# Fall Groundwork for a Healthy Landscape

**City of Kirkland - Natural Yard Care – Saturday, September 10, 2016**

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## PART ONE – Building Healthy Soil

### Backbone for a Healthy Garden

**Healthy Soil:**

- Reduces need for chemical fertilizers and pesticides
- Reduces irrigation needs
- Filters out urban pollutants
- Sequesters stormwater
- Stores carbon from atmosphere

### Components of Soil

- Mineral/inorganic matter: silt, clay, sand
- Air and Water - need pore spaces
- Organic Matter - food for micro-organisms
- Micro-organisms – do the work of converting nutrients

### Native versus Manufactured Soil

**Native soils:** variable, native plants are adapted to them and can be amended with care

**Manufactured:** come from variable sources, some have certified organic components

### Soil Testing: Why Do It?

- Determine soil health baseline
- Assess nutrient quality – fall is a great time to check fertility
- Get guidelines for further amendments
- Assess toxin issues

**Basic Soil Amendments**

- Compost: make your own or purchase
- Manure: composted or fresh, nitrogen source
- Cover Crops: grow in place, good nitrogen source and provide organic matter

**Types of Cover Crops**

- Annual Rye Grass – cool weather, can be planted as late as November
- Crimson Clover - legume, fixes Nitrogen, cool weather
- Field Peas - legume, fixes Nitrogen, cool weather
- Vetch – legume, fixes Nitrogen, cool weather
- Brassicas – cool weather, do not use where Club Root is an issue
- Phacelia – summer, flowers are great for bees
- Buckwheat - summer, flowers are great for bees

**Soil and Compaction**

- Commonly found on new or remodeled construction sites and on formerly hard-scaped areas like driveways
- Washington State has 'Best Management Practices' for soil
- Soil sample with soil corer

**Mulch**

- Sheet Mulching: for renovating lawn and weedy areas
    - Good for large areas with problematic weeds – weeds can creep up at edges
    - Ground nesting bees are at risk – use only in spots that don't impact bees
- Assess area to be mulched to make correct mulch product choice

**What Does Mulch Do?**

- Moderates soil temperature
- Keeps weeds down
- Conserves moisture
- Makes a finished look
- Creates habitat for beneficial insects and birds

**Mulch Products**

- Wood Chips - paths, tree and shrub beds, sheet mulching
- Compost - vegetable and annual gardens, around perennials
- Leaves - tree and shrub beds, winter vegetable gardens
- Straw - vegetable gardens, paths
- Grass Clippings - sparingly in vegetable gardens
- Weeds - lay in place around vegetables
- Livestock Bedding - in open soil areas as winter cover
- Wood Shaving Manure Blends - tree and shrub beds, annual gardens, around perennials; can compact
- Hazelnut shells - paths; attractive to wildlife
- Bark - fine grade material not recommended; repels water, compacts
- Gravel - paths, rock gardens

## PART TWO – Growing Healthy and Sustainable Lawns

**Sustaining a Healthy Lawn**

- Mow properly
    - 2 inch height will help shade soil, conserve moisture, discourage weeds
    - Grasscycle during growing season and fertilize once a year in the fall –

    - Use proper equipment and avoid long and wet grass
    - Use an organic slow release fertilizer. In 2013 Phosphorus use in lawns was restricted to use only on lawns being established or when soil test shows need for Phosphorus.
- Apply lime if needed in fall or early spring -
    - Test soil to assess the need to apply
    - Ideally use agricultural lime – calcium carbonate
- Supply good drainage
    - De-thatch your lawn when needed
    - Aerate and top dress with compost at least every two years, annually is better
- Water properly
    - Water when top 2 – 4 inches of soil is dry
    - Let soak in slowly and deeply
    - Apply 1 inch of water a week on average to 6 inch soil depth,
    - Water in the morning
    - Water less from May through June and then in September and more in July and August.
    - Use the tuna can test
- Ensure 6-8 hours of sun
    - Prune shrubs and trees that shade the area
    - Remove lawn from areas that are too shaded

**Lawn and Seed Choices for Northwest Gardens**

- Perennial Rye – loves sun, creeping, takes traffic, deep green color
- Perennial Fine Fescue – has some shade tolerance, bunching, light green color
- Kentucky Bluegrass – sometimes used as filler in seed until other grasses fill in, dies out and leaves gaps allowing weeds to move in, better in Eastern Washington
- Eco Turf– less mowing, less water use, can incorporate wildflowers like yarrow and daisy
- Native grasses – can be found in some Eco Turf mixes but include Oregon bentgrass, western fescue, creeping red fecue, blue wild rye, Alaska onion grass, Columbia sedge. Will not be a traditional lawn.
- Steppable groundcovers – no mowing, less water and fertilizer, takes less traffic, fragrant when touched – creeping thyme, Corsican mint
- Perennial Clover – Adds nitrogen, used to be a component of seed mixes

**Lawns in the Wrong Place**

- Slopes
    - Issue - More than 12% grade is not acceptable for a healthy lawn
    - Solutions - Consider native groundcovers instead
- Ponding –
    - Issue - Indicates compaction or high water table –
    - Solution - Assess for both situations and correct or substitute with plants adapted to the site
- Under Conifers
    - Issue - Casts shade, tree roots are hard to mow over, needles cover grass and choke out, use lots of ground water

    - Solution - substitute with shade loving perennials, ferns or groundcovers.
- Shady Garden
    - Issue – Sparse lawn because lawns need 6 – 8 hours of sun daily for optimal growth.
    - Solution - Consider substituting shade loving plants and natives where shade cannot be changed.

**Weeds and Lawns**

- Weed Infestations
    - Remove weeds by hand
    - Correct soil conditions
    - Improve health of lawn to outcompete weeds
    - Do not let weeds go to seed
    - Mow at an optimum 2 inches to shade out weed seedlings
    - Tolerate certain weeds

**Common Weeds**

- Dandelion – edible perennial, tap root, indicates poor nutrition
- Cat's Ear – perennial, matting in colonies, tap root, likes disturbance
- Moss – Indicates compacted soil, shade, moisture, low nutrition and low pH - birds make use of moss for nests - substitute with native plants or accept some moss
- Plantain – edible and medicinal perennial, tap root, indicates compaction
- Buttercup – creeping perennial, indicates moist and compact soil
- Clover – creeping perennial, fixes nitrogen and feeds grass, stays green – used to be included in seed mixes

- Daisy – self-seeding perennial, makes a nice companion in lawns
- Yarrow – medicinal perennial, indicates poor nutrition, dry soil, disturbed areas
- Sheep's Sorrel – creeping perennial, taproot
- Ground Ivy – creeping perennial, indicates moist soil
- Self Heal – creeping perennial, indicates moist soil
- Speedwell – creeping perennial, indicates moist soil
- Annual Bluegrass – takes advantage of bare spots, looks like lawn grass until it blooms at short height
- Tall Fescue - clumping grass with large blades, makes large patches in lawn

**Common Lawn Pests and Diseases**

- Moles
    - Damage – Moles tunnel and make hills in lawns
    - Tolerance – Their presence indicates that your soil has life in it!
    - Management - Stamp down hills, runs, tolerate until they go deeper into ground in summer.
- Crane Fly
    - Damage - Larvae eat roots creating bare spots in the lawn
    - Tolerance – Do not treat until larvae reach numbers of more than 40 per square foot of lawn
    - Management – Improve drainage, attract predators like birds to your garden, let your chickens out on the lawn when larvae are present, reduce pesticides in the garden to encourage predaceous insects like ground beetles, apply nematodes as a bio-control, let lawn go golden in the summer.

- Red Thread
    - Damage – Causes large brown patches in the lawn
    - Tolerance – Does not do a lot of harm to the lawn, is mostly cosmetic.
    - Management – Fertilize with slow release organic Nitrogen, add lime, improve drainage, raise mowing height to two inches

## Fall Lawn Renovation

Lawn grasses grow very well in cool weather so fall is a good time to get them re-established. If your lawn is weedy and sparse begin your renovation in September. You need to get the seed germinated before frost hits which is often in November.

**September**

- Remove weeds from lawn – if soil is dry water well first
- Aerate the lawn – leave the plugs to break back down into the soil

**September to November**

- Loosen soil with a lawn rake
- Apply slow release or organic fertilizer
- Spread seed – use seed recommendations for the northwest
- Top dress with compost and cover seed

**Resources**

*Ecologically Sound Lawn Care for the Pacific Northwest, by David McDonald, Seattle, Seattle Public Utilities, @1999*

**Soil Best Management Practices for Washington State**

http://www.soilsforsalmon.org/how.htm

**Sprinkler Efficiencies**

http://cascadewater.org/irrigation.php

***Right Plant, Right Place***, by Nicola Ferguson; New York, Fireside, © 2005

**Great Plant Picks** www.greatplantpicks.org

**Go-Native King County** https://green2.kingcounty.gov/gonative/index.aspx

**King Conservation District Plant Sales** http://kingcd.org/programs-native-walk-up-sale.htm

**Garden Hotline** www.gardenhotline.org 206-633-0224

Monday through Saturday 9:00 am to 5:00 pm