Stream	16	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-4	36.7003	-81.9919	Clear	Stream	633	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-5	36.7009	-81.9917	Clear	Stream	334	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-6	36.7055	-81.9959	Clear	Stream	7	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-7	36.7059	-81.9960	Clear	Stream	27	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-8	36.7059	-81.9959	Clear	Stream	8	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-9	36.7071	-81.9961	Clear	Stream	45	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-10	36.7020	-81.9921	Clear	Stream	17	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-11	36.7105	-81.9977	Clear	Pipe	4	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-12	36.7114	-81.9978	Clear	Pipe	250	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-13	36.7120	-81.9979	Clear	Stream	54	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-14	36.7104	-81.9980	Clear	Stream	35	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No

WC-15	36.7104	-81.9980	Clear	Stream	36	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-16	36.7081	-81.9965	Clear	Stream	16	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-17	36.7072	-81.9962	Clear	Stream	2	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No
WC-18	36.7072	-81.9962	Clear	Stream	8	Urban	060101020402 (TH-16)	Wolf Creek	Yes	No

TOWN OF ABINGDON
REGULAR COUNCIL MEETING
MONDAY, MAY 7, 2018 – 6:30 PM
COUNCIL CHAMBERS – MUNICIPAL BUILDING

A Regular Council meeting of the Abingdon Town Council was held on Monday, May 7, 2018 at 6:30 pm in the Council Chamber of the Municipal Building.

A. WELCOME by *Mayor Cathy Lowe*

B. ROLL CALL – *Gregory W. Kelly, Town Manager*

Members of Council Present:

Cathy C. Lowe, Mayor
Richard E. Humphreys, Vice Mayor
Robert M. Howard
M. Cindy Patterson
J. Wayne Craig

Administrative/Town Staff:

Greg Kelly, Town Manager
Tony Sullivan, Interim Town Manager
Jon Phelps, IT Department
Chuck Banner, Director of Finance
Matt Bolick, Dir. of Public Services/Const.
Floyd Baily, Director of IT
John McCormick, Chief, AFD
Tyler Vencill, Civil Engineer
Jayne Duehring, Director of Tourism
Tonya Triplett, Community Development Coordinator
Tenille Sells, Community Relations Coordinator

C. PLEDGE OF ALLEGIANCE – Vice-Mayor Rick Humphreys led the Pledge of Allegiance.

D. APPROVAL OF MINUTES (VIDEO 5:50 – 7:54)

Ms. Patterson requested that the minutes of April 2, 2018 "change the minutes to reflect the video verbatim where she had a discussion" during the February 12 minutes involving co-counsel and a FOIA hearing.

Mayor Lowe requested that the April 16, 2018 Special Called minutes "to stipulate that we (Council) asked Mr. Kelly to make a recommendation to them regarding Mr. Bailey's additional pay as an additional FOIA officer" which he has done.

On motion by Ms. Patterson, seconded by Mr. Howard, the Council approved the minutes as of the March 27, 2018 Non-Departmental Budget work session; corrected April 2, 2018 Regular Council meeting; corrected April 16, 2018 Special Called Meeting; and April 18, 2018 Emergency Called meeting.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

CLOSED SESSION NOT ON THE AGENDA – Pursuant to Section 2.2-3711(A)(1) of the Code of Virginia, 1950, as amended, Council will convene in a closed meeting to discuss a personnel matter. (VIDEO 8:04 – 1:12:02)

On motion by Mr. Craig, seconded by Mr. Howard, to go into Closed Session pursuant to Section 2.2-3711(A)(1) for the purpose of discussing a personnel matter.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

Mayor Lowe invited the three newly elected Council members (Derek Webb, Donna Quetsch and Albert Bradley) and Ramesh Murthy, counsel for the Town Council, to join them in closed session.

On motion of Ms. Patterson, seconded by Mr. Craig, the Council reconvened in open session.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

Gregory W. Kelly, Town Manager, read the following certification to be adopted by the Council members:

WHEREAS, *the Council of the Town of Abingdon, Virginia has convened in a closed meeting on this date pursuant to an affirmative recorded vote and in accordance with the provisions set forth in the Virginia Freedom of Information Act; and*

WHEREAS, *Sec. 2.2-3712(D) of the Code of Virginia, 1950, as amended, requires a certification by the Town Council that such closed meeting was conducted in conformity with Virginia law; and*

NOW THEREFORE, *be it resolved, that the Council of the Town of Abingdon, Virginia hereby certifies that to the best of each member's knowledge (i) only public business matters lawfully exempted from an open meeting requirement by Virginia law were discussed in closed meeting to which this certification resolution applies and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Town Council.*

The certification was as follows:

Mr. Craig	**I so certify**
Ms. Patterson	**I so certify**
Mr. Howard	**I so certify**
Mr. Humphreys	**I so certify**
Mayor Lowe	**I so certify**

E. PUBLIC COMMENTS - (VIDEO 1:12:04- 1:34:21)

- David McLeish, Abingdon Farmers Market, 13050 Bell Lane, Meadowview, VA
- Carol Fields, Washington County Public Library, 17177 Rich Valley Road, Abingdon, VA
- Ben Jennings, Washington County Public Library, 160 Country Club, Abingdon, VA
- Bo Catron, Washington County Public Library, 20125 Vances Mill Road, Abingdon, VA
- Ann Cunningham, 155 Bogey Drive, Abingdon, VA (Left prior to public comments)
- Ashby Dickerson, Washington County Public Library, 305 Fairway Drive, Abingdon, VA
- Bunny Medeirus, Washington County Public Library, 112 ElderSpirit Ct, Abingdon, VA
- Nan Harman, 498 Green Springs Road (Deferred)

F. PETITIONS, PUBLIC HEARINGS AND FIRST READING OF ORDINANCES

1. **FIRST READING – PUBLIC HEARING** - Consideration of General Fund & Sewer Budget proposal for the Town of Abingdon, Virginia for the fiscal year beginning July 1, 2018 through June 30, 2019. – ***Gregory W. Kelly, Town Manager*** **(VIDEO 1:34:24 – 2:45:46)**

Gregory W. Kelly, Town Manager, presented an overview of the FY 2018/2019 General Fund and Sewer Budget stating the general fund budget for this year is $12,851,892 with a capital improvement budget of $6,792,000 for a total general fund budget of $19,643,098.

The sewer budget has a slight increase this year of 8.8% for a total balanced budget $3,247,930. Mr. Kelly stated that the increase is primarily due to two significant studies necessary and as a result, the rates have increased incrementally for both Town residents and out-of-town residents.

Mr. Kelly stating the non-departmental funding was $533,427; Council contingency of $56,380; and Mayor Contingency of $4,000.

Mr. Kelly stated that there is a pay increase to full-time employees, specifically a 2% Cost of Living Adjustment totaling $95,000 and entry-level minimum starting salary set at $25,000.

Mr. Kelly advised Council there were no tax increases, however the sewer rate would increase for both in-town and out-of-town customers to help prepare for the sewer studies and debt services associated with line upgrades.

Mr. Kelly discussed the four significant capital outlay projects including Green Spring Road/Cook Street/Sports Complex; Park Street Project (redevelopment/streetscape); Urban Path Project; and the Watauga parking/restroom project.

Mr. Kelly stated that this is the first reading with the second reading to be held on June 4, 2018.

Mayor Lowe declared the public hearing open. Hearing no comments from the public, Mayor Lowe closed the public hearing.

Ms. Patterson questioned the type of sewer lines that the Town presently use and the need for the upgrade. Ms. Patterson also questioned the average amount of Council contingency in previous years. Discussion ensued. Mr. Craig questioned Mr. Kelly with regard to the future trend for non-departmental budgeting.

Mayor Lowe allowed Nan Harman, 498 Green Springs Road, to speak at this time stating that she felt that the public did not understand that the comment section had closed.

Nan Harmon questioned how the Council contingency was utilized. Mayor Lowe stated that the non-departmental requests were supported with the Council contingency. An unidentified individual addressed the Council from the chamber (inaudible). Mayor Lowe stated that the Council contingency would be utilized for items that occur after the budget was adopted. Discussion ensued between the Council and unidentified individual(s) from the chamber (some video inaudible). Joe Levine addressed the Council regarding future meetings. Mr. Howard broached the matter regarding public safety and discussion ensued between the Council members and unidentified individual(s) from the chamber.

Mayor Lowe and Ms. Patterson read the proposed Ordinance.

2. **FIRST READING – PUBLIC HEARING** – Consideration of Potential Right-of-Way Acquisition by Eminent Domain of Interest in Property in the Town of Abingdon, Virginia for Public Use to Improve Transportation Safety (Parcel 105-A-42 located in the Abingdon district consisting of 14,810.4 square feet, more or less; and Parcel No. 104-A-41 located in the Abingdon district consisting of 0.34 acres,more or less). - ***Matt Bolick, Director of Public Services/Construction*** **(VIDEO 2:45:47 – 2:48:00)**

Mayor Lower announced that the public hearing was postponed indefinitely by mutual agreement of the Town and Nan Harman, the property owner, subject to the potential eminent domain acquisition.

Nan Harman, 498 Green Springs Road, addressed the Council questioning whether the matter was removed or postponed.

G. SECOND READINGS

1. **PUBLIC HEARING – SECOND READING** – Consideration of a request for vacation of unnamed fifteen foot (15') public right-of-way labeled as "15 ft. ROW to water" located between two parcels, namely, 018-6-37 and 018-6-36B,

at or near 243 Fugate Street – ***Matt Bolick, Director of Public Services/Construction*** **(VIDEO 2:48:22 - 2:55:24)**

Matt Bolick, Director of Public Services/Construction, advised Council that the Board of Viewers' opinion was that no inconvenience would result from the requested vacation, subject to two conditions: (a) Concurrence of abutting property owners; and (b) a permanent drainage easement be obtained from the property owner to run the length of the property on the north side, from Fugate Street to the rear (west) property line with a minimum of ten (10) feet.

Mr. Bolick stated that the property owner had reservations regarding the ten (10) foot drainage easement as it would consume approximately 10% of his property and that the easement limits use of his property. Mr. Bolick recommended that Council approve the right-of-way vacation request and impose the condition of a 7.5 foot drainage easement to run the length of the property line as set forth by the Board of Viewers.

Mayor Lowe declared the public hearing open. Mayor Lowe addressed the property owner, Tim Hoke, questioning whether he would allow staff on his property if the occasion occurred that the Town need additional right-of-way. Mr. Hoke agreed. Hearing no further comments from the public, Mayor Lower closed the public hearing.

On motion by Mr. Humphreys, seconded by Mr. Craig, the Council vacate the property located within two parcels, namely, 018-6-37 and 018-6-36B, at or near 243 Fugate Street unnamed fifteen (15') public right-of-way labeled as "15 ft. ROW to water" reduced to a 7.5' drainage easement on the north-side of the property line.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

2. **PUBLIC HEARING – SECOND READING** – Consideration of an Ordinance to enact Chapter 30, Article VI, Stormwater System, §§3126-3131 and §§3141-3143, Illicit Discharge and Illegal Connection. – ***Tyler Vencill, Engineer*** **(VIDEO 2:55:27 – 2:59:54)**

Gregory W. Kelly, Town Manager, advised Council that this matter is listed as a public hearing however the public hearing was last month and will be a second reading only.

Tyler Vencill, Town Civil Engineer addressed the Council stating that the proposed Ordinance is mandated by the Department of Environmental Quality concerning illicit discharge

and illegal connections that transfers authority to regulate, abate and fine for discharges. Mr. Tyler further advised Council that this ordinance would be effective July 1, 2018 for five years. Discussion ensued between the Council members.

On motion by Mr. Howard, seconded by Mr. Craig, the Council enacted an Ordinance to enact Chapter 30, Article VI, Stormwater System, §§3126-3131 and §§3141-3143, Illicit Discharge and Illegal Connection.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

H. CONSIDERATION OF BIDS

1. Consideration of bids for Stanley Street Curb, Gutter and Sidewalk – ***Matt Bolick, Director of Construction/Public Service*** **(VIDEO 2:59:54 – 3:03:55)**

Matt Bolick gave an overview of the bids for the Stanley Street Curb, Gutter and Sidewalk project. Mr. Bolick recommended that Council award the bid to King General Contractors at the bid price of $112,765.75 and authorized the Interim Town Manager to execute any necessary documents to carry out the award bid and project.

On motion by Mr. Craig, seconded by Ms. Patterson, the Council award the contract to King General Contractors at the bid price of $112,765.75 and authorize the Interim Town Manager to execute any necessary documents to carry out the award bid and project.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

Council member Ms. Patterson requested a five (5) minute break.

I. REPORTS FROM THE TOWN MANAGER

1. Consideration of Abingdon Fire Department's request to surplus a 2006 Chevrolet Tahoe to sale by sealed bid. – ***John McCormick, Fire Chief*** **(VIDEO 3:10:27 – 3:13:57)**

Gregory W. Kelly, Town Manager, advised the Council that after researching this matter that it will not need to be sold by sealed bids as it will be sold to another locality. Fire Chief John McCormick requested authority from the Council to surplus a 2006 Chevrolet Tahoe to sale to the Glade Spring Fire Department. The Glade Spring Fire Department will need permission to purchase the vehicle if Council could agree upon a fair price. Discussion ensured.

On motion by Mr. Craig, seconded by Mr. Howard, the Council authorize the Fire Chief and the Interim Town Manager to negotiate a fair price for the vehicle and should the purchase price not be successful, then authorize the vehicle to be sold by sealed bids.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
Mayor Lowe	**Aye**

2. Presentation regarding Tourism Week and event planned – ***Jayne Duehring, Director of Tourism*** **(VIDEO 3:14:15 – 3:26:25)**

Jayne Duehring, Director of Tourism gave a presentation to Council regarding Tourism Week. Speakers supporting National Tourism Week included:

- George Brewer, General Manager of Country Inn & Suites
- Adventure Mendota Representative
- Kathy Shearer, Holston Mountain Artisans
- Neta Farmer, Washington County Chamber of Commerce
- Lisa Quigley, Virginia Creeper Trail Club

3. Presentation regarding a proposed public art project – ***Jayne Duehring, Director of Tourism and Jan Hurt*** **(VIDEO 3:25:42 – 3:49:31)**

Jayne Duehring, Director of Tourism, and Abingdon resident Jan Hurt gave a presentation to Council on a possible bridge mural on the Cummings Street Bridge. Discussion ensued and Ms. Patterson recommended public input of the design selection.

4. Discussion regarding the renaming of a park in honor of Lois H. Humphreys – ***Cathy Lowe, Mayor*** **(VIDEO 3:49:36 – 3:56:05)**

Mayor Lowe stated she would like to name the Park on Main in honor of Lois Humphreys.

On motion by Ms. Patterson, seconded by Mr. Howard, the Council authorize the renaming of the Park on Main in honor of Lois H. Humphreys.

Discussion ensued.

The roll call vote was as follows:

Mr. Craig	**Aye**
Ms. Patterson	**Aye**
Mr. Howard	**Aye**
Mr. Humphreys	**Aye**
	(Disclosed that he is the son of Lois H. Humphreys)
Mayor Lowe	**Aye**

The dedication date scheduled for June 18, 2018 at 11:00 am

5. Discussion regarding reinstalling traffic light at the corner of Russell Road and Valley Street – ***Cathy Lowe, Mayor*** **(VIDEO 3:56:06 – 4:04:01)**

Discussion ensued regarding the reinstalling of the traffic light at the corner of Russell Road and Valley Street. Tony Sullivan, Interim Town Manager presented statistics on the intersection.

J. PROCLAMATION

1. Presentation of Proclamation regarding Business Appreciation Month, results of Best of Abingdon survey, and planned initiatives – ***Tonya Triplett, Community Development Coordinator*** and ***Tenille Montgomery, Community Relations Coordinator*** **(VIDEO 4:04:08 – 4:10:10)**

Mayor Lowe read the Proclamation regarding Business Appreciation Month. Tonya Triplett, Community Development Coordinator and Tenille Montgomery, Community Relations Coordinator presented information about the upcoming Best of Abingdon survey.

K. OLD BUSINESS/MATTERS NOT ON THE AGENDA

L. COUNCIL MEMBER REPORTS

Ms. Patterson thanked Mr. Kelly for the twelve (12) years of service and wished him the best.

Mr. Humphreys asked Mr. Bolick if the Watauga Project was ready for bid. Discussion was not audible. Mr. Humphreys reminded the new Council members about the trees for the tree wells for downtown Abingdon. Mr. Humphreys also stated that there have been several issues that an attorney is needed. (Inaudible voice from Chamber) Mr. Humphreys also commented on the beautiful sidewalks in front of the Findlay House. Mr. Humphreys also thanked Mr. Kelly for all of his services to the Town.

Mayor Lowe announced several meetings. Discussion between Council ensued.

Mr. Humphreys provided information about the Overmountain Victory Trail Association; Retirement and the Muster Grounds.

Mayor Lowe stated that Floyd Bailey was named as an additional Freedom of Information Act officer and it was recommended that he receive a $5,000 pay increase to being immediately.

Mayor Lowe thanked Mr. Kelly for his service to the Town, which has been a great ride and is proud of the work completed in the twelve years.

Gregory W. Kelly, Town Manager, stated that it has been an honor and a privilege to serve the Town as Town Manager for the past twelve years. The Town has a great group of employees, past and present, which is a large part of the reason Abingdon is the wonderful place it is.

M. APPOINTMENTS TO BOARDS AND COMMITTEES

1. **Economic Development Authority**

- Appointment to fill the unexpired term of Richard Buddington, who has been appointed as Juvenile and Domestic Relations Judge for 28th Judicial District.

If Council so desires, Closed Session pursuant to the Code of Virginia, 1950, as amended, Section 2.2-3711(A)(1) for the purpose of considering applications for appointment/reappointment the position(s) on the Economic Development Authority.

THIS MATTER WAS NOT ADDRESSED DURING THIS MEETING.

Mayor Lowe declared the meeting adjourned.

Cathy C. Lowe, Mayor
MAYOR

Kimberly B. Kingsley
Kimberly Kingsley, Acting Clerk

PURSUANT TO A STATE MANDATE AN AMENDMENT OF THE COUNCIL FOR THE TOWN OF ABINGDON, VIRGINIA HEREBY EXPANDS CHAPTER 30, ENVIRONMENT, OF THE CODE OF ORDINANCES BY ADDING TO IT ARTICLE VI, STORMWATER SYSTEM TO ADDRESS ILLICIT DISCHARGE AND ILLEGAL CONNECTION, §§126 – 131,

(§§132 – 140 reserved), §§141 – 143, (§§144 - 150 reserved), §§151 – 154 (§§155 – 165 reserved)

WHEREAS, pursuant to the Virginia Stormwater Management Act (Article 2.3 (§62.1-44.15:24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia) and the Virginia Stormwater Management Program (VSMP) Regulations (9VAC25-870), the effective date of record being July 1, 2013 and expiration date being June 30, 2018, the Council for the Town of Abingdon, Virginia hereby expands the Town's Code of Ordinances, as set forth above, to incorporate into Article VI sufficient language to meet the mandatory requirements thereof; and

WHEREAS, in compliance with the provisions of the Clean Water Act, as amended and pursuant to the Virginia Stormwater Management Act and regulations adopted pursuant thereto, this Commonwealth of Virginia permit authorizes operators of small municipal separate storm sewer systems to discharge to surface waters within the boundaries of the Commonwealth of Virginia, except those waters specifically named in State Water Control Board regulations which prohibit such discharges; and

WHEREAS, this addition, as set forth above, results from a Commonwealth of Virginia mandate to enact prior to an issuance of a MS-4 permit to the municipality pursuant to best management practices as set forth by the Commonwealth of Virginia; and

WHEREAS, upon due consideration, the Council for the Town of Abingdon, Virginia, has found it in the best interest of the public welfare to expand Chapter 30, Environment, Article VI, Stormwater System to address Illicit Discharge and Illegal Connection.

NOW THEREFORE, BE IT ORDAINED, by the Council for the Town of Abingdon, Virginia, after notice and public hearing, as required by law, adopts this Ordinance pursuant to the general permit requirements and the MS4 Program Plan, General Permit No.: VAR04, Commonwealth of Virginia.

1. That this ordinance shall become effective on June 1, 2018.

2. That should any section or provision of this ordinance be decided to be invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity or constitutionality of any other section Or provision of this ordinance or the Code of the Town of Abingdon, Virginia.

- **ARTICLE VI. - STORMWATER SYSTEM TO ADDRESS ILLICIT DISCHARGE AND ILLEGAL CONNECTION**

§ 30-126. - Purpose(s).

The purposes of this article are to provide to the maximum extent practical for the health, safety and general welfare of the citizens of the Town of Abingdon:

(1) By reducing pollutants in storm water discharges;

(2) Through the regulation of non-storm water discharges to the Town's storm sewer system; and

(3) Complying with the requirements of the Federal Clean Water Act (33 U.S.C. 1251 *et seq.*)

- **§ 30-127. - Definitions.**

As used in this article:

Best management practices (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to the municipal storm sewer system. This term also includes treatment requirements, operating procedures, and practices to control site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage.

Department of public works means the agency designated to administer and enforce this article.

Director means the director of the department of public works of the town.

Clean Water Act means the Federal Water Pollution Act (33 U.S.C. 1251 et seq.), and any subsequent amendments.

Hazardous materials means any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored transported, disposed of, or otherwise managed.

Illicit discharge means any direct or indirect non-storm water discharge to the town’s storm sewer system, except as exempted in sections 30-141 through 30-143.

Illicit connection means any unauthorized or illegal connection to the town's storm sewer system whether or not such connection results in a discharge to the system.

National pollutant discharge elimination system (NPDES) permit means a permit issued pursuant to 33 U.S.C. § 1342, as amended from time to time.

Non-storm water discharge means any discharge to the storm drain system that is not composed entirely of storm water.

Pollutant means sewage, industrial waste, or other waste or materials, whether liquid or solid, which cause or contributes to pollution.

Storm sewer system means any publicly owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Storm water means any surface flow, runoff, and drainage consisting entirely of water from rainstorm events.

Town means Town of Abingdon, Virginia.

Town manager means the town manager of the town or his designee, who is responsible for the implementation of this article.

- **§ 30-128. - Applicability.**

  This article, including any amendments or revisions thereto, shall apply to all water entering the storm sewer system generated on any developed and undeveloped lands lying within the town.

- **§ 30-129. - Administration.**

  The public work department of the town shall administer, implement, and enforce the provisions of this article.

- **§ 30-130. - Watercourse protection.**

  Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, sot that such structures will not become a hazard to the use, function, or physical integrity of the watercourse.

- **§ 30-131. - Notification of spills.**

  (a) Notwithstanding other requirement of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation, has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into

storm water or the municipal storm water system, the person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release.

(b) In the event of a release of hazardous materials, the person shall immediately notify the Virginia Department of Emergency Management, the Virginia Department of Environmental Quality, and the Abingdon Fire Department of the occurrence. In addition, the person shall notify the town manager in person or by telephone or facsimile no later than the next business day.

(c) In the event of a release of non-hazardous materials, the person shall notify the Virginia Department of Environmental Quality and the Abingdon Fire Department. In addition, the person shall notify the town manager in person or by telephone or facsimile no later than the next business day.

(d) Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the town manager within three business days of the telephone notice.

(e) If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five years.

(§§ 30-132—30-140 – Reserved)

- **DIVISION 2. - ILLICIT DISCHARGES AND CONNECTIONS**

- **§ 30-141. - Prohibition of illicit discharges.**

(a) No person shall introduce or cause to be introduced into the town storm sewer system any discharge that is not composed entirely of storm water. The commencement, conduct, or continuance of any non-storm water discharge to the town storm sewer system is prohibited.

(b) Notwithstanding the foregoing, uncontaminated discharges from the following sources are permitted: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; street wash water; and discharges or flows from fire fighting activities.

(c) The prohibition shall not apply to any non-storm water discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm sewer system.

- **§ 30-142. - Prohibition or abatement of illicit connections.**

(a) The construction, use, maintenance, or continued existence of illicit connections to the town's storm sewer system is prohibited.

(b) Illicit connections to the town's storm sewer system made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection, shall be abated.

- **§ 30-143. - Elimination of illicit discharges and connections.**

(a) Any owner or person responsible for a property or premises, which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the best management practices necessary to prevent the further discharge of pollutants to the storm sewer system.

(b) Any person responsible for a property or premises where an illicit connection is located may be required, at the person's expense, to eliminate or secure approval for the connection to the storm sewer system.

(§§ 30-144—30-150 – Reserved)

- **DIVISION 3. - ENFORCEMENT**

- **§ 30-151. - Notice of violation.**

Whenever the department of public works finds that a person has violated a prohibition or failed to meet a requirement of the ordinance, the director may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

(1) The performance of monitoring, analyses, and reporting;
(2) The elimination of illicit connections or discharges;
(3) The violating discharges, practices, or operations shall cease and desist;
(4) The abatement or remediation of storm water pollution or contamination hazards and the restoration of any affected property;
(5) The implementation of source control or treatment BMPs.; and
(6) A deadline within which such remediation or restoration must be completed.

- **§ 30-152. - Abatement of violation.**

(a) If such violation presents an immediate and imminent threat to life or property, the town may abate or remove such violation and bring an action to recover the necessary costs for provision of public emergency services required to abate the violation against the responsible party.

(b) The town may, after reasonable notice to the responsible party to abate or remove the violation, and after no action by that responsible part, remove or abate such violation acting through its own agents or by contract with independent contractors and may collect the cost thereof from the owner or occupants of the premises upon which the violation is maintained in any manner provided for the collection of state or local taxes, or by action against the responsible party if the responsible party is other than the owner or occupant of the premises upon which the violation is maintained.

- **§ 30-153. - Inspections by town.**

  (a) The department shall have the right at reasonable times to enter onto private properties for the purposes of investigating a suspected violation of this article. In the event the owner or person in control of any premises refuses entry after a request to enter and inspect has been made by the department, the town is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry.

  (b) The owner or person in control of any premises, facility, operation or residence where an illicit discharge or illicit connection is known or suspected shall allow the department to have access to and copy at reasonable times, any applicable state or federal permits related to the suspected or known discharge or connection, and any reports or records maintained in accordance with this article.

  (c) The failure of an owner or person in control of any premises to allow such inspection by the department shall be cause for the issuance of a cease and desist order, the issuance of a stop work order, withholding of a certificate of occupancy, and civil penalties.

- **§ 30-154. - Penalties and liability.**

  (a) Any person who knowingly violates any provision of this article shall be guilty of a Class 1 misdemeanor. Each day that such violation is committed, and each day that such violation is permitted to remain uncorrected shall constitute a separate offense.

  (b) Any person who otherwise violates any provision of this article shall be subject to a civil penalty between $250.00 and $1,000.00 for each day that the violation continues. The court assessing such civil penalty may order the penalty to be paid into the treasury of the town and designated for the purpose of minimizing, preventing, managing or mitigating pollution of the waters of the town.

  (c) Pursuant to sections 30-143 and 30-152, any person who violates any provision of this article shall be responsible for the necessary costs to eliminate and abate the violation.

  (d) Upon the request of the town manager, the town attorney shall initiate appropriate legal action to enforce the provisions of this article.

  (e) The remedies provided for in this article are cumulative and not exclusive, and shall be in addition to any other remedies provided by law.

  (f) Neither the approval of a discharge under this article, nor compliance with the conditions of such approval, shall relieve any person of responsibility for damage to other persons or property or impose any liability upon the town for damage to other persons or property.

(§§155 – 165 reserved)

CERTIFICATE

Pursuant to Section 2-100 of the Code of the Town of Abingdon, I hereby certify that I have reviewed the foregoing proposed ordinance to expand Chapter 30, Environment, Article VI, Stormwater System to address Illicit Discharge and Illegal Connection of the Code of the Town of Abingdon, Virginia to establish open burning and find it to be in correct form this _____ day of ____, 2018.

_____
Deborah C. Icenhour
Town Attorney for the Town of Abingdon, Virginia

This Ordinance was adopted on April 2, 2018 to take effect on June 1, 2018.

_____
Cathy Lowe, Mayor
Town of Abingdon

The undersigned Clerk of the Town of Abingdon, Virginia (the "Town"), hereby certifies that the foregoing constitutes a true and correct copy of an ordinance duly adopted at a meeting of the Council held on the 2nd day of April, 2018. I hereby certify that such meeting was a regularly scheduled meeting and that, during the consideration of the foregoing ordinance, a quorum was present. I further certify that the minutes of meeting was a regularly scheduled meeting and that, during the consideration of the foregoing ordinance, a quorum was present. I further certify that the minutes of such meeting reflect the attendance of the members and the voting on the foregoing ordinance was as follows:

MEMBERS	ATTENDANCE	VOTE
Cathy Lowe, Mayor		
Richard Humphreys, Vice Mayor		
Robert Howard		
Wayne Craig		
Cindy Patterson		

WITNESS MY HAND and seal of the Town of Abingdon, Virginia as of _____, 2018.

(Seal)_____

Kimberly Kingsley, Deputy Clerk
Town of Abingdon, Virginia

APPENDIX D

COMMONWEALTH OF VIRGINIA

State Water Control Board

629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Combined Administrator

John Tyler Vencill

CERTIFICATE NUMBER

SWCA0196

EXPIRATION DATE

7/4/2021

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Combined Administrator
John Tyler Vencill

Certificate Number
SWCA0196

Expiration Date
7/4/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
629 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Combined Administrator
John Tyler Vencill

Certificate Number
SWCA0196

Expiration Date
7/4/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

Erosion and Sediment Control

Program Administrator

John Tyler Vencill

CERTIFICATE NUMBER

ESPA0100

EXPIRATION DATE

6/9/2023

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

Erosion and Sediment Control

Program Administrator

John Tyler Vencill

Certificate Number

ESPA0100

Expiration Date

6/9/2023

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

Erosion and Sediment Control

Program Administrator

John Tyler Vencill

Certificate Number

ESPA0100

Expiration Date

6/9/2023

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL

Plan Reviewer

John Tyler Vencill

CERTIFICATE NUMBER

600

EXPIRATION DATE

11/30/2021

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Plan Reviewer
John Tyler Vencill

Certificate Number
600

Expiration Date
11/30/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Plan Reviewer
John Tyler Vencill

Certificate Number
600

Expiration Date
11/30/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL

Inspector

Michael Troy Surrett

CERTIFICATE NUMBER

5181

EXPIRATION DATE

11/30/2021

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Michael Troy Surrett

Certificate Number
5181

Expiration Date
11/30/2021

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Michael Troy Surrett

Certificate Number
5181

Expiration Date
11/30/2021

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT

Inspector

Michael Troy Surrett

CERTIFICATE NUMBER

SWIN1710

EXPIRATION DATE

6/19/2022

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Inspector
Michael Troy Surrett

Certificate Number
SWIN1710

Expiration Date
6/19/2022

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Inspector
Michael Troy Surrett

Certificate Number
SWIN1710

Expiration Date
6/19/2022

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Program Administrator

Heagon Skylar Gill

CERTIFICATE NUMBER

ESPA0395

EXPIRATION DATE

2/24/2025

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Program Administrator
Heagon Skylar Gill

Certificate Number
ESPA0395

Expiration Date
2/24/2025

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Program Administrator
Heagon Skylar Gill

Certificate Number
ESPA0395

Expiration Date
2/24/2025

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Plan Reviewer

Heagon Skylar Gill

CERTIFICATE NUMBER

ESPR0370

EXPIRATION DATE

4/21/2025

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COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Plan Reviewer
Heagon Skylar Gill

Certificate Number
ESPR0370

Expiration Date
4/21/2025

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Plan Reviewer
Heagon Skylar Gill

Certificate Number
ESPR0370

Expiration Date
4/21/2025

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

Stormwater Management

Inspector

Heagon Skylar Gill

CERTIFICATE NUMBER
SWIN2351

EXPIRATION DATE
3/1/2025

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COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

Stormwater Management

Inspector

Heagon Skylar Gill

Certificate Number

SWIN2351

Expiration Date

3/1/2025

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

Stormwater Management

Inspector

Heagon Skylar Gill

Certificate Number

SWIN2351

Expiration Date

3/1/2025

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Program Administrator

Heagon Skylar Gill

CERTIFICATE NUMBER

SWPA0390

EXPIRATION DATE

7/11/2025

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Program Administrator
Heagon Skylar Gill

Certificate Number
SWPA0390

Expiration Date
7/11/2025

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

STORMWATER MANAGEMENT
Program Administrator
Heagon Skylar Gill

Certificate Number
SWPA0390

Expiration Date
7/11/2025

COMMONWEALTH OF VIRGINIA

State Water Control Board

1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL

Inspector

Heagon Skylar Gill

CERTIFICATE NUMBER

ESIN2114

EXPIRATION DATE

11/22/2024

This certificate is for your records and should be kept in a safe location. Please detach the above certificate and the two wallet size cards below. It is your responsibility to ensure that your certification is kept current and that you meet the requirements for re-certification before the expiration date.

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Heagon Skylar Gill

Certificate Number
ESIN2114

Expiration Date
11/22/2024

COMMONWEALTH OF VIRGINIA
State Water Control Board
1111 East Main Street, Richmond, Virginia 23219

EROSION AND SEDIMENT CONTROL
Inspector
Heagon Skylar Gill

Certificate Number
ESIN2114

Expiration Date
11/22/2024

APPENDIX E

Stormwater Management Facility Inspection Schedule

Permit Year	BMP ID
PY 2	2007-02*
	2014-03*
	2006-06
	2006-07
	2007-12
	2008-04
PY 3	2007-02*
	2014-03*
	2016-05A*
	2016-05B*
	2008-07
	2008-09A
	2008-09B
	2009-07
PY 4	2007-02*
	2014-03*
	2016-05A*
	2016-05B*
	2010-02
	2010-03
	2010-05
	2011-06
PY 5	2007-02*
	2014-03*
	2016-05A*
	2016-05B
	2011-09
	2012-01
	2015-02
	2016-01
	2016-06A

***Publicly Owned BMPs**

BMP_ID	Date Installed	BMP Name	Measurement Name	Measurement Unit	BMP Extent	Impervious Acres Treated	Latitude	Longitude	Existing Land Use	Ownership Type	Maintenance Agreement
2006-06	3/1/2007	Dry Detention Ponds	Area Treated	ACRE	0.6	0.49	36.6974	-82.0125	Urban (land use not specified inside MS4 service area)	Private	No
2006-07	6/20/2007	Dry Detention Ponds	Area Treated	ACRE	0.52	0.52	36.7171	-81.9688	Urban (land use not specified inside MS4 service area)	Private	No
2007-02	10/1/2008	Rain Garden	Contributing Area	ACRE	0.1	0.05	36.7082	-81.9704	Urban (land use not specified inside MS4 service area)	Public	
2007-12	3/1/2008	Dry Detention Ponds	Area Treated	ACRE	2.83	1.89	36.7139	-81.9621	Urban (land use not specified inside MS4 service area)	Private	Yes
2008-04	6/2/2008	Dry Detention Ponds	Area Treated	ACRE	1.46	0.75	36.7090	-81.9753	Urban (land use not specified inside MS4 service area)	Private	No
2008-07	7/13/2010	Dry Detention Ponds	Area Treated	ACRE	1.65	1.1	36.7124	-81.9570	Urban (land use not specified inside MS4 service area)	Private	No
2008-09A	10/1/2012	Dry Extended Detention Ponds	Area Treated	ACRE	4.4	0.5	36.6988	-82.0173	Urban (land use not specified outside MS4 service area)	Private	Yes
2008-09B	10/1/2012	Dry Extended Detention Ponds	Area Treated	ACRE	0.31	0.15	36.6964	-82.0183	Urban (land use not specified inside MS4 service area)	Private	Yes
2009-07	1/4/2011	Dry Extended Detention Ponds	Area Treated	ACRE	1.09	0.91	36.7114	-81.9852	Urban (land use not specified inside MS4 service area)	Private	No
2010-02	7/12/2011	Dry Detention Ponds	Area Treated	ACRE	6.1	1.83	36.6962	-82.0089	Urban (land use not specified inside MS4 service area)	Private	Yes
2010-03	8/12/2013	Dry Extended Detention Ponds	Area Treated	ACRE	1.73	0.69	36.7235	-81.9524	Urban (land use not specified inside MS4 service area)	Private	Yes
2010-05	10/1/2013	Dry Detention Ponds	Area Treated	ACRE	0.63	0.46	36.7109	-81.9899	Urban (land use not specified inside MS4 service area)	Private	Yes
2011-06	4/9/2012	Dry Extended Detention Ponds	Area Treated	ACRE	0.69	0.69	36.7171	-81.9450	Urban (land use not specified inside MS4 service area)	Private	Yes
2011-09	9/15/2017	Dry Extended Detention Ponds	Area Treated	ACRE	1.94	0.55	36.7022	-81.9828	Urban (land use not specified inside MS4 service area)	Private	Yes
2012-01	4/11/2013	Dry Extended Detention Ponds	Area Treated	ACRE	1.53	1.22	36.7049	-81.9734	Urban (land use not specified inside MS4 service area)	Private	No
2014-03	11/15/2014	Dry Detention Ponds	Area Treated	ACRE	2.97	1.266	36.7073	-81.9853	Urban (land use not specified inside MS4 service area)	Public	
2015-02	5/5/2017	Bioretention	Area Treated	ACRE	2.6	1.31	36.7154	-81.9379	Urban (land use not specified inside MS4 service area)	Private	Yes
2016-01	1/10/2018	Dry Detention Ponds & Hydrodynamic Structures	Area Treated	ACRE	0.536	0.126	36.7284	-81.9453	Urban (land use not specified outside MS4 service area)	Private	Yes
2016-05A	4/28/2020	Dry Detention Basin w/ Proprietary Filtering Devices	Area Treated	ACRE	5.56	2.67	36.7048	-81.9722	Urban (land use not specified inside MS4 service area)	Public	
2016-05B	4/28/2020	Dry Detention Basin w/ Proprietary Filtering Devices	Area Treated	ACRE	7.44	6.68	36.7025	-81.9730	Urban (land use not specified inside MS4 service area)	Public	
2016-06A	6/29/2020	Dry Detention Basin	Area Treated	ACRE	1.27	0.5	36.7049	-81.9697	Urban (land use not specified inside MS4 service area)	Private	Yes

APPENDIX F

	SOLID WASTE COLLECTED	**LOADS OF BRUSH**	**LOADS OF LEAVES**
Jul-21	408.39	54	0
Aug-21	330.53	35	0
Sep-21	349.44	38	0
Oct-21	330.22	32	14
Nov-21	278.81	29	42
Dec-21	296.91	28	34
Jan-22	255.96	8	2
Feb-22	250.74	16	1
Mar-22	348.59	30	3
Apr-22	317.81	26	1
May-22	409.03	41	0
Jun-22	354.79	37	0
TOTAL	3931.22	374	97

BAGS OF ROADSIDE LITTER	**MILES OF STREETS SWEPT**
0	590
0	835
0	750
0	435
15	465
59	194
0	100
31	0
13	235
4	288
0	196
0	447
122	4535

Town of Abingdon, Virginia

Illicit Discharge Detection and Elimination Standard Operating Procedure

June 2016
June 2018 - Revised

A. Introduction

Non-stormwater flows discharging from storm drainage systems can contribute significant pollutant loadings to receiving waters. Addressing these loadings is key for improving water quality. Common sources of non-stormwater discharges include sanitary wastewater, industrial and commercial activities, failing septic systems and vehicle maintenance.

“Illicit discharge” means any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a VPDES or state permit (other than the state permit or discharges from the municipal separate storm sewer), discharges resulting from fire fighting activities, and discharges identified by and in compliance with 9VAC25-870-400. The following non-stormwater discharges or flows only need to be addressed if the Town identifies them as significant contributors or pollutants to the MS4.

- water line flushing;
- landscape irrigation;
- diverted stream flows;
- rising groundwater;
- non-contaminated groundwater infiltration;
- uncontaminated pumped groundwater;
- discharges from potable water sources;
- foundation drains;
- air conditioning condensation;
- irrigation water;
- springs;
- water from crawl spaces;
- footing drains;
- lawn watering;
- individual residential car washing;
- flows from riparian habitats and wetlands;
- de-chlorinated swimming pool discharges; and
- street wash water.

Illicit connections are connections by which non-stormwater enters the Town's storm sewer system without approval from the Town.

The Town of Abingdon adopted an ordinance to prohibit illicit discharges and illicit connections to the MS4 on June 1, 2018. Part II. Chapter 30. Article VI, Stormwater System, §§3126-3131 and §§3141-3143, Illicit Discharge and Illegal Connection provides for the following:

- prohibition of illicit discharges;
- prohibition and abatement of illicit connections; and
- elimination of illicit discharges and connections.

Additionally, the code authorizes the Town to enter property for the purpose of making inspections and may impose enforcement actions for violations of the code.

The Town must implement its IDDE program as a measure to address pollutants which enter streams through outfalls of its system to reveiving water. "Outfall" means, when used in reference to municipal separate storm sewers, a point source at the point where a municipal separate storm sewer discharges to surface waters and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and used to convey surface waters.

In accordance with the permit, this SOP includes:

- a prioritized schedule of field screening activities determined by the Town;
- the minimum number of field screening activities the Town must complete annually;
- methodologies to collect the general information about the outfall;
- a timeframe upon which to conduct an investigation or investigations to identify and locate the source of any observed continuous or intermittent nonstormwater discharge;
- methodologies to determine the source of all illicit discharges shall be conducted;

- mechanisms to eliminate identified sources of illicit discharges including a description of the policies and procedures for when and how to use legal authorities;
- methods for conducting a follow-up investigation in order to verfy that the discharge has been eliminated; and
- a mechanism to track all investigations.

B. IDDE Program Implementation

The Town's approach for implementing its IDDE program consists of:

- maintaining an up-to-date storm sewer map and information table;
- performing visual screening of outfalls during dry weather;
- promoting, and facilitating public reporting of illicit discharges;
- responding to reports of suspected illicit connections or discharges;
- source tracking of identified illicit discharges;
- tracking activities in a database; and
- staff training on recognizing and reporting illicit discharges.

The Town has mapped the system during this permit cycle and periodically updates the GIS map as new information becomes available. A map of the Town's MS4 system outfalls is included as Attachment A. The Town performs dry weather screening of outfalls to proactively address its illicit discharge detection and elimination permit requirements.

The MS4 permit requires the Town to include the following information in the associated information table for each mapped outfall"

- the unique identifier;
- the estimated MS4 acreage served;
- the name of the receiving surface water and indication as to whether the receiving water is listed as impaired in the Virginia 2010 303(d)/305(b) Water Quality Assessment Integrated Report; and
- the name of any applicable TMDL or TMDLs.

In addition to visual screening of outfalls, the Town implements a reporting mechanism illicit discharges and/or connections.

C. Roles and Responsibilities

The Public Works Director is responsible for the administration of the IDDE program. This role includes supervising staff who implement the program on a daily basis. The Public Works Director signs off on significant enforcement actions.

The Town Civil Engineer implements the IDDE Program on a daily basis. This role includes oversight of outfall mapping, scheduling inspections, response to reports of suspected illicit discharges, and all documentation and reporting activities.

Public Works staff performs the daily tasks of maintaining outfall and inspection data, performing outfall screenings, investigation of suspected illicit discharges, and associated reporting responsibilities.

The Town of Abingdon Fire Department is the primary agency for incidents involving hazardous materials. They manage a Hazardous Materials Response Team under the Virginia Department of Emergency Management.

Below is a guide linking the proper entity to contact based on some of the common sources of illicit discharges:

Table 1. Contact Information for Suspected Illicit Discharge or Connections

Common Sources of Illicit Discharges	Contact
Car Accidents	Emergency Call 911. Fire Department, Police Department
Concrete Washouts	Public Works Director (276) 628-3167
Dumping in Storm Drain and/or Stream	Public Works Director (276) 628-3167
Erosion and Sediment Control	Town Civil Engineer/Engineering Inspector (276) 628-3167
Solid Waste and Recycling	Street Superintendent (276) 628-2361
Hazardous Waste	Public Works Director (276) 628-3167
Industrial NPDES Permitted Sites	Virginia Department of Environmental Quality
Internal Plumbing Connections	Building Official (276) 628-3167
Outdoor Plumbing Connections	Sewer Maintenance Superintendent (276) 628-4114
Sanitary Sewage Blockage or Overflows	Sewer Maintenance Superintendent (276) 628-4114

Yard Waste (Leaves and Grass Clippings)	Street Superintendent (276) 628-2361

D. Dry Weather Field Screening

The Town's current outfall map indicates that the Town has a total of 37 outfalls, with 23 discharging to Town Creek and 14 discharging to Wolf Creek. If the MS4 has less than 50 total outfalls, all the outfalls must be screened annually.

The permit requires the following information to be gathered during screening activities:

- time since last rain;
- quantity of the last rain;
- site descriptions (e.g. width of water surface, approximate depth of water, approximate flow velocity, and flow rate); and
- visual observations (e.g. odor, color, clarity, floatables, deposits or stains, vegetation condition, structural condition, and biology).

Attachment B presents the Outfall Screening Form to be used during outfall screenings. The information is recorded and stored in the Town's GIS.

If the Town observes evidence of an illicit discharge, it will begin documenting the suspected illicit discharge or illicit connection within 24 hours using the Illicit Discharge Investigation Form (Attachment C). For continuous discharges that are observed, the Town will attempt to trace the source and eliminate the discharge within 24 hours. For intermittent discharges, the Town must make three separate attempts, and document such attempts, to investigate the discharge and/or the source within 6 months of initial discovery, in accordance with Section II.B.3.f of the MS4 permit. Once the intermittent discharge and source has been identified, the Town will initiate elimination actions within 24 hours. The Town must tracking IDDE investigations of flowing outfalls as part of Dry Weather Field Screening Activities.

E. IDDE Investigations Launched in Response to Complaints

Collection of General Information

The public may report suspected illicit discharges or connections in the following ways:

- website complaint form
- telephone/e-mail to staff
- in person at Town Hall

In emergency situations, persons will be advised to call 911 or the Fire Department or Police Department. For the website reporting mechanism, reports are received and processed by the Administrative Assistant in the Public Works Department. Reports which are received via phone, in an email to staff or in person, will be referred to the Public Works Director.

Town staff will initiate investigations of reported illicit discharges within 24 hours of receipt of the report. Actions may include telephone calls and emails, field visits, or source tracking.

F. Handling of Illicit Discharges

Field Visit

The Town will visit the location and document conditions of the suspected illicit discharge. If staff is unable to identify the source of the discharge, they will further investigate by examining nearby land uses and flagging the nearest outfall for a non-routine screening.

Source Tracking

The Town will attempt to trace possible sources of the illicit discharge to the extent that the evidence of the illicit discharge allows. The Town will utilize field visits, as indicated above and evaluate nearby land uses to seek the causes of reported illicit discharges. The Town will observe physical indicators such as staining, odor, and clarity or coloration of flowing water to assess possible source scenarios. Staff may conduct interviews with nearby occupants and/or utilities operators to analyze possible sources.

Elimination Actions

Once the Town has identified the source of the illicit discharge, it will initiate actions to eliminate the discharge. Responsible person may be required to make the repair or employ best management practices to prevent the further discharge of pollutants in the storm sewer system. Persons responsible for properties where illicit discharges are located may be required to eliminate the connection, and/or secure approval for the connection to the storm sewer system. In some cases, the Town will pursue enforcement. Persons who are notified of their obligations to eliminate illicit discharges or connections must immediately do so. If corrective actions are needed, such as extensive repairs, special equipment, or training, the Town will provide a deadline by which these must be done. The deadlines will vary depending on the source and nature of the illicit discharge but usually range from 7 to 14 days. Some cases may require enforcement to serve as a deterrent or punitive purpose and/or to recover expenses incurred by the Town to address the illicit discharge. Enforcement tools available to the Town include:

- verbal warning to the property owner and/or discharger
- notice of violation
- civil and criminal judicial enforcement procedures

Follow-Up Investigations

Upon each illicit discharge elimination action, the Town will conduct at least one follow-up investigation to confirm the discharge was eliminated and/or has not recurred. Due to the variability of circumstances surrounding illicit discharge (spanning from unawareness to intentional dumping), the follow-up activities will be tailored to each eliminated illicit discharge. Depending on situation and/or the person(s) implicated in the illicit discharge findings, the Town may elect to continue scheduled follow-up activities for a period of time beyond the elimination date.

G. Reports of Unauthorized Discharges

Section III.G of the permit requires the Town to notify the Department of Environmental Quality if a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance or a hazardous substance or oil in an amount equal to or in excess of a reportable quantity

established under either 40 CFR Part 110(2002), 40 CFR Part 117(2002) or 40 CFR Part 302(2002) that occurs during a 24-hour period into or upon surface waters. This includes discharges that may be reasonably expected to enter surface waters. The report to DEQ shall be made immediately upon the discovery of the discharge, but not later than 24 hours after the discovery. A written report of the unauthorized discharge shall be submitted with 5 days of the discovery of the discharge. The written report shall contain the following information.

- A description of the nature and location of the discharge;
- Cause of the discharge;
- Date on which the discharge occurred;
- Length of time that the discharge continued;
- Volume of the discharge.

H. Attachments

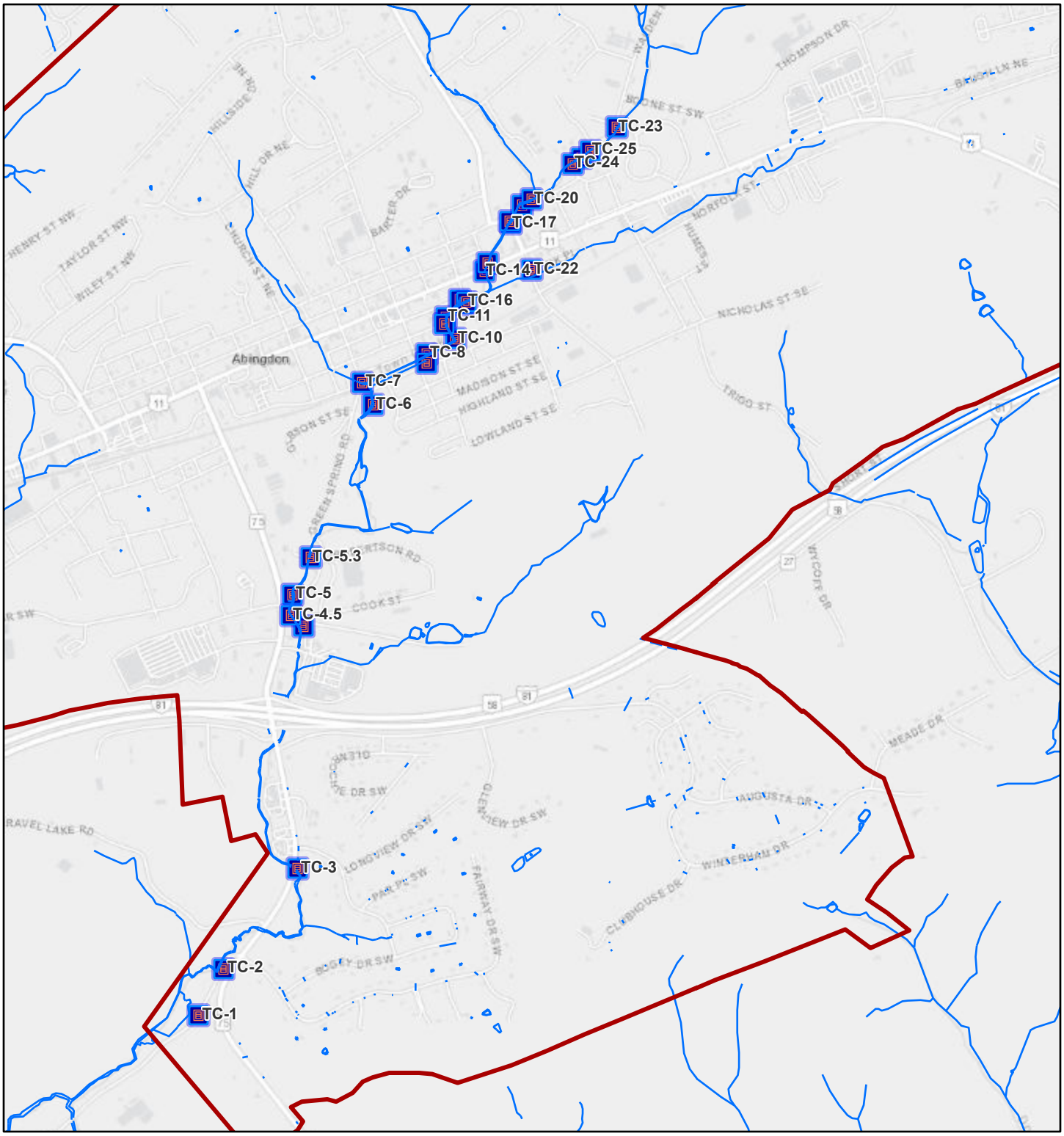
Attachment A–MS4 Outfall Maps

Attachment B–Outfall Screening Form

Attachment C–IDDE Investigation Form

Attachment D–Illicit Discharge Call Report

ArcGIS Web Map



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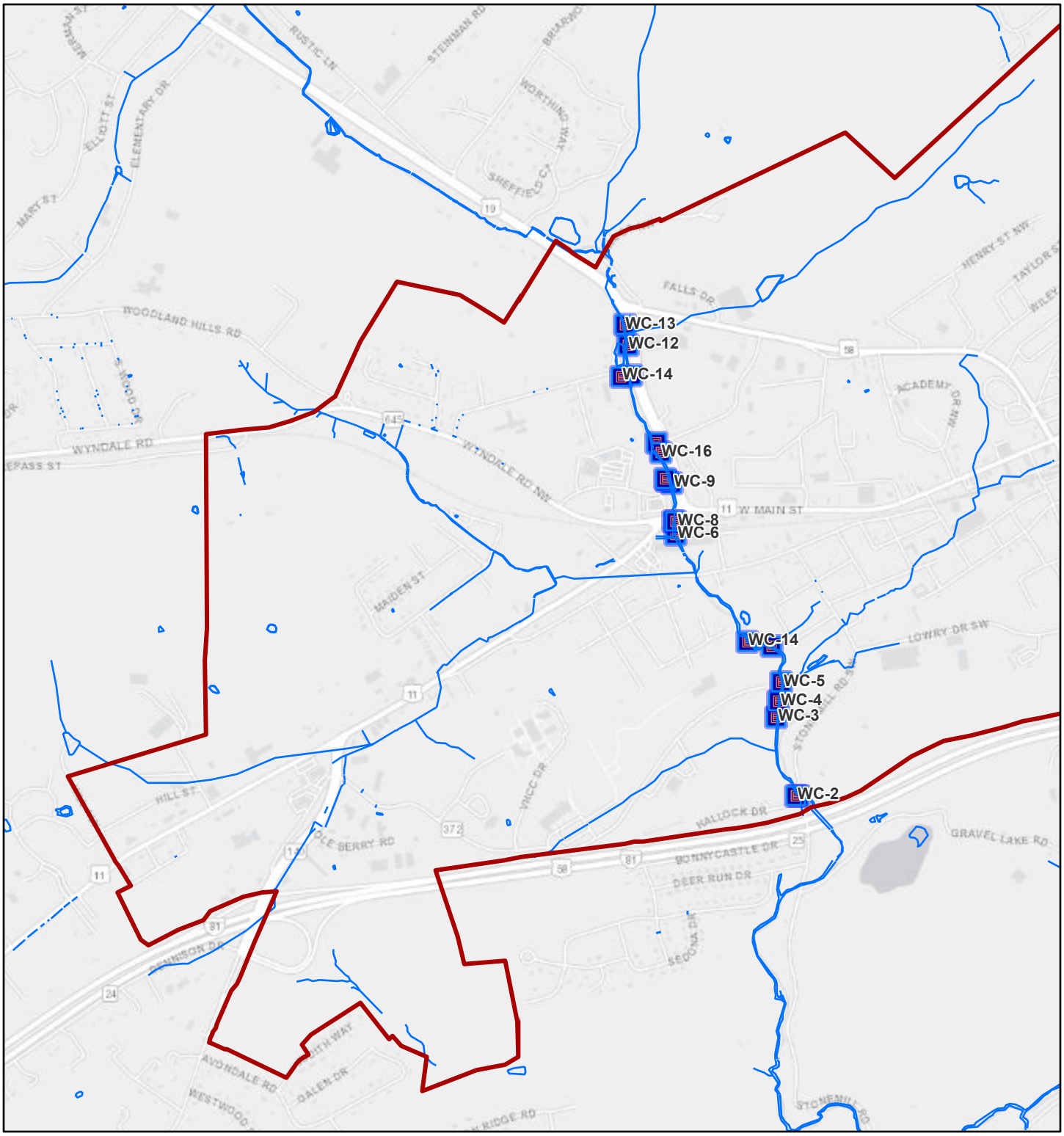
0 0.25 0.5 1 km

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, Esri, HERE

ArcGIS Web AppBuilder

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA | Esri, HERE |

ArcGIS Web Map



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0 0.25 0.5 1 km

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, Esri, HERE

ArcGIS Web AppBuilder

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, EPA | Esri, HERE |

Town of Abingdon

Stormwater Outfall Screening Field Sheet

SCREENING INFORMATION		
Outfall ID:	Screen Date:	Screen Time:
Time Since Last Rainfall (circle one):	Less than 72 hours	More than 72 hours
Quantity of Last Rainfall (circle one):	Less than 0.1 “	More than 0.1”

RECEIVING WATER INFORMATION		
Briefly Describe the Site:	• Width of Stream	ft.
	• Approximate Depth	
	• Approximate Flow Velocity	
	• Approximate Flow Rate	
Physical Observations	• Odor	
	• Color	
	• Clarity	
	• Floatables	
	• Deposits or Stains	
	• Vegetation Condition	

OUTFALL INFORMATION			
Latitude:		Longitude:	
Type (circle):	Pipe	Ditch/Open Channel	Other (describe):
General Condition:	• Good • Failing Slopes • Warped or Crushed • Areas of Erosion • Blocked Opening • Headwall Problems • Good Vegetation • Structural Problems • Vegetation Problems • Corrosion • Other (describe):		
Narrative Description (type and condition of the outfall):			

DRY WEATHER DISCHARGE OBSERVATION	
Circle One:	No Discharge
	Active Discharge
	Evidence of Previous Non-Stormwater Discharge (describe):

Town of Abingdon

Stormwater Outfall Screening Field Sheet

Describe Flow in Outfall:	• No Flow • Wet, but no Flow • Dripping • Outfall less than ½ full • Outfall more than ½ full	Describe Odor of Flow in Outfall:	• None • Rancid/Sour • Petroleum (gas) • Sulfide (rotten eggs) • Musty • Sewage • Chemicals • Other (describe):
Describe Color of Flow in Outfall:	• Clear • Red • Yellow • Green • Gray • Other (describe):	Describe Clarity of Flow in Outfall	• Clear • Cloudy • Suspended Solids (not translucent)
Describe Litter and Floatables In/Around Outfall	• None • Sediments • Sewage • Excessive Litter • Oily Sheen • Suds/Foam/Bubbles • Other (describe):	Deposits/Staining In/Around Outfall	• None • Sediments • Oil or Grease • Other (describe):
Vegetation	• None • Normal • Excessive Growth • Inhibited Growth • Other (describe):	Other Biological Indicators	• None • Mosquito Larvae • Bacteria • Algae • Other (describe):
Narrative Description of Findings Related to Dry Weather Flow			
Photograph Description. Provide filename and/or numbers. Include date/time/location taken.			
Town of Abingdon Inspector Name/Department/Phone Number:			
Return to the Town Engineer, Tyler Vencill (276) 628-3167			

Attachment C

Town of Abingdon

Illicit Discharge Investigation Form

ILLICIT DISCHARGE INFORMATION			
Location of Illicit Discharge (include Outfall # if applicable):			
How Was Illicit Discharged Initially Discovered?	Outfall Screening Observation by Town Staff Citizen Complaint Fire Department, provide NFIRS Incident Number (if applicable):		
Date of Initial Discovery:			
Type of Discharge:	Continuous	Intermittent	Single Incident
Brief Description of Illicit Discharge:			

DETECTION INFORMATION			
Inspector Name:			
Field Visit Date:		Time	
For Continuous Illicit Discharge, Describe the Source:			
For Intermittent Illicit Discharge, Provide Dates of Attempts to Investigate the Source: (minimum of 3 required in 6 months)			
Describe Attempts and Outcomes of Attempts to Investigate:			
If Source Found for Intermittent Discharge, Describe:			

ELIMINATION INFORMATION
Type of Action(s) Taken by Town to Eliminate Discharge (Example Verbal Warning, Notice of Violation, Civil Penalty, Remediated by Town, etc.):
Description of Action(s) by Town and/or Responsible Party to Eliminate Illicit Discharge
Date(s) of Action Taken:
Date Illicit Discharge Eliminated
Comments/Notes:

Attachment D

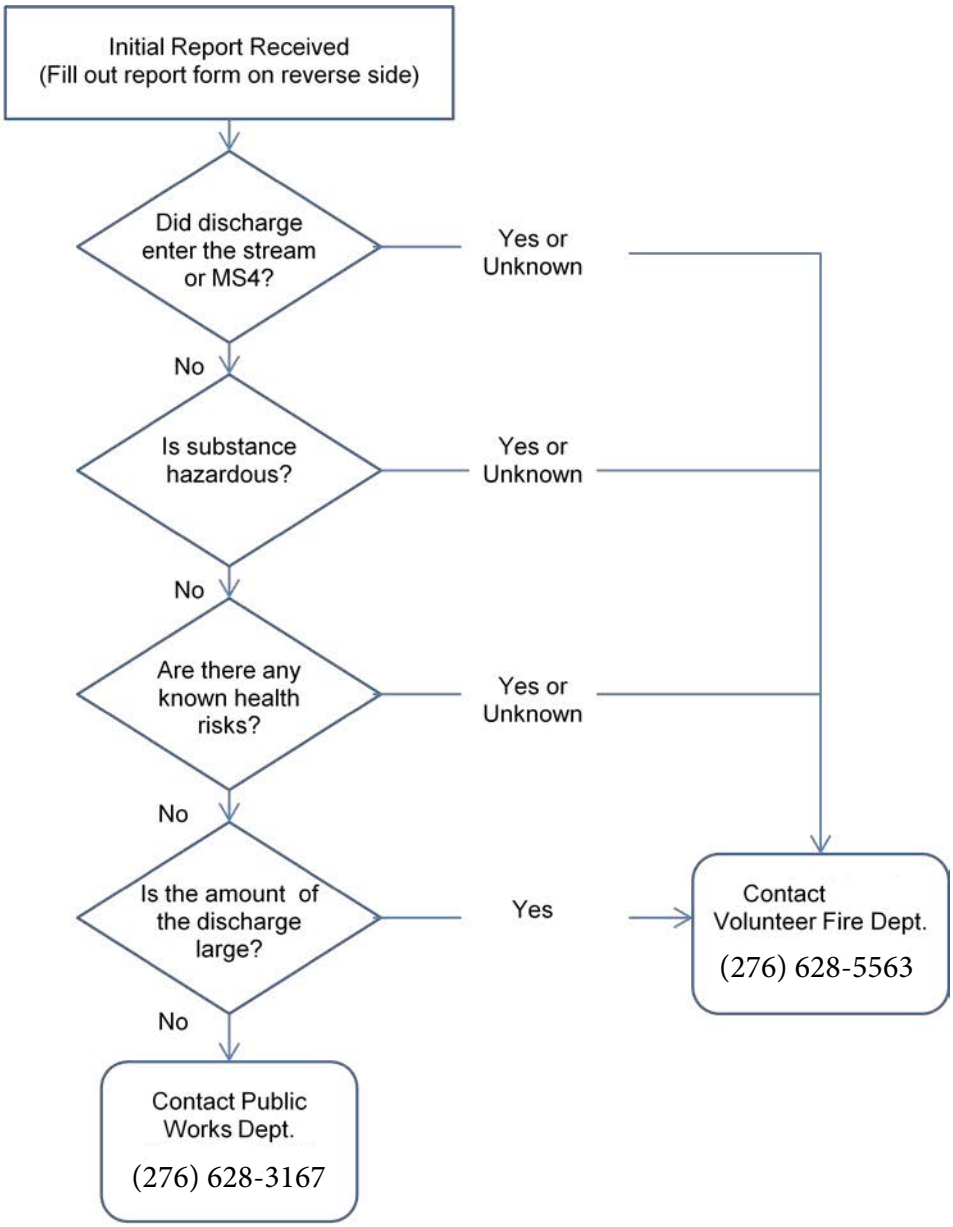
Town of Abingdon

Illicit Discharge Call Report

CALL INFORMATION			
Date of Call:	Time:	Duration of Call:	
Address or Location of Suspected Illicit Discharge:			
Name of Caller:		Caller's Phone #:	
Name of Person(s) Involved with Discharges (if known):			
DISCHARGE INFORMATION			
Chemical Name, Identity or Description of Substance:			
Is the Substance Potentially Hazardous? (circle one)	No	Yes (describe):	
Estimated Quantity of Substance:			
Did the Illicit Discharge Enter a Stream?	No	Yes (select)	
		Town Creek Wolf Creek	
Did the Illicit Discharge Enter the Storm Sewer System? (Example: manhole, curb/gutter inlet)	No	Yes (describe)	
Provide Additional Information About the Illicit Discharge (location, health risks for exposed individuals, etc.)			
CALL RECIEPT INFORMATION			
Name of Town Employee Taking the Call:			
Department:			
FOLLOW-UP/RESPONSE INFORMATION (USE INSTRUCTIONS ON REVERSE SIDE)			
Call or Information Routed To (Provide Name of Employee):			
Circle the Department the Illicit Discharge information was referred to:		Fire Department Police Department Town Engineer (Public Works) Other (specify):	
Brief Description of Handling of the Call:			
Signature of Person Taking the Call:			Date:

Town of Abingdon

Illicit Discharge Call Report



Nutrient Management Plan

Prepared For:

Town Of Abingdon, VA
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Prepared By:

Anthony Phillips
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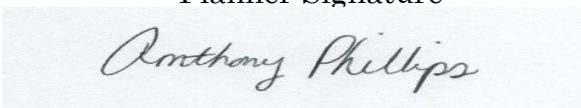
Bluefield, VA
276-979-7106
Certification Code: 873
anthonyphillips37@hotmail.com

Acreage

Total:	4.00
Field 1: Latture	2.55/A
Field 2: Foster-Debose	.85/A
Field 3: Ray Petty	.60/A
County:	Washington
Watershed:	TH16

Plan Written: 5/22/2017
Plan Expires: 5/22/2022

Planner Signature



The purpose of this Nutrient Management Plan is to ensure minimum movement of nitrogen and phosphorus from the specified area of application to surface and groundwaters where they can potentially have a detrimental effect on water quality as well as ensuring that plants have optimum soil nutrient availability for good productivity and quailty. By following this soil test based plan you are helping to protect local waters and the Chesapeake Bay.

If you have questions, please contact your plan writer, local Virginia Cooperative Extension Agent or the Department of Conservation and Recreation Nutrient Management Program.

Nutrient Management Plan for:
Town Of Abingdon, VA

Director of Parks & Recreation	
Director	*Kevin Worley*
Mailing Address	*P.O. Box 789*
City State Zip	*Abingdon, VA 24212*
Phone	*276-623-5279*
Fax	*Fax*
Email	kworley@abingdon-va.gov

Planner Information	
Planner Name	*Anthony Phillips*
Mailing Address	*200 Jacks Way*
City State Zip	*Bluefield, VA*
Phone	*276-979-7106*
Fax	*Fax*
Email	anthonyphillips37@hotmail.com
Certification Code	*873*

Location Information	
Physical Address	*401-423 Russell Rd NW*
City State Zip	*Abingdon, VA 24210*
Coordinates	*36 º42'37.75"N*
Please Use NAD 83 Deg Min Sec	*81 º59'10.94"W*
VAHU6 Watershed Code	*TH16*
County	*Washington*

Acreage	
Total	*4.00*
Field 1 Latture	*2.55/A*
Field 2 Foster-Debose	*.85/A*
Field 3 Ray Petty	*.60/A*

Plan Start Date	*5/22/17*
Plan End Date	*5/22/22*

Narrative

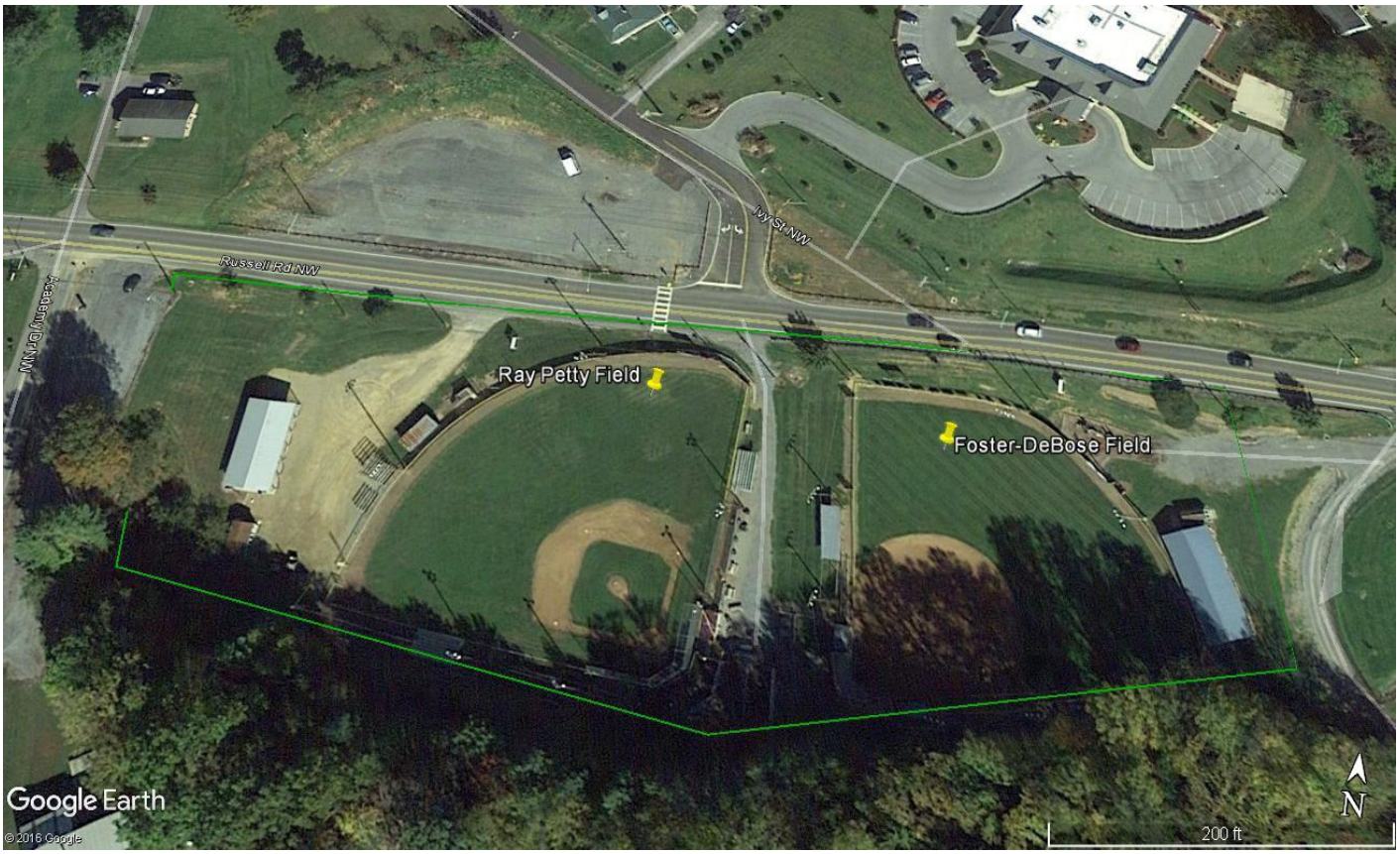
The town of Abingdon Virginia Parks and Recreation maintains 3 sports fields that recieves annual fertilizer appliations. The fields are 2 little league baseball fields and 1 baseball/football/scoccer field.

Latture Field consist of 2.55/A, Foster-Debose Field consist of .85/A, and Ray Petty Field consist of .60/A. All fields are a mix of rye/blue/fescue.

Applications of inorganic fertilizer will not occur on frozen or snow covered ground. Any changes made to the agronomic procedures, size of fertilized areas, or field design will be submitted to plan writer for update to nutrient plan. There are no know environmentally sensitive areas. Fertilizer with herbicide/insecticide combination is being used. Do not apply with 50 feet of any water body. It is recommended the revision process begin at least 6 months before plan expires. The plan is effective from 5/22/17 to 5/22/22 upon approval by the state of Virginia.

	Killing Frost Dates	**Cool Season**
Spring	April20	March9
Fall	October15	November26

Maps


Russell Rd NW
Ivy St NW
Ray Petty Field
Foster-DeBose Field
Google Earth
© 2016 Google
200 ft
N

Latture Field And Annex
Latture Field Dr
Google Earth
© 2016 Google
200 ft
N

Ray Petty Field
Foster-DeBose Field
Infield
Google Earth
© 2016 Google
N
100 ft

Latture Field And Annex
Latture Field Dr
Google Earth
© 2016 Google
N
200 ft

Reference Materials and Notes

Latture Field Location
32°42'31.00"N
81°59'03.33"W
Latture Field Drive
Abingdon, VA 24210

Total product needed for applications to all 3 fields combined

Product	Pounds	50pound bags needed
8-0-0 Dim/Acelepryn	700	14
Pro-Scape 30-0-0	550	11
Lime -AG Type	16625	8.31 tons (Split lime application into 2 seperate applications Nov/Dec)

***No Lime is need for the Foster-Debose Field**

Make appliations of Nitrogen from April 15-May15 only if turf use warrants additional N for sustaining desirable growth and color.
No applications of Nitrogen fertilizer can be applied from June-August 15 except for small souble amouts.(see bold print below)

* **Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application may be applied any time the turf is actively growing, but must be considered with the total annual N application rate.**

Cool Season Grasses	Maintenance Program[a]	
	Normal	Intensive
When to Apply[b]	Pounds per 1,000 ft^2 Nitrogen	
After August 15	------	0.5
September	0.7	0.7 [(c)]
October	0.7 [(c)]	0.7 [(c)]
November	0.5	0.7 [(c)]
April 15 - May 15	0.5	0.5
June 1 - June 15	----	0.5

Nutrient Application Worksheet

NAME:	**Town Of Abingdon, VA**		**Management Area:Sports Field**	Latture Field	
Prepared:	**5/22/17**		**Area:**	**111078**	**Species:** **Rye/Blue/Fescue**
Expires:	**5/22/22**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	8 - 0 - 0	1		Granular	Pre/Insect	4.00		128.00		0.32 - 0.00 - 0.00			444.312
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	September 11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			333.234
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	Nov/Dec	0 - 0 - 0	2				115.00		128.00		0.00 - 0.00 - 0.00		Lime	12773.97
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.22 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8 | 1 | 0			

Notes:

The pounds in the product per area colum is the per application totals, not the total product needed for all appliations. (see Ref, Mat, and Notes)

Nutrient Application Worksheet

NAME:	**Town Of Abingdon,VA**		**Management Area:Sports Field**	Foster-Debose Field	
Prepared:	**5/22/17**		**Area:**	**26136**	**Species:**	**Rye/Blue/Fescue**
Expires:	**5/22/22**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April15	8 - 0 - 0	1		Granular	Pre/Insect	4.00		128.00		0.32 - 0.00 - 0.00			104.544
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	Septmber11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			78.408
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.22 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8	0	0	

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Town Of Abingdon,VA**		**Management Area:Sports Field**	Ray Petty	
Prepared:	**5/22/17**		**Area:**	**37026**	**Species:**	**Rye/Blue/Fescue**
Expires:	**5/22/22**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April15	8 - 0 - 0	1		Granular	Pre/Insect	4.00		128.00		0.32 - 0.00 - 0.00			148.104
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	September11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			111.078
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	Nov/Dec	0 - 0 - 0	2				104.00		128.00		0.00 - 0.00 - 0.00		Lime	3850.704
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.22 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8	0.5	0	

Notes:

The pounds in the product per area colum is the per application totals, not the total product needed for all applications. (see Ref,Mat,and Notes)

Soil Test Summary

Customer Name:	Town of Abingdon, VA
Testing Lab:	Virginia Tech Soil Testing Laboratory
Sample Date:	5/8/2017
Planner Name	Anthony Phillips
Certification Number	873

Managed Area ID	AREA (ft^2 or acres)	Soil pH	Buffer pH	Lab Test P (ppm)	Lab Test P (lbs/A)	VT (H/M/L)	Lab Test K (ppm)	Lab Test K (lbs/A)	VT (H/M/L)	Species
LATT	2.55/A	5.9	6.07		55	H-		363	VH	Rye/Blue/Fescue
FOSDE	.85/A	6.7	6.37		146	VH		324	VH	Rye/Blue/Fescue
RAYP	.60/A	5.9	6.11		91	H+		333	VH	Rye/Blue/Fescue

Notes:

Soil Test Reports

Soil samples were taken from each field. Several samples from the upper 3" of soil were taken and mixed throughly. The samples were taken in random pattern throughout each area.
Soil samples were analyzed by Virginia Tech Soil Testing Lab through the Virginia Cooperative Extension. The soil samples are good for the life of this plan or 5 years from approval.

A.Latture Field

Soil pH measures 5.9. Buffer pH measures 6.07. Lime is needed at 2.5 tons per acre. P levels average in the H- range. P applications for the year are not to exceed 1 pound P/1000sqft. K levels average in the VH range. No K applications can be made. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

B. Foster - Debose Field

Soil pH measures 6.7. Buffer pH measures 6.37. No lime is needed . P levels average in the VH range. No P applications can be made. K levels average in the VH range. No K applications can be made. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

C.Ray Petty Field

Soil pH measures 5.9. Buffer pH measures 6.11. Lime is needed at 2.25 tons per acre. P levels average in the H+ range. P applications for the year are not to exceed .5 pounds P/1000sqft. K levels average in the VH range. No K applications can be made. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

Fertilizer Application Records

Customer Information		Management Area Information	
Name:	Town of Abingdon	Management Area ID:	
Address:	401-423 Russell Rd NW	Management Area Size:	
	Abingdon, VA 24210	Plant Species:	
		Notes:	
Phone #:	276-623-5279		

Date (M/D/Y)	Supervisor/Applicator	Weather Conditions			Fertilizer Analysis	Rate	Amount Fertilizer Used	Application Equipment Used
		Temp	Wind Speed	Precip				

When was the last time your fertilizer equipment was calibrated???
For information on calibration see Chapter 10 of the "Urban Nutrient Management Handbook".
Available for download at http://pubs.ext.vt.edu/430/430-350/430-350.html

Section VI. Turfgrass Nutrient Recommendations for Home Lawns, Office Parks, Public Lands and Other Similar Residential/Commercial Grounds

Definitions

For the purposes of this section, the following definitions, as presented by the Association of American Plant Food Control Officials (AAPFCO), apply:

"Enhanced efficiency fertilizer" describes fertilizer products with characteristics that allow increased plant nutrient availability and reduce the potential of nutrient losses to the environment when compared to an appropriate reference product.

"Slow or controlled release fertilizer" means a fertilizer containing a plant nutrient in a form which delays its availability for plant uptake and use after application, or which extends its availability to the plant significantly longer than a reference "rapidly available nutrient fertilizer" such as ammonium nitrate, urea, ammonium phosphate or potassium chloride. A slow or controlled release fertilizer must contain a minimum of 15 percent slowly available forms of nitrogen.

"Water soluble nitrogen", "WSN" and "readily available nitrogen" means: Water soluble nitrogen in either ammonical, urea, or nitrate form that does not have a controlled release, or slow response.

Recommended Season of Application For Nitrogen Fertilizers - Applies to all Turf

A nitrogen fertilization schedule weighted toward fall application is recommended and preferred for agronomic quality and persistence of cool season turfgrass; however, the acceptable window of applications is much wider than this for nutrient management. The nutrient management recommended application season for nitrogen fertilizers to cool season turfgrasses begins six weeks prior to the last spring average killing frost date and ends six weeks past the first fall average killing frost date (see Figures 6-1 & 6-2). Applications of nitrogen during the intervening late fall and winter period should be avoided due to higher potential leaching or runoff risk, but where necessary, apply no more than 0.5 pounds per 1,000 ft^2 of water soluble nitrogen within a 30 day period. Higher application rates may be used during this late fall and winter period by using materials containing slowly available sources of nitrogen, if the water soluble nitrogen contained in the fertilizer does not exceed the recommended maximum of 0.5 pounds per 1,000 ft^2 rate. Do not apply nitrogen or phosphorus fertilizers when the ground is frozen.

The acceptable nitrogen fertilizer application season for non-overseeded warm season turfgrass begins no earlier than the last spring average killing frost date and ends no later than one month prior to the first fall average killing frost date (see Figures 6-1 & 6-2).

Per Application Rates
Do not apply more than 0.7 pounds of water soluble nitrogen per 1,000 ft^2 within a 30 day period. For cool season grasses, do not apply more than 0.9 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. For warm season grasses, do not apply more than 1.0 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. Lower per application rates of water soluble nitrogen sources or use of slowly available nitrogen sources should be utilized on very permeable sandy soils, shallow soils over fractured bedrock, or areas near water wells.

Annual Application Rates for Home Lawns and Commercial Turf
Up to 3.5 pounds per 1,000 ft^2 of nitrogen may be applied annually to cool season grass species or up to 4 pounds per 1,000 ft^2 may be applied annually to warm season grass species using 100 percent water soluble nitrogen sources. Lower rates of nitrogen application may be desirable on those mature stands of grasses that require less nitrogen for long-term quality. As a result, lower application rates will probably be more suited to the fine leaf fescues (hard fescue, chewings fescue, creeping red fescue, and sheep fescue) and non-overseeded zoysiagrass. Lower rates should also be used on less intensively managed areas.

Use of Slowly Available Forms of Nitrogen
For slow or controlled release fertilizer sources, or enhanced efficiency fertilizer sources, no more than 0.9 pounds of nitrogen per 1,000 ft^2 may be applied to cool season grasses within a 30 day period and no more than 1.0 pounds of nitrogen per 1,000 ft^2 may be applied to warm season grasses within a 30 day period. Provided the fertilizer label guarantees that the product can be used in such a way that it will not release more than 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period, no more than 2.5 pounds of nitrogen per 1,000 ft^2 may be applied in a single application. Additionally, total annual applications shall not exceed 80 percent of the annual nitrogen rates for cool or warm season grasses.

Phosphorus and Potassium Nutrient Needs (Established Turf)
Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated necessary by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range. (For example the recommendation for a P_2O_5 soil test level of L- would be 3 pounds per 1,000 ft^2.)

Do not use high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Recommendations for Establishment of Turf

These recommendations are for timely planted turfgrass, that is, the seed or vegetative material (sod, plugs, and /or sprigs), are planted at a time of the year when temperatures and moisture are adequate to maximize turfgrass establishment. These recommended establishment periods would be late summer to early fall for cool-season turfgrasses and late spring through mid-summer for warm-season turfgrasses.

Nitrogen Applications

At the time of establishment, apply no more than 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses, using a material containing slowly available forms of nitrogen, followed by one or two applications beginning 30 days after planting, not to exceed a total of 1.8 pounds per 1,000 ft^2 total for cool season grasses and 2.0 pounds per 1,000 ft^2 for warm season grasses for the establishment period. Applications of WSN cannot exceed more than 0.7 pounds per 1,000 ft^2 within a 30 day period.

Phosphorus and Potassium Recommendations for Establishment

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Nutrient Recommendations for Golf Courses

Nitrogen Timing

The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

If the full rate or the highest rate of the recommendation range for a monthly application is applied in a single application, then the interval of application for nitrogen shall be at least 30 days to allow turf to utilize previous nitrogen applications. If several applications are to be made for the monthly nitrogen rate, then the timing of the applications shall be at approximately even intervals, with the rate per application to be evenly divided between each application with the total nitrogen applied not to exceed the maximum monthly rate. Use of Water Insoluble Nitrogen forms of Nitrogen is encouraged.

Nitrogen Rates

	Grass Type	Maximum WSN Rate Per Application pounds per 1,000 ft^2	Total Annual N Rate pounds per 1,000 ft^2 [a]
Greens		0.7 [b]	3-6
Tees		0.7 [b]	2-5
Fairways	Cool Season	0.7 [c]	2-3
	Warm Season	0.7 [c]	3-4
Fairways - Intensive Management	Cool Season	0.5 [d]	3-4
	Warm Season	0.5 [d]	3.5-4.5
Overseeding Warm Season Fairways		0.5	1.25
Roughs		0.7 [e]	1-3

Fairways-Overseeding Warm Season Fairways

* For warm season grasses, up to 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period may be applied in the Fall after perennial ryegrass overseeding is well established. An additional nitrogen application of 0.7 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Applications using WSN may not exceed 0.7 pounds per 1,000 ft^2 within a 30 day period.

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application, may be applied any time during the application windows described in Recommended Season of Application for Nitrogen Fertilizers of this section, but must be considered with the total annual nitrogen application rate.

(a) Use higher rates for intensively used turf where accelerated growth and/or rapid recovery are required, use lower rates for maintenance of lesser used areas; do not exceed total annual nitrogen levels as stated above.

(b) Greens and Tees - Per application timing must be a minimum of 30 days between applications. A rate of 0.9 pounds per 1,000 $ft^2$of total nitrogen may be applied for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(c) Fairways-Normal Management (Non-Irrigated or Irrigated) - Per Application timing must be a minimum of 30 days between applications. Total nitrogen application rates of 0.9 pounds per 1,000 ft^2 of total nitrogen may be applied for cool season grasses or 1.0 pound per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(d) Fairways-Intensive Management (Irrigated) - Per Application timing must be a minimum of 15 days between applications. This option requires optimized timing of more frequent applications of nitrogen with lesser rates per application. Alternatively, a maximum application rate of 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses using a material containing slowly available forms of nitrogen may be applied with a minimum of 30 days between applications.

(e) Foliar fertilizer may be applied to warm season grasses within 30 days prior to the first killing frost in the fall, at a rate not to exceed 0.1 pounds per 1,000 ft^2 of nitrogen per application. This application must be accounted for in the total annual nitrogen rate.

Phosphorus and Potassium Recommendations for Established Golf Courses

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.

* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Nitrogen Management on Athletic Fields - Cool Season Grasses

* This program is intended for those fields which are under heavy use.

* Nitrogen recommendations are based on the assumption that there is adequate soil moisture to promote good turf growth at the time of application. If no rainfall has occurred since the last application, further applications should be delayed until significant soil moisture is available.

Cool Season Grasses	Maintenance Program[a]	
	Normal	Intensive
When to Apply[b]	Pounds per 1,000 ft^2 Nitrogen	
After August 15	------	0.5
September	0.7	0.7 [(c)]
October	0.7 [(c)]	0.7 [(c)]
November	0.5	0.7 [(c)]
April 15 - May 15	0.5	0.5
June 1 - June 15	----	0.5

Notes:

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application may be applied any time the turf is actively growing, but must be considered with the total annual N application rate.

* WSN = water soluble nitrogen; WIN = water insoluble nitrogen

(a) Intensive managed areas must be irrigated.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the preceding Season of Application for Nitrogen section, using Figures 6-1 and 6-2.

(c) Rates up to 0.9 pounds per 1,000 ft^2 of total nitrogen can be applied using a material containing slowly available forms of nitrogen, with a minimum of 30 days between applications.

(d) Make this application only if turf use warrants additional N for sustaining desirable growth and /or color.

Nitrogen Management on Athletic Fields - Warm Season Grasses
The following comments apply to both Naturally Occurring or Modified Sand based Fields and Predominantly Silt/Clay Soil Fields:

* Annual nitrogen rates for warm season grasses shall not exceed **4 pounds** in areas which have the average first killing frost on or before October 20, and shall not exceed **5 pounds** in areas which have the average first killing frost after October 20 as shown in Figure 6-1. Nitrogen rates and timings for overseeding warm season grasses are not included in these rates.

* April 15 - May 15 applications should not be made until after complete green-up of turf.

* Nitrogen applications June through August should be coordinated with anticipated rainfall if irrigation is not available.

* Use the lower end of the ranges for non-irrigated fields and the higher end of the ranges should be used on fields with irrigation.

* Nitrogen rates towards the higher end of the ranges may be applied on heavily used fields to accelerate recovery, however per application and annual rates cannot be exceeded.

Bermudagrass - Predominantly Silt/Clay Soil Fields [a]		
When to Apply[b]	**Pounds per 1,000 ft^2 Nitrogen**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7	
July	0.5 - 0.7 [(d)]	
August	0.5 - 0.7 [(d)]	
Sept 1 - Sept 15	0.5 - 0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb-Mar	0.5 [(e)]	

Bermudagrass - Naturally Occurring or Modified Sand based Fields [a]		
When to Apply[b]	**Lbs/1,000 ft^2 Nitrogen[c]**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7 [(c)]	
July	0.7 [(c)]	
August	0.7 [(c)]	
Sept 1 - Sept 15	0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb - Mar	0.5 [(e)]	

The following notes apply to both of the Bermudagrass tables above:

(a) In the Piedmont and the Ridge and Valley areas of Virginia, the existing native soil will normally be

lower water infiltration and percolation rates and greater nutrient holding capacity. However, most areas of the Coastal Plain have existing native soils that are predominantly sandy textured soils and other facilities throughout the state may choose to install modified soil root zones that are predominantly sand (>50%) in order to maximize drainage and reduce compaction tendency. If subsurface drain tile surrounded by sand and/or gravel has been installed under the playing surface of any of these fields, their nitrogen programs should be managed as predominantly sand-based systems to minimize nutrient leaching.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

(c) WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 each with a minimum of 15 days between applications. Alternatively, using a material that contains slowly available nitrogen sources, split applications of 0.5 pounds per 1,000 ft^2 may be applied with a minimum of 15 days between applications.

(d) If a material containing slowly available forms of nitrogen is used, rates up to 1.0 pounds of nitrogen per 1,000 ft2 may be applied in a single application with a minimum of 30 days between applications.

(e) For overseeded warm season grasses, an additional 0.7 pounds per 1,000ft^2 of WSN may be applied in the Fall after the perennial ryegrass overseeding is well established. The WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 of nitrogen each, with a minimum of 15 days between applications. Additional WSN application of 0.5 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Alternatively, split applications of 0.5 pounds of nitrogen per 1,000 ft^2 each with a minimum of 15 days between applications may be applied using a material containing slowly available nitrogen sources.

Phosphorus and Potassium Recommendations Athletic Fields

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.
* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.
* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Establishment/Grow-In Recommendations for Golf Courses, Athletic Fields, and Sod Production

(These rates replace normal maintenance fertilizer applications that would have occurred during these time periods.)

Warm Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - late May - June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds of WSN per 1,000 ft^2 per week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - late May -June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds per 1,000 ft^2 using a material containing slowly available forms of nitrogen per week for the next 4 weeks.

Cool Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - August - September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied; 30 days after planting, apply up to 0.5 pounds of nitrogen per 1,000 ft^2 every week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - August -September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 lbs pounds of nitrogen per 1,000 ft^2 using a using a material containing slowly available forms of nitrogen may be applied.
* Apply up to 0.25 pounds of nitrogen per 1,000 ft^2 per week after germination is complete, for the next 8 weeks. If using a material containing slowly available forms of nitrogen, up to 0.5 pounds of nitrogen per

Sod Installations:

Site preparation should include a soil test, which can be done several months before the project begins in order to have time to get test results back. Phosphorus, potassium and lime applications should be based on soil test analysis to increase the likelihood of a successful installation. Shallow incorporation of material into the top 2 inches of the soil is preferred prior to sod installation, especially if lime is required.

No more than 0.7 pounds of nitrogen per 1,000 ft^2 of WSN may be applied before sod is installed. Alternatively, using a material with slowly available forms of nitrogen, 0.9 pounds of nitrogen per 1,000 ft^2 for cool season grasses or 1.0 pounds of nitrogen per 1,000 ft^2 for warm season grasses may be applied before sod is installed.

After installation apply adequate amounts of water to maintain sufficient soil moisture (i.e. to prevent visible wilt symptoms). Excessive water will limit initial root development. After roots begin to establish (as verified by lightly tugging on the sod pieces), shift irrigation strategy to a deep and infrequent program in order to encourage deep root growth. Apply approximately 1 inch of water per week (either by rainfall or irrigation), making sure that the water is being accepted by the soil profile without running off. This will insure thorough wetting of the soil profile.

After sod has completed rooting and is well established, initiate the normal nitrogen management program as described for the appropriate use shall be recommended.

Phosphorus and Potassium Recommendations for Establishment/Grow-In/Installation

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Other Turf Management Considerations for Golf Courses, Athletic fields, and Home Lawns

Lime Recommendations
Lime should be recommended based on a soil test to maintain soil pH within an agronomic range for turfgrass.

For new seedings where lime is recommended, incorporate the lime into the topsoil for best results.

Returning Grass Clippings
Recycling of clippings on turf should be encouraged as an effective means of recycling nitrogen, phosphorus, and potassium. Proper mowing practices that ensure no more than 1/3 of the leaf blade is removed in any cutting event will enhance turf appearance and performance when clippings are returned. Return all leaf clippings from mowing events to the turf rather than discharging them onto sidewalks or streets. Rotary mulching mowers can further enhance clipping recycling by reducing the size of clippings being returned to the turfgrass canopy.

Management of Collected Clippings
If clippings are collected they should be disposed of properly. They may be composted or spread uniformly as a thin layer over other turf areas or areas where the nutrient content of the clippings can be recycled through actively growing plants. They should not be blown onto
impervious surfaces or surface waters, dumped down stormwater drains, or piled outside where rainwater will leach out the nutrients creating the potential for nutrient loss to the environment.

Use of Iron
Iron applications (particularly foliar applications) may periodically be used for enhanced greening as an alternative to nitrogen. These applications are most beneficial if applied in late spring through summer for cool season grasses and in late summer/fall applications for warm-season grasses.

Impervious Surfaces
Do not apply fertilizers containing nitrogen or phosphorus to impervious surfaces (sidewalks, streets, etc.). Remove any granular materials that land on impervious surfaces by sweeping and collecting, and either put the collected material back in the bag, or spread it onto the turf and /or using a leaf blower etc. to return the fertilizer back to the turfgrass canopy.

Nutrient Management Plan

Prepared For:

Meadows Sports Complex Abingdon,VA
Derek Bowman
P.O. Box 789
Abingdon,VA 24212
276-706-1943
dbowman@abingdon-va.org

Prepared By:

Anthony Phillips
200 Jacks Way
Bluefield, VA 24605
276-979-7106
Certification Code: 873
anthonyphillips37@hotmail.com

Acreage

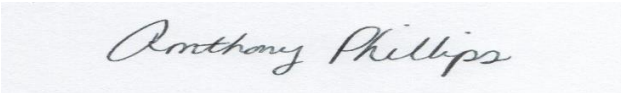
Total:	9.50	Baseball Field 2	0.77
Soccer Field 1	2.11	Baseball Field 3	1.35
Soccer Field 2	2.11	Baseball Field 4	1.35
Baseball Field 1	0.77	Small Square Field	1.04

County: Washington

Watershed: HUC8

Plan Written: 4/22/2022
Plan Expires: 4/22/2025

Planner Signature



The purpose of this Nutrient Management Plan is to ensure minimum movement of nitrogen and phosphorus from the specified area of application to surface and groundwaters where they can potentially have a detrimental effect on water quality as well as ensuring that plants have optimum soil nutrient availability for good productivity and quailty. By following this soil test based plan you are helping to protect local waters and the Chesapeake Bay.

If you have questions, please contact your plan writer, local Virginia Cooperative Extension Agent or the Department of Conservation and Recreation Nutrient Management Program.

Nutrient Management Plan for:
Meadows Sports Complex Town of Abingdon,VA

Superintendent Information	
Field Manager	*Derek Bowman*
Mailing Address	*P.O. Box 789*
City State Zip	*Abingdon,VA 24212*
Phone	*276-706-1943*
Fax	*Fax*
Email	dbowman@abingdon-va.org

Planner Information	
Planner Name	*Anthony Phillips*
Mailing Address	*200 Jacks Way*
City State Zip	*Bluefield, VA 24605*
Phone	*276-979-7106*
Fax	*Fax*
Email	anthonyphillips37@hotmail.com
Certification Code	*873*

Location Information	
Physical Address	*78 Cook St.*
City State Zip	*Abingdon, VA 24210*
Coordinates	*36 º42'09.87"N*
Please Use NAD 83 Deg Min Sec	*81 º58'11.16"W*
VAHU6 Watershed Code	*HUC8*
County	*Washington*

Acreage	
Total	*9.50*
Soccer Field 1	*2.11*
Soccer Field 2	*2.11*
Baseball Field 1	*0.77*
Baseball Field 2	*0.77*
Baseball Field 3	*1.35*
Baseball Field 4	*1.35*
Small Square Field	*1.04*

Plan Start Date	*4/22/22*
Plan End Date	*4/22/25*

Narrative

The Meadows Sports Complex is approximately 34 acres, and is a state of the art sports facility and community park, located in downtown Abingdon, Virginia. This complex will enhance the quality of life in Abingdon and the entire region through supporting our local teams and families, while providing traveling youth and adult sports teams the ability to compete in baseball, softball, soccer, football, lacrosse and more. Other amenities will accommodate a variety of community recreational needs listed below. The Meadows Sports Complex maintains 9.5 acres of intensive athletic field management of turf type tall fescue and blue grass mix. The Meadows Sports Complex is irrigated.

Applications of inorganic fertilizer will not occur on frozen or snow covered ground. Any changes made to the agronomic procedures, size of fertilized areas, or field design will be submitted to plan writer for update to nutrient plan. There are no know environmentally sensitive areas. If fertilizer with herbicide/insecticide combination is being used do not apply with 50 feet of any water body. It is recommended the revision process begin at least 6 months before plan expires. New soil samples should be taken every 3 years. The plan is effective from 4/21/22 to 4/21/25 upon approval by the state of Virginia.

	Killing Frost Date	Cool Season
Spring	April 20	March 9
Fall	October 15	November 26

Maps

Soccer Field 1
1,250.63 ft
1.04715 mi
Soccer Field 2
1,248.73 ft
Baseball Field 1
Baseball Field 2
828.875 ft
819.993 ft
1,061.72 ft
1,142.43 ft
Baseball Field 4
Baseball Field 3
900.151 ft
Small Square Field
Boundary
Robertson Rd.
Cook St.
Food City
Food City Gas 'N Go
Jersey Mike's Subs
Ludovina's Authentic Italian Foods, Inc.
Virginia Creep
Pinehurst Ct
Winterham Dr
Country Club Dr E
81

Reference Materials and Notes

Replenish™ 10-2-5

EarthWorks is the only major manufacturer of Natural Organic fertilizers to use a truly agronomic approach to formulating products. For over twenty years we have been developing soil and plant focused products. **Replenish** 10-2-5 is a Formulated Organic. We have supplemented the compost and minerals with soluble forms of nitrogen such as ammonium sulfate to provide a nice blend of both rich organics and available soluble nitrogen. The core of this formula still follows the recognized EarthWorks Carbon Pyramid, using both short and long chain carbons and a host of rock minerals. The carbon helps to stimulate soil microbes while the minerals **replenish** the soil from the loss taken by the constant uptake by plants. The mineral value of 10-2-5 is significant. Although these minerals are not immediately soluble, they are sustainable and plants can use them when they need them most.

Guaranteed Analysis

Total Nitrogen (N) 10.00%
- 4.20% Ammoniacal Nitrogen
- 4.55% Water Insoluble Nitrogen *
- 1.25% Other Water Soluble Nitrogen **

Available Phosphate (P_2O_5) 2.00%
Soluble Potash (K_2O) 5.00%
Calcium (Ca).....5.75%
Sulfur (S) 6.00%
- 6.00% Combined Sulfur (S)

Derived From: Composted poultry manure, ammonium sulfate, methylene urea, and sulfate of potash.

* 3.40% water insoluble nitrogen from methylene urea and 1.15% water insoluble nitrogen from composted poultry manure.

** .80% water soluble nitrogen from methylene urea and 45% water soluble nitrogen from composted poultry manure.

APPLICATION RATES & PROGRAMS:

Replenish 10-2-5 is an ideal fertilizer for most turf environments.

Greens & Tees – 5 lbs. per 1000 sq. ft. (1/2 lb. N) 2 - 4 times per year. Ideal times are early spring and after aerification in the fall. Increase frequency using lower rates on biologically weak and sand based soils. Rates can be increased if more nitrogen is desired, but be sure to water in this product and always use it appropriately.

Fairways – 250 lbs. per acre two times per season. Ideal application times are early spring and mid fall to help recover from aerification and as a dormant feed.

Sports Fields – 5 lbs. per 1000 sq. ft. (1/2 lb. N) 2 - 4 times per year. Ideal times are early spring and fall as well as a dormant feed product. Increase frequency using a lower rate on biologically weak soils and on sand based fields.

Home Lawns – 5 lbs. per 1000 sq. ft. (1/2 lb. N) 2 - 4 times per year. Ideal times are early spring and early fall. Increase frequency using a lower rate on biologically weak soils.

This product should be watered in after every application.

Replenish could be the healthiest thing you do for your soil.

EarthWorks™
Natural Organic Products

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Soccer Field 1-TMSC1	
Prepared:	**4/22/22**		**Area:**	**91,911**	**Species:** **Bluegrass, Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			459.555
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			459.555
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			459.555
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			643.377
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			643.377
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5 1.5 3			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Soccer Field 2-TMSC2	
Prepared:	**4/22/22**		**Area:**	**91,911**	**Species:** **Bluegrass, Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			459.555
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			459.555
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			459.555
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			643.377
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			643.377
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5 2 3			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Baseball Field 1-TMSC3	
Prepared:	**4/22/22**		**Area:**	**33,541**	**Species:** **Bluegrass, Fesuce**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			167.705
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			167.705
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			167.705
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			234.787
		- -							128.00		0.00 - 0.00 - 0.00			0
	Octomber 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			234.787
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5 2.5 3			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Baseball Field 2-TMSC4	
Prepared:	**4/22/22**		**Area:**	**33,541**	**Species:** **Bluegrass, Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			167.705
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			167.705
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			167.705
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			234.787
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			234.787
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5	2.5	3	

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Baseball Field 3-TMSC5	
Prepared:	**4/22/22**	**Area:**	**58,806**	**Species:**	**Bluegrass,Fesuce**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			294.03
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			294.03
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			294.03
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 - 2 - 5	1		Gramular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			411.642
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			411.642
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5	2.5	2.5	

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Baseball Field 4-TMSC6	
Prepared:	**4/22/22**	**Area:**	**58,806**	**Species:**	**Bluegrass, Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			294.03
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			294.03
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			294.03
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			411.642
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			411.642
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5 2.5 3			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Meadows Sports Complex**		**Management Area:**	Small Square Field-TMSC7	
Prepared:	**4/22/22**		**Area:**	**45,302**	**Species:** **Bluegrass, Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			226.51
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	May 15	10 - 2 - 5	1		Granular	Organic	5.00		128.00	45%	0.50 - 0.10 - 0.25			226.51
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	August 15	3 - 4 - 3	1		Granular	Organic	5.00		128.00	75%	0.15 - 0.20 - 0.15			226.51
		- -							128.00		0.00 - 0.00 - 0.00			0
	September 15	10 J21 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			317.114
		- -							128.00		0.00 - 0.00 - 0.00			0
	October 15	10 - 2 - 5	1		Granular	Organic	7.00		128.00	45%	0.70 - 0.14 - 0.35			317.114
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			51%	2.55 - 0.68 - 1.35			
				N Recommendation Range and Soil Test Recommendation							4.5 2 2.5			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Soil Test Summary

Customer Name:	Meadows Sports Complex
Testing Lab:	Virginia Tech Soil Testing Laboratory
Sample Date:	12/22/2021
Planner Name	Anthony Phillips
Certification Number	873

Managed Area ID	AREA (ft^2 or acres)	Soil pH	Buffer pH	Lab Test P (ppm)	Lab Test P (lbs/A)	VT (H/M/L)	Lab Test K (ppm)	Lab Test K (lbs/A)	VT (H/M/L)	Species
Soccer Field 1-TMSC1	2.11	6.5	6.48		12	M-		15	L-	Bluegrass, Fescue
Soccer Field 2-TMSC2	2.11	6.6	6.48		9	L+		11	L-	Bluegrass, Fescue
Baseball Field 1-TMSC3	.77	6.6	6.5		6	L		11	L-	Bluegrass, Fescue
Baseball Field 2-TMSC4	.77	6.8	6.5		7	L		20	L	Bluegrass, Fescue
Baseball Field 3-TMSC5	1.35	6.7	6.5		8	L		18	L	Bluegrass, Fescue
Baseball Field 4-TMSC6	1.35	6.8	6.5		5	L		10	L-	Bluegrass, Fescue
Small Square Field-TMSC7	1.04	6.8	6.51		9	L+		23	L	Bluegrass, Fescue

Notes: No Lime applications are needed at this time to any of the fields.

Soil Test Reports

Soil samples were taken from each field. Several samples from the upper 3" of soil were taken and mixed throughly. The samples were taken in random pattern thorughout each area. Soil samples were analyzed by Virginia Tech Soil Testing Lab through the Virginia Cooperative Extension. The soil samples are good for the life of this plan or 3 years from approval.

1. Soccer Field 1-TMSC1
Soil pH measures 6.5. Buffer pH measures 6.48. No lime application is needed. P levels average in the M- range. P applications for the year are not to exceed 1.5 pounds P/1000sqft per. K levels average in L- range. K applications for the year are not to exceed 3 pounds K/1000sqft per year.

2. Soccer Field 2-TMSC2
Soil pH measures 6.6. Buffer pH measures 6.48. No lime application is needed. P levels average in the L+ range. P applications for the year are not to exceed 2 pounds P/1000sqft per. K levels average in L- range. K applications for the year are not to exceed 3 pounds K/1000sqft per year.

3. Baseball Field 1-TMSC3
Soil pH measures 6.6. Buffer pH measures 6.5. No lime application is needed. P levels average in the L range. P applications for the year are not to exceed 2.5 pounds P/1000sqft per. K levels average in L- range. K applications for the year are not to exceed 3 pounds K/1000sqft per year.

4. Baseball Field 2-TMSC4
Soil pH measures 6.8. Buffer pH measures 6.5. No lime application is needed. P levels average in the L range. P applications for the year are not to exceed 2.5 pounds P/1000sqft per. K levels average in L range. K applications for the year are not to exceed 2.5 pounds K/1000sqft per year.

5. Baseball Field 3-TMSC5
Soil pH measures 6.7. Buffer pH measures 6.5. No lime application is needed. P levels average in the L range. P applications for the year are not to exceed 2.5 pounds P/1000sqft per. K levels average in L range. K applications for the year are not to exceed 2.5 pounds K/1000sqft per year.

6. Baseball Field 4-TMSC6
Soil pH measures 6.8. Buffer pH measures 6.5. No lime application is needed. P levels average in the L range. P applications for the year are not to exceed 2.5 pounds P/1000sqft per. K levels average in L- range. K applications for the year are not to exceed 3 pounds K/1000sqft per year.

7. Small Square Field-TMSC7
Soil pH measures 6.8. Buffer pH measures 6.51. No lime application is needed. P levels average in the L+ range. P applications for the year are not to exceed 2 pounds P/1000sqft per. K levels average in L range. K applications for the year are not to exceed 2.5 pounds K/1000sqft per year.

Fertilizer Application Records

Customer Information		Management Area Information	
Name:	0	Management Area ID:	
Address:	78 Cook St.	Management Area Size:	
	Abingdon, VA 24210	Plant Species:	
		Notes:	
Phone #:	276-706-1943		

Date (M/D/Y)	Supervisor/Applicator	Weather Conditions			Fertilizer Analysis	Rate	Amount Fertilizer Used	Application Equipment Used
		Temp	Wind Speed	Precip				

When was the last time your fertilizer equipment was calibrated???
For information on calibration see Chapter 10 of the "Urban Nutrient Management Handbook".
Available for download at http://pubs.ext.vt.edu/430/430-350/430-350.html

Section VI. Turfgrass Nutrient Recommendations for Home Lawns, Office Parks, Public Lands and Other Similar Residential/Commercial Grounds

Definitions

For the purposes of this section, the following definitions, as presented by the Association of American Plant Food Control Officials (AAPFCO), apply:

"Enhanced efficiency fertilizer" describes fertilizer products with characteristics that allow increased plant nutrient availability and reduce the potential of nutrient losses to the environment when compared to an appropriate reference product.

"Slow or controlled release fertilizer" means a fertilizer containing a plant nutrient in a form which delays its availability for plant uptake and use after application, or which extends its availability to the plant significantly longer than a reference "rapidly available nutrient fertilizer" such as ammonium nitrate, urea, ammonium phosphate or potassium chloride. A slow or controlled release fertilizer must contain a minimum of 15 percent slowly available forms of nitrogen.

"Water soluble nitrogen", "WSN" and "readily available nitrogen" means: Water soluble nitrogen in either ammonical, urea, or nitrate form that does not have a controlled release, or slow response.

Recommended Season of Application For Nitrogen Fertilizers - Applies to all Turf

A nitrogen fertilization schedule weighted toward fall application is recommended and preferred for agronomic quality and persistence of cool season turfgrass; however, the acceptable window of applications is much wider than this for nutrient management. The nutrient management recommended application season for nitrogen fertilizers to cool season turfgrasses begins six weeks prior to the last spring average killing frost date and ends six weeks past the first fall average killing frost date (see Figures 6-1 & 6-2). Applications of nitrogen during the intervening late fall and winter period should be avoided due to higher potential leaching or runoff risk, but where necessary, apply no more than 0.5 pounds per 1,000 ft^2 of water soluble nitrogen within a 30 day period. Higher application rates may be used during this late fall and winter period by using materials containing slowly available sources of nitrogen, if the water soluble nitrogen contained in the fertilizer does not exceed the recommended maximum of 0.5 pounds per 1,000 ft^2 rate. Do not apply nitrogen or phosphorus fertilizers when the ground is frozen.

The acceptable nitrogen fertilizer application season for non-overseeded warm season turfgrass begins no earlier than the last spring average killing frost date and ends no later than one month prior to the first fall average killing frost date (see Figures 6-1 & 6-2).

Per Application Rates
Do not apply more than 0.7 pounds of water soluble nitrogen per 1,000 ft^2 within a 30 day period. For cool season grasses, do not apply more than 0.9 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. For warm season grasses, do not apply more than 1.0 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. Lower per application rates of water soluble nitrogen sources or use of slowly available nitrogen sources should be utilized on very permeable sandy soils, shallow soils over fractured bedrock, or areas near water wells.

Annual Application Rates for Home Lawns and Commercial Turf
Up to 3.5 pounds per 1,000 ft^2 of nitrogen may be applied annually to cool season grass species or up to 4 pounds per 1,000 ft^2 may be applied annually to warm season grass species using 100 percent water soluble nitrogen sources. Lower rates of nitrogen application may be desirable on those mature stands of grasses that require less nitrogen for long-term quality. As a result, lower application rates will probably be more suited to the fine leaf fescues (hard fescue, chewings fescue, creeping red fescue, and sheep fescue) and non-overseeded zoysiagrass. Lower rates should also be used on less intensively managed areas.

Use of Slowly Available Forms of Nitrogen
For slow or controlled release fertilizer sources, or enhanced efficiency fertilizer sources, no more than 0.9 pounds of nitrogen per 1,000 ft^2 may be applied to cool season grasses within a 30 day period and no more than 1.0 pounds of nitrogen per 1,000 ft^2 may be applied to warm season grasses within a 30 day period. Provided the fertilizer label guarantees that the product can be used in such a way that it will not release more than 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period, no more than 2.5 pounds of nitrogen per 1,000 ft^2 may be applied in a single application. Additionally, total annual applications shall not exceed 80 percent of the annual nitrogen rates for cool or warm season grasses.

Phosphorus and Potassium Nutrient Needs (Established Turf)
Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated necessary by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range. (For example the recommendation for a P_2O_5 soil test level of L- would be 3 pounds per 1,000 ft^2.)

Do not use high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Recommendations for Establishment of Turf

These recommendations are for timely planted turfgrass, that is, the seed or vegetative material (sod, plugs, and /or sprigs), are planted at a time of the year when temperatures and moisture are adequate to maximize turfgrass establishment. These recommended establishment periods would be late summer to early fall for cool-season turfgrasses and late spring through mid-summer for warm-season turfgrasses.

Nitrogen Applications

At the time of establishment, apply no more than 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses, using a material containing slowly available forms of nitrogen, followed by one or two applications beginning 30 days after planting, not to exceed a total of 1.8 pounds per 1,000 ft^2 total for cool season grasses and 2.0 pounds per 1,000 ft^2 for warm season grasses for the establishment period. Applications of WSN cannot exceed more than 0.7 pounds per 1,000 ft^2 within a 30 day period.

Phosphorus and Potassium Recommendations for Establishment

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Nutrient Recommendations for Golf Courses

Nitrogen Timing

The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

If the full rate or the highest rate of the recommendation range for a monthly application is applied in a single application, then the interval of application for nitrogen shall be at least 30 days to allow turf to utilize previous nitrogen applications. If several applications are to be made for the monthly nitrogen rate, then the timing of the applications shall be at approximately even intervals, with the rate per application to be evenly divided between each application with the total nitrogen applied not to exceed the maximum monthly rate. Use of Water Insoluble Nitrogen forms of Nitrogen is encouraged.

Nitrogen Rates

	Grass Type	Maximum WSN Rate Per Application pounds per 1,000 ft^2	Total Annual N Rate pounds per 1,000 ft^2 [a]
Greens		0.7 [b]	3-6
Tees		0.7 [b]	2-5
Fairways	Cool Season	0.7 [c]	2-3
	Warm Season	0.7 [c]	3-4
Fairways - Intensive Management	Cool Season	0.5 [d]	3-4
	Warm Season	0.5 [d]	3.5-4.5
Overseeding Warm Season Fairways		0.5	1.25
Roughs		0.7 [e]	1-3

Fairways-Overseeding Warm Season Fairways

* For warm season grasses, up to 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period may be applied in the Fall after perennial ryegrass overseeding is well established. An additional nitrogen application of 0.7 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Applications using WSN may not exceed 0.7 pounds per 1,000 ft^2 within a 30 day period.

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application, may be applied any time during the application windows described in Recommended Season of Application for Nitrogen Fertilizers of this section, but must be considered with the total annual nitrogen application rate.

(a) Use higher rates for intensively used turf where accelerated growth and/or rapid recovery are required, use lower rates for maintenance of lesser used areas; do not exceed total annual nitrogen levels as stated above.

(b) Greens and Tees - Per application timing must be a minimum of 30 days between applications. A rate of 0.9 pounds per 1,000 $ft^2$of total nitrogen may be applied for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(c) Fairways-Normal Management (Non-Irrigated or Irrigated) - Per Application timing must be a minimum of 30 days between applications. Total nitrogen application rates of 0.9 pounds per 1,000 ft^2 of total nitrogen may be applied for cool season grasses or 1.0 pound per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(d) Fairways-Intensive Management (Irrigated) - Per Application timing must be a minimum of 15 days between applications. This option requires optimized timing of more frequent applications of nitrogen with lesser rates per application. Alternatively, a maximum application rate of 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses using a material containing slowly available forms of nitrogen may be applied with a minimum of 30 days between applications.

(e) Foliar fertilizer may be applied to warm season grasses within 30 days prior to the first killing frost in the fall, at a rate not to exceed 0.1 pounds per 1,000 ft^2 of nitrogen per application. This application must be accounted for in the total annual nitrogen rate.

Phosphorus and Potassium Recommendations for Established Golf Courses

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.

* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Nitrogen Management on Athletic Fields - Cool Season Grasses

* This program is intended for those fields which are under heavy use.

* Nitrogen recommendations are based on the assumption that there is adequate soil moisture to promote good turf growth at the time of application. If no rainfall has occurred since the last application, further applications should be delayed until significant soil moisture is available.

Cool Season Grasses	Maintenance Program[a]	
	Normal	Intensive
When to Apply[b]	Pounds per 1,000 ft^2 Nitrogen	
After August 15	------	0.5
September	0.7	0.7 [(c)]
October	0.7 [(c)]	0.7 [(c)]
November	0.5	0.7 [(c)]
April 15 - May 15	0.5	0.5
June 1 - June 15	----	0.5

Notes:

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application may be applied any time the turf is actively growing, but must be considered with the total annual N application rate.

* WSN = water soluble nitrogen; WIN = water insoluble nitrogen

(a) Intensive managed areas must be irrigated.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the preceding Season of Application for Nitrogen section, using Figures 6-1 and 6-2.

(c) Rates up to 0.9 pounds per 1,000 ft^2 of total nitrogen can be applied using a material containing slowly available forms of nitrogen, with a minimum of 30 days between applications.

(d) Make this application only if turf use warrants additional N for sustaining desirable growth and /or color.

Nitrogen Management on Athletic Fields - Warm Season Grasses
The following comments apply to both Naturally Occurring or Modified Sand based Fields and Predominantly Silt/Clay Soil Fields:

* Annual nitrogen rates for warm season grasses shall not exceed **4 pounds** in areas which have the average first killing frost on or before October 20, and shall not exceed **5 pounds** in areas which have the average first killing frost after October 20 as shown in Figure 6-1. Nitrogen rates and timings for overseeding warm season grasses are not included in these rates.

* April 15 - May 15 applications should not be made until after complete green-up of turf.

* Nitrogen applications June through August should be coordinated with anticipated rainfall if irrigation is not available.

* Use the lower end of the ranges for non-irrigated fields and the higher end of the ranges should be used on fields with irrigation.

* Nitrogen rates towards the higher end of the ranges may be applied on heavily used fields to accelerate recovery, however per application and annual rates cannot be exceeded.

Bermudagrass - Predominantly Silt/Clay Soil Fields [a]		
When to Apply[b]	**Pounds per 1,000 ft^2 Nitrogen**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7	
July	0.5 - 0.7 [(d)]	
August	0.5 - 0.7 [(d)]	
Sept 1 - Sept 15	0.5 - 0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb-Mar	0.5 [(e)]	

Bermudagrass - Naturally Occurring or Modified Sand based Fields [a]		
When to Apply[b]	**Lbs/1,000 ft^2 Nitrogen[c]**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7 [(c)]	
July	0.7 [(c)]	
August	0.7 [(c)]	
Sept 1 - Sept 15	0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb - Mar	0.5 [(e)]	

The following notes apply to both of the Bermudagrass tables above:

(a) In the Piedmont and the Ridge and Valley areas of Virginia, the existing native soil will normally be

lower water infiltration and percolation rates and greater nutrient holding capacity. However, most areas of the Coastal Plain have existing native soils that are predominantly sandy textured soils and other facilities throughout the state may choose to install modified soil root zones that are predominantly sand (>50%) in order to maximize drainage and reduce compaction tendency. If subsurface drain tile surrounded by sand and/or gravel has been installed under the playing surface of any of these fields, their nitrogen programs should be managed as predominantly sand-based systems to minimize nutrient leaching.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

(c) WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 each with a minimum of 15 days between applications. Alternatively, using a material that contains slowly available nitrogen sources, split applications of 0.5 pounds per 1,000 ft^2 may be applied with a minimum of 15 days between applications.

(d) If a material containing slowly available forms of nitrogen is used, rates up to 1.0 pounds of nitrogen per 1,000 ft2 may be applied in a single application with a minimum of 30 days between applications.

(e) For overseeded warm season grasses, an additional 0.7 pounds per 1,000ft^2 of WSN may be applied in the Fall after the perennial ryegrass overseeding is well established. The WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 of nitrogen each, with a minimum of 15 days between applications. Additional WSN application of 0.5 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Alternatively, split applications of 0.5 pounds of nitrogen per 1,000 ft^2 each with a minimum of 15 days between applications may be applied using a material containing slowly available nitrogen sources.

Phosphorus and Potassium Recommendations Athletic Fields

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.
* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.
* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Establishment/Grow-In Recommendations for Golf Courses, Athletic Fields, and Sod Production

(These rates replace normal maintenance fertilizer applications that would have occurred during these time periods.)

Warm Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - late May - June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds of WSN per 1,000 ft^2 per week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - late May -June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds per 1,000 ft^2 using a material containing slowly available forms of nitrogen per week for the next 4 weeks.

Cool Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - August - September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied; 30 days after planting, apply up to 0.5 pounds of nitrogen per 1,000 ft^2 every week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - August -September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 lbs pounds of nitrogen per 1,000 ft^2 using a using a material containing slowly available forms of nitrogen may be applied.
* Apply up to 0.25 pounds of nitrogen per 1,000 ft^2 per week after germination is complete, for the next 8 weeks. If using a material containing slowly available forms of nitrogen, up to 0.5 pounds of nitrogen per

Sod Installations:

Site preparation should include a soil test, which can be done several months before the project begins in order to have time to get test results back. Phosphorus, potassium and lime applications should be based on soil test analysis to increase the likelihood of a successful installation. Shallow incorporation of material into the top 2 inches of the soil is preferred prior to sod installation, especially if lime is required.

No more than 0.7 pounds of nitrogen per 1,000 ft^2 of WSN may be applied before sod is installed. Alternatively, using a material with slowly available forms of nitrogen, 0.9 pounds of nitrogen per 1,000 ft^2 for cool season grasses or 1.0 pounds of nitrogen per 1,000 ft^2 for warm season grasses may be applied before sod is installed.

After installation apply adequate amounts of water to maintain sufficient soil moisture (i.e. to prevent visible wilt symptoms). Excessive water will limit initial root development. After roots begin to establish (as verified by lightly tugging on the sod pieces), shift irrigation strategy to a deep and infrequent program in order to encourage deep root growth. Apply approximately 1 inch of water per week (either by rainfall or irrigation), making sure that the water is being accepted by the soil profile without running off. This will insure thorough wetting of the soil profile.

After sod has completed rooting and is well established, initiate the normal nitrogen management program as described for the appropriate use shall be recommended.

Phosphorus and Potassium Recommendations for Establishment/Grow-In/Installation

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Other Turf Management Considerations for Golf Courses, Athletic fields, and Home Lawns

Lime Recommendations
Lime should be recommended based on a soil test to maintain soil pH within an agronomic range for turfgrass.

For new seedings where lime is recommended, incorporate the lime into the topsoil for best results.

Returning Grass Clippings
Recycling of clippings on turf should be encouraged as an effective means of recycling nitrogen, phosphorus, and potassium. Proper mowing practices that ensure no more than 1/3 of the leaf blade is removed in any cutting event will enhance turf appearance and performance when clippings are returned. Return all leaf clippings from mowing events to the turf rather than discharging them onto sidewalks or streets. Rotary mulching mowers can further enhance clipping recycling by reducing the size of clippings being returned to the turfgrass canopy.

Management of Collected Clippings
If clippings are collected they should be disposed of properly. They may be composted or spread uniformly as a thin layer over other turf areas or areas where the nutrient content of the clippings can be recycled through actively growing plants. They should not be blown onto
impervious surfaces or surface waters, dumped down stormwater drains, or piled outside where rainwater will leach out the nutrients creating the potential for nutrient loss to the environment.

Use of Iron
Iron applications (particularly foliar applications) may periodically be used for enhanced greening as an alternative to nitrogen. These applications are most beneficial if applied in late spring through summer for cool season grasses and in late summer/fall applications for warm-season grasses.

Impervious Surfaces
Do not apply fertilizers containing nitrogen or phosphorus to impervious surfaces (sidewalks, streets, etc.). Remove any granular materials that land on impervious surfaces by sweeping and collecting, and either put the collected material back in the bag, or spread it onto the turf and /or using a leaf blower etc. to return the fertilizer back to the turfgrass canopy.

Nutrient Management Plan

Prepared For:

Town Of Abingdon, VA
Kevin Worley
P.O. Box 789
Abingdon, VA 24212
276-623-5279
kworley@abingdon-va.gov

Prepared By:

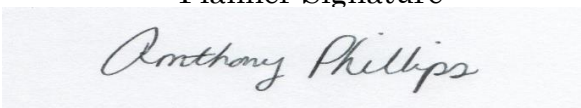
Anthony Phillips
200 Jacks Way
Bluefield, VA
276-979-7106
Certification Code: 873
anthonyphillips37@hotmail.com

Acreage

Total:	4.00
Field 1: Latture	2.55/A
Field 2: Foster-Debose	.85/A
Field 3: Ray Petty	.60/A
County:	Washington
Watershed:	TH16

Plan Written: 4/21/2022
Plan Expires: 4/21/2025

Planner Signature



The purpose of this Nutrient Management Plan is to ensure minimum movement of nitrogen and phosphorus from the specified area of application to surface and groundwaters where they can potentially have a detrimental effect on water quality as well as ensuring that plants have optimum soil nutrient availability for good productivity and quailty. By following this soil test based plan you are helping to protect local waters and the Chesapeake Bay.

If you have questions, please contact your plan writer, local Virginia Cooperative Extension Agent or the Department of Conservation and Recreation Nutrient Management Program.

Nutrient Management Plan for:
Town Of Abingdon, VA

Director of Parks & Recreation	
Director	*Kevin Worley*
Mailing Address	*P.O. Box 789*
City State Zip	*Abingdon, VA 24212*
Phone	*276-623-5279*
Fax	*Fax*
Email	kworley@abingdon-va.gov

Planner Information	
Planner Name	*Anthony Phillips*
Mailing Address	*200 Jacks Way*
City State Zip	*Bluefield, VA*
Phone	*276-979-7106*
Fax	*Fax*
Email	anthonyphillips37@hotmail.com
Certification Code	*873*

Location Information	
Physical Address	*401-423 Russell Rd NW*
City State Zip	*Abingdon, VA 24210*
Coordinates	*36 º42'37.75"N*
Please Use NAD 83 Deg Min Sec	*81 º59'10.94"W*
VAHU6 Watershed Code	*TH16*
County	*Washington*

Acreage	
Total	*4.00*
Field 1 Latture	*2.55/A*
Field 2 Foster-Debose	*.85/A*
Field 3 Ray Petty	*.60/A*

Plan Start Date	*4/22/22*
Plan End Date	*4/22/25*

Narrative

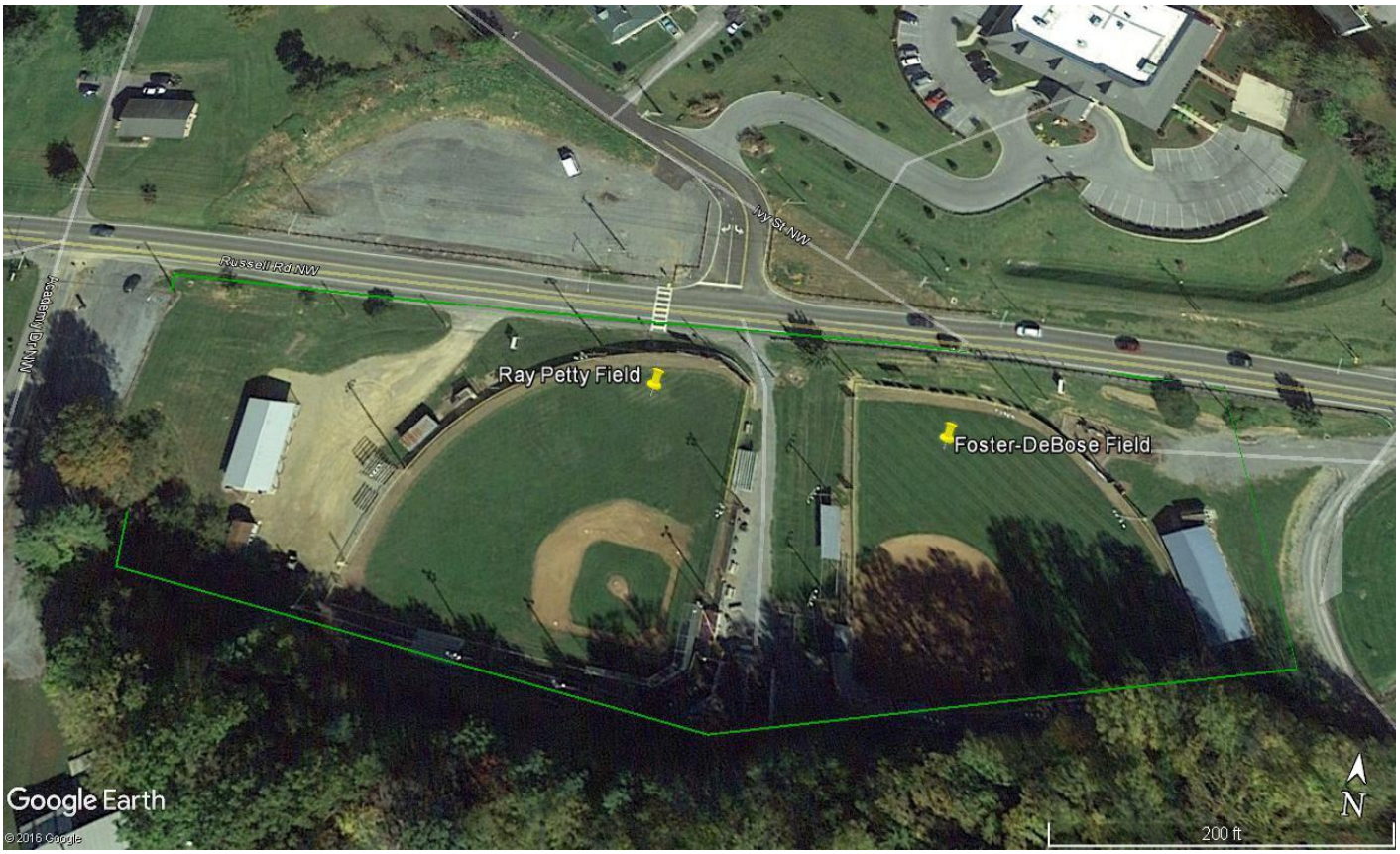
The town of Abingdon Virginia Parks and Recreation maintains 3 sports fields that recieves annual fertilizer appliations and are non irrigated. The fields are 2 little league baseball fields and 1 baseball/football/scoccer field.

Latture Field consist of 2.55/A, Foster-Debose Field consist of .85/A, and Ray Petty Field consist of .60/A. All fields are a mix of rye/blue/fescue.

Applications of inorganic fertilizer will not occur on frozen or snow covered ground. Any changes made to the agronomic procedures, size of fertilized areas, or field design will be submitted to plan writer for update to nutrient plan. There are no know environmentally sensitive areas. New soil test should be taken every 3 years. It is recommended the revision process begin at least 6 months before plan expires. The plan is effective from 4/21/22 to 4/21/25 upon approval by the state of Virginia.

	Killing Frost Dates	**Cool Season**
Spring	April20	March9
Fall	October15	November26

Maps


Russell Rd NW
Ivy St NW
Ray Petty Field
Foster-DeBose Field
Google Earth
© 2016 Google
200 ft
N

Latture Field And Annex
Latture Field Dr
Google Earth
© 2016 Google
200 ft
N

Ray Petty Field
Foster-DeBose Field
Infield
Google Earth
© 2016 Google
N
100 ft

Latture Field And Annex
Latture Field Dr
Google Earth
© 2016 Google
N
200 ft

Reference Materials and Notes

Latture Field Location
32°42'31.00"N
81°59'03.33"W
Latture Field Drive
Abingdon, VA 24210

Total product needed for applications to all 3 fields combined

Product	Pounds	50pound bags needed
Pro-Scape 30-0-0	785	16
Lime -AG Type	3000	1.5 tons only to sports field 3 (Ray Petty Field -RP)

***No Lime is need for the Foster-Debose Field-FDB or Latture Field-CF.**

Make appliations of Nitrogen from April 15-May15 only if turf use warrants additional N for sustaining desirable growth and color.
No applications of Nitrogen fertilizer can be applied from June-August 15 except for small souble amouts.(see bold print below)

*** Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application may be applied any time the turf is actively growing, but must be considered with the total annual N application rate.**

Cool Season Grasses	Maintenance Program[a] Normal	Intensive
When to Apply[b]	Pounds per 1,000 ft^2 Nitrogen	
After August 15	------	0.5
September	0.7	0.7 [(c)]
October	0.7 [(c)]	0.7 [(c)]
November	0.5	0.7 [(c)]
April 15 - May 15	0.5	0.5
June 1 - June 15	----	0.5

Nutrient Application Worksheet

NAME:	**Town Of Abingdon, VA**		**Management Area:Sports Field**	Latture Field-CF	
Prepared:	**4/22/22**		**Area:**	**111078**	**Species:** **Rye/Blue/Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April 15	30 - 0 - 0	1		Granular	GCRN	1.50		128.00	56%	0.45 - 0.00 - 0.00			166.617
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	September 11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			333.234
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.35 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8 0.5 0			

Notes:

The pounds in the product per area colum is the per application totals, not the total product needed for all appliations. (see Ref, Mat, and Notes)

Nutrient Application Worksheet

NAME:	**Town Of Abingdon,VA**		**Management Area:Sports Field**	Foster-Debose Field-FDB	
Prepared:	**4/22/22**		**Area:**	**26136**	**Species:**	**Rye/Blue/Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April15	30 - 0 - 0	1		Granular	GCRN	1.50		128.00	56%	0.45 - 0.00 - 0.00			39.204
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	Septmber11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			78.408
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.35 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8 0.5 0.5			

Notes:

The pounds in the product per area colum is the per application totals, not the total prodcut needed for all applications. (See Ref,Mat,and Notes)

Nutrient Application Worksheet

NAME:	**Town Of Abingdon,VA**		**Management Area:Sports Field**	Ray Petty-RP	
Prepared:	**4/22/22**		**Area:**	**37026**	**Species:**	**Rye/Blue/Fescue**
Expires:	**4/22/25**				

Total Nutrient Needs	**Application Month/Day**	**Analysis**	**# of Apps**	**Application Interval**	**Fertilizer Type**	**Fertilizer Description**	**Rate per 1000ft^2**	**lbs or oz**	**Wt. per Gal.**	**%Slow Release N**	**Total NPK lbs/1000ft^2**	**Gypsum**	**Lime**	**Total Product (lbs/Area)**
Nitrogen		N - P - K									N - P_2O_5 - K_2O			
	April15	30 - 0 - 0	1		Granular	GCRN	1.50		128.00	56%	0.45 - 0.00 - 0.00			55.539
Phosphorus		- -							128.00		0.00 - 0.00 - 0.00			0
	September11	30 - 0 - 0	1		Granular	GCRN	3.00		128.00	56%	0.90 - 0.00 - 0.00			111.078
Potassium		- -							128.00		0.00 - 0.00 - 0.00			0
	Nov/Dec	0 - 0 - 0	1				81.00		128.00		0.00 - 0.00 - 0.00		Lime	2999.106
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
		- -							128.00		0.00 - 0.00 - 0.00			0
							Total			56%	1.35 - 0.00 - 0.00			
				N Recommendation Range and Soil Test Recommendation							2.8 | 0.75 | 0.75			

Notes:

The pounds in the product per area colum is the per application totals, not the total product needed for all applications. (see Ref,Mat,and Notes)

Soil Test Summary

Customer Name:	Town of Abingdon, VA
Testing Lab:	Virginia Tech Soil Testing Laboratory
Sample Date:	12/20/2021
Planner Name	Anthony Phillips
Certification Number	873

Managed Area ID	AREA (ft^2 or acres)	Soil pH	Buffer pH	Lab Test P (ppm)	Lab Test P (lbs/A)	VT (H/M/L)	Lab Test K (ppm)	Lab Test K (lbs/A)	VT (H/M/L)	Species
LATT-CF	2.55/A	6.6	6.29		107	H+		403	VH	Rye/Blue/Fescue
FOSDE-FDB	.85/A	6.8	6.38		87	H+		283	H+	Rye/Blue/Fescue
RAYP-RP	.60/A	6.3	6.19		59	H		266	H	Rye/Blue/Fescue

Notes:

Soil Test Reports

Soil samples were taken from each field. Several samples from the upper 3" of soil were taken and mixed throughly. The samples were taken in random pattern throughout each area.
Soil samples were analyzed by Virginia Tech Soil Testing Lab through the Virginia Cooperative Extension. The soil samples are good for the life of this plan or 3 years from approval.

A.Latture Field-CF

Soil pH measures 6.6. Buffer pH measures 6.29. No Lime is application is needed. P levels average in the H+ range. P applications for the year are not to exceed 1/2 pound P/1000sqft. K levels average in the VH range. No K applications can be mande. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

B. Foster - Debose Field-FDB

Soil pH measures 6.8. Buffer pH measures 6.38. No lime is needed . P levels average in the H+ range. P applications for the year are not to exceed 1/2 pound P/1000sqft.. K levels average in the H+ range. K applications for the year are not to exceed 1/2 pound K/1000sqft. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

C.Ray Petty Field-RP

Soil pH measures 6.3. Buffer pH measures 6.19. Lime is needed at 1.5 ton per acre. P levels average in the H range. P applications for the year are not to exceed .75 pounds P/1000sqft. K levels average in the H range. K applications for the year are to exceed .75 pounds K/1000sqft. Annual N rate not to exceed 2.8 pounds N/1000sqft per year.

Fertilizer Application Records

Customer Information		Management Area Information	
Name:	Town of Abingdon	Management Area ID:	
Address:	401-423 Russell Rd NW	Management Area Size:	
	Abingdon, VA 24210	Plant Species:	
		Notes:	
Phone #:	276-623-5279		

Date (M/D/Y)	Supervisor/Applicator	Weather Conditions			Fertilizer Analysis	Rate	Amount Fertilizer Used	Application Equipment Used
		Temp	Wind Speed	Precip				

When was the last time your fertilizer equipment was calibrated???
For information on calibration see Chapter 10 of the "Urban Nutrient Management Handbook".
Available for download at http://pubs.ext.vt.edu/430/430-350/430-350.html

Section VI. Turfgrass Nutrient Recommendations for Home Lawns, Office Parks, Public Lands and Other Similar Residential/Commercial Grounds

Definitions

For the purposes of this section, the following definitions, as presented by the Association of American Plant Food Control Officials (AAPFCO), apply:

"Enhanced efficiency fertilizer" describes fertilizer products with characteristics that allow increased plant nutrient availability and reduce the potential of nutrient losses to the environment when compared to an appropriate reference product.

"Slow or controlled release fertilizer" means a fertilizer containing a plant nutrient in a form which delays its availability for plant uptake and use after application, or which extends its availability to the plant significantly longer than a reference "rapidly available nutrient fertilizer" such as ammonium nitrate, urea, ammonium phosphate or potassium chloride. A slow or controlled release fertilizer must contain a minimum of 15 percent slowly available forms of nitrogen.

"Water soluble nitrogen", "WSN" and "readily available nitrogen" means: Water soluble nitrogen in either ammonical, urea, or nitrate form that does not have a controlled release, or slow response.

Recommended Season of Application For Nitrogen Fertilizers - Applies to all Turf

A nitrogen fertilization schedule weighted toward fall application is recommended and preferred for agronomic quality and persistence of cool season turfgrass; however, the acceptable window of applications is much wider than this for nutrient management. The nutrient management recommended application season for nitrogen fertilizers to cool season turfgrasses begins six weeks prior to the last spring average killing frost date and ends six weeks past the first fall average killing frost date (see Figures 6-1 & 6-2). Applications of nitrogen during the intervening late fall and winter period should be avoided due to higher potential leaching or runoff risk, but where necessary, apply no more than 0.5 pounds per 1,000 ft^2 of water soluble nitrogen within a 30 day period. Higher application rates may be used during this late fall and winter period by using materials containing slowly available sources of nitrogen, if the water soluble nitrogen contained in the fertilizer does not exceed the recommended maximum of 0.5 pounds per 1,000 ft^2 rate. Do not apply nitrogen or phosphorus fertilizers when the ground is frozen.

The acceptable nitrogen fertilizer application season for non-overseeded warm season turfgrass begins no earlier than the last spring average killing frost date and ends no later than one month prior to the first fall average killing frost date (see Figures 6-1 & 6-2).

Per Application Rates
Do not apply more than 0.7 pounds of water soluble nitrogen per 1,000 ft^2 within a 30 day period. For cool season grasses, do not apply more than 0.9 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. For warm season grasses, do not apply more than 1.0 pounds of total nitrogen per 1,000 ft^2 within a 30 day period. Lower per application rates of water soluble nitrogen sources or use of slowly available nitrogen sources should be utilized on very permeable sandy soils, shallow soils over fractured bedrock, or areas near water wells.

Annual Application Rates for Home Lawns and Commercial Turf
Up to 3.5 pounds per 1,000 ft^2 of nitrogen may be applied annually to cool season grass species or up to 4 pounds per 1,000 ft^2 may be applied annually to warm season grass species using 100 percent water soluble nitrogen sources. Lower rates of nitrogen application may be desirable on those mature stands of grasses that require less nitrogen for long-term quality. As a result, lower application rates will probably be more suited to the fine leaf fescues (hard fescue, chewings fescue, creeping red fescue, and sheep fescue) and non-overseeded zoysiagrass. Lower rates should also be used on less intensively managed areas.

Use of Slowly Available Forms of Nitrogen
For slow or controlled release fertilizer sources, or enhanced efficiency fertilizer sources, no more than 0.9 pounds of nitrogen per 1,000 ft^2 may be applied to cool season grasses within a 30 day period and no more than 1.0 pounds of nitrogen per 1,000 ft^2 may be applied to warm season grasses within a 30 day period. Provided the fertilizer label guarantees that the product can be used in such a way that it will not release more than 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period, no more than 2.5 pounds of nitrogen per 1,000 ft^2 may be applied in a single application. Additionally, total annual applications shall not exceed 80 percent of the annual nitrogen rates for cool or warm season grasses.

Phosphorus and Potassium Nutrient Needs (Established Turf)
Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated necessary by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range. (For example the recommendation for a P_2O_5 soil test level of L- would be 3 pounds per 1,000 ft^2.)

Do not use high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Recommendations for Establishment of Turf

These recommendations are for timely planted turfgrass, that is, the seed or vegetative material (sod, plugs, and /or sprigs), are planted at a time of the year when temperatures and moisture are adequate to maximize turfgrass establishment. These recommended establishment periods would be late summer to early fall for cool-season turfgrasses and late spring through mid-summer for warm-season turfgrasses.

Nitrogen Applications

At the time of establishment, apply no more than 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses, using a material containing slowly available forms of nitrogen, followed by one or two applications beginning 30 days after planting, not to exceed a total of 1.8 pounds per 1,000 ft^2 total for cool season grasses and 2.0 pounds per 1,000 ft^2 for warm season grasses for the establishment period. Applications of WSN cannot exceed more than 0.7 pounds per 1,000 ft^2 within a 30 day period.

Phosphorus and Potassium Recommendations for Establishment

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Nutrient Recommendations for Golf Courses

Nitrogen Timing

The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

If the full rate or the highest rate of the recommendation range for a monthly application is applied in a single application, then the interval of application for nitrogen shall be at least 30 days to allow turf to utilize previous nitrogen applications. If several applications are to be made for the monthly nitrogen rate, then the timing of the applications shall be at approximately even intervals, with the rate per application to be evenly divided between each application with the total nitrogen applied not to exceed the maximum monthly rate. Use of Water Insoluble Nitrogen forms of Nitrogen is encouraged.

Nitrogen Rates

	Grass Type	Maximum WSN Rate Per Application pounds per 1,000 ft^2	Total Annual N Rate pounds per 1,000 ft^2 [a]
Greens		0.7 [b]	3-6
Tees		0.7 [b]	2-5
Fairways	Cool Season	0.7 [c]	2-3
	Warm Season	0.7 [c]	3-4
Fairways - Intensive Management	Cool Season	0.5 [d]	3-4
	Warm Season	0.5 [d]	3.5-4.5
Overseeding Warm Season Fairways		0.5	1.25
Roughs		0.7 [e]	1-3

Fairways-Overseeding Warm Season Fairways

* For warm season grasses, up to 0.7 pounds of nitrogen per 1,000 ft^2 in a 30 day period may be applied in the Fall after perennial ryegrass overseeding is well established. An additional nitrogen application of 0.7 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Applications using WSN may not exceed 0.7 pounds per 1,000 ft^2 within a 30 day period.

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application, may be applied any time during the application windows described in Recommended Season of Application for Nitrogen Fertilizers of this section, but must be considered with the total annual nitrogen application rate.

(a) Use higher rates for intensively used turf where accelerated growth and/or rapid recovery are required, use lower rates for maintenance of lesser used areas; do not exceed total annual nitrogen levels as stated above.

(b) Greens and Tees - Per application timing must be a minimum of 30 days between applications. A rate of 0.9 pounds per 1,000 $ft^2$of total nitrogen may be applied for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(c) Fairways-Normal Management (Non-Irrigated or Irrigated) - Per Application timing must be a minimum of 30 days between applications. Total nitrogen application rates of 0.9 pounds per 1,000 ft^2 of total nitrogen may be applied for cool season grasses or 1.0 pound per 1,000 ft^2 of total nitrogen may be applied for warm season grasses using a material containing slowly available forms of nitrogen.

(d) Fairways-Intensive Management (Irrigated) - Per Application timing must be a minimum of 15 days between applications. This option requires optimized timing of more frequent applications of nitrogen with lesser rates per application. Alternatively, a maximum application rate of 0.9 pounds per 1,000 ft^2 of total nitrogen for cool season grasses or 1.0 pounds per 1,000 ft^2 of total nitrogen for warm season grasses using a material containing slowly available forms of nitrogen may be applied with a minimum of 30 days between applications.

(e) Foliar fertilizer may be applied to warm season grasses within 30 days prior to the first killing frost in the fall, at a rate not to exceed 0.1 pounds per 1,000 ft^2 of nitrogen per application. This application must be accounted for in the total annual nitrogen rate.

Phosphorus and Potassium Recommendations for Established Golf Courses

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.

* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Nitrogen Management on Athletic Fields - Cool Season Grasses

* This program is intended for those fields which are under heavy use.

* Nitrogen recommendations are based on the assumption that there is adequate soil moisture to promote good turf growth at the time of application. If no rainfall has occurred since the last application, further applications should be delayed until significant soil moisture is available.

Cool Season Grasses	Maintenance Program[a]	
	Normal	Intensive
When to Apply[b]	Pounds per 1,000 ft^2 Nitrogen	
After August 15	------	0.5
September	0.7	0.7 [(c)]
October	0.7 [(c)]	0.7 [(c)]
November	0.5	0.7 [(c)]
April 15 - May 15	0.5	0.5
June 1 - June 15	----	0.5

Notes:

* Soluble nitrogen rates of 0.25 pounds per 1,000 ft^2 or less which may be a component of a pesticide or minor element application may be applied any time the turf is actively growing, but must be considered with the total annual N application rate.

* WSN = water soluble nitrogen; WIN = water insoluble nitrogen

(a) Intensive managed areas must be irrigated.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the preceding Season of Application for Nitrogen section, using Figures 6-1 and 6-2.

(c) Rates up to 0.9 pounds per 1,000 ft^2 of total nitrogen can be applied using a material containing slowly available forms of nitrogen, with a minimum of 30 days between applications.

(d) Make this application only if turf use warrants additional N for sustaining desirable growth and /or color.

Nitrogen Management on Athletic Fields - Warm Season Grasses
The following comments apply to both Naturally Occurring or Modified Sand based Fields and Predominantly Silt/Clay Soil Fields:

* Annual nitrogen rates for warm season grasses shall not exceed **4 pounds** in areas which have the average first killing frost on or before October 20, and shall not exceed **5 pounds** in areas which have the average first killing frost after October 20 as shown in Figure 6-1. Nitrogen rates and timings for overseeding warm season grasses are not included in these rates.

* April 15 - May 15 applications should not be made until after complete green-up of turf.

* Nitrogen applications June through August should be coordinated with anticipated rainfall if irrigation is not available.

* Use the lower end of the ranges for non-irrigated fields and the higher end of the ranges should be used on fields with irrigation.

* Nitrogen rates towards the higher end of the ranges may be applied on heavily used fields to accelerate recovery, however per application and annual rates cannot be exceeded.

Bermudagrass - Predominantly Silt/Clay Soil Fields [a]		
When to Apply[b]	**Pounds per 1,000 ft^2 Nitrogen**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7	
July	0.5 - 0.7 [(d)]	
August	0.5 - 0.7 [(d)]	
Sept 1 - Sept 15	0.5 - 0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb-Mar	0.5 [(e)]	

Bermudagrass - Naturally Occurring or Modified Sand based Fields [a]		
When to Apply[b]	**Lbs/1,000 ft^2 Nitrogen[c]**	**First Fall Killing Frost Date[b]**
April 15 - May 15	0.5 - 0.7 [(c)]	Before Oct. 20
June	0.7 [(c)]	
July	0.7 [(c)]	
August	0.7 [(c)]	
Sept 1 - Sept 15	0.7 [(c)]	After Oct. 20
If overseeded with perennial ryegrass		
Oct - Nov	0.5 [(e)]	
Feb - Mar	0.5 [(e)]	

The following notes apply to both of the Bermudagrass tables above:

(a) In the Piedmont and the Ridge and Valley areas of Virginia, the existing native soil will normally be

lower water infiltration and percolation rates and greater nutrient holding capacity. However, most areas of the Coastal Plain have existing native soils that are predominantly sandy textured soils and other facilities throughout the state may choose to install modified soil root zones that are predominantly sand (>50%) in order to maximize drainage and reduce compaction tendency. If subsurface drain tile surrounded by sand and/or gravel has been installed under the playing surface of any of these fields, their nitrogen programs should be managed as predominantly sand-based systems to minimize nutrient leaching.

(b) The beginning and ending dates for application of nitrogen shall be determined using guidance and frost date maps contained in the Season of Application for Nitrogen section, Figures 6-1 and 6-2.

(c) WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 each with a minimum of 15 days between applications. Alternatively, using a material that contains slowly available nitrogen sources, split applications of 0.5 pounds per 1,000 ft^2 may be applied with a minimum of 15 days between applications.

(d) If a material containing slowly available forms of nitrogen is used, rates up to 1.0 pounds of nitrogen per 1,000 ft2 may be applied in a single application with a minimum of 30 days between applications.

(e) For overseeded warm season grasses, an additional 0.7 pounds per 1,000ft^2 of WSN may be applied in the Fall after the perennial ryegrass overseeding is well established. The WSN must be applied as two applications not to exceed 0.35 pounds per 1,000 ft^2 of nitrogen each, with a minimum of 15 days between applications. Additional WSN application of 0.5 pounds per 1,000 ft^2 may be made in February-March to overseeded perennial ryegrass if growth and color indicate need. Alternatively, split applications of 0.5 pounds of nitrogen per 1,000 ft^2 each with a minimum of 15 days between applications may be applied using a material containing slowly available nitrogen sources.

Phosphorus and Potassium Recommendations Athletic Fields

Apply phosphorus (P_2O_5) and potassium (K_2O) fertilizers as indicated by a soil test using the following guidelines:

Soil Test Level	Nutrient Needs (lbs /1000 ft^2) *	
	P_2O_5	K_2O
L	2-3	2-3
M	1-2	1-2
H	0.5-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.
* For irrigated turf grown on Naturally Occurring and Modified Sand Based soils only, up to 0.5 pounds of P_2O_5 per 1,000 ft^2 may be applied, if needed, to aid in recovery of damaged turf during times of extreme use. No phosphorus applications shall be made when the soil phosphorus test level is above 65% saturation, based on the soil test phosphorus values and region as listed in Table 4-1 of Section IV.
* Avoid the general use of high phosphorus ratio fertilizers such as 10-10-10 or 5-10-10, unless soil tests indicate phosphorus availability below the M+ level.

Establishment/Grow-In Recommendations for Golf Courses, Athletic Fields, and Sod Production

(These rates replace normal maintenance fertilizer applications that would have occurred during these time periods.)

Warm Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - late May - June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds of WSN per 1,000 ft^2 per week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - late May -June for sprigs, plugs, sod, or seeding.
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - Up to 1.0 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied as one application or lesser amounts applied at regular intervals, through the first 4 weeks, not to exceed a total of 1.0 pounds of nitrogen per 1,000 ft^2.
* Four weeks after planting - 0.25 pounds per 1,000 ft^2 using a material containing slowly available forms of nitrogen per week for the next 4 weeks.

Cool Season Grasses:
Predominantly Silt/Clay Soils

* Plant Date - August - September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 pounds of nitrogen per 1,000 ft^2 using a material containing slowly available forms of nitrogen may be applied; 30 days after planting, apply up to 0.5 pounds of nitrogen per 1,000 ft^2 every week for the next 4 weeks.

Naturally Occurring or Modified Sand Based Soils

* Plant Date - August -September (preferred)
* Apply P_2O_5 and K_2O as needed based on soil test recommendations, incorporate into the top 2 inches if possible.
* At Planting - up to 0.9 lbs pounds of nitrogen per 1,000 ft^2 using a using a material containing slowly available forms of nitrogen may be applied.
* Apply up to 0.25 pounds of nitrogen per 1,000 ft^2 per week after germination is complete, for the next 8 weeks. If using a material containing slowly available forms of nitrogen, up to 0.5 pounds of nitrogen per

Sod Installations:

Site preparation should include a soil test, which can be done several months before the project begins in order to have time to get test results back. Phosphorus, potassium and lime applications should be based on soil test analysis to increase the likelihood of a successful installation. Shallow incorporation of material into the top 2 inches of the soil is preferred prior to sod installation, especially if lime is required.

No more than 0.7 pounds of nitrogen per 1,000 ft^2 of WSN may be applied before sod is installed. Alternatively, using a material with slowly available forms of nitrogen, 0.9 pounds of nitrogen per 1,000 ft^2 for cool season grasses or 1.0 pounds of nitrogen per 1,000 ft^2 for warm season grasses may be applied before sod is installed.

After installation apply adequate amounts of water to maintain sufficient soil moisture (i.e. to prevent visible wilt symptoms). Excessive water will limit initial root development. After roots begin to establish (as verified by lightly tugging on the sod pieces), shift irrigation strategy to a deep and infrequent program in order to encourage deep root growth. Apply approximately 1 inch of water per week (either by rainfall or irrigation), making sure that the water is being accepted by the soil profile without running off. This will insure thorough wetting of the soil profile.

After sod has completed rooting and is well established, initiate the normal nitrogen management program as described for the appropriate use shall be recommended.

Phosphorus and Potassium Recommendations for Establishment/Grow-In/Installation

Soil Test Level	Nutrient Needs (lbs /1000 $ft^{2)}$ *	
	P_2O_5	K_2O
L	3-4	2-3
M	2-3	1-2
H	2-1	0.5-1
VH	0	0

* For the lower soil test level within a rating, use the higher side of the range and for higher soil test level within a rating use the lower side of the recommendation range.

Other Turf Management Considerations for Golf Courses, Athletic fields, and Home Lawns

Lime Recommendations
Lime should be recommended based on a soil test to maintain soil pH within an agronomic range for turfgrass.

For new seedings where lime is recommended, incorporate the lime into the topsoil for best results.

Returning Grass Clippings
Recycling of clippings on turf should be encouraged as an effective means of recycling nitrogen, phosphorus, and potassium. Proper mowing practices that ensure no more than 1/3 of the leaf blade is removed in any cutting event will enhance turf appearance and performance when clippings are returned. Return all leaf clippings from mowing events to the turf rather than discharging them onto sidewalks or streets. Rotary mulching mowers can further enhance clipping recycling by reducing the size of clippings being returned to the turfgrass canopy.

Management of Collected Clippings
If clippings are collected they should be disposed of properly. They may be composted or spread uniformly as a thin layer over other turf areas or areas where the nutrient content of the clippings can be recycled through actively growing plants. They should not be blown onto
impervious surfaces or surface waters, dumped down stormwater drains, or piled outside where rainwater will leach out the nutrients creating the potential for nutrient loss to the environment.

Use of Iron
Iron applications (particularly foliar applications) may periodically be used for enhanced greening as an alternative to nitrogen. These applications are most beneficial if applied in late spring through summer for cool season grasses and in late summer/fall applications for warm-season grasses.

Impervious Surfaces
Do not apply fertilizers containing nitrogen or phosphorus to impervious surfaces (sidewalks, streets, etc.). Remove any granular materials that land on impervious surfaces by sweeping and collecting, and either put the collected material back in the bag, or spread it onto the turf and /or using a leaf blower etc. to return the fertilizer back to the turfgrass canopy.

Training Schedule for Recognizing and Reporting Illicit Discharges		
Staff Position	**FTEs***	**Training Due**
Department of Public Works		
Public Works Director	1	PY3, PY5
Engineering Technicians	1	PY3, PY5
Street Superintendent	1	PY3, PY5
Collections Superintendent	1	PY3, PY5

*Full Time Employees

Training Schedule for Fertilizer and Pesticide Management		
Staff Position	**FTEs***	**Training Due**
Department of Public Works		
Parks and Recreation Director	1	PY3, PY5
Town Arborist	1	PY3, PY5
Street Superintendent	1	PY3, PY5
Parks and Recreation Department	3	PY4
Street Department	6	PY4

*Full Time Employees

Training Schedule for Good Housekeeping and Pollution Prevention		
Staff Position	**FTEs***	**Training Due**
Department of Public Works		
Parks and Recreation Director	1	PY3, PY5
Public Works Director	1	PY3, PY5
Engineering Staff	2	PY3, PY5
Collections Superintendent	1	PY3, PY5
Street Superintendent	1	PY3, PY5

*Full Time Employees