

**Nutrient Management Plan
for the
Manassas Campus
Northern Virginia Community College**

Prepared for:

**Northern Virginia Community College
Facilities Planning Division, Rm. 314 B
8333 Little River Turnpike
Annandale, VA 22003**

Prepared By:

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**Wetland Studies and Solutions, Inc.
1620 Brook Road
Richmond, VA 23220**

Location Information	
Physical Address	6901 Sudley Rd
City State Zip	Manassas, VA 20109
Coordinates	+38 48' 34.11"
NAD 83 Deg Min Sec	- 77 31' 3.51"
VAHU6 Watershed Code	PL44 – Middle Bull Run
County	Prince William

Square Footage of Management Areas	
Total	17.72 acres (771,757 ft ²)
Area 1	16.09 acres (701,050 ft ²)
Area 2	1.62 acres (70,706 ft ²)

Plan Start Date	July 1, 2024
Plan End Date	July 1, 2027

Planner Signature	Sara Shelton
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1.0 INTRODUCTION AND SITE DESCRIPTION

1.1 Introduction

This Nutrient Management Plan (NMP) is for the Manassas Campus of the Northern Virginia Community College (NOVA) located in the western portion of Prince William County, Virginia, just north of I-66 (Figure 1).

This NMP addresses only the nutrient management of turfgrass. Management of other vegetated areas containing trees, flowering ornamentals, small shrubs and groundcovers, is performed by each facility and their landscape contractor based on very site-specific conditions including but not limited to the type and status of vegetated areas, annual soil testing, and the occurrence of pests and weeds. This NMP is effective for three years (until July 1, 2027) or until major renovation or other changes to maintenance practices occur. This NMP should be used as a resource for planning the quantity and timing of turfgrass nutrient application based on sound agronomic practices.

1.2 Site Description

The 101-acre Manassas Campus contains turfgrass in many areas including around campus buildings, along roadways and around and within parking lots. The Manassas Campus has an athletic field used for lacrosse and other field sports as well as a large turf area surrounding an amphitheater. All turf areas, except for the athletic field, have been seeded with a tall fescue blend (mix of fine leaf tall fescue and Kentucky bluegrass) and are therefore categorized as cool season turf. The athletic field, which was installed in 2014, is seeded with warm season bermudagrass. Only the athletic field is irrigated. The remainder of the turf is non-irrigated.

The area surrounding the amphitheater is very sloped as well as the area behind Buildings MB and MT. In general, turf conditions are good except for some of the turfed medians and the strongly sloped areas surrounding Buildings MB and MT.

There are two environmentally sensitive areas located on the Manassas Campus, and several stormwater management facilities as shown on Figures 2, and 3. Section 4 addresses environmentally sensitive areas.

1.3 Current and Future Turf Maintenance

A landscaping maintenance contractor will be performing most turf management including all nutrient applications. It will be the responsibility of the Landscape Supervisor and the campus Facility Manager to ensure the management plan is followed.

2.0 SOIL SAMPLING AND ANALYSIS

Although most of the soils in the turf areas have been modified by cut and fill activities, many areas still retain some of the characteristics from the U.S. Department of Agriculture (USDA) soil survey and may still be classified as loams to clay loams. The USDA soil survey indicates some of the soils on the campus were characterized as hydric or partially hydric soils with low infiltration rates and high runoff potential.

Soil samples were collected on April 22, 2024, from four (4) different turfgrass areas across the campus and submitted for laboratory analysis including pH, buffer pH, phosphorus and potassium, and other soil properties. Figure 2 shows the locations of the soil sampling areas as well as environmentally sensitive areas and Table 1 presents the laboratory results. Appendix A presents the soil laboratory data. No sampling was performed within wooded or landscaped areas.

Soil laboratory results were converted into nutrient management ratings based on the Virginia Nutrient Management Standards and Criteria (VNMS&C). Soil phosphorous levels ranged from L- to L, and potassium concentrations ranged from M to H-. Soil pH ranged from 6.4 to 6.8 Standard Units (SU), with all but one sample having a pH above the target level of 6.2 for turf.

3.0 NUTRIENT MANAGEMENT AREAS

Based on the soil test results, current turf conditions, the intensity of use, and overall visibility and aesthetic considerations, two Nutrient Management Areas (NMA) at the Manassas Campus have been established for this NMP. The number of nutrient management areas was kept to a minimum to facilitate effective management and still protect water quality and maintain healthy turf. Figure 3 shows the nutrient management areas. Tables 2a and 2b present the application schedules for the nutrient management and liming areas, discussed in greater detail in Section 3.1 below.

3.1 Nutrient and Liming Applications

3.1.1 Nitrogen, Phosphorous and Potassium

Nitrogen, phosphorous (P₂O₅) and potassium (K₂O) are the three macronutrients essential for healthy turf and, along with lime applications, are the central focus of the NMP. Phosphorous and potassium recommendations are based on the soil laboratory results. Nitrogen recommendations are based on the turfgrass needs, not soil test results, which vary based on the type of turfgrass (cool vs. warm season) and level of management (standard vs. intensive). Recommended rates and timing of all three macronutrients are based on the VNMS&C. This NMP uses the most restrictive application rate for each NMA based on individual sample results where multiple sampling areas are part of the same NMA.

The acceptable window for nitrogen application for cool season fescue turf (NMA 1) at the Manassas Campus is from March 4 until December 6. Although aggressive spring and summer nitrogen fertilization can result in lush, dark green foliage, this occurs at the expense of the turf's root system. Turf with an inadequate root system will then struggle in the summer heat and moisture conditions. Additionally, too much nitrogen in spring and summer for cool season turf can result in leaching or runoff to nearby waterbodies. For these reasons, only 0.5 pounds of slow-release nitrogen (per 1000 ft²) is recommended during April to May for the campus to provide a sustained growth response without a flush in shoot growth at the expense of the roots. The bulk of nitrogen should be applied in monthly increments from September through November. As phosphorous and potassium are not as mobile as nitrogen and generally reside in soil for longer periods of time, the application timing of these two macronutrients is not as critical as nitrogen. Incremental applications of these nutrients from September through November are recommended.

The acceptable window for nitrogen application for non-overseeded warm season turfgrass (NMA 2) at the Manassas Campus is from April 15 through September 25. April to May nitrogen applications should not be made until after complete green-up of turf. Fields overseeded with ryegrass in the fall are allowed additional late fall and early spring nitrogen applications after the perennial ryegrass is well established as identified in Table 2b. The bulk of nitrogen should be applied in monthly increments from June through August. February to March and October to November applications of nitrogen should only be performed if overseeding with perennial ryegrass. Heavy nitrogen fertilization in spring causes excessive shoot production and can weaken root development and set the turf up for disease. Heavy spring nitrogen fertilization can also be detrimental to the grass if there is a late frost after green-up. Avoiding excessive nitrogen applications in late summer and early fall can also reduce disease severity.

3.1.2 Lime and pH

Soil acidity is critical to plants as it affects the availability of nutrients in the soil and potential leaching of nutrients from the soil. Most warm and cool season turfgrasses prefer a slightly acidic soil pH of approximately 6.2 Standard Units (SU). Periodic lime applications are necessary for many Virginia soils to correct low pH, add buffering capacity, and provide secondary nutrients calcium and magnesium as well as some micronutrients. Liming rates provided by the laboratory are based on the soil pH and the pH buffer indices. Based on the 2024 soil samples, no lime applications are recommended for the soil sampling areas.

Liming recommendations are only for the first year following sampling. The soil should be tested for soil pH and Buffer pH in the late fall to winter in each year and if necessary, liming should continue annually.

3.2 Problem Turfgrass Areas & Temporarily Inactive Nutrient Management Areas

Parking medians within large parking lots are problem turf areas and are the result of poor soil quality, over-compaction, active erosion, or shading and poor soil moisture conditions caused by nearby trees. Areas of ineffective groundcover should be temporarily removed from active nutrient management until corrective measures can be applied to improve the turfgrass or groundcover conditions.

Corrective action options will vary by area but may include additional soil amendments (compost/topsoil), aeration or shallow tilling, and the use of mulch, turf mats and blankets. Alternative landscaping such as pavers, and other hardscape treatments may be the best alternative for some areas. If turfgrass is the desired vegetative cover, the soil should be retested for soil and buffer pH and adjusted accordingly with limestone as part of corrective action. Once turfgrass is re-established the areas may be included in the nutrient recommendations.

3.3 Selection of Fertilizers

Specific fertilizers have not been selected as a part of this NMP to provide greater flexibility and cost savings. The landscape contractor has the option to select either commonly used fertilizer blends that they may already have in stock or are readily available, or they can use custom blends, a common practice in the commercial landscaping industry. Slow-release nitrogen containing fertilizers are recommended. This NMP will require revision should the landscape contractor and the campus Facility Manager decide to use animal manures or Class B biosolids (not of exceptional quality).

Provided the maximum rate of nitrogen per application and the total annual rates of all three nutrients are not exceeded as detailed in Tables 2a and 2b, the landscape contractor may use their discretion with the exact ratio of nutrients applied per application.

3.4 Pre- and Post-Emergent Herbicides

Weed control is a necessary requirement for healthy turf and has been implemented in the past at the Manassas Campus. In the past, pre and post emergent herbicides containing nitrogen fertilizers were applied in spring and early summer months for the campus grounds. As presented in Section 3.1.1, only one application of slow-release nitrogen is recommended in the late spring. Therefore, additional straight application of herbicides without nitrogen additives may be required.

Similarly, for the athletic field, it is best not to apply straight herbicides if using before spring green up and not to apply any herbicides containing nitrogen after September 25th.

3.5 Precautions for Fertilizer Applications

General precautions for fertilizer application include:

- Avoid applying fertilizers on steep slopes 48-hours prior to a rain event.
- Do not apply fertilizers to frozen or snow-covered ground, nor should they ever be used as ice melt.
- Avoid/minimize application of fertilizers to impervious areas such as parking lots, roads, and sidewalks, and within 25 feet of environmentally sensitive areas and stormwater collection/management facilities.
- 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.

4.0 ENVIRONMENTALLY SENSITIVE AREAS & RECOMMENDED BUFFERS

Two environmentally sensitive areas and several stormwater management facilities are located on the Manassas Campus as shown on Figures 2 and 3:

- Two stream segments in the southeastern portion of campus
- A grass channel and level spreader east of MB Building
- Two bioretention basins south and west of MP Building
- Filterra north of the MP Building
- Detention basin located southeast of MC Building
- Barracuda, StormTech Chamber and a BayFilter in parking lots 1 and 2
- Bioretention basin southwest of MTS Building

A no-fertilizer/pesticide application buffer area of at least 25 feet and preferably 50 feet should be established around these sensitive areas. Where practicable, native vegetation may be an alternative to turf in the buffer areas. Turf in the detention basin and swale should be mowed at a greater height.

It is noted that identification of sensitive natural resources areas such as wetlands and streams is based on the publicly available National Hydrologic Dataset and the U.S. Fish & Wildlife Service (USFWS) National Wetland Inventory Maps. Field mapping of other wetlands and streams that may exist on the campus was outside the scope of this NMP.

5.0 OTHER TURF MANAGEMENT CONSIDERATIONS

Aeration - Extensive core cultivation/aeration in the late summer to early fall is recommended for the Manassas campus. Core aeration is very disruptive to surface smoothness, but it is the best way to relieve the physical effects of soil compaction and increase soil oxygen levels.

Grass Seed Type – VCE 2014 - 2015 - Virginia Turfgrass Variety Recommendations <https://www.sites.ext.vt.edu/newsletter-archive/turfgrass/index.html> - (most recent year) should be referenced when selecting seed mix for over-seeding. The type should be suitable to environmental conditions of the Northern Virginia Transition zone. A general recommendation for the Manassas Campus is 90% Tall Fescue possibly blended with 10% Kentucky Bluegrass for turf in primarily sunny locations. Fine fescue blends may be more appropriate for shadier turf areas.

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. Since iron is a micronutrient, its application levels are very low. The color response is short-lived (typically two to three weeks) because the iron-induced color response in the leaves is removed by mowing.

Returning and Management of Grass Clippings - The recycling of grass clippings on turf should be encouraged as an effective means of recycling nitrogen, phosphorus, and potassium. Where aesthetics allows, all clippings from mowing events should be returned to the turf rather than discharging them onto sidewalks or streets. Clippings 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.

Spreader Equipment Calibration - Spreader equipment calibration is critical to NMP implementation. The landscape contractor should supply equipment calibration records to the campus Facility Manager on a routine basis.

6.0 RECORDKEEPING

Proper NMP implementation requires diligent record keeping of fertilizer, lime, and herbicide applications, and turfgrass conditions. Important information to retain with the plan includes soil tests reports; spreader settings; calibration results, dates of fertilizer application and rates applied; seeding or renovation; and unusual stresses caused by disease, drought, and pests. This information will also provide the background needed for future plan revisions.

7.0 REFERENCES

Nutrient Management Training and Certification Regulations 4VAC50-85
<https://www.dcr.virginia.gov/soil-and-water/document/nm-training-certification-regulations-2022.pdf>

Virginia Nutrient Management Standards and Criteria (Revised July 2014):
<https://www.dcr.virginia.gov/document/standardsandcriteria.pdf>

TABLES

Table 1: Soil Test Summaries

Site:		Manassas Campus – NOVA									
Testing Lab:		Waypoint Analytical (Formerly A&L Eastern Laboratories)									
Sample Date:		4/22/2024									
Soil Sampling Area ID	Square Feet	Soil pH (SU)	Buffer pH (SU)	P (Mehlich III) ppm	P (Mehlich I) ppm	P (H/M/L)	K (Mehlich III) ppm	K (Mehlich I) ppm	K (H/M/L)	Soil description	Turf Species
MA-1	355,901	6.8	6.9	6	0	L-	118	84	M+	Dark brown, sandy loam	Cool season, fescue
MA-2	200,324	6.5	6.83	11	2	L-	112	80	M+	Dark red-brown, sandy clay loam	Cool season, fescue
MA-3	144,826	6.4	6.82	8	0	L-	132	94	H-	Dark red-brown, sandy clay loam	Cool season, fescue
MA-4	70,706	6.6	6.86	14	3	L	103	73	M	Dark brown, sandy loam	Warm season, bermuda

Notes: SU = Standard Units; ppm = parts per million; P and K ratings are from Virginia Nutrient Management Standards & Criteria.

Table 2a: Nutrient Application Worksheet for Nutrient Management Area 1Site: **Manassas Campus – NOVA**Begins: **7/1/2024** Expires: **7/1/2027**Nutrient Management Area: **1 (MA-1, MA-2 & MA-3)**Square Feet: **701,050**Landscape Plants: **Cool Season Turf (Fescue)**

Annual Nutrient Needs (lbs./1000 ft ²) ¹	Application Month/Day ^{1,2}	Amendment Material Notes	% Slow-Release N	Total N (lbs./1000 ft ²)	Total P205 (lbs./1000 ft ²)	Total K20 (lbs./1000 ft ²)	Lime Recommendation (lbs./1000 ft ²) ³
3.0 - 3.0 - 1.0	April 1	N	50% or greater	0.50	0	0	
	Sept 1	Aerate, Overseed & N, P ₂ O ₅ , K ₂ O	50% or greater	0.90	1.00	0.50	
	Oct 1	N, P ₂ O ₅ , K ₂ O	50% or greater	0.90	1.00	0.25	
	Nov 1	N, P ₂ O ₅ , K ₂ O	50% or greater	0.70	1.00	0.25	
	Totals:			3.0	3.0	1.0	

Notes:

1. Fertilizer recommendations are flexible provided the following conditions are met: (a) no more than 0.7 pounds of Water-Soluble N per 1000 ft² is applied within a 30-day period; (b) no more than 0.9 pounds of Total N (per 1000 ft²) may be applied within a 30-day period; and (c) Total annual fertilizer amounts for each nutrient should not exceed the Annual Nutrient Needs listed in column 1.
2. The month and day designations are a general guideline. Apply as close to the month as possible, using the day designation to determine the interval between applications.
3. No lime applications are recommended for NMA 1. Lime applications are for the first year after sampling only. Liming for years 2 and 3 should be based on additional soil pH and Buffer pH testing.
4. Do not apply inorganic fertilizers on frozen or snow-covered ground, or on denuded areas. Any fertilizer that makes its way onto impervious surfaces should be swept or blown back into pervious turfgrass covered areas. Do not use fertilizers as ice melt.
5. Use a drop spreader for application of inorganic fertilizers on turf areas less than 10 feet wide or on slopes greater than 2%.
6. Apply pre and or post emergent herbicides as needed, but do not use fertilizer containing herbicide prior to March 4. Conditions must be met in Note 1.

Table 2b: Nutrient Application Worksheet for Nutrient Management Area 2Site: **Manassas Campus – NOVA**Begins: **7/1/2024** Expires: **7/1/2027**Management Area: **2 (MA-4)**Square Feet: **70,706**Landscape Plants: **Warm Season Turf (Bermuda)**

Annual Nutrient Needs (lbs./1000 ft ²) ^{1d}	Application Month/Day ²	Amendment Material Notes	% Slow-Release N	Total N ^{1a,b,c}	Total P ₂ O ₅ (lbs./1000 ft ²)	Total K ₂ O (lbs./1000 ft ²)	Lime Recommendation (lbs./1000 ft ²) ³
4.2* - 2.5 - 1.5	April 15	N	50% or greater	0.7			
	May 15	N	50% or greater	0.7			
	June 15	N, P ₂ O ₅ , K ₂ O	50% or greater	0.7	0.50	0.25	
	July 15	N, P ₂ O ₅ , K ₂ O	50% or greater	0.7	0.50	0.25	
	August 15	N, P ₂ O ₅ , K ₂ O	50% or greater	0.7	0.75	0.50	
	Sept 15	N, P ₂ O ₅ , K ₂ O	50% or greater	0.7	0.75	0.50	
	Totals:			4.2	2.5	1.50	
If Overseeded with Perennial Ryegrass							
1.0 – 0 - 0	Oct – Nov	N	50% or greater	0.5 ^(1e)	0	0	
	Feb - Mar	N	50% or greater	0.5 ^(1e)	0	0	
	Totals:			1.0	0	0	

Notes:

*5.0 lbs./1000 ft² of Nitrogen (excluding Nitrogen rates for overseeding) is allowed, but only 4.2 lbs./1000 ft² is recommended for this NMP based on intensity of use.

1. Fertilizer recommendations are flexible if the following conditions are met: (a) no more than 0.7 pounds of Water-Soluble N per 1000 ft² is applied within a 30-day period. Water-Soluble N must be applied as two applications not to exceed 0.35 lbs./1000 ft² each with a minimum of 15 days between applications; (b) using a material containing slowly available nitrogen sources, split applications of 0.5 lbs./1000 ft² may be applied with a minimum of 15 days between applications; (c) no more than 1.0 pounds of Total N per 1000 ft² may be applied within a 30-day period; (d) total annual fertilizer amounts for each nutrient shall not exceed the Annual Nutrient Needs listed in column 1; (e) up to 1.0 lb./1000 ft² of additional nitrogen is allowed if overseeding with perennial ryegrass. This may be accomplished using split applications of 0.5 lbs./1000 ft² applied with a minimum of 15 days between applications.

2. The month and day designations are a general guideline. Apply as close to the month as possible, using the day designation to determine the interval between applications. April and May applications should not be made until after complete green-up of turf.

3. No lime is required for the turf areas in NMA 2 for the first year of this NMP. Lime applications are only for the first year. Liming for years 2 and 3 shall be based on additional soil pH and Buffer pH testing.

4. Do not apply inorganic fertilizers on frozen or snow-covered ground, or on denuded areas. Any fertilizer that makes its way onto impervious surfaces should be swept or blown back into previous turfgrass covered areas. Do not use fertilizers as ice melt.

5. Use a drop spreader for application of inorganic fertilizers on turf areas less than 10 feet wide or on slopes greater than 2%.

6. Apply pre and/or post emergent herbicides as needed, but do not use fertilizer containing herbicide before April 15th. Conditions must be met in Note 1.

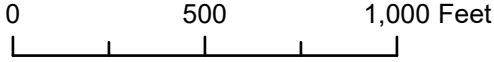
FIGURES

Figure 1: Project Location

 Manassas Campus Boundary

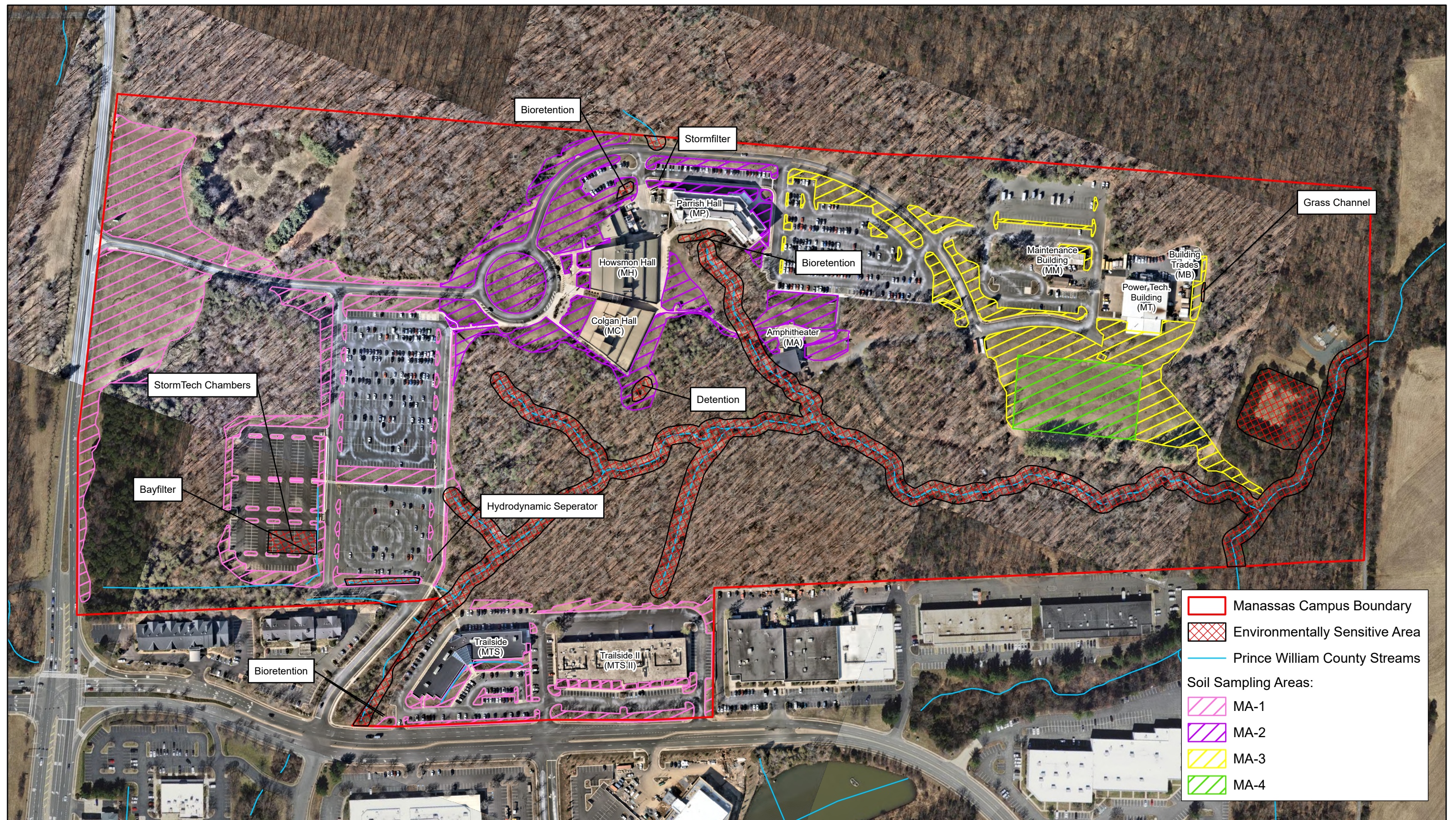


Date: J. Bradley, May 24, 2024
Source: 2021-2023 VGIN VBMP Orthoimagery
Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet



Manassas Campus
Figure 1: Project Location
NVCC NMP

Figure 2: Soil Sampling Areas



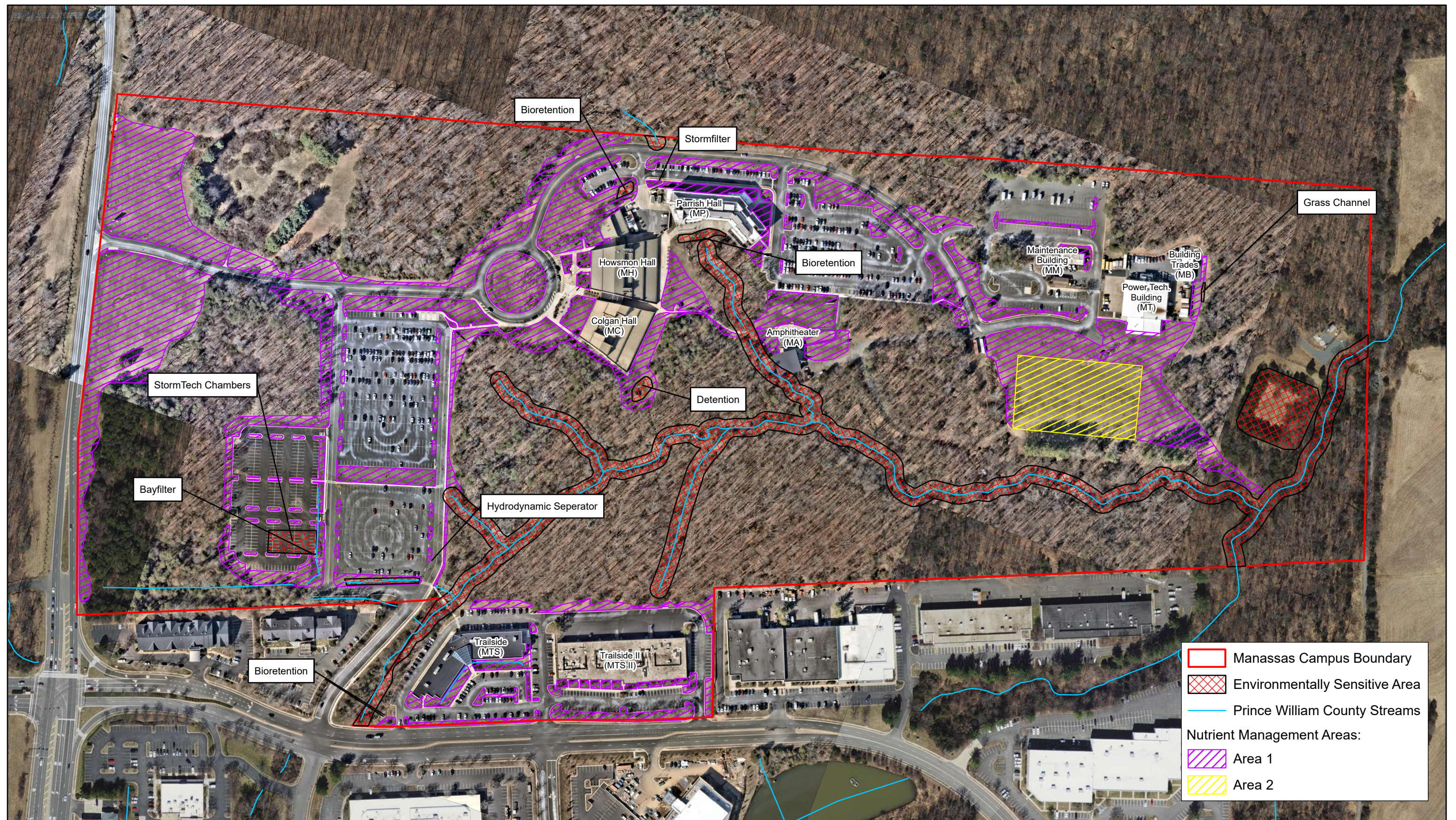
Date: J. Bradley, May 24, 2024
 Source: Nearmap® (February 2024); 2021-2023 VGIN VBMP Orthoimagery,
 Prince William County Digital Data
 Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

0 250 500 Feet



Manassas Campus
Figure 2: Soil Sampling Areas
 NVCC NMP

Figure 3: Nutrient Management Areas



- Manassas Campus Boundary
- Environmentally Sensitive Area
- Prince William County Streams
- Nutrient Management Areas:
- Area 1
- Area 2



Date: J. Bradley, May 24, 2024
 Source: Nearmap® (February 2024); 2021-2023 VGIN VBMP Orthoimagery,
 Prince William County Digital Data
 Projection: NAD 1983 StatePlane Virginia North FIPS 4501 Feet

0 250 500 Feet



Manassas Campus
Figure 3: Nutrient Management Areas
 NVCC NMP

APPENDICES

Appendix A: Laboratory Soil Test Results



7621 Whitepine Road, Richmond, VA 23237
Main 804-743-9401 ° Fax 804-271-6446
www.waypointanalytical.com

Send To: Wetlands Studies Solutions
1620 Brook Road
Richmond VA 23220

"Every acre...Every year."™

Grower: NVCC Manassas NVCC MA
10950 Campus Drive
Manassas VA 20109

SOIL ANALYSIS REPORT

Analytical Method(s): SMP Buffer pH Mehlich 3 Loss On Ignition Water pH

Date Received: 04/22/2024 Date Of Analysis: 04/23/2024 Date Of Report: 04/23/2024

Sample ID Field ID	Lab Number	OM	W/V	ENR	Phosphorus			Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C
		% Rate	Soil Class	lbs/A	M3 ppm Rate	ppm	Rate	K ppm Rate	Mg ppm Rate	Ca ppm Rate	Na ppm Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
MA-1	15057	4.2 M		119	6 VL			118 M	376 VH	1311 M		6.8		0.3	10.3
MA-2	15058	5.5 H		141	11 VL			112 M	415 VH	1765 M		6.5		1.0	13.6
MA-3	15059	4.7 M		127	8 VL			132 M	431 VH	1412 M		6.4		1.1	12.1
MA-4	15060	4.8 M		130	14 L			103 L	227 H	1713 H		6.6		0.7	11.4

Sample ID Field ID	Percent Base Saturation					Nitrate	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Soluble Salts		
	K %	Mg %	Ca %	Na %	H %	NO ₃ N ppm Rate	S ppm Rate	Zn ppm Rate	Mn ppm Rate	Fe ppm Rate	Cu ppm Rate	B ppm Rate	SS ms/cm Rate		
MA-1	2.9	30.4	63.6		2.9										
MA-2	2.1	25.4	64.9		7.4										
MA-3	2.8	29.7	58.3		9.1										
MA-4	2.3	16.6	75.1		6.1										

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.
Analysis prepared by: Waypoint Analytical Virginia, Inc.

by: Brandi Watson

Brandi Watson

Appendix B: Application Record Forms

Fertilizer Application Records								
Customer Information					Management Area Information			
Name:					Management Area ID:			
Address:					Management Area Size:			
					Target Species:			
					Notes:			
Date	Supervisor/Applicator	Weather Conditions			Fertilizer Analysis	Rate	Amount Fertilizer Used (1000 lbs/AC)	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								

Herbicide Application Records								
Customer Information					Management Area Information			
Name:					Management Area ID:			
Address:					Management Area Size:			
					Target Species:			
					Notes:			
Date	Supervisor/Applicator	Weather Conditions			Herbicide Analysis	Rate	Amount Herbicide 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								

Lime Application Records								
Customer Information					Management Area Information			
Name:					Management Area ID:			
Address:					Management Area Size:			
					Notes:			
Date	Supervisor/Applicator	Weather Conditions			Lime Analysis	Rate	Amount Lime Used (1000 lbs/AC)	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								

Pesticide Application Records								
Customer Information					Management Area Information			
Name:					Management Area ID:			
Address:					Management Area Size:			
					Target Species:			
					Notes:			
Date	Supervisor/Applicator	Weather Conditions			Pesticide Analysis	Rate	Amount Pesticide 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								