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COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Approval February 12, 2025

Date Received by DCR February 11, 2025

Chip Kramer
Brightpoint Community College
800 Charter Colony Parkway
Midlothian Virginia

Your nutrient management plan (NMP) dated March 1, 2025 located in Midlothian Virginia has been approved by the Virginia Department of Conservation and Recreation (DCR). The approved plan is for 20.48 acres. Only nutrient recommendations for applications to be made after the date of this letter are approved by this letter. Your NMP was written by Sara Shelton, a nutrient management planner certified by DCR.

This site has not been inspected by DCR and this approval is contingent upon site conditions being as stated in the NMP. Any revisions to this plan must be approved by DCR. Any change in personnel resulting in a change to the plan manager should be reported to the Certified Nutrient Management Planner who will then make DCR aware. Please note that this letter should be kept with the NMP and supporting documentation including nutrient application records. This plan expires on March 1 2028. Please feel free to contact me with any questions or concerns regarding this approval.

Best regards,

James Janney

James Janney
Urban Nutrient Management Coordinator
Division of Soil and Water Conservation
600 East Main Street, 24th Floor
Richmond VA 23219
(804) 513-5958

Nutrient Management Plan

**Midlothian Campus
Brightpoint Community College
Midlothian, Virginia**

**Prepared for
Brightpoint Community College
c/o Chip Kramer
Director of Facilities and Safety
800 Charter Colony Parkway
Midlothian, Virginia
804.840.8354**

**Prepared by
Sara Shelton, CLA, CNMP
Wetland Studies and Solutions, Inc.
1620 Brook Road
Richmond, Virginia 23220**

February 4, 2025

Nutrient Management Plan
for the
Midlothian Campus
Brightpoint Community College

Prepared for:

Brightpoint Community College
C/O: Chip Kramer
800 Charter Colony Parkway
Midlothian, Virginia, 23114

Prepared By:

Sara Shelton/Certified Nutrient Management Planner
Certification No. 943
Wetland Studies and Solutions, Inc.
1620 Brook Road
Richmond, VA 23220

Location Information	
Physical Address	<i>800 Charter Colony Parkway</i>
City State Zip	<i>Midlothian, Virginia, 23114</i>
Coordinates	<i>37 N 29' 23.41"</i>
NAD 83 Deg Min Sec	<i>77 W 39' 54.69"</i>
VAHU6 Watershed Code	<i>JA41 – Swift Creek Reservoir</i>
County	<i>Chesterfield</i>

Square Footage of Management Areas	
Total	<i>20.48 acres (892,248.34 ft²)</i>
Area 1	<i>0.41 acres (17,779.49 ft²)</i>
Area 2	<i>20.07 acres (874,468.84 ft²)</i>

Plan Start Date	<i>March 1, 2025</i>
Plan End Date	<i>March 1, 2028</i>

Planner Signature	<i>Sara Shelton</i>
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1.0 INTRODUCTION AND SITE DESCRIPTION

1.1. Introduction

This Nutrient Management Plan (NMP) is for the Midlothian Campus of the Brightpoint Community College (BCC) located in Chesterfield County, Virginia just northeast of the intersection of US-288 and Woolridge Road (Figure 1).

The purpose of this NMP is to maintain and improve turf conditions and facilitate effective turf management while protecting water quality. This NMP addresses only the managed turfgrass areas at the campus. Management of other vegetated areas containing trees, flowering ornamentals, small shrubs, and groundcovers is performed by each campus and their landscape contractor based on 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 March 1, 2028) 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 118-acre Midlothian Campus contains turfgrass in many areas within the campus grounds, including around campus buildings, along roadways, and around and within parking lots. All turf areas have been seeded with a tall fescue blend (mix of fine leaved tall fescue and Kentucky bluegrass) and are therefore categorized as cool season turf.

Turf areas around Midlothian Campus generally appeared in good condition. The Midlothian Campus contains no athletic fields. Turf areas around the main campus buildings are irrigated. Turf around the campus entrances at Woolridge Road are also irrigated. The remainder of the turf is non-irrigated.

There are several environmentally sensitive areas at the Midlothian Campus including five stormwater management ponds and two streams. A detention pond is located in the western portion of the property and a retention pond is located in the eastern portion of the property. Two small VDOT detention ponds are located adjacent to campus entrances along Charter Colony Parkway. A detention pond is northwest of the Facilities Building. Two unnamed tributaries of Little Tomohawk Creek are located in the northern and southern portions of the property. Section 4 addresses environmentally sensitive areas.

1.3. Current and Future Turf Maintenance

Current maintenance of turf at the BCC Midlothian campus consists of mowing, periodic aeration and seeding, and pesticide/herbicide applications. No nutrients have been applied in the last couple of years. Campus personnel have indicated the potential for increased management of turf in the future including application of fertilizers to improve turf conditions. They do not intend to intensively manage turf at the campus and prefer to follow a basic nutrient management program.

Campus staff are responsible for maintenance of turf including mowing, herbicide fertilizer and lime application, as well as aeration and overseeding. It is the responsibility of the Plan Administrator to ensure this nutrient management plan is followed.

2.0 SOIL SAMPLING AND ANALYSIS

Using the NRCS Web Soil Survey application, Wetland Studies and Solutions, Inc. (WSSI) personnel reviewed mapped soil data for the campus. Most of the soils at the campus are mapped as Mayodan series, the remaining portions are mapped as Creedmoor. Although the natural soils have been modified by cut and fill activities, they still retain most of the mapped soil series characteristics and are classified as sandy loams to sandy clay loams. Soils in problem areas were compacted with thin to no amounts of topsoil.

Areas of managed turfgrass were divided into four sampling areas based on topography, soil properties, and management intentions. Soil samples were collected from the 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 summarizes the laboratory results. Appendix A presents the soil laboratory data. No sampling was performed within wooded areas 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 concentrations ranged from Low + to Low-, and potassium concentrations ranged from Low+ to Medium+. Soil samples exhibited moderately low pH values ranging from 5.6 to 5.9. All of the soil samples were below the pH target level of 6.2 for turfgrass.

3.0 NUTRIENT MANAGEMENT AREAS

Based on the soil test results, current turf conditions, the intensity of use, overall visibility and aesthetic considerations, and the request of facility personnel implement a straightforward nutrient management program, two Nutrient Management Areas (NMA) at the Midlothian Campus have been established for this NMP. The two (2) NMAs will maintain and improve turf conditions, facilitate effective management, and protect water quality. Figures 3 and 4 show the nutrient management areas and the liming areas, respectively. Table 2 presents a suggested application schedule 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 (N), phosphorous (P_2O_5) and potassium (K_2O) are the three macronutrients essential for healthy turf, and therefore, are the central focus of the NMP along with lime applications. Phosphorous and potassium recommendations found on Table 2 are based on the soil laboratory results, the VNMS&C, and the overall turf conditions as observed during the soil sampling site visit. Nitrogen recommendations are based on turfgrass needs defined by VNMS&C, not soil test results, which vary based on the type of turfgrass (cool vs. warm season) and level of management (standard vs. intensive).

The acceptable window for nitrogen application for cool season fescue turf at the Midlothian Campus is from February 28 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 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 water bodies. For these reasons, only 0.5 pound of slow-release nitrogen is recommended during May to June 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 to November are recommended.

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 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. Table 2 shows the liming schedule and Figure 4 shows the turf areas which require lime.

According to the laboratory results, Soil Sampling Areas 1, 3 and 4 require a liming application of 70 lbs. per 1,000 ft² and Soil Sampling Area 2 requires a liming application of 60 lbs. per 1000 ft² for the first year of this NMP. See Table 2 for recommended amounts and timing of applications.

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 each following year to determine if liming is necessary following the initial recommended liming.

3.2 Problem Turfgrass Areas and Temporarily Inactive Nutrient Management Areas

Some turf areas have ineffective groundcover including turfgrass in poor condition. The poor turfgrass conditions are the result of poor soil quality, over-compaction, active erosion, steep slopes, or shading and poor soil moisture conditions. The areas where there is ineffective groundcover should be temporarily removed from active nutrient management until corrective measures can be applied to improve the turfgrass or groundcover conditions. At the time of the development of this NMP, there were no active construction sites or turf areas that were designated as ineffective and removed from active management.

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

3.3 Selection of Fertilizers

Specific fertilizers and herbicides have not been selected as a part of this NMP to provide greater flexibility and cost savings. The nutrient applicator has the option to select either commonly used fertilizer blends already 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 Director of Facilities and Safety 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 Table 2, 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 Campus. Herbicides with nitrogen included may be used in the spring provided the application of nitrogen follows the amount allowed by this NMP and the VNMS&C. However, additional straight application of herbicides without nitrogen additives may be required.

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 placing material back in the bag or spreading it onto the turf.

4.0 ENVIRONMENTALLY SENSITIVE AREAS, STORMWATER MANAGEMENT FACILITIES, AND RECOMMENDED BUFFERS

Seven environmentally sensitive areas including four stormwater management facilities were identified on the Midlothian Campus as shown on Figures 2, 3, and 4:

- A detention pond located along the west side of the Facilities building at the southern corner of the campus.
- A retention pond and forebay situated east of the main campus on the eastern portion of the property.
- A detention pond and forebay situated west of the main campus on the western portion of the property.
- An unnamed tributary of Little Tomohawk Creek runs in the southeastern corner of the Campus in the wooded area.
- An unnamed tributary of Little Tomohawk Creek runs along the northern and northwestern wooded area.
- Two dry detention ponds reportedly managed by VDOT but situated on BCC property along Charter Colony Parkway.

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 and around the detention basins 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 Midlothian 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 - Reference the most recent Virginia Cooperative Extension's *Virginia Turfgrass Variety Recommendations* found online at <https://www.sites.ext.vt.edu/newsletter-archive/turfgrass/index.html> when selecting seed mix for over-seeding. The seed type should be suitable to regional environmental conditions.

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 fertilizer applicator 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 this NMP 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 revisions of the NMP. NMP Application record keeping forms are included in Appendix B for use for tracking fertilizer, lime, pesticide and herbicides.

7.0 REFERENCES

Nutrient Management Training and Certification Regulations 4VAC50-85 (effective date November 23, 2014)

Virginia Nutrient Management Standards and Criteria (Revised July 2014):

<https://www.dcr.virginia.gov/document/standardsandcriteria.pdf>

Urban Nutrient Management Handbook (August 16, 2019); 430-350:

<https://resources.ext.vt.edu/>

A Spreadsheet-Based Soil Test Converter for Turfgrass Professionals and Nutrient Management Planning in Virginia (November 1, 2018); SPES-60P:

<https://resources.ext.vt.edu/>

Soil Test Note #1 – Explanation of Soil Tests (December 1, 2018):

<https://resources.ext.vt.edu/>

Tables

Table 1 - Soil Test Summaries

Site: Midlothian Campus – BCC											
Lab: Waypoint Laboratories											
Sample Date: 11/6/24											
Soil Sampling Area ID	Square Feet	Soil pH (SU)	Buffer pH (S.U.)	P (Mehlich III) (ppm)	P (Mehlich I) (ppm)	P (H/M/L)	K (Mehlich III) (ppm)	P (Mehlich I) (ppm)	K (H/M/L)	Soil description	Turf Species
MI-1	17,779.49	5.9	6.75	18	5	L+	92	65	M	Dark Brown, Sandy Clay Loam	Cool season, Fescue Blend
M-2	136,663.18	5.9	6.80	11	2	L-	85	60	M	Dark Brown, Sandy Clay Loam	Cool season, Fescue Blend
MI-3	374,945.40	5.7	6.75	8	0	L-	115	82	M+	Brown, Sandy Clay Loam	Cool season, Fescue Blend
MI-4	362,860.26	5.6	6.79	8	0	L-	41	29	L+	Brown, Sandy Clay Loam	Cool season, Fescue Blend

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

Table 2 – Nutrient Application Worksheet (Schedule 1)**Site:** Midlothian Campus**Operator:** Brightpoint Community College**Begins:** 2/1/2025**Expires:** 2/1/2028**Nutrient Management Area:** 1 (MI-1)**Square Feet:** 17,779.49**Landscape Plants:** Cool Season Turf (Fescue Mix)

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 P ₂ O ₅ (lbs./1000 ft ²)	Total K ₂ O (lbs./1000 ft ²)	Lime Recommendation (lbs./1000 ft ²) ³
3.2 - 2.0 - 1.5	March 1	Lime		0	0	0	35 (MI-1)
	April 1	N, K ₂ O	50% or greater	0.7	0	0.5	
	September 1	N, P ₂ O ₅	50% or greater	0.9	1.0	0.5	
	October 1	N, P ₂ O ₅ , K ₂ O	50% or greater	0.9	1.0	0.5	
	November 1	N	50% or greater	0.7	0	0	
	December 1	Lime		0	0	0	35 (MI-1)
	Totals:			3.2	2.0	1.5	

Notes:

1. Fertilizer recommendations are flexible as long as 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 fertilization window is from February 28th until December 6th. The day designations in column 2 are general guidelines. The application day can vary as long as the application intervals are adhered to, and the applications occur within the window dates.
3. Lime areas are shown in Figure 4 and Soil Sampling Areas are shown in Figure 2. Two split applications of pelletized agricultural dolomitic limestone at a rate of 35 lbs./1000 ft² for a total of 70 lbs./1000 ft² for soil sampling area MI-1 is recommended. Lime applications are for the first year 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 herbicide containing fertilizer prior to February 28th. Conditions must be met in Note 1.

Table 3 – Nutrient Application Worksheet (Schedule 2)**Site:** Midlothian Campus**Operator:** Brightpoint Community College**Begins:** 2/1/2025**Expires:** 2/1/2028**Nutrient Management Area:** 2 (MI-2, MI-3 & MI-4)**Square Feet:** 874,468.84**Landscape Plants:** Cool Season Turf (Fescue Mix)

Annual Nutrient Needs (lbs./1000 ft ²) ^{1c}	Application Month/Day ^{1,2}	Amendment Material Notes	% Slow-Release N	Total N (lbs./1000 ft ²)	Total P ₂ O ₅ (lbs./1000 ft ²)	Total K ₂ O (lbs./1000 ft ²)	Lime Recommendation (lbs./1000 ft ²) ³
3.2 - 3.0 - 1.0	March 1	Lime		0	0	0	30 (MI-2), 35 (MI-3 & MI-4)
	April 1	N	50% or greater	0.7	0	0	
	September 1	N, P ₂ O ₅ , K ₂ O	50% or greater	0.9	1.5	0.5	
	October 1	N, P ₂ O ₅ , K ₂ O	50% or greater	0.9	1.5	0.5	
	November 1	N	50% or greater	0.7	0	0	
	December 1	Lime		0	0	0	30 (MI-2), 35 (MI-3 & MI-4)
	Totals:			3.2	3.0	1.0	



Notes:


1. Fertilizer recommendations are flexible as long as 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 fertilization window is from February 28th until December 6th. The day designations in column 2 are general guidelines. The application day can vary as long as the application intervals are adhered to, and the applications occur within the window dates.
3. Lime areas are shown in Figure 4 and Soil Sampling Areas in Figure 2. Two split applications of pelletized agricultural dolomitic limestone at a rate of 30 lbs./1000 ft² for Soil Sampling Area MI-2 for a total of 60 lbs./1000 ft² and two split applications of 35 lbs./1000 ft² is recommended for Soil Sampling Areas MI-3 and MI-4 for a total of 70 lbs./1000 ft². Lime applications are for the first year 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 herbicide containing fertilizer prior to February 28th. Conditions must be met in Note 1.

Figures

Figure 1: Project Location

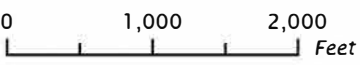




Campus Boundary

Prepared by WL 1/14/2025 12:58 PM
Sources: VGIN Most Recent
Projection: NAD 1983 StatePlane Virginia South FIPS 4502 Feet


FIGURE 1
PROJECT LOCATION
BCC - Midlothian NMP



Chester, Virginia


Figure 2: Soil Sampling Areas





DAVEY company

N



<div style="border: 1px solid purple; width: 20px; height: 10px; margin-bottom: 5px;"></div> MI-1 <div style="border: 1px solid blue; width: 20px; height: 10px; margin-bottom: 5px;"></div> MI-2 <div style="border: 1px solid green; width: 20px; height: 10px; margin-bottom: 5px;"></div> MI-3 <div style="border: 1px solid yellow; width: 20px; height: 10px; margin-bottom: 5px;"></div> MI-4	<div style="border-bottom: 1px solid blue; width: 20px; margin-bottom: 5px;"></div> National Hydrography Dataset (NHD) <div style="border: 2px solid red; width: 20px; height: 10px; margin-bottom: 5px;"></div> Campus Boundary <div style="border: 1px dashed red; width: 20px; height: 10px; margin-bottom: 5px;"></div> Environmentally Sensitive Area
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FIGURE 3
NUTRIENT MANAGEMENT AREAS
 BCC - Midlothian NMP

0

520

Feet

Midlothian, Virginia

Prepared by WL 1/14/2025 12:53 PM
 Sources: VGIN Most Recent
 Projection: NAD 1983 StatePlane Virginia South FIPS 4502 Feet

Figure 3: Nutrient Management Areas








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N



 NMA-1

 NMA-2

 National Hydrography Dataset (NHD)

 Environmentally Sensitive Area


 Campus Boundary

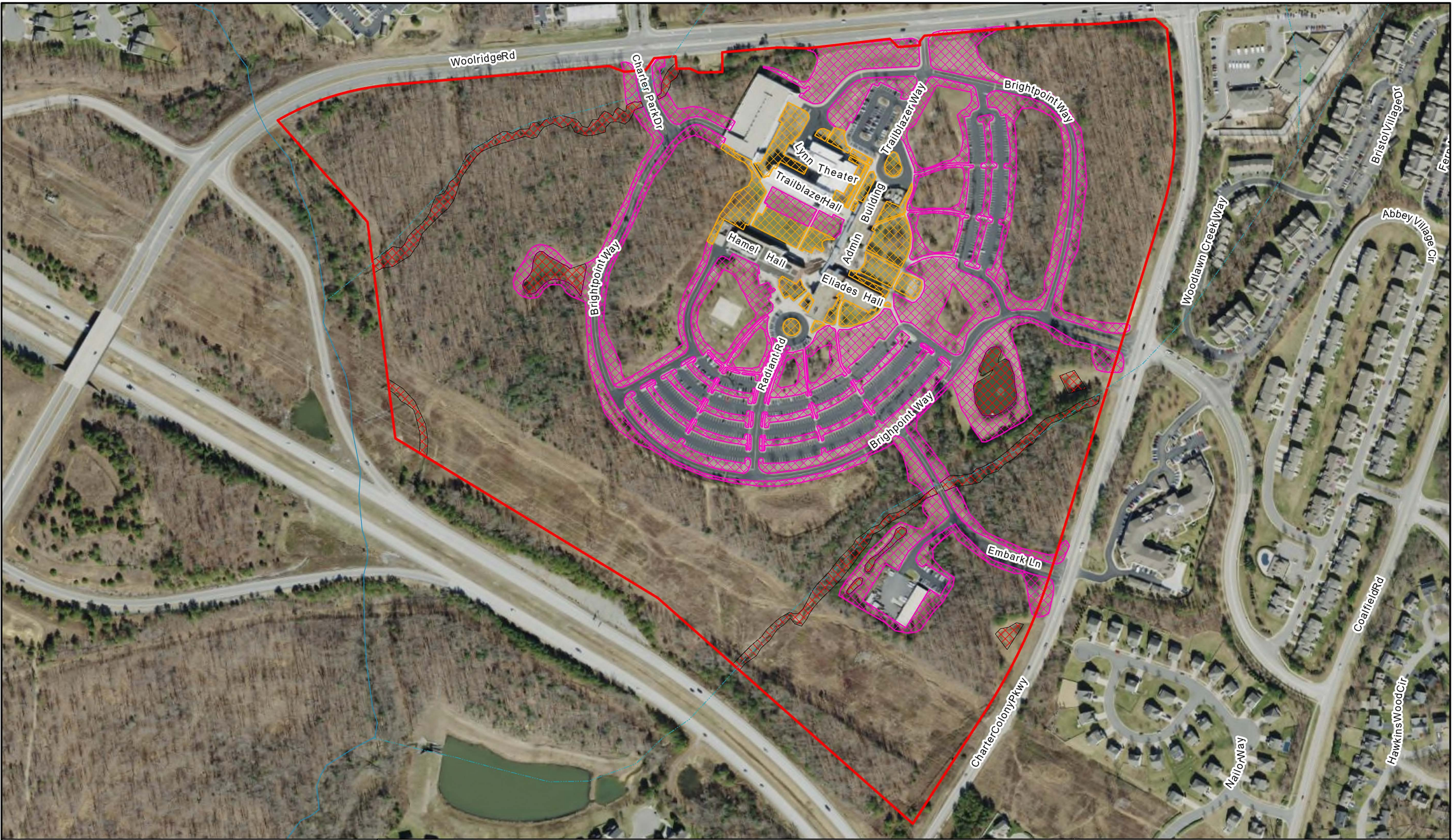
FIGURE 3
NUTRIENT MANAGEMENT AREAS
BCC - Midlothian NMP


0250500

Feet

Midlothian, Virginia


Figure 4: Liming Areas









Wetland
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N



Liming Area:

 60 lbs/1000 ft ²	 Environmentally Sensitive Area
 70 lbs/1000 ft ²	 Campus Boundary

*See Table 3 for split applications.

FIGURE 4
LIMING AREA
BCC - Midlothian NMP

0 250 500

Feet

Midlothian, Virginia

Prepared by WL 1/14/2025 12:53 PM
Sources: VGIN Most Recent
Projection: NAD 1983 StatePlane Virginia South FIPS 4502 Feet

Appendices

Appendix A: Laboratory Soil Test Results

SOIL ANALYSIS

Client : Wetlands Studies Solutions 1620 Brook Road Richmond VA 23220	Grower : Brightpoint Community College 13101 Route 1 Chester, VA 23831 PO:	Report No: 24-311-0503 Cust No: 78934 Date Printed: 11/07/2024 Date Received : 11/06/2024 Date Analysis : 11/07/2024 Page : 5 of 12
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Lab Number : 12476

Field Id :

Sample Id : MI-1

Test	Results	SOIL TEST RATINGS					Calculated Cation Exchange Capacity
		Very Low	Low	Medium	Optimum	Very High	
Soil pH	5.9						10.6 meq/100g
Buffer pH	6.75						
Phosphorus (P)	18 ppm						Calculated Cation Saturation
Potassium (K)	92 ppm						%K 2.2
Calcium (Ca)	1315 ppm						%Ca 62.0
Magnesium (Mg)	239 ppm						%Mg 18.8
Sulfur (S)							%H 17.0
Boron (B)							Hmeq 1.8
Copper (Cu)							
Iron (Fe)							
Manganese (Mn)							
Zinc (Zn)							K : Mg Ratio
Sodium (Na)							0.10
Soluble Salts							Ca : Mg Ratio
Organic Matter	4.9 % ENR 133						3.30
Nitrate Nitrogen							

SOIL FERTILITY GUIDELINES

Crop : Lawn

Rec Units: LB/1000 SF

(lbs)	LIME	(tons)	N	P ₂ O ₅	K ₂ O	Mg	S	B	Cu	Mn	Zn	Fe
70			4.0	1.0	3.0	0						
Crop :												Rec Units:

Comment :

Brandi Watson

SOIL ANALYSIS

Client : Wetlands Studies Solutions 1620 Brook Road Richmond VA 23220	Grower : Brightpoint Community College 13101 Route 1 Chester, VA 23831 PO:	Report No: 24-311-0503 Cust No: 78934 Date Printed: 11/07/2024 Date Received : 11/06/2024 Date Analysis : 11/07/2024 Page : 6 of 12
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Lab Number : 12476

Field Id :

Sample Id : MI-1

SUGGESTED FERTILIZATION PROGRAM

First Application		Second Application		Third Application		Fourth Application	
#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer
12	10-20-15	12	10-0-20	8	16-4-8		

Comments:

Lawn

Limestone application is targeted to bring soil pH to 6.5.

- Apply the amount of lime recommended in first page to raise pH
- For existing lawns, lime applications should NOT exceed 50 pounds per 1000 sq. feet per application. Split and apply every 4 to 6 month until the recommended amount is completed.
- The amount of fertilizer recommended on the first page is the total amount needed for the entire growing season. Split into 3-4 applications to keep the lawn green and prevent fertilizer loss. You should not apply more than 0.7 lbs of soluble nitrogen per 1000 square feet in a 30 day period. Or more than 0.9 lbs of nitrogen per 1000 square feet if you are using a slow or controlled release product in a 30 day period. Custom blend is best to meet exactly the requirement, if this is impossible, the above specific fertilizer application is a general guideline, if the specified grades can not be found, replace with fertilizer having similar N:P:K ratio. The best time to apply fertilizer for cool season grass (bluegrass, fescue, ryegrass) is in the Fall when the grass is growing. For Mid-Atlantic region the time is from late August to November. For Northeast region the time is from mid August to October. Fall application should start as soon as the day time high temperature is below 80-85F, apply with the interval of one month. If you start application late in the Fall and do not finish all three applications, repeat the same applications in the Fall of next year. Spring application is recommended when exceptional fertilizer loss due to heavy spring rain leaching and the grasses look pale green. Spring application can start as soon as the grass starts to grow in April. In the case of exceptional warm spring, the application can be made earlier.
-
- Use calcitic limestone to correct the pH.

Brandi Watson

SOIL ANALYSIS

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Lab Number : 12477

Field Id :

Sample Id : MI-2

Test	Results	SOIL TEST RATINGS					Calculated Cation Exchange Capacity
		Very Low	Low	Medium	Optimum	Very High	
Soil pH	5.9						7.7
Buffer pH	6.80						meq/100g
Phosphorus (P)	11 ppm						Calculated Cation Saturation
Potassium (K)	85 ppm						%K 2.8
Calcium (Ca)	953 ppm						%Ca 61.9
Magnesium (Mg)	168 ppm						%Mg 18.2
Sulfur (S)							%H 16.9
Boron (B)							Hmeq 1.3
Copper (Cu)							
Iron (Fe)							
Manganese (Mn)							
Zinc (Zn)							K : Mg Ratio
Sodium (Na)							0.14
Soluble Salts							Ca : Mg Ratio
Organic Matter	4.8 % ENR 135						3.40
Nitrate Nitrogen							

SOIL FERTILITY GUIDELINES

Crop : Lawn

Rec Units: LB/1000 SF

(lbs)	LIME	(tons)	N	P ₂ O ₅	K ₂ O	Mg	S	B	Cu	Mn	Zn	Fe
60			4.0	2.0	2.0	0						
Crop :												Rec Units:

Comment :

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Lab Number : 12477

Field Id :

Sample Id : MI-2

SUGGESTED FERTILIZATION PROGRAM

First Application		Second Application		Third Application		Fourth Application	
#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer
12	10-20-15	12	10-20-15	8	16-4-8		

Comments:

Lawn

Limestone application is targeted to bring soil pH to 6.5.

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-
- Use calcitic limestone to correct the pH.



SOIL ANALYSIS

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Lab Number : 12478

Field Id :

Sample Id : MI-3

Test	Results	SOIL TEST RATINGS					Calculated Cation Exchange Capacity
		Very Low	Low	Medium	Optimum	Very High	
Soil pH	5.7						8.5 meq/100g
Buffer pH	6.75						
Phosphorus (P)	8 ppm						Calculated Cation Saturation
Potassium (K)	115 ppm						
Calcium (Ca)	923 ppm						%K 3.5
Magnesium (Mg)	211 ppm						%Ca 54.3
Sulfur (S)							%Mg 20.7
Boron (B)							%H 21.2
Copper (Cu)							Hmeq 1.8
Iron (Fe)							
Manganese (Mn)							
Zinc (Zn)							K : Mg Ratio
Sodium (Na)							0.17
Soluble Salts							Ca : Mg Ratio
Organic Matter	4.2 % ENR 122						2.62
Nitrate Nitrogen							

SOIL FERTILITY GUIDELINES

Crop : Lawn

Rec Units: LB/1000 SF

(lbs)	LIME	(tons)	N	P ₂ O ₅	K ₂ O	Mg	S	B	Cu	Mn	Zn	Fe
70			4.0	2.0	1.0	0						
Crop :												Rec Units:

Comment :

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Lab Number : 12478

Field Id :

Sample Id : MI-3

SUGGESTED FERTILIZATION PROGRAM

First Application		Second Application		Third Application		Fourth Application	
#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer
12	10-20-15	12	10-20-15	8	16-4-8		

Comments:

Lawn

Limestone application is targeted to bring soil pH to 6.5.

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- Use calcitic limestone to correct the pH.



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Lab Number : 12479

Field Id :

Sample Id : MI-4

Test	Results	SOIL TEST RATINGS					Calculated Cation Exchange Capacity
		Very Low	Low	Medium	Optimum	Very High	
Soil pH	5.6						6.1 meq/100g
Buffer pH	6.79						
Phosphorus (P)	8 ppm						Calculated Cation Saturation
Potassium (K)	41 ppm						%K 1.7
Calcium (Ca)	656 ppm						%Ca 53.8
Magnesium (Mg)	152 ppm						%Mg 20.8
Sulfur (S)							%H 23.0
Boron (B)							Hmeq 1.4
Copper (Cu)							
Iron (Fe)							
Manganese (Mn)							
Zinc (Zn)							K : Mg Ratio
Sodium (Na)							0.08
Soluble Salts							Ca : Mg Ratio
Organic Matter	3.8 % ENR 117						2.59
Nitrate Nitrogen							

SOIL FERTILITY GUIDELINES

Crop : Lawn

Rec Units: LB/1000 SF

(lbs)	LIME	(tons)	N	P ₂ O ₅	K ₂ O	Mg	S	B	Cu	Mn	Zn	Fe
70			4.0	2.0	3.0	0						
Crop :												Rec Units:

Comment :

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Lab Number : 12479

Field Id :

Sample Id : MI-4

SUGGESTED FERTILIZATION PROGRAM

First Application		Second Application		Third Application		Fourth Application	
#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer	#/1000 Sq. Ft.	Fertilizer
12	10-20-15	12	10-20-15	12	10-0-20		

Comments:

Lawn

Limestone application is targeted to bring soil pH to 6.5.

- Apply the amount of lime recommended in first page to raise pH
- For existing lawns, lime applications should NOT exceed 50 pounds per 1000 sq. feet per application. Split and apply every 4 to 6 month until the recommended amount is completed.
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- Use calcitic limestone to correct the pH.

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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				
<p>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</p>								