



# SITE ASSESSMENT

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# SITE ASSESSMENT

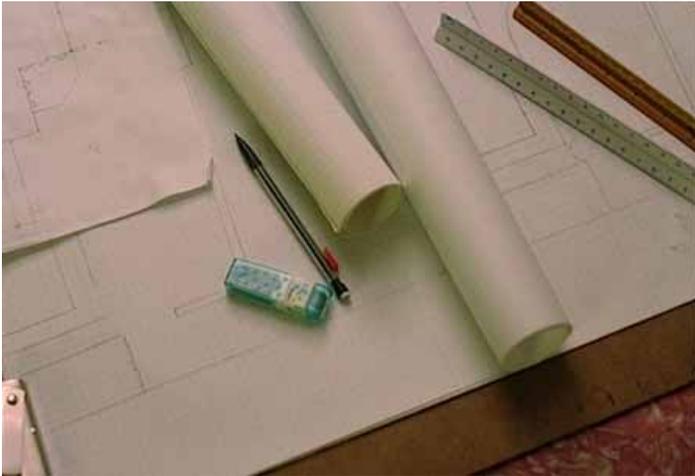
An approach for identifying and analyzing existing natural, built, and social characteristics in the landscape and their relationship to each other.

**Natural + Built + Social**



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# Site Assessment: What is the point?



A **tool** and **methodology** that lessens the chances of your garden contributing to the creation of:

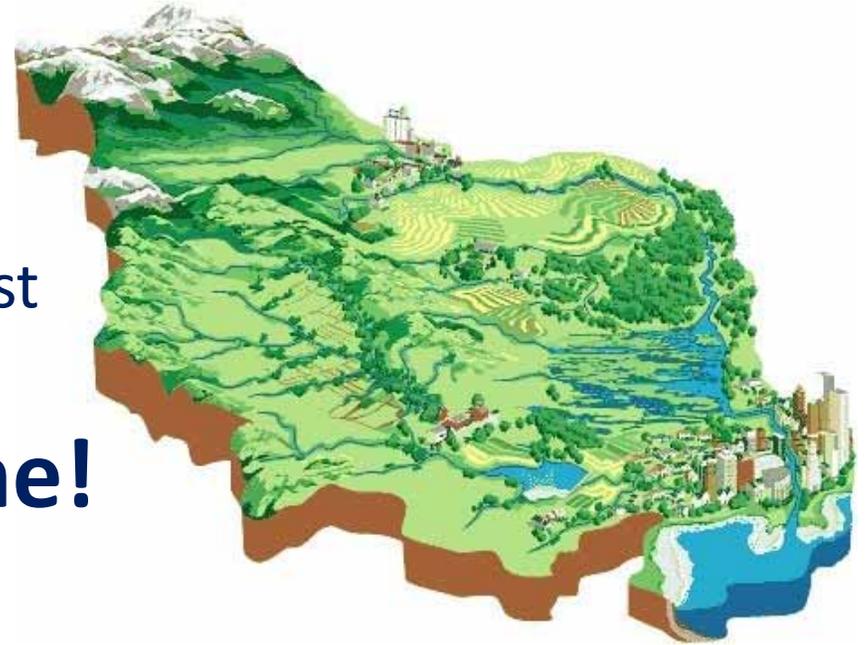
- Stormwater runoff
- Nonpoint source pollution
- Resource degradation!

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# Site Assessment: What is the point?

Regardless of location, every landscape is within a watershed, and every watershed drains via smaller water bodies to the largest water bodies

**Every curb is a coastline!**



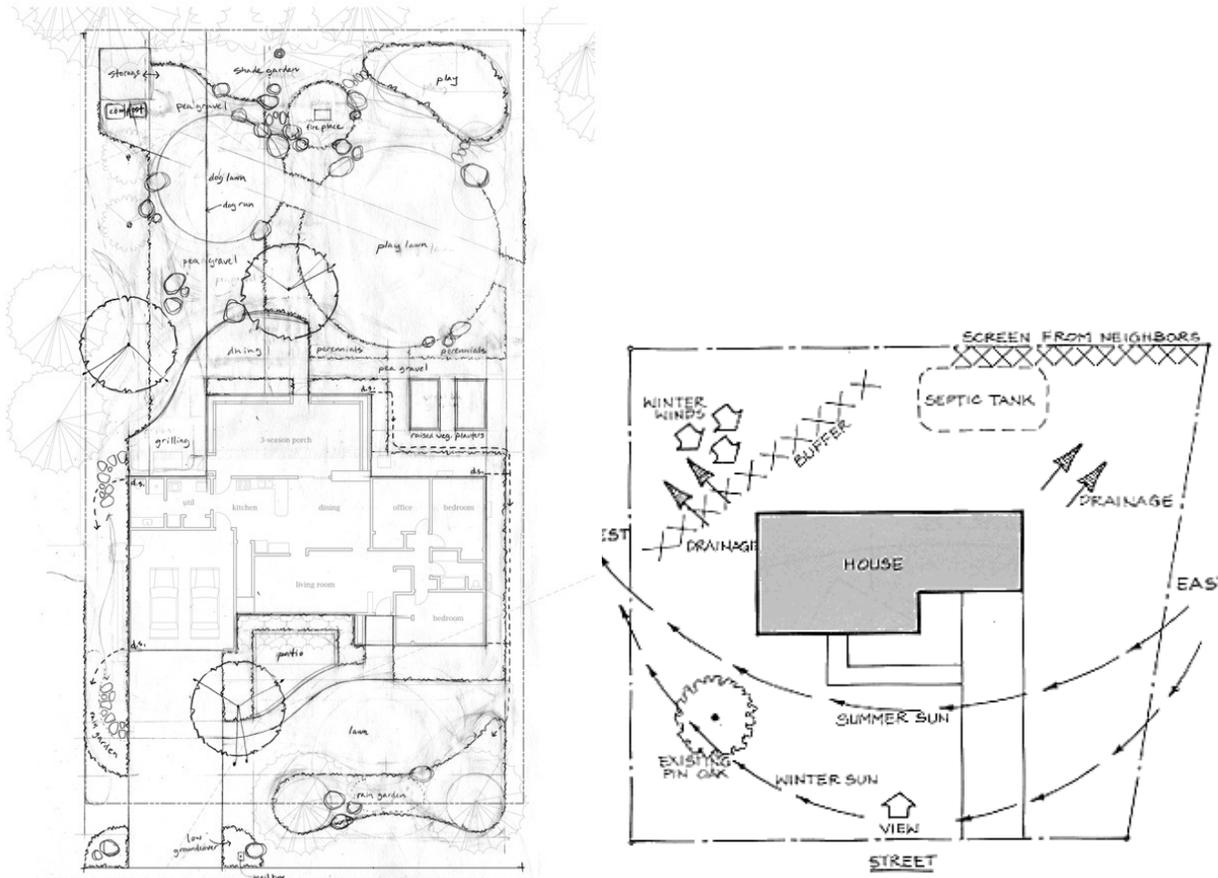
# Site Assessment: What is the point?

- Save time and **money**.
- Turn yard waste into yard resources to build soil health; save **money** on mulch and compost.
- Make plant selection easy and fun, and realistic; save **money** on plants you won't have to replace.
- Reduce garden maintenance over time. Save your back! And **money**.

# Site Assessment: How is it done?

1. Go outside.
2. Record what you see.
3. Do a little research.
4. Write down what you find.

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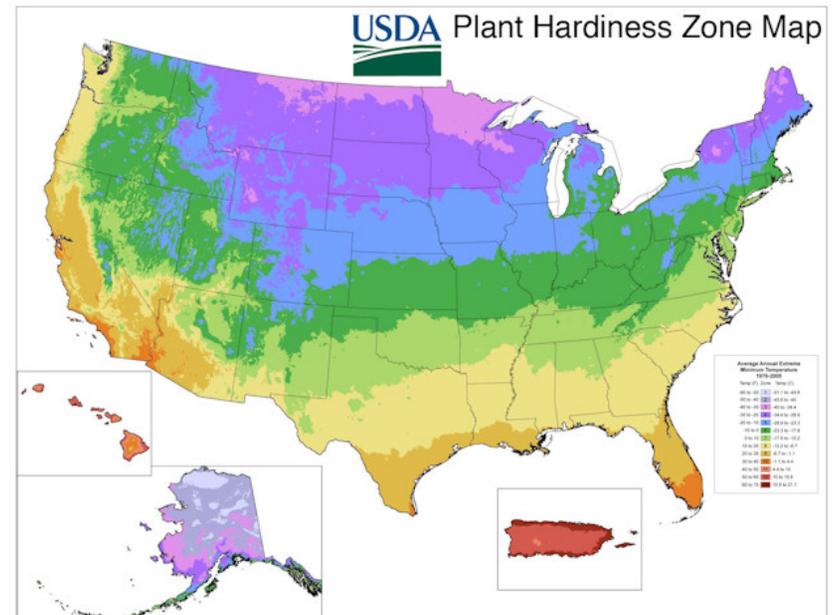


# Site Assessment: Categories

- Climate (NATURAL)
- Landform (NATURAL)
- Water (NATURAL)
- Access and Circulation (SOCIAL)
- Vegetation and Wildlife (NATURAL)
- Buildings and Infrastructure (BUILT)
- Zones of Use (BUILT)
- Soil (NATURAL)

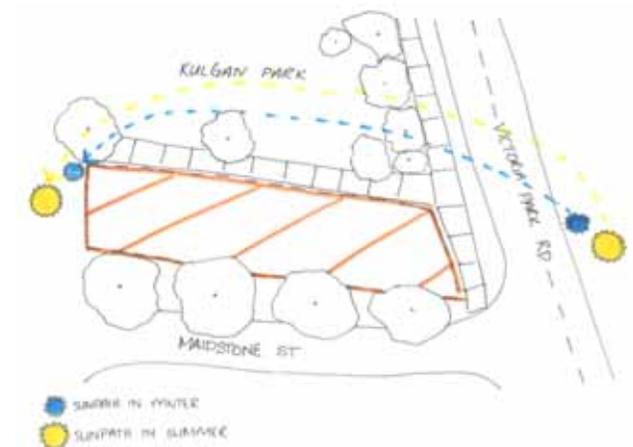
# Site Assessment: CLIMATE - Research

- The basic limiting factor for plant and animal life in an area
- **Plant Hardiness Zone**
- **Average growing days**
- **Average precipitation levels**
- **Average last frost date**



# Site Assessment: CLIMATE – Observation

- **Wind Direction and Exposure**
  - Where is it coming from?
  - Signs of stress include leaning trees and stunted growth on one side of the plant
  
- **Sun Location and Exposure**
  - Where is it in the sky?
  - Full sun = more than 6hrs of direct sunlight
  - Partial sun = less than 6hrs of direct or filtered sunlight for most of day
  - Full shade = more than 6hrs of direct or indirect shade



# Site Assessment: LANDFORM

- Generally unchangeable site feature having an effect on microclimates, drainage, soil depth, access and views
- **Topographic Position (i.e. valley, hill)**
- **Estimated Seasonal High Water Table Depth**
- **Estimated Depth to bedrock, hardpan or impermeable soil**
- **Elevation above sea level**
- **Slope = Rise/Run x 100**



# Site Assessment: LANDFORM –Observation

## Do-It-Yourself Soil Permeability Test

1. Dig 6” wide x 12” deep hole
2. Fill with water and let drain
3. Fill with water again

*If the water on the 2nd run  
doesn't drop at least  
2"/hour, you are dealing  
with poorly drained OR  
compacted soils...*



# Site Assessment: WATER

- Available water affects design
- Depends on:
  - Distribution and reliability of local rainfall (FIXED)
  - Drainage and water retention properties of soil
  - Soil covers
  - Plants



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# Site Assessment: WATER – Observation

- Type and location of supply (spigots, pipes, filters)?
- Sources of runoff and pollution? (i.e. rooftop, driveway, road, bare soil, neighbor...)?



# Site Assessment: WATER – Observation

- **Conduct a Runoff Test**
  - During a rain storm, watch where channels or sheets of water travel over the landscape –OR– simulate rainfall using a garden hose
  - Note areas where water stands or ponds



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# Site Assessment: WATER – Observation



## **Erosion?**

-First sign is sheeting...

*-Inset: Path shows sheeting and the beginning of "rilling"*

# Site Assessment: WATER – Observation

## Erosion?

- Sheeting is followed by rill formation
- Carries sediment to storm drains



# Site Assessment: VEGETATION & WILDLIFE – Observation

- Existing Plant Communities (RESEARCH also)
- Habitat types (RESEARCH also)
- Pests / Varmints
  - Existing
  - Potential
- Existing Plant Species
- Indicator Species
  - i.e. Wetland, Dune

## *Natural Communities of Rhode Island*



December 2006

Richard W. Enser, Rhode Island Natural Heritage Program  
Department of Environmental Management

and

Julie A. Lundgren  
The Nature Conservancy of Rhode Island



The Nature  
Conservancy  
www.nature.org

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RHODE ISLAND COASTAL PLANT GUIDE



50 of 231 Species Page 1 of 5 Clear Filter

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[Enter all or part of name above to filter list] [Select from dropdown list to filter plant list by attributes]

| Species  | Common Name            | Zone | Plant Type | Native Status | Full Sun | Shade Tolerant | Drought Tolerant | Wet Sites | Wind Tolerant | Na:Spray Tolerant | Na:Soil Tolerant | Acid Tolerant | pH Adapt | Rain Gardens | Dune Plant | Height | Width    | Availability                   |
|--|------------------------|------|------------|---------------|----------|----------------|------------------|-----------|---------------|-------------------|------------------|---------------|----------|--------------|------------|--------|----------|--------------------------------|
| <i>Abies concolor</i>                                | White fir              | 2    | Tree       | -             | +        | -              | +                | -         | -             | -                 | -                | +             | +        | -            | -          | >10'   | 15-30'   | 8,10,22,67,74,77,57            |
| <i>Achillea sp.</i>                                  | Yarrow                 | 2    | Per.       | -             | +        | -              | +                | -         | +             | -                 | +                | -             | -        | -            | -          | 2-6'   | -        | 28,10,12,22,24,67,74,77,35,51  |
| <i>Aesculus flava (A. octandra)</i>                  | Yellow Buckeye         | 2    | Tree       | -             | +        | +              | -                | -         | -             | -                 | -                | -             | -        | -            | -          | >10'   | -        | 10,67                          |
| <i>Aesculus glabra</i>                               | Ohio Buckeye           | 2    | Tree       | -             | -        | -              | -                | -         | -             | -                 | -                | -             | -        | -            | -          | >10'   | 20-40'   | 10,67,74                       |
| <i>Aesculus x carnea</i>                             | Red Horsechestnut      | 2    | Tree       | -             | -        | -              | -                | -         | -             | -                 | -                | -             | -        | -            | -          | >10'   | -        | 10,67,57                       |
| <i>Alnus incana ssp. rugosa</i>                      | Speckled Alder         | 1    | Shrub      | +             | +        | +              | +                | +         | +             | -                 | +                | -             | -        | -            | -          | >10'   | 6-12'    | 10,74                          |
| <i>Alnus serrulata</i>                               | Common Alder           | 1    | Shrub      | +             | +        | +              | +                | +         | +             | -                 | +                | -             | -        | -            | -          | >10'   | 6-12'    |                                |
| <i>Amelanchier arborea</i>                           | Serviceberry           | 1    | Tree       | +             | +        | +              | +                | -         | +             | +                 | -                | +             | -        | +            | -          | >10'   | 15-25'   | 10,67,74,57                    |
| <i>Amelanchier canadensis</i> !                      | Shadbush               | 1    | Shrub      | +             | +        | +              | +                | +         | +             | +                 | +                | +             | +        | +            | +          | >10'   | variable | 8,10,22,52,74,77,100,57        |
| <i>Amelanchier laevis</i>                            | Allegheny Serviceberry | 1    | Tree       | +             | +        | +              | +                | -         | +             | +                 | +                | +             | +        | +            | -          | >10'   | 15-25'   | 8,10,67,74,77,57               |
| <i>Amelanchier stolonifera</i>                       | Running Serviceberry   | 1    | Shrub      | +             | +        | +              | +                | +         | +             | +                 | +                | +             | +        | -            | -          | 2-6'   | variable | 22,67                          |
| <i>Ammophila breviligulata</i>                       | American Beach Grass   | 1    | Grass      | +             | +        | -              | +                | -         | +             | +                 | +                | -             | -        | -            | +          | 2-6'   | -        | 10,12,22,35,67,74,77           |
| <i>Andropogon gerardii</i>                           | Big Bluestem           | 1    | Grass      | +             | +        | -              | +                | -         | +             | +                 | +                | -             | -        | -            | -          | 6-10'  | 2'       | 10,12,35,67,74,100             |
| <i>Andropogon glomeratus</i>                         | Bushy Bluestem         | 2    | Grass      | +             | +        | -              | +                | +         | -             | -                 | -                | -             | -        | -            | -          | <2'    | -        | 8,10,12,35,67                  |
| <i>Andropogon ternarius</i>                          | Split-beard Bluestem   | 2    | Grass      | -             | +        | -              | +                | +         | -             | +                 | +                | +             | -        | -            | -          | 2-6'   | 2-3'     | 67                             |
| <i>Andropogon virginicus</i>                         | Broomsedge             | 1    | Grass      | +             | +        | -              | +                | -         | +             | +                 | +                | +             | -        | -            | -          | 2-6'   | 1-2'     | 12,67                          |
| <i>Arctostaphylos uva-ursi</i>                       | Bearberry              | 1    | Shrub      | +             | +        | +              | +                | -         | +             | +                 | +                | +             | -        | +            | -          | <2'    | variable | 8,10,22,24,41,52,67,74,77,100  |
| <i>Artemisia stelleriana</i>                         | Dusty Miller           | 1    | Per.       | -             | +        | -              | +                | -         | -             | +                 | +                | -             | -        | -            | -          | 2-6'   | 36"      | 2,8,10,12,22,24,67,74,77       |
| <i>Asclepias tuberosa</i>                            | Butterfly Milkweed     | 2    | Per.       | +             | +        | -              | +                | -         | -             | -                 | -                | -             | -        | +            | -          | 2-6'   | 2'       | 8,10,12,22,24,67,74,77         |
| <i>Astilbe sp.</i>                                   | Astilbe                | 2    | Per.       | -             | +        | +              | -                | -         | -             | -                 | -                | -             | -        | +            | -          | 2-6'   | -        | 2,8,10,12,22,24,67,74,77,35,51 |
| <i>Atriplex sp.</i>                                  | Salt Bush              | 1    | Shrub      | +             | +        | -              | +                | -         | -             | +                 | +                | -             | -        | -            | +          | <2'    | 6'       |                                |
| <i>Baccharis halimifolia</i>                         | Groundsel-bush         | 1    | Shrub      | +             | +        | -              | +                | -         | +             | +                 | +                | +             | +        | -            | -          | >10'   | 5-12'    | 10,74                          |
| <i>Baptisia australis</i>                            | Blue Wild Indigo       | 1    | Per.       | -             | +        | -              | +                | -         | +             | +                 | -                | -             | -        | -            | -          | 2-6'   | 3-4'     | 8,10,12,22,24,67,74,77,100     |
| <i>Baptisia sphaerocarpa</i>                         | Yellow Wild Indigo     | 2    | Per.       | -             | +        | -              | +                | -         | -             | -                 | -                | -             | -        | -            | -          | 2-6'   | 3-4'     | 12,22,67,77                    |
| <i>Baptisia tinctoria</i>                            | False Indigo           | 1    | Per.       | +             | +        | -              | +                | -         | +             | +                 | -                | -             | -        | -            | -          | 2-6'   | 2-3'     | 10,22,67,77                    |
| <i>Betula populifolia</i>                            | Gray Birch             | 2    | Tree       | +             | +        | +              | +                | +         | +             | -                 | -                | -             | +        | -            | -          | >10'   | 10-20'   | 10,22,67                       |
| <i>Calamagrostis x acutiflora</i><br>'Karl Foerster' | Feather Reed Grass     | 2    | Grass      | -             | +        | -              | +                | +         | -             | -                 | -                | -             | -        | -            | -          | <2'    | 5-7'     | 28,10,12,22,24,52,67,74,77     |



## RI NATIVE PLANT GUIDE

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"Native" species are those believed to have been present in the state prior to European settlement that began in the 15th century. (*Vascular Flora of Rhode Island*. Kingston: Rhode Island Natural History Survey, 1998.)"

[What are Native Plants?](#)

Search:

Type (T):

Exposure:

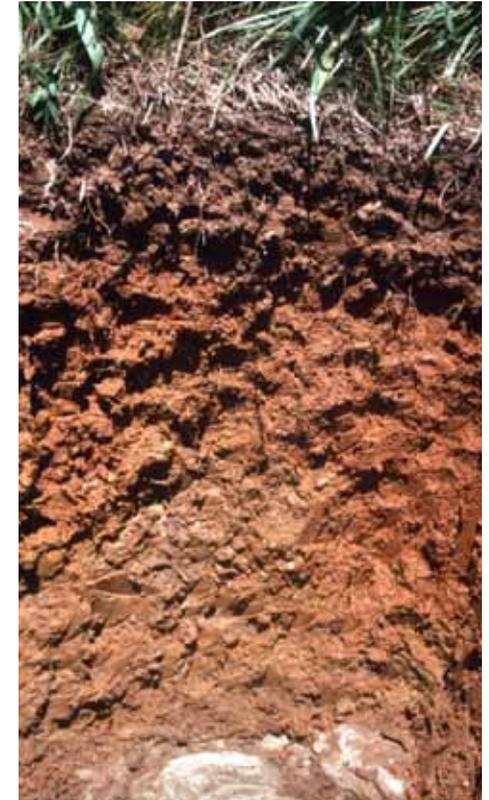
Moisture:

Wildlife:

Uses:

# Site Assessment: SOIL

- Foundation of healthy landscape
- Without it, plants CAN'T grow
- Unhealthy soil:
  - Might not contain nutrients plants need to survive
  - Might not support insect populations that contribute to a healthy ecosystem
  - Might be easily compacted, which doesn't allow water to make it back underground



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# Site Assessment: SOILS –Observation

Ball Test: Squeeze a moistened ball of soil in the hand

**Soils break with slight pressure =**

Sand or sandy loam

**Soil stays together but changes shape easily =**

Loam or loamy silt

**Soils resist breaking =**

Silty clay or clay



# Site Assessment: SOILS – Observation

## Ribbon Test

- **Less than 1”**
  - Feels gritty = coarse texture (sandy) soil
  - Not gritty feeling = medium texture soil high in silt
- **1-2”**
  - Feels gritty = medium texture soil
  - Not gritty feeling = fine texture soil
- **Greater than 2”**
  - Fine texture (clayey) soil



# Site Assessment: SOILS – Observation

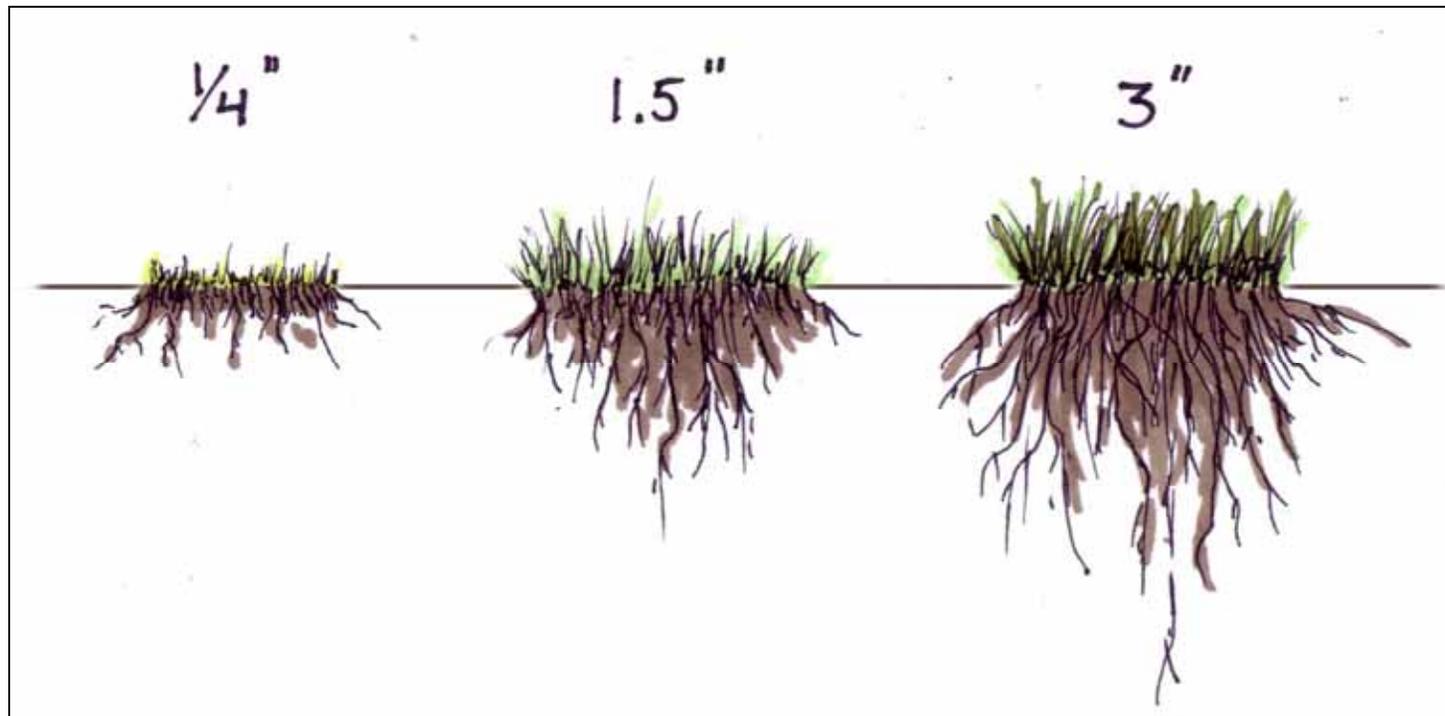
## Identify Drainage Characteristics

- Poorly drained soil indicators:
  - Ponding / areas with standing water
  - Mottled soil
  - Presence of Willow, Pin Oak, Swamp White Oak, & Tupelo species
    - In poorly drained soils, wetland plant species will thrive; others will not



# Wisdom

Is mowing high.



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