



Understanding Soil

Credit: Landscape for Life

Soil Profile

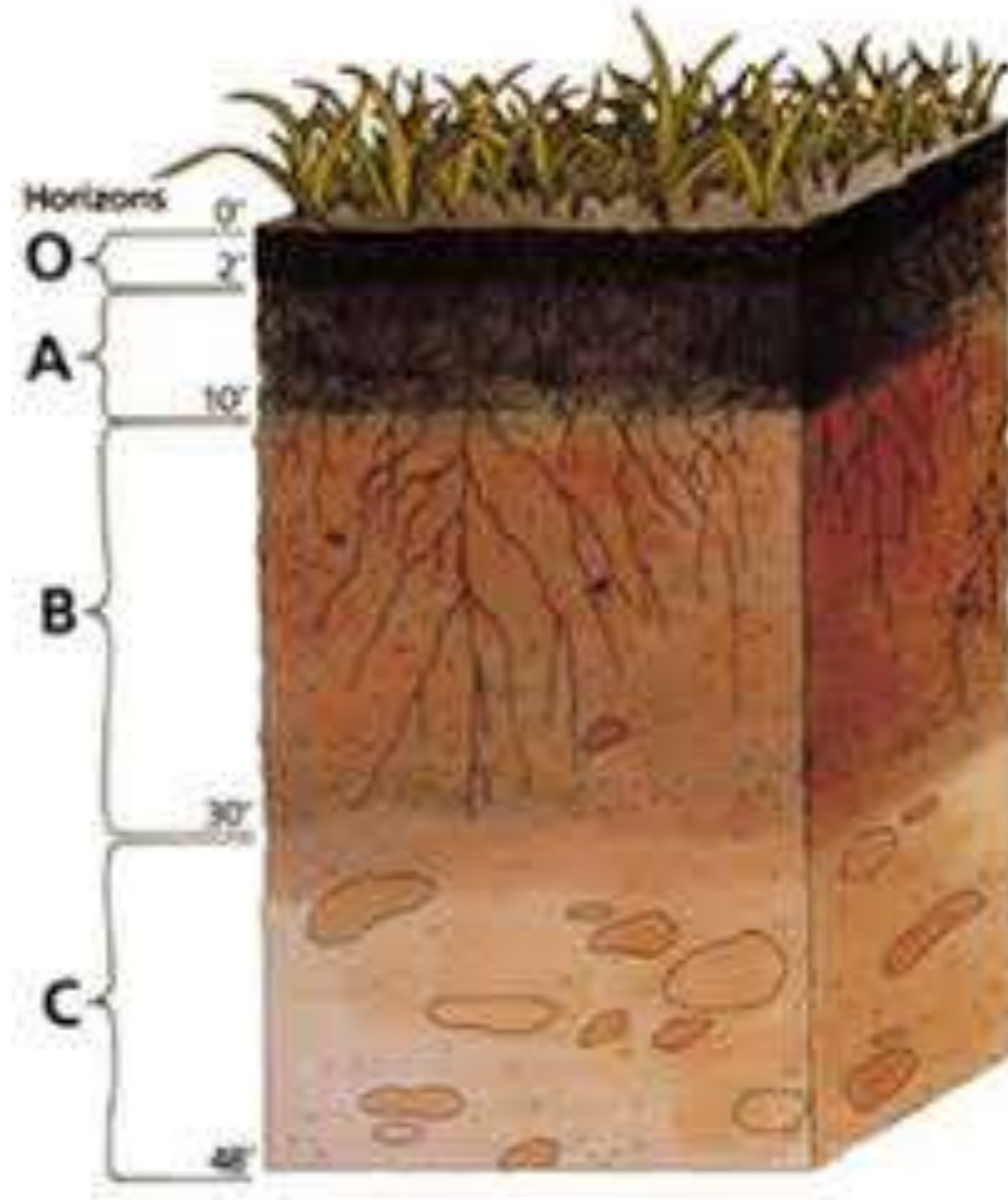
Topsoil

Subsoil

Parent Material

Our area, a transition of piedmont and coastal plains has parent material of weathered bedrock that has eroded down from the mountains and marine sediments further east that were deposited as the ocean goes through advance and retreat cycles. It takes many thousands of years for soil to form.

Diagram Credit: nrcs.usda.gov



O-Leaf Litter and Organic Debris

A-Mineral Horizon showing Organic Matter Accumulation

B-Subsoil showing depletion of Organic Matter and accumulation of clay

C-Parent Material- Weathered Rock, Floodplain Sediment, Loose Sand

The *IDEAL* Soil

25% Water

25% Air

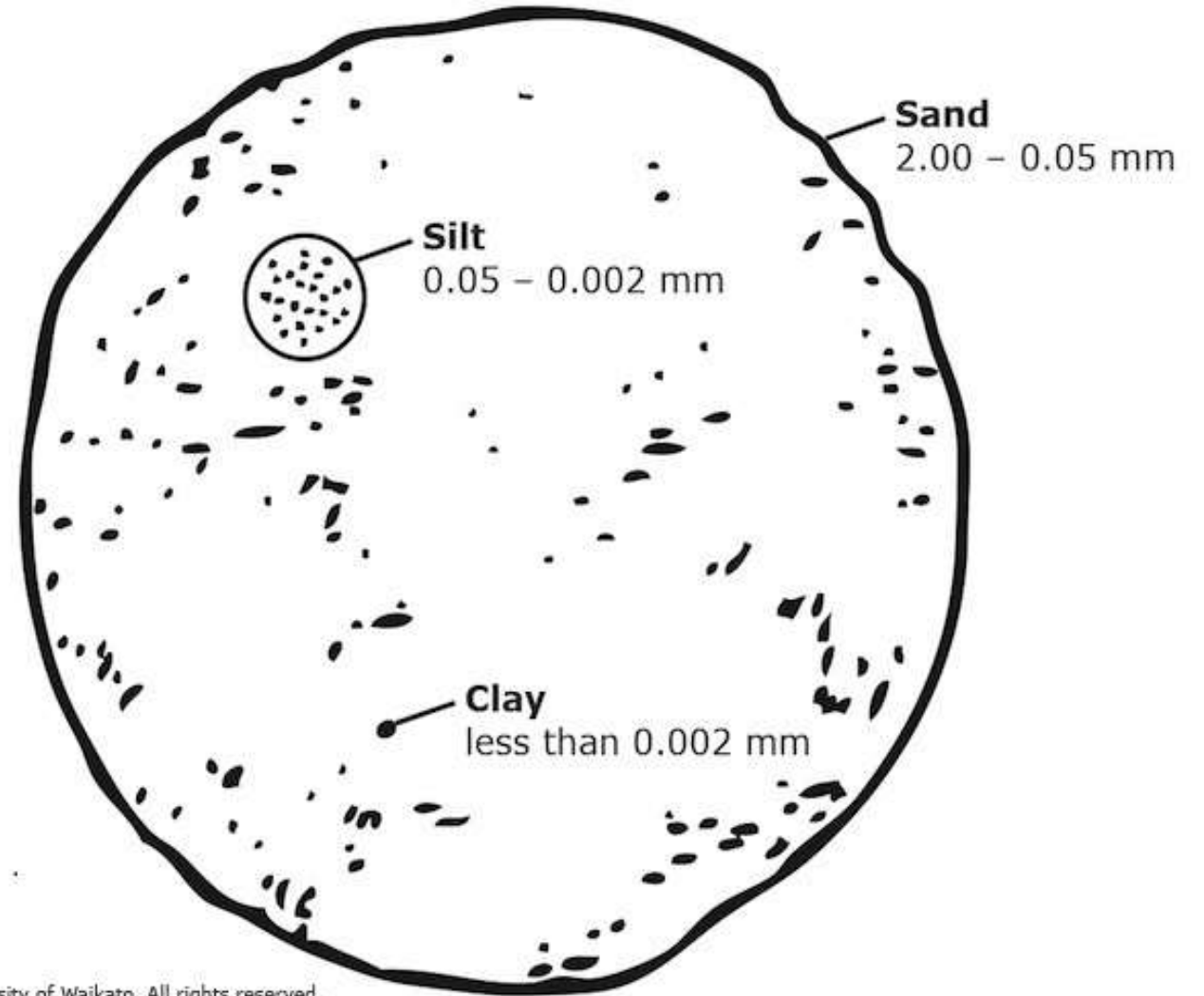
45% Mineral

5% Organic

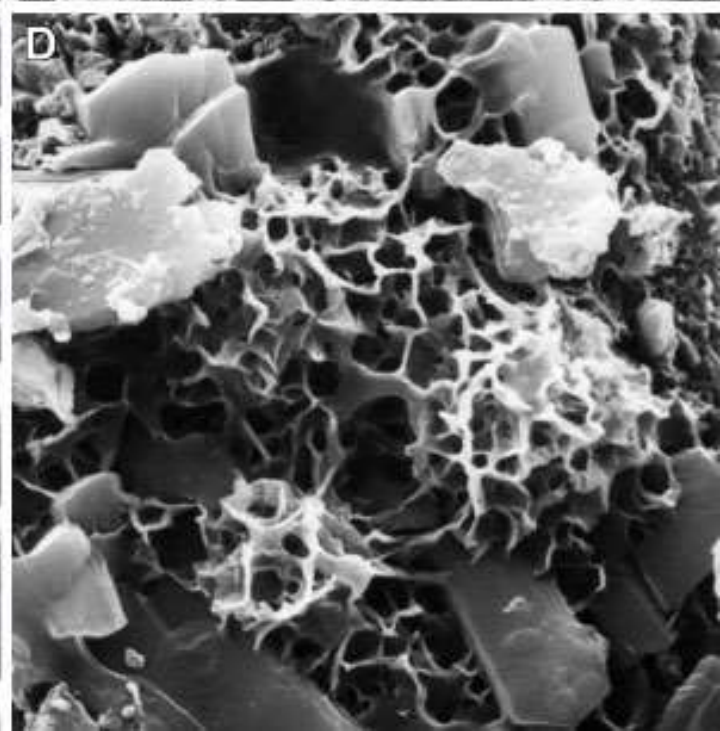
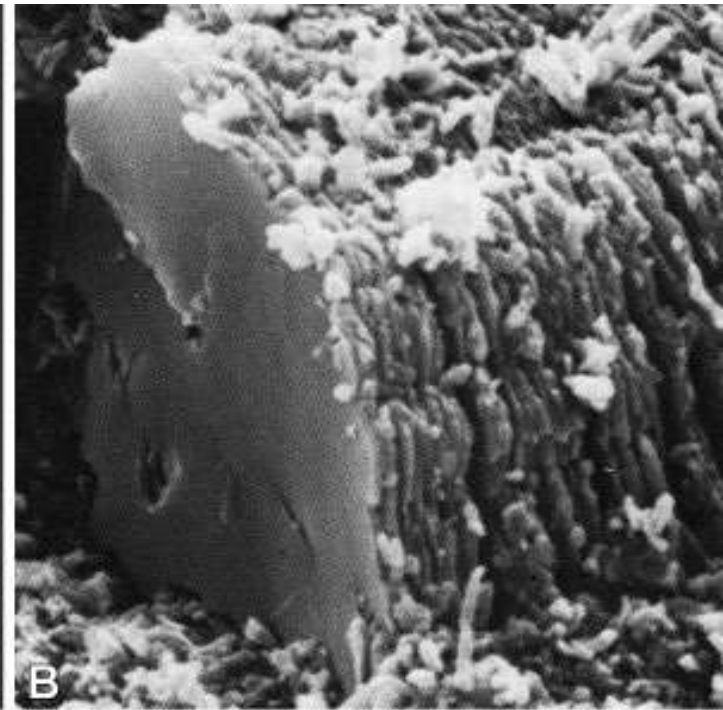
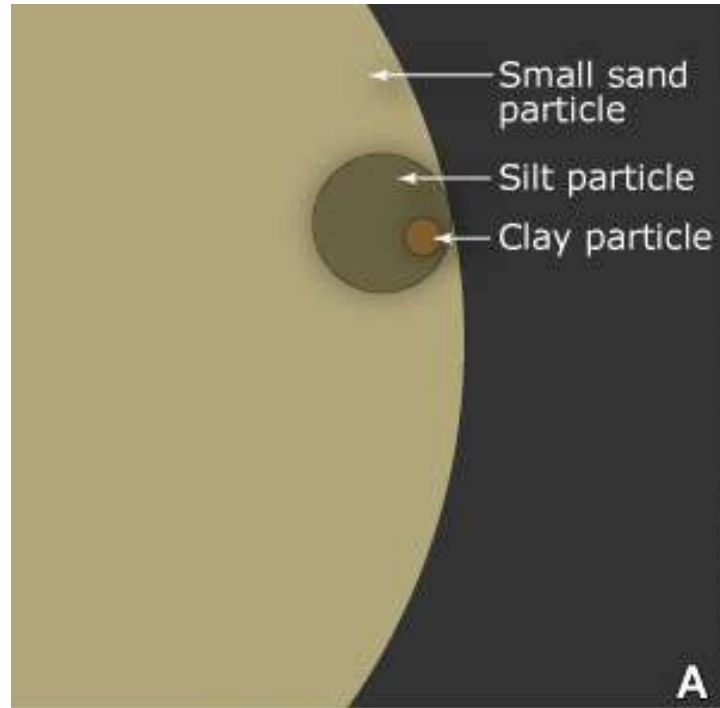


Soil Properties

- Color
- Texture
- Structure
- Drainage or Water Holding Capacity



B-Clay Particle
C-Sand Particle
D-Silt Particle



Examples of Compacted Soil

Not compacted



Compacted



Photo Credit USFS/USDA

Most soils will require some form of organic amendments. Adding organic matter to clay and sandy soil can help with:

- Nutrient holding capacity
- Improved drainage
- Reducing compaction

Avoid these 'quick fixes for compacted soil!

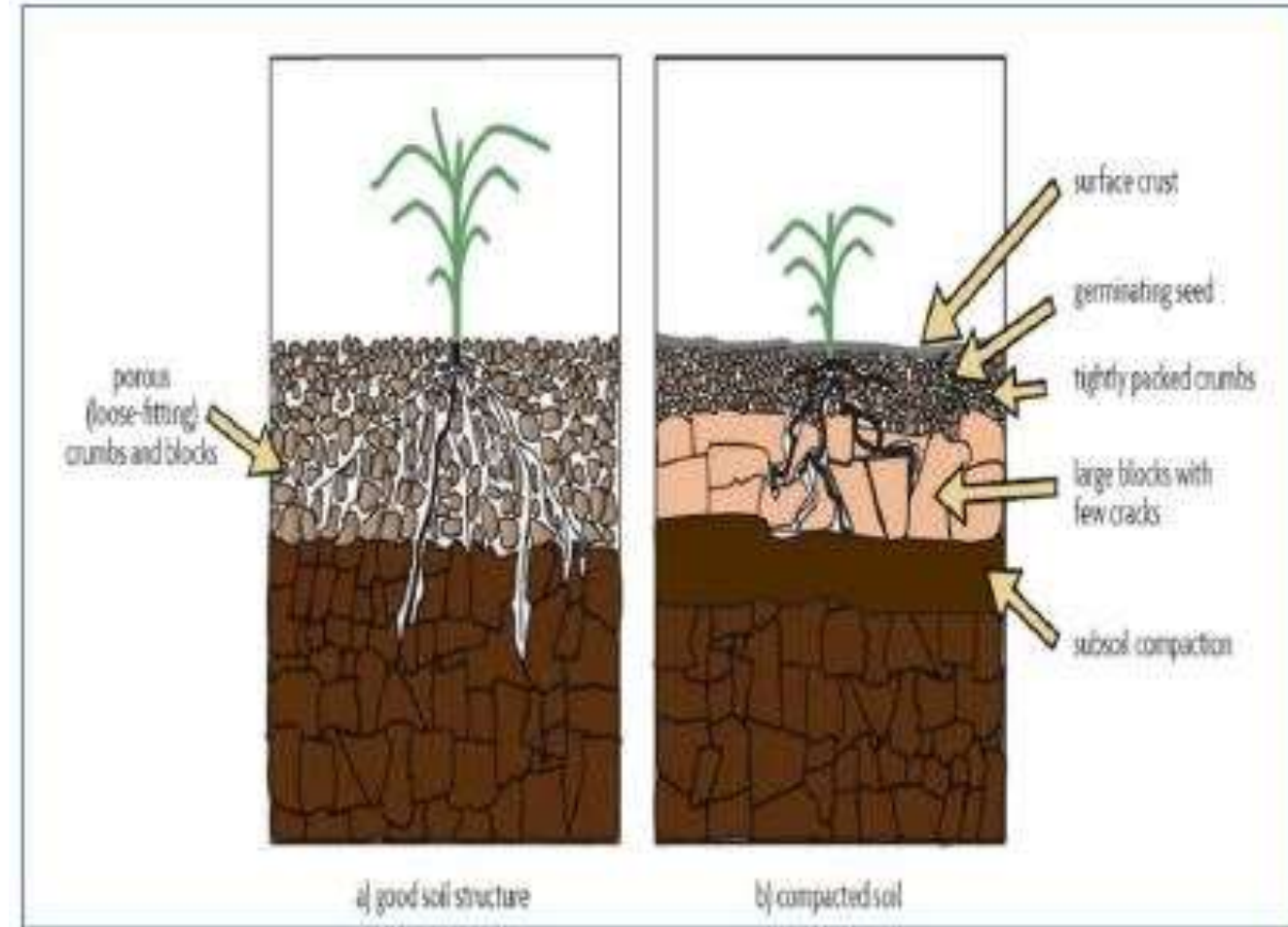
Don't add topsoil

Don't add sand or peat moss to clay soils

ALWAYS add Organic Matter for several years in a row and minimize compaction to allow soil to heal itself

DO NOT till or work the soil if it is wet or water is standing

COMPOST, COMPOST, COMPOST!!!



Credit-Extension, UNV, Reno

SOIL TEXTURE ANALYSIS “THE JAR TEST”

Factsheet | HGIC 1656 | **Updated:** Feb 11, 2019

Soil is a medium comprised of soil particles, organic matter, water, air and living organisms, all of which are important to the overall health of the soil and the plants that grow in it. The three primary soil particles are sand, silt, and clay. The relative percentages of these components present make up the soil's texture. Texture is important to overall soil and plant health as it relates to soil porosity, which refers to the pore spaces where air and water reside.

The ideal soil texture is a mix of sand, silt, and clay particles, known as a loam. In most cases the particles will not be balanced, and the soil will need to be altered by adding organic amendments. To evaluate soil texture, use a simple jar test to determine the percentages of sand silt, and clay. Once the percentages are calculated, the soil textural triangle can be used to determine the soil type.

Soil Texture Analysis “The Jar Test” Procedure

Materials:

- Straight edged, clear jar
- Permanent marker
- Ruler
- Watch or stop watch
- 1 tablespoon of powdered dishwashing detergent
- Mesh sieve or old colander





1. Using a mesh sieve or old colander, sift the soil to remove any debris, rocks, and large organic matter (leaves, sticks, roots, etc.).
2. Fill the jar $\frac{1}{3}$ full of the soil to be tested

Jar filled a $\frac{1}{3}$ of the way full with soil.
Andrew Jeffers, ©2018, Clemson Extension



3. Fill the remainder of the jar with clean water, but leave some space at the top.

Jar filled with water, leaving space at top.
Andrew “Drew” Jeffers, ©2018, Clemson Extension



4. Add 1 tablespoon of **powdered dishwashing detergent**

5. Cap the jar and shake vigorously until the soil turns into a uniform slurry.

6. Set on a level surface and time for one minute.

7. Place a mark the outside of the jar, showing the ***coarse sand layer*** settled at the bottom of the jar.

Jar showing the coarse sand layer settled at the bottom of the jar.

Andrew “Drew” Jeffers, ©2018, Clemson Extension



8. Leave the jar in a level spot for 2 hours.

9. Mark the top of the next settled layer with the permanent marker. ***This is the silt layer.***

Jar showing the silt layer.

Andrew “Drew” Jeffers, ©2018, Clemson Extension



10. Leave the jar on a level spot for 48 hours.

11. Mark the top of the next settled layer with the permanent marker. ***This is the clay layer*** that has settled on top of the silt layer.

Jar showing the clay layer.

Andrew “Drew” Jeffers, ©2018, Clemson Extension



12. Using a ruler, measure and record the height of each layer, and the total height of all three layers. Use the soil texture analysis worksheet below to record results.

Using a ruler, measure and record the height of each layer, and the total height of all three layers.

Andrew “Drew” Jeffers, ©2018, Clemson Extension

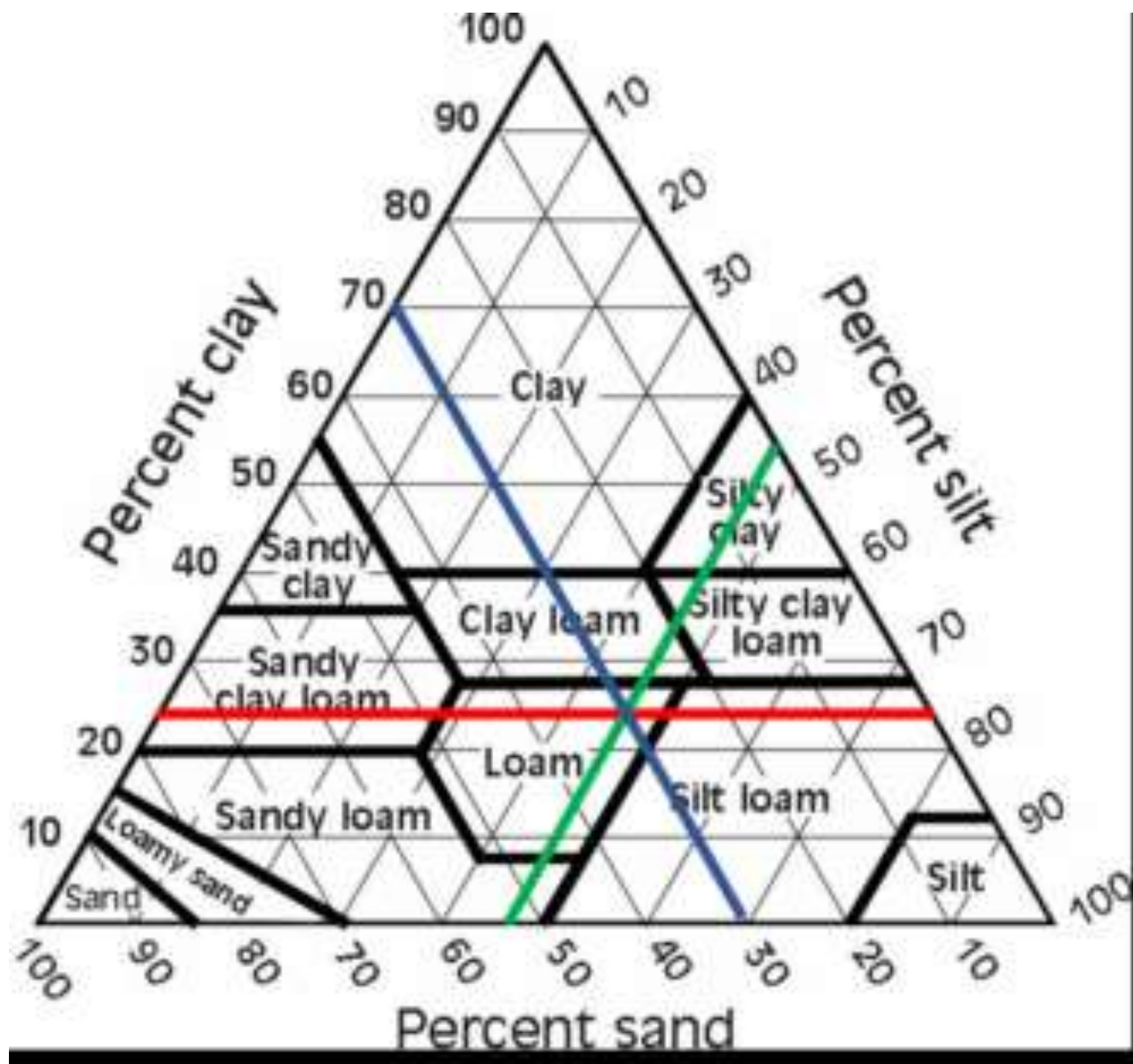
Use the soil texture triangle to estimate the soil type for the site.

1. The clay percentages are listed on the left side of the triangle. Lines corresponding to clay percentages extend from the percentages reading left to right (*see red line*).

2. The silt percentage is on the right side, with lines extending downwardly, diagonally right to left (*see green line*).

3. The sand percentage is on the right side, with lines extending upwardly, diagonally right to left (*see blue line*).

Track the lines with the percentages measured and find the spot on the triangle where all three lines intersect. The region where these lines intersect indicates the soil type present. ***The example shown represents a loam soil texture.***



Soil Texture Analysis “The Jar Test” Worksheet

Measurements

Height of sand layer _____inches / cm

Height of silt layer _____inches / cm

Height of clay layer _____inches / cm

TOTAL HEIGHT OF LAYERS _____inches / cm

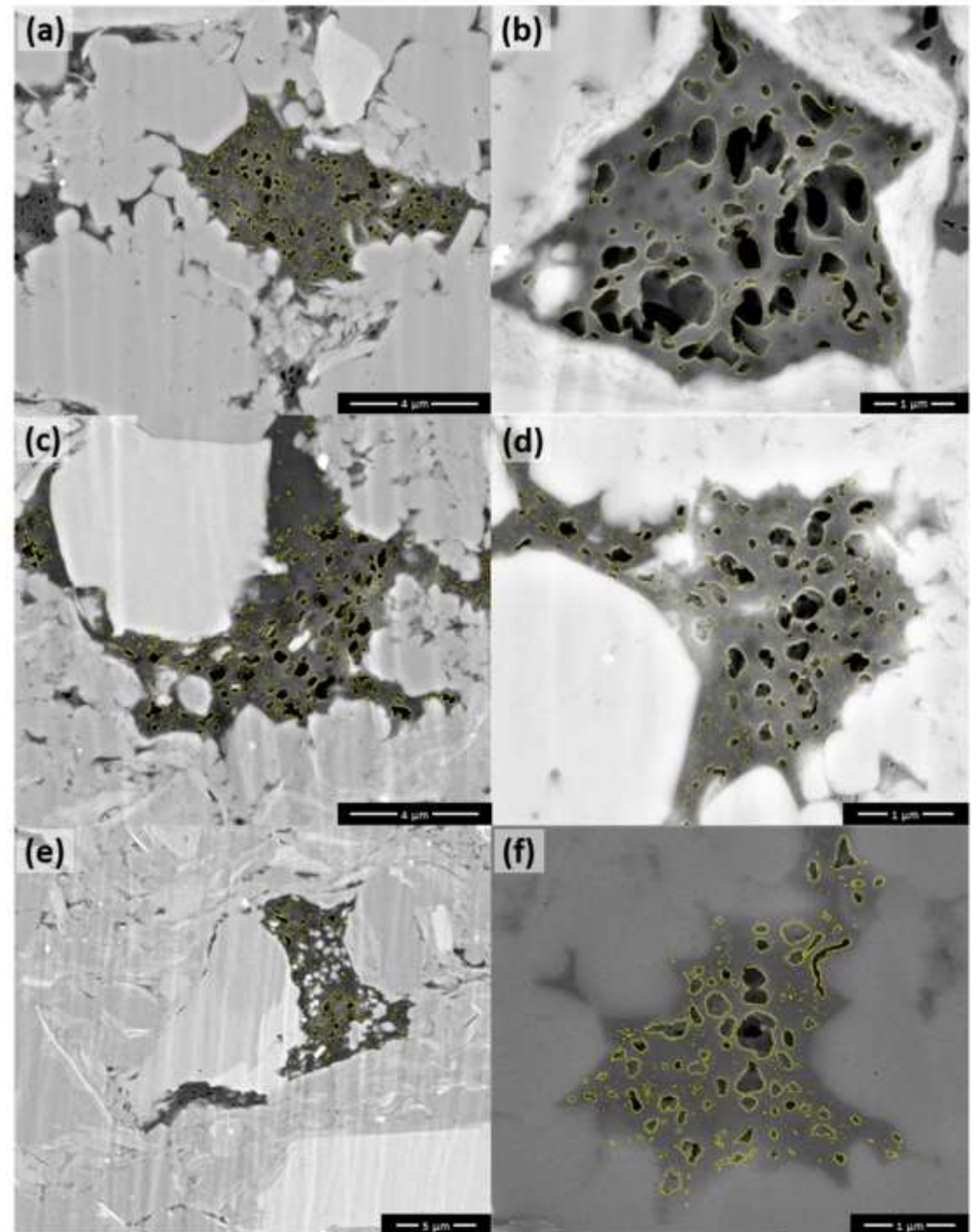
% SAND=(sand height)/(total height) x 100 =_____ % SAND

% SILT=(silt height)/(total height) x 100 =_____ % SILT

% CLAY=(clay height)/(total height) X 100 =_____ % CLAY

Organic Matter

Use organic matter and
improve you soil!



Credit: MDPI

Organic matter:

Compost

Cover Crops

Manure

Remains of plants



Credit: joegardener.com

Soil Testing in NC

- Service provided by NC Department of Agriculture, Agronomic Services Division
- Agronomic Lab located in Raleigh
- Boxes and forms for packaging samples available from any county Extension center
- Home soil testing kits very Inaccurate



What Soil Testing Can Tell You

- Nutrients your soil needs to support healthy growth
- Can be applied with natural (organic) or synthetic fertilizers
- If nutrient levels are too high
- Soil pH •Is your soil acidic (sour), or
- Is it alkaline (sweet)
- If lime is needed & how much Iron deficiency, likely caused by high pH Soil pH
- Measure of how acidic or alkaline (basic) soil is
- 5.5 – 6.5 ideal for most plants (and microbes!)
- Piedmont soils typically acidic, > 5.0
- Amended soils may be too high, > 7.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 5.5 – 6.5

Soil testing does not analyze drainage issues or soil compaction – both are common, serious problems

What Soil Testing Can Not Tell You

- Why your plant died, unless nutrient or salt related
- If diseases are present in the soil
- If pesticides or chemical residues are in the soil
- Does not directly tell you how to amend your soil

When to Sample

- Take samples at least 2-3 months before starting any gardening project
- It takes time to change soil pH • Lime needs to be incorporated
- Some nutrients need to be incorporated
- Submit samples April through October to avoid delays common during the busy winter season
- No charge for samples submitted April - Oct
- Peak season fee, \$4 per sample (box) for samples received Dec. 1 – March 31
- Clay soils: every 3-4 years
- Sandy soils: every 2-3 years
- If fertilizer or lime applied, wait 6-8 weeks before collecting samples
- Avoid sampling wet soils

Tools for Sampling

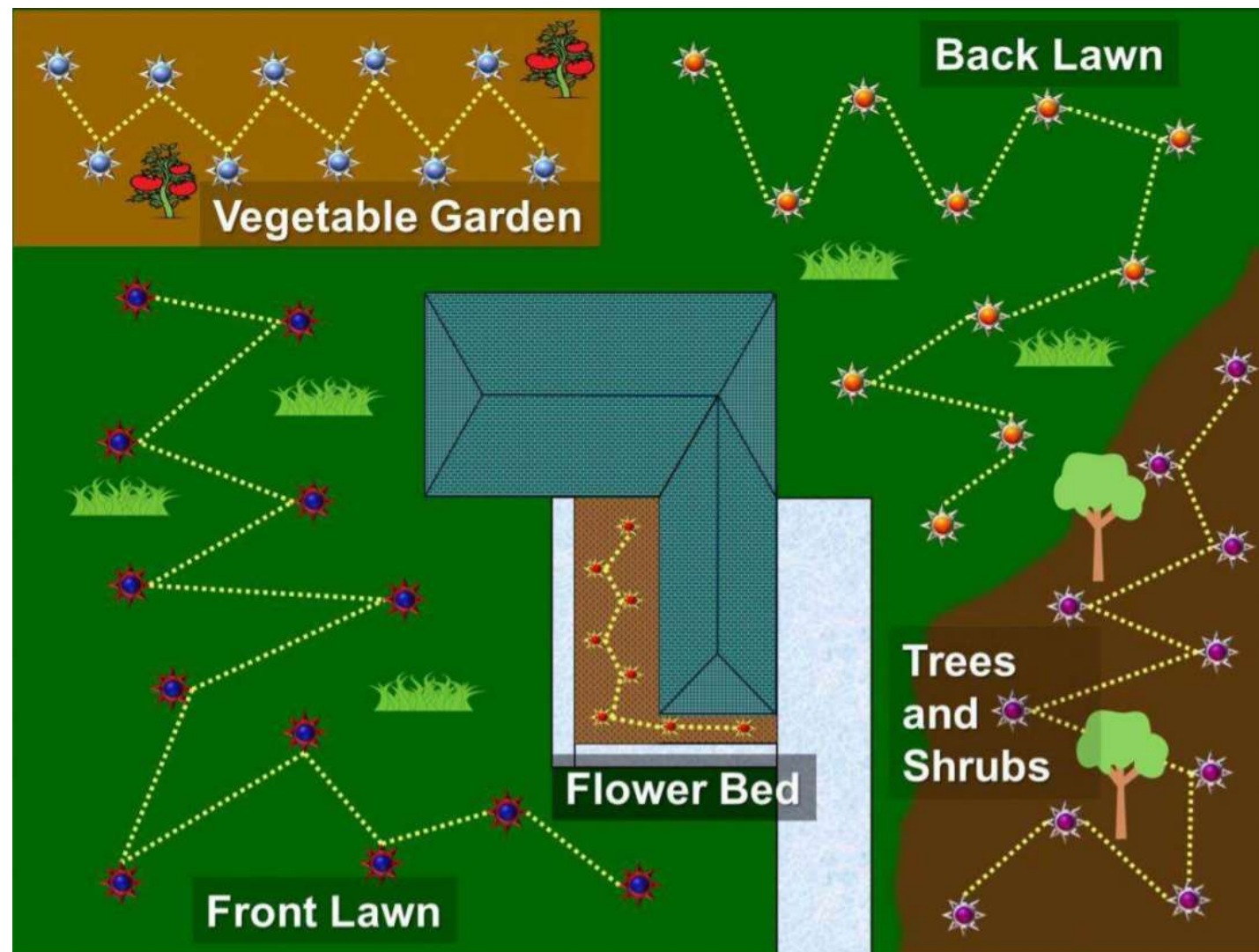
- Use appropriate tools, such as soil probe, spade, garden trowel or shovel
- Place collected soil in a clean plastic bucket

Where to Sample

- Identify unique areas you wish to fertilize
- Unique areas should represent only one soil type and planting type, for example:
 - Lawn
 - Landscape trees & shrubs
 - Vegetable garden
 - Fruit trees
- Sample noticeably different soil type separately even if same planting type

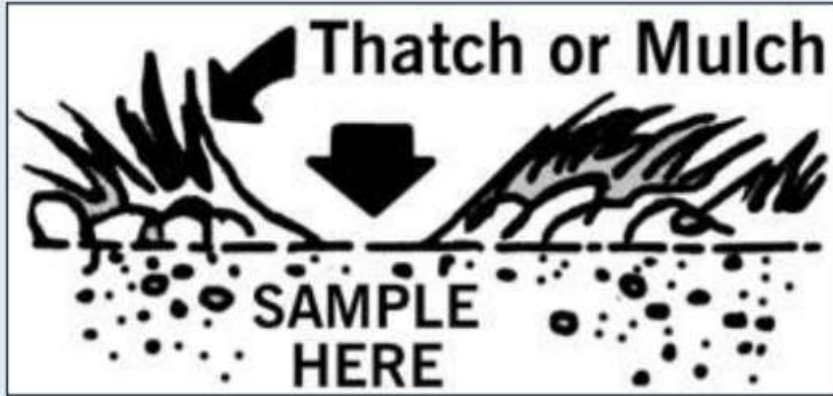
Amount to Sample

- For each unique area, collect at least six to eight soil cores (subsamples) from random spots
- For raised beds, collect 3-4 cores from each bed
- Combine cores in plastic bucket to make one composite sample random spots



Collecting Cores

- Avoid thatch or mulch
- Take a 'slice' of soil DEPTH:
- Turf: 4" deep
- Landscape beds, vegetables: 4 - 6" deep



Mixing Cores

- For each unique area, combine all cores in a clean plastic bucket
- Thoroughly mix cores
- If wet, allow sample to dry before filling box
- Use mixture to fill one box to the red fill line
- Fill one box for each unique area



Label the Box

- Write your name and address on each box
- Make up a sample ID
- Up to 5 letters or numbers that will help you remember where sample was taken
- Examples: LAWN, GARDN, BACK
- Make sure filled to red fill line
- Close box flaps securely
- Never tape box closed
- Never put soil in plastic bag!



Form AO-15 (September, 2016)

LAWN AND GARDEN SOIL SAMPLE INFORMATION- NC SOIL ONLY

ROUTINE / PREDICTIVE SAMPLES

April ~ Thanksgiving: NO FEE
December ~ March: \$4 / sample
Check online for exact dates

NCDA&CS Agronomic Division Soil Testing Section
Mailing Address: 1040 Mail Service Ctr. Raleigh, NC 27699-1040
Physical Address (UPS/FedEx): 4300 Reedy Creek Rd. Raleigh, NC 27607
Phone: (919) 733-2655 Website: www.ncagr.gov/agronomi



For laboratory results, go to www.ncagr.gov/agronomi/pals

SAMPLE INFORMATION	PAYMENT	CLIENT INFORMATION (PLEASE PRINT LEGIBLY)	OTHER RECIPIENT/SERVICE PROVIDER
SAMPLE DATE Today's Date	FEE TOTAL \$ Check preferred- payable to NCDA&CS Please NO CASH	LAST NAME FIRST NAME Gardener Dale	LAST NAME FIRST NAME
NC COUNTY (WHERE COLLECTED)* Chatham	Reminders Use NCDA&CS sample boxes only. Fill box with soil to red line. Bags of any type not accepted. Acquire boxes at our lab or NC Cooperative Extension office.	ADDRESS 5 Gardenview Ln	ADDRESS
NUMBER OF SAMPLES Up to 6 per form		CITY STATE ZIP Gardenville NC 27312	CITY STATE ZIP
		E-MAIL ADDRESS (needed for report notification) GreatGardener@gmail.com	E-MAIL ADDRESS
		PHONE (best contact number) PALS # (if known) 919-542-8202	PHONE PALS # (if known)

*By submitting this form to the NCDA&CS Agronomic Division, I attest that the accompanying samples were collected in North Carolina.

LAB NUMBER (LEAVE BLANK - LAB USE ONLY)	YOUR SAMPLE IDENTIFICATION (maximum of 5 characters- same as box)	LIME APPLIED WITHIN PAST 12 MONTHS lb / 1000 sq ft Month Year	LAWN / GARDEN PLANTING CODE (Please see page 2)	Quick Tips
	L A W N 1		026	<ul style="list-style-type: none"> • Please use only the planting codes on page 2. • A bag of lime weighs 40 lb. If lime was applied over one year ago, leave the lime information blank. • Please make sure your email address is correct and legible. You will be notified when the report is complete by email.
	L A W N 2	40 9 2016	026	
	V E G		024	
	B B		032	
	A P P L E		030	

Thank you for using agronomic services to manage nutrients and safeguard environmental quality. -- Steve Troxler, Commissioner of Agriculture


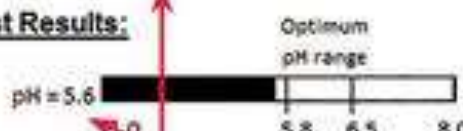

Turn-around Time

- Most of the year: Samples analyzed within one week after arrival at the lab
- During winter season: Thousands of samples arrive at once – Sample turn-around may take several weeks from October through February
- Peak season fee: Dec. 1 – March 31, \$4/box


Soil Test Reports

- Are sent by email
- Write email address legibly!
- Look for email from: AGRONOMICS LIMS
- If it's been several weeks, check junk folder
- Problems – contact Agronomic Services Division, (919) 733-2655
www.ncagr.gov/agronomic




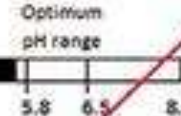


NCDA&CS Agronomic Division Phone: (919) 733-2655 Website: www.ncagr.gov/agron Report No:																				
	Predictive Home & Garden Soil Report	Client: _____ Advisor: _____ Mehlich-3 Extraction Sampled County: _____ Sampled: 6/4/15 Received: 6/8/15 Completed: 6/16/15 Farm: _____																		
Agronomist's Comments: This report provides Test Results and Recommendations for each sample submitted for testing. Look for Lime Recommendations and N-P-K Fertilizer Recommendations. If lime is needed, application at the indicated rate will raise soil pH to the optimal level for the plant you specified. Common target pH values are as follows: 5.0 for azalea, camellia, rhododendron and mt. laurel; 5.5 for centipedegrass; 6.0 for other lawn grasses, shrubbery and flowering plants; and 6.5 for vegetable gardens. N-P-K Recommendations are based on the nitrogen (N) needs of the plants being grown and the soil test results for phosphorus (P-I) and potassium (K-I); a 50 to 70 index for either is optimum. If the exact fertilizer cannot be found, find the closest match and adjust the rate accordingly. Refer to "Understanding the Soil Report" (last page of this report) for additional explanation and links to helpful information.																				
Sample ID: P1 Lime History	Crop 1- Flower garden Crop 2- Flower garden Test Results: 	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> Lime Recommendation 55.0 per 1000 sq ft 0.0 per 1000 sq ft </div> <div style="width: 48%;"> N-P-K Fertilizer Recommendations* 7 lbs per 1000 sq ft 15-0-14 7 lbs per 1000 sq ft 15-0-14 </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 48%;"> Phosphorus index (P-I) = 61 Potassium index (K-I) = 49 </div> <div style="width: 48%;">  </div> </div>																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Additional Test Results</td> <td style="width: 10%;">HM%</td> <td style="width: 10%;">W/V</td> <td style="width: 10%;">0.85</td> <td style="width: 10%;">CEC 15.8</td> <td style="width: 10%;">Mn-I</td> <td style="width: 10%;">Zn-I</td> <td style="width: 10%;">Cu-I</td> <td style="width: 10%;">S-I</td> </tr> <tr> <td></td> <td>0.60</td> <td>g/cm3</td> <td></td> <td>mag/100 cm3</td> <td>577</td> <td>124</td> <td>87</td> <td>26</td> </tr> </table>			Additional Test Results	HM%	W/V	0.85	CEC 15.8	Mn-I	Zn-I	Cu-I	S-I		0.60	g/cm3		mag/100 cm3	577	124	87	26
Additional Test Results	HM%	W/V	0.85	CEC 15.8	Mn-I	Zn-I	Cu-I	S-I												
	0.60	g/cm3		mag/100 cm3	577	124	87	26												
<div style="display: flex; justify-content: space-between;"> <div style="width: 22%;"> <p>* If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C, D) listed on the last page of this report. Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.</p> </div> </div>																				
Sample ID given by client	"Crop" being grown. Impacts lime recommendation.	pH and nutrient levels found in sample. Bar graphs show optimal ranges.																		
Lime and fertilizer recommendations																				

NCDA&CS Agronomic Division		Phone: (919) 733-2655	Website: www.ncagr.gov/agron		Report No:
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	Predictive Home & Garden		Client:	Advisor:
	Soil Report		Mehlich-3 Extraction	
			Sampled County:	

Sampled: 6/4/15	Received: 6/8/15	Completed: 6/16/15	Farm:
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Agronomist's Comments:
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Sample ID: P1 Lime History	Crop 1- Flower garden Crop 2- Flower garden	Lime Recommendation 55.0 per 1000 sq ft 0.0 per 1000 sq ft	N-P-K Fertilizer Recommendations* 7 lbs per 1000 sq ft 15-0-14 7 lbs per 1000 sq ft 15-0-14
	Test Results: <div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> <p>pH = 5.6</p>  </div> <div> <p>Optimum pH range</p>  </div> </div>		
	<div style="display: flex; justify-content: space-around;"> <div> <p>Phosphorus Index (P-I) = 61</p>  </div> <div> <p>Potassium index (K-I) = 49</p>  </div> </div> <p style="text-align: center; font-size: small;">Below Optimum Optimum Above Optimum</p>		


Additional Test Results	HM%	W/V	0.85	CEC 15.8	Mn-I	Zn-I	Cu-I	S-I
	0.60	g/cm3		meq/100 cm3	577	324	87	26

Lime: pounds (lb) of lime recommended per 1,000 square feet (sq ft) of lawn or garden. Multiply length times width to get sq. ft.

"Mixed" Fertilizer: Means it has some combination of nitrogen, phosphorus, and potassium. In this case, it is 15% nitrogen (N), 0% phosphorus (P), and 14% potassium (K). The rest is just filler. Always same order of N-P-K.

* If you cannot find the fertilizer recommended here, choose one from the same Group (A,B,C,D) listed on the last page of this report. Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only

NCDA&CS Agronomic Division
Phone: (919) 733-2655
Website: www.ncagr.gov/agron
Report No:



Predictive Home & Garden
Soil Report

Mehlich-3 Extraction

Client:
Advisor:

Sampled County:

Sampled: 6/4/15
Received: 6/8/15
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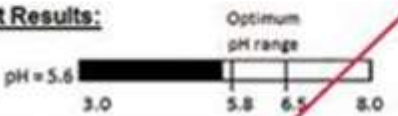
Sample ID: P1

Crop 1- Flower garden
Crop 2- Flower garden

Lime History

Test Results:

pH = 5.6



Lime Recommendation

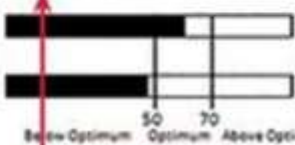
55.0 per 1000 sq ft
0.0 per 1000 sq ft

N-P-K Fertilizer Recommendations*

7 lbs per 1000 sq ft 15-0-14
7 lbs per 1000 sq ft 15-0-14

Phosphorus Index (P-I) = 61

Potassium Index (K-I) = 49



Additional Test Results	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
0.60	0.86	15.8	577	324	87	26	

* If you cannot find the fertilizer recommended here, choose one from the same Group (A,B,C,D) listed on the last page of this report. Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only

Lime: pounds (lb) of lime recommended per 1,000 square feet (sq ft) of lawn or garden. Multiply length times width to get sq. ft.

"Mixed" Fertilizer: Means it has some combination of nitrogen, phosphorus, and potassium. In this case, it is 15% nitrogen (N), 0% phosphorus (P), and 14% potassium (K). The rest is just filler. Always same order of N-P-K.

Here is how to determine how much lime and/or fertilizer you need:

Take a rough estimate of your garden area. Let's say it is approximately 10 ft. wide by 14 ft. long.

$$10 \times 14 = 140 \text{ sq. ft.}$$

Your fertilizer and lime recommendations are by the 1,000 sq. ft. This area is **LESS** than 1,000 sq. ft. You have to convert this to find out how much you need.

$$140 \text{ divided by } 1,000 = 0.14$$

(sq. ft. of bed divided by 1,000)

$$0.14 \times 7 \text{ lbs. fertilizer (recommended per 1,000 sq. ft.)} = 0.98 \text{ lbs. or round off to } 1 \text{ lb.}$$

To figure the Lime amount-recommended is 55 lbs. per 1,000 sq. ft.

$$0.14 \times 55 \text{ lbs. of lime} = 7.7 \text{ lbs. or round off to } 8 \text{ lbs.}$$

You need 1 lb. of recommended mixed 15-0-14 (NPK) fertilizer and 8 lbs. of lime for this bed.

Your soil report will always give you the formulation of recommended N-P-K fertilizer. For this particular sample they are recommending -0- for your Phosphorus (P). The recommendation will always be for a readily available mix. 15-0-14 in this case.

Lime Recommendation: 55 lbs per 1000 sq. ft.

NPK Fertilizer Recommendation: 7 lbs per 1000 square feet

Mixed Fertilizer N-P-K means it is some combination of Nitrogen (N), Phosphorus (P), and Potassium (K). In this case, it is 15% Nitrogen, 0% Phosphorus, and 14% Potassium. The rest is just filler. Always in the same order N-P-K.

In most cases, soil tests do not measure nitrogen because N does not persist long in soil. Soil reports provide a N recommendation based on the known requirements of the crop(s) specified on the sample information form. Suggested application rates (lb/1000 sq. ft.) are based on field research studies.

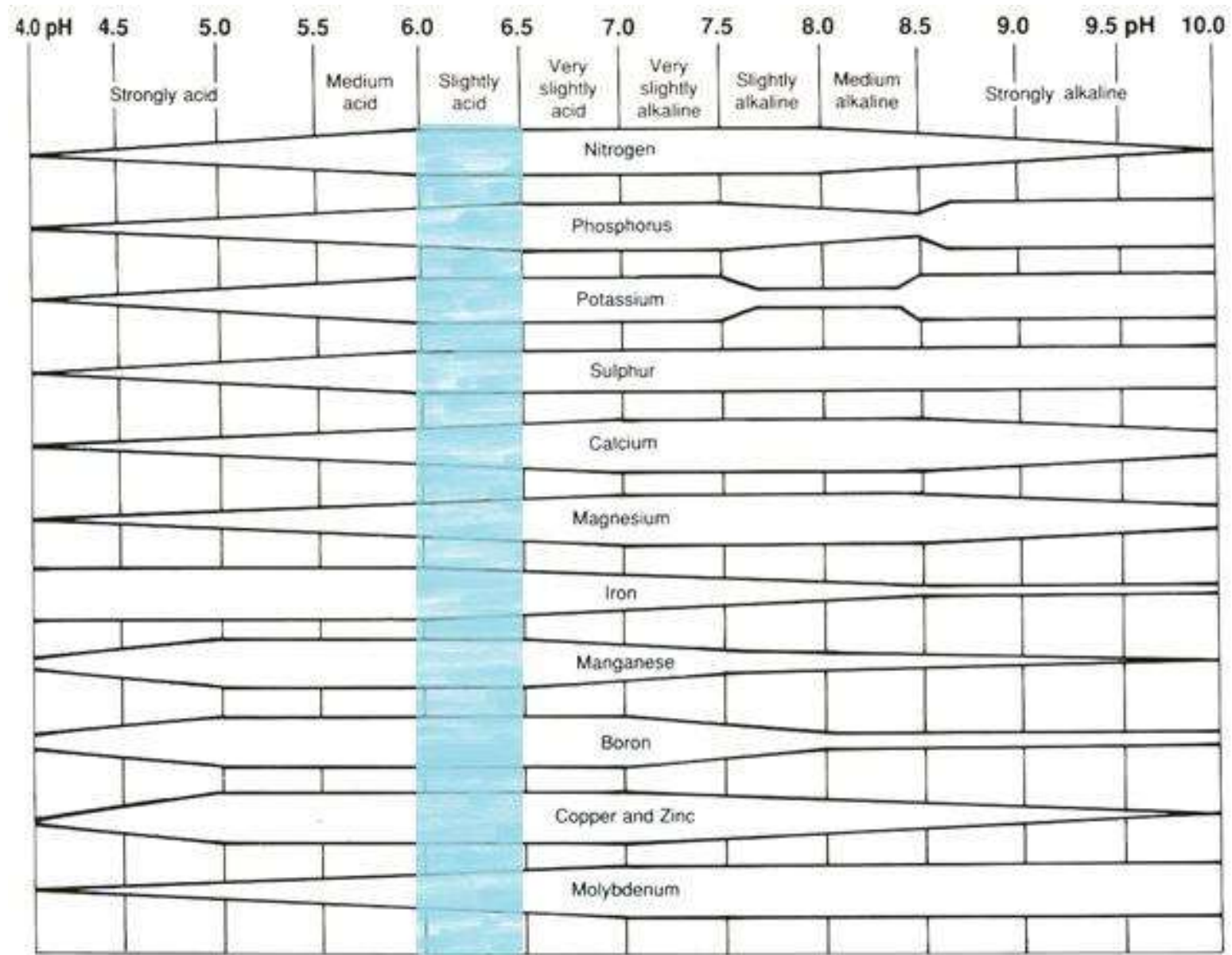
What the soil report doesn't tell you:

Drainage Issues

Soil Compaction

Both affect root health and plant growth – Must correct these problems before lime or fertilizer can help

- **Add organic matter**



Credit: NC Extension Gardener Handbook

Using the Harnett County GIS (Geographical Information System) for information on your property and soil survey information:

<https://gis.harnett.org/>

- This opens the GIS site for Harnett County
- Go to the Tax Parcel Viewer
- Put in your address
- Look in the info window to your right side
- Scroll down to Soil Analysis
- Look just below the Soil Analysis (in Green) and you will find soil type, slope, acreage, and other information about your property. Write down your soil type/s as the link will not take you directly to your soil type in the tables.
- Click on the below link and it will lead you through the Harnett County Soil Survey to find your soil type and other information on drainage, depth of each part of the soil profile, colors of the different profiles, and the permeability, soil acidity, water table levels, and other. The '**Detailed Soils Map Unit**' begins on page 19 of the document. The soil classifications are in alphabetical order.

https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/north_carolina/harnettNC1994/text.pdf

Harnett County GIS / E-911

More than just maps.

Contact Us to See How We Can Meet All Your Geospatial Needs.



Tax Parcel / GIS Viewer



Address Search



School Locator



Polling Place Finder



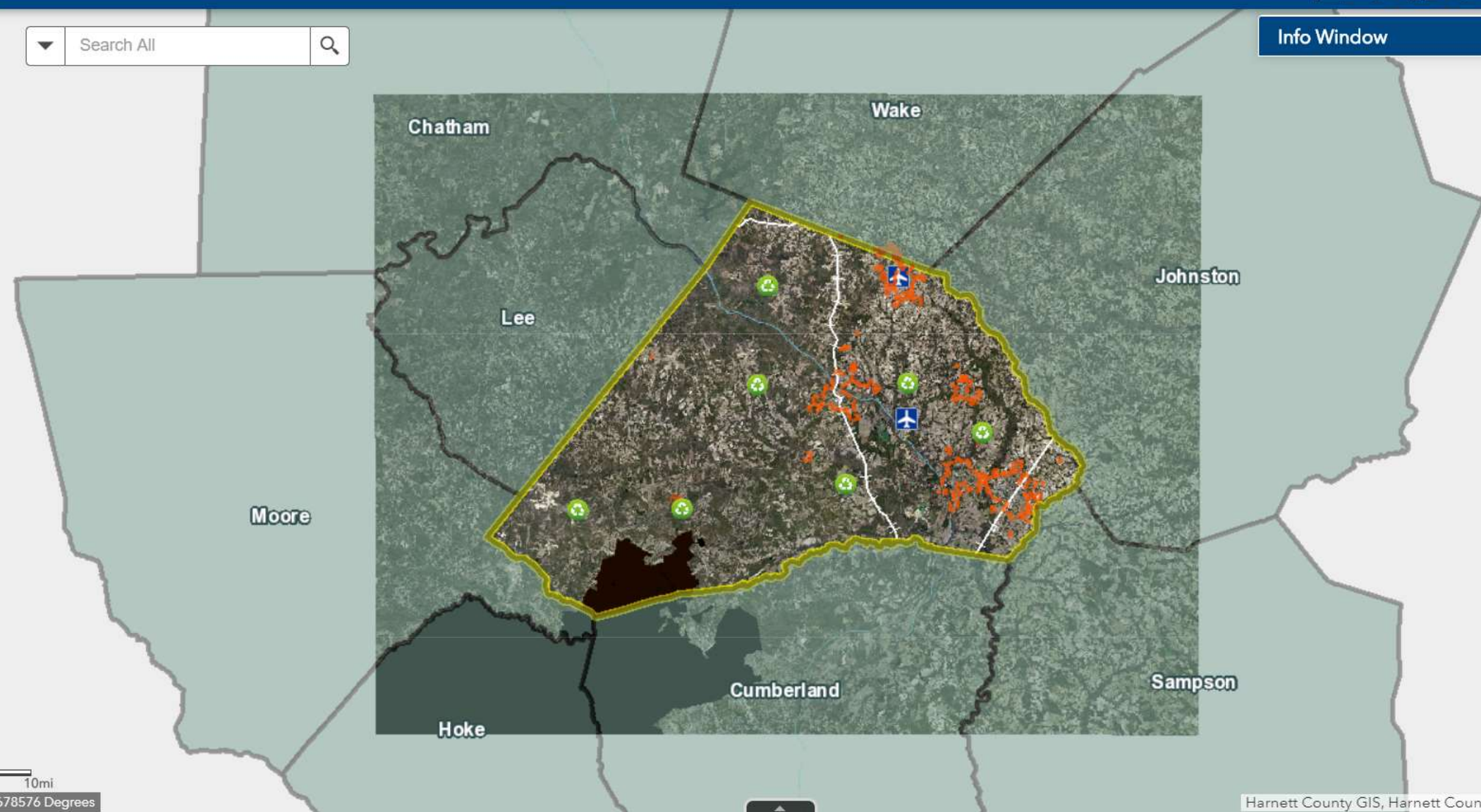
Tax Parcels – Harnett County Website – Pulls up GIS Mapping



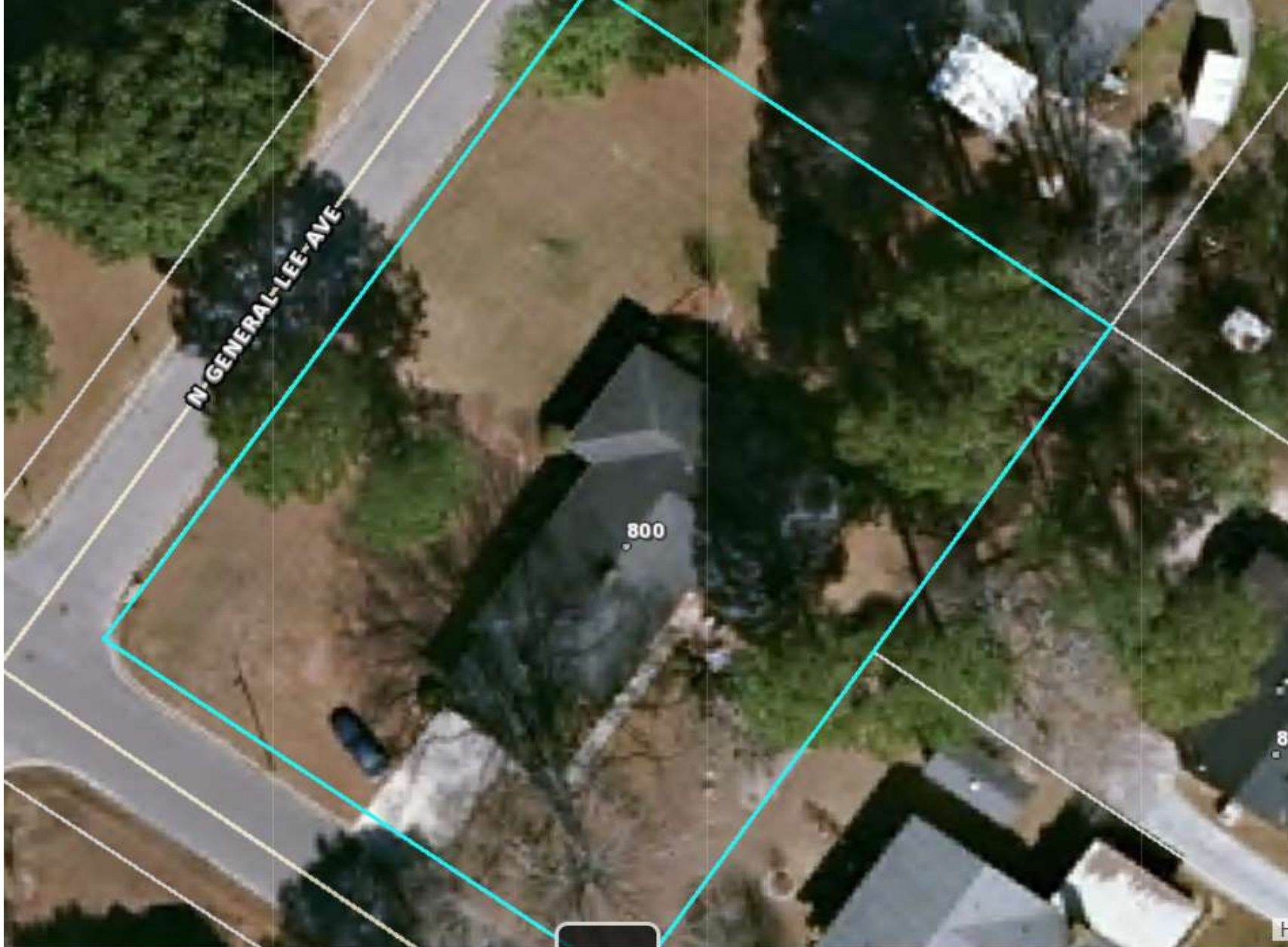
Advanced Search >

Search All

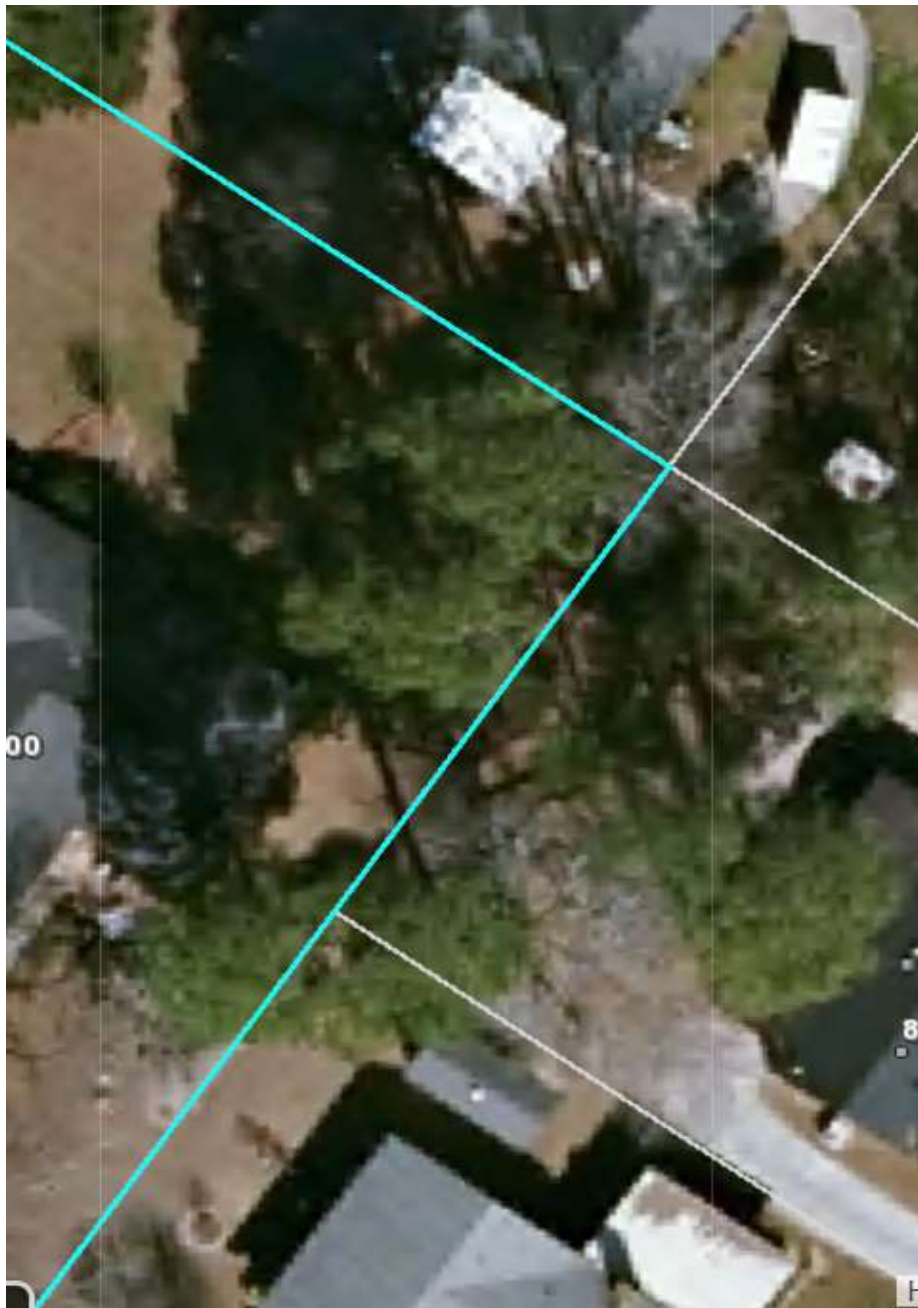
Info Window ⌵ ✕



0 5 10mi
-79.756042 35.678576 Degrees




800 N. General Lee Avenue, Dunn, NC 28334



(1 of 1)[Clear](#)

Owners: HORTON CHARLES DAVID JR & THOMPSON
DEBBIE SABRINA



> [CLICK for Parcel Report](#) <

Tax Parcel
PIN - 1517-50-7922.000
PID - 02151607370014

Owner
HORTON CHARLES DAVID JR & THOMPSON
DEBBIE SABRINA

Mailing Address - 800 N GENERAL LEE AVE DUNN, NC
28334-3232
Account Number - 1500029583

Address
800 N GENERAL LEE AVE DUNN, NC 28334

Address Type - Single Family
Address Use -
Development - MAURICE FLEISHMAN PROPERTY
Township - [view reference Layer - Boundaries > Townships](#)

Property
Description - 1 LOT CHARLES D HORTON MAP#2018-340

Parcel Information shows up on the right side of screen

The Info Window shows important information regarding your property

Acreage - 0.69

Wetlands – No

Flood Zone – Minimal Flood Risk

Soil Analysis ([Document](#))

NuB-Norfolk-Urban land complex, 0 to 6 percent slopes-.045 acres (65.1%), RB-Rains-Urban land complex-.024 acres(34.9%)

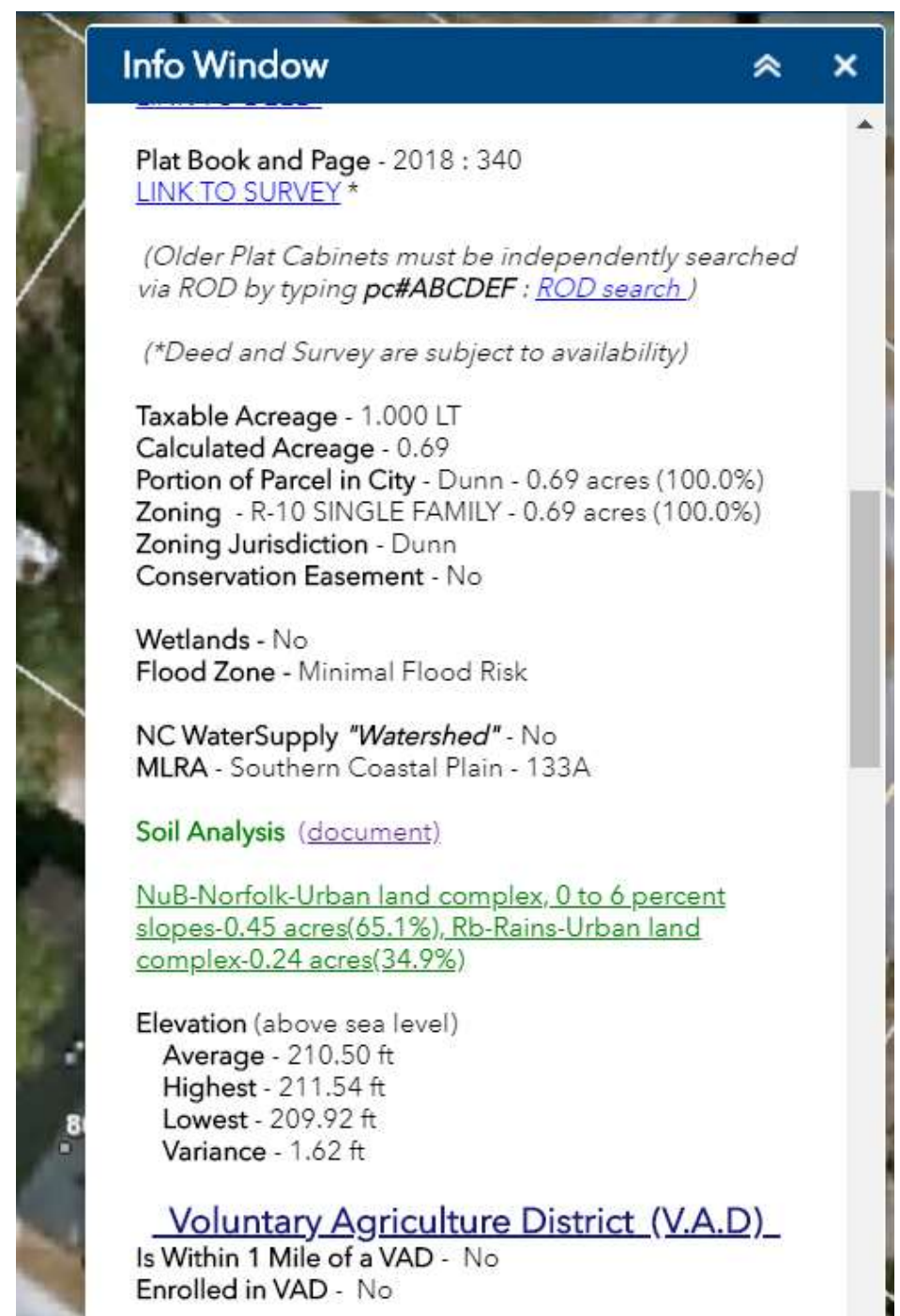
Elevation (above sea level)

Average – 210.50 ft

Highest – 211.54 ft

Lowest – 209.92 ft

Variance – 1.62 ft

A screenshot of a web application's 'Info Window' for a property. The window has a blue header with the title 'Info Window' and icons for expand and close. The content is organized into sections. The first section provides plat information: 'Plat Book and Page - 2018 : 340' with a link to the survey, and a note about searching older plat cabinets via ROD. The second section lists key metrics: Taxable Acreage (1.000 LT), Calculated Acreage (0.69), Portion of Parcel in City (Dunn, 0.69 acres, 100.0%), Zoning (R-10 SINGLE FAMILY, 0.69 acres, 100.0%), Zoning Jurisdiction (Dunn), and Conservation Easement (No). The third section shows 'Wetlands - No' and 'Flood Zone - Minimal Flood Risk'. The fourth section indicates 'NC WaterSupply "Watershed" - No' and 'MLRA - Southern Coastal Plain - 133A'. The fifth section, 'Soil Analysis', includes a link to a document and a detailed description of land complexes: 'NuB-Norfolk-Urban land complex, 0 to 6 percent slopes-0.45 acres(65.1%), Rb-Rains-Urban land complex-0.24 acres(34.9%)'. The sixth section, 'Elevation (above sea level)', lists Average (210.50 ft), Highest (211.54 ft), Lowest (209.92 ft), and Variance (1.62 ft). The final section, 'Voluntary Agriculture District (V.A.D.)', shows 'Is Within 1 Mile of a VAD - No' and 'Enrolled in VAD - No'.

Info Window

Plat Book and Page - 2018 : 340
[LINK TO SURVEY](#) *

(Older Plat Cabinets must be independently searched via ROD by typing *pc#*ABCDEF : [ROD search](#))

(*Deed and Survey are subject to availability)

Taxable Acreage - 1.000 LT
Calculated Acreage - 0.69
Portion of Parcel in City - Dunn - 0.69 acres (100.0%)
Zoning - R-10 SINGLE FAMILY - 0.69 acres (100.0%)
Zoning Jurisdiction - Dunn
Conservation Easement - No

Wetlands - No
Flood Zone - Minimal Flood Risk

NC WaterSupply "Watershed" - No
MLRA - Southern Coastal Plain - 133A

Soil Analysis ([document](#))

[NuB-Norfolk-Urban land complex, 0 to 6 percent slopes-0.45 acres\(65.1%\), Rb-Rains-Urban land complex-0.24 acres\(34.9%\)](#)

Elevation (above sea level)
Average - 210.50 ft
Highest - 211.54 ft
Lowest - 209.92 ft
Variance - 1.62 ft

[Voluntary Agriculture District \(V.A.D.\)](#)
Is Within 1 Mile of a VAD - No
Enrolled in VAD - No

If you click on the link (document) in the Information Window just above your soil information, it will take you to the Soil Survey for Harnett County. Write your soil types down from the Information Window because it will not link directly to the description of the soils. The general soils map information is on page starts on page 15 of the PDF.



United States
Department of
Agriculture

Soil
Conservation
Service

In cooperation with
North Carolina
Department of
Environment, Health, and
Natural Resources; North
Carolina Agricultural
Research Service; North
Carolina Cooperative
Extension Service;
Harnett County Board of
Commissioners; and
Harnett County Soil and
Water Conservation
District

Soil Survey of Harnett County, North Carolina



3. Norfolk-Wagram-Rains

Nearly level to strongly sloping, well drained and poorly drained soils that have a loamy subsoil; on uplands

This unit is in the southern and southeastern parts of the county in areas that are at an elevation of less than 265 feet. It is on broad uplands that have numerous wet flats and depressions.

This unit makes up about 21 percent of the county. It is about 44 percent Norfolk soils, 8 percent Wagram soils, 6 percent Rains soils, and 42 percent soils of minor extent. The minor soils are Goldsboro, Lynchburg, Marlboro, Orangeburg, and Vacluse soils in the uplands and Bibb and Wehadkee soils along the larger streams.

The nearly level and gently sloping, well drained Norfolk soils are on broad ridges. Typically, the surface layer is brown loamy sand. The subsurface layer is light yellowish brown loamy sand. The subsoil is brownish yellow sandy loam in the upper part; yellowish brown and strong brown sandy clay loam in the next part; and mottled strong brown, red, and light gray sandy clay loam in the lower part.

The nearly level and gently sloping, well drained Wagram soils are on broad ridges. They are frequently intermingled with areas of Norfolk soils. Typically, the surface layer is brown loamy sand. The subsurface layer is very pale brown loamy sand. The upper part of the subsoil is brownish yellow sandy loam and sandy clay loam. The next part is strong brown sandy clay loam. The lower part is mottled brown, light gray, and red sandy clay loam.

The nearly level, poorly drained Rains soils are in shallow depressions and on low flats. They are below the Norfolk and Wagram soils on the landscape. Typically, the surface layer is dark gray sandy loam. The subsoil is gray, mottled sandy clay loam or sandy loam.

Most of this unit is used for cultivated crops, such as corn, cotton, soybeans, sweet potatoes, and tobacco, or for pasture. Many of the wetter areas are wooded.

The Norfolk soils are well suited to cultivated crops and pasture, and the Wagram and Rains soils are suited. Droughtiness is a limitation in areas of the Wagram soil. Wetness is a limitation in areas of the Rains soil. Erosion is a hazard in the more sloping areas of the Norfolk soil.

The Norfolk and Rains soils are well suited to trees, such as loblolly pine, and the Wagram soils are suited.

The Norfolk soils are well suited to urban and recreational uses. The Wagram soils are well suited to urban uses and suited to recreational uses. The Rains soils are poorly suited to most urban and recreational uses. Wetness is the main limitation.

Find your soil type/s and read about the general characteristics of your soil. For more detail, you can go further into the report and it will give you specifics on each soil type. The Detailed Soil Map Unit starts on page 19 of the survey. The soil names are in alphabetical order.

Soils Information inserted from USDA/SCS Harnett County Soil Survey

NuB—Norfolk-Urban land complex, 0 to 6 percent slopes. This map unit consists of areas of Norfolk and similar soils and areas of Urban land. The soils and Urban land that make up this unit occur as areas so small and intermingled that mapping them separately was not feasible at the scale selected. This unit is about 45 percent Norfolk soil and 35 percent Urban land. The well drained Norfolk and similar soils are in open, relatively undisturbed areas. This unit is most extensive in and around the towns of Dunn, Erwin, and Buies Creek. Mapped areas are irregular in shape and range from about 10 to more than 100 acres in size.

Typically, the surface layer of the Norfolk soil is brown loamy sand 7 inches thick. The subsurface layer is light yellowish brown loamy sand 4 inches thick. The subsoil extends to a depth of 80 inches. The upper part is brownish yellow sandy loam. The next part is yellowish brown and strong brown sandy clay loam. The lower part is strong brown sandy clay loam that has red and light gray mottles.

Permeability is moderate in the Norfolk soil. Available water capacity also is moderate. Reaction is extremely acid to moderately acid, except where the surface layer has been limed. The seasonal high water table is at a depth of 4 to 6 feet from January through March during most years.

Urban land consists of areas where the soil has been covered by concrete, asphalt, buildings, or other impervious surfaces. The slope has been modified and commonly ranges from 0 to 4 percent.

Included in mapping are small areas of Goldsboro.

Aycock, Marlboro, Wagram, Orangeburg, and Dothan soils. Goldsboro soils are moderately well drained. They are in slight depressions or on the lower slopes. Aycock, Marlboro, and Wagram soils are intermingled with areas of the Norfolk soil. Aycock soils contain more silt than the Norfolk soil, Marlboro soils contain more clay, and Wagram soils contain more sand. Orangeburg soils have a redder subsoil than that of the Norfolk soil and are in the slightly convex areas adjacent to side slopes. Dothan soils have more than 5 percent plinthite in the subsoil and are intermingled with areas of the Norfolk soil at an elevation of more than 265 feet. Included soils make up about 20 percent of the map unit.

This map unit is poorly suited to cultivated crops, hay, and pasture because of the small size of the areas of soil. These small areas, however, are well suited to gardens, vegetable crops, trees, and shrubs.

This map unit is well suited to most urban and recreational uses. The wetness is a limitation on sites for buildings with basements and on sites for septic tank absorption fields.

The Norfolk soil is in capability subclass IIe. The Urban land is in capability subclass VIIIs. Based on loblolly pine as the indicator species, the woodland ordination symbol in areas of the Norfolk soil is 8A. The Urban land has not been assigned a woodland ordination symbol.

Rb—Rains-Urban land complex. This map unit consists of areas of Rains and similar soils and Urban land. The soils and Urban land that make up this unit occur as areas so small and intermingled that mapping them separately was not feasible at the scale selected. This unit is about 45 percent Rains soils and 35 percent Urban land. The poorly drained Rains and similar soils are in open, relatively undisturbed areas. This unit is most extensive in and around the towns of Dunn and Erwin. Mapped areas are irregular in shape and range from about 10 to more than 100 acres in size.

Typically, the surface layer of the Rains soil is dark gray sandy loam 10 inches thick. The subsoil extends to a depth of 64 inches. The upper part is gray sandy clay loam that has yellowish brown and very pale brown mottles. The lower part is gray sandy clay loam. The underlying material to a depth of 72 inches is light gray sandy loam.

Permeability is moderate in the Rains soil. Available water capacity is high. Reaction is very strongly acid or strongly acid, except where the surface layer has been limed. The seasonal high water table is at or near the surface from November through April during most years.

Urban land consists of areas where the soil has been covered by concrete, asphalt, buildings, or other impervious surfaces. The slope has been modified and commonly ranges from 0 to 4 percent.

Included in mapping are small areas of Lynchburg, Portsmouth, and Bibb soils. Lynchburg soils are somewhat poorly drained. They are along the outer edge of mapped areas. Portsmouth soils are very poorly drained. They are near the center of the mapped areas or at the base of side slopes. Bibb soils have less clay than the Rains soil and are along small drainageways. Included soils make up about 20 percent of the map unit.

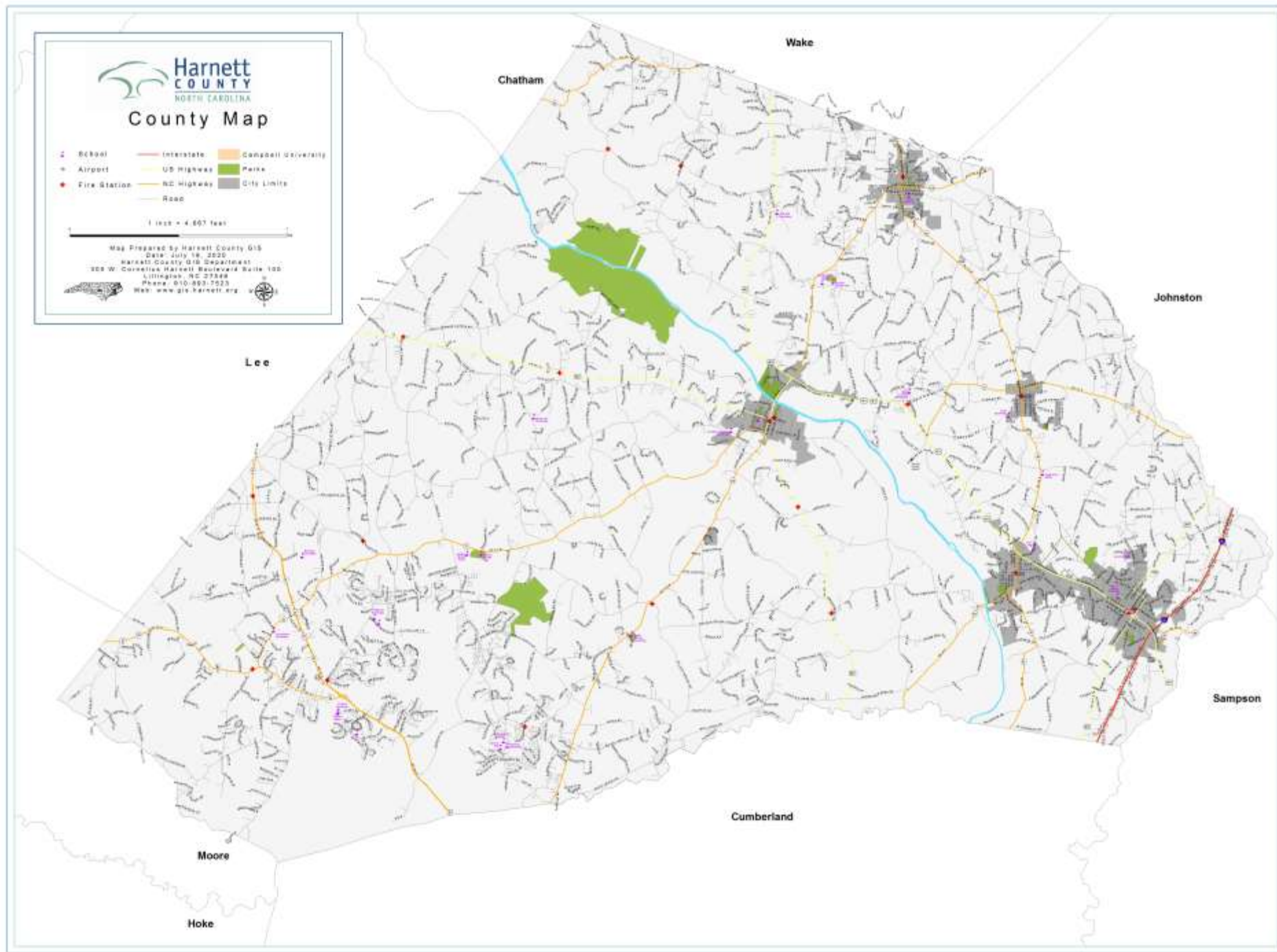
This map unit is poorly suited to cultivated crops, hay, and pasture because of the small size of the areas of soil. These small areas, however, are suited to gardens, vegetable crops, trees, and shrubs.

This map unit is poorly suited to most urban and recreational uses. The wetness and the slow rate of surface runoff are severe limitations on sites for urban and recreational uses. Extensive drainage measures may be needed to control surface and subsurface water.

The Rains soil is in capability subclass IIIw. The Urban land is in capability subclass VIIIs. Based on loblolly pine as the indicator species, the woodland ordination symbol in areas of the Rains soil is 10W. The Urban land has not been assigned a woodland ordination symbol.

More detailed information on the soil types that I have on my property. This will give you insights into drainage and permeability.

Soils Information inserted from USDA SCS
Harnett County Soil Survey



West

East

Credit: Harnett
County GIS

References:

NC Extension Gardener Handbook – Chapter 1

Soil Science Society of America

Harnett County GIS Website

United States Department of Agriculture

Soil Conservation Service

US Forest Service