2: Compost Use Guidelines

Landscaping/Turf Management

Planting Bed Establishment With Compost

Soil Amendment for the Establishment of Planting Beds (seed, seedlings, or woody plants)

One of the most popular uses for compost products by horticultural professionals and homeowners is amending planting beds for the establishment of various ornamental plants. Plant growth benefits are typically substantial when using compost because existing soils around homes and commercial sites are typically of poor quality due to the practice of soil stripping before construction. The addition of compost improves the physical structure of the soil, which in turn, promotes root development and heightens a plant's resistance to stress. Compost also adds organic matter, beneficial microbes, and vital nutrients, all of which store and maintain soil fertility.

Preferred Compost Characteristics*
Planting Bed Establishment

Parameter	***Value Range***
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	Pass through 1-inch screen or smaller.
Stability	Stable to highly stable, thereby providing nutrients for plant growth
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; 2.5 dS/m (mmhos/cm) or less is the preferred salt content for the soil/compost blend

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety regulations.

* More in-depth information regarding compost characteristics/parameters can be found in Section 5.

What has field experience with compost shown us?

Lower application rates can be used when composts possessing higher organic matter contents are used or where soil quality is moderate. Excessively coarse-textured (sandy) or fine-textured (clay, clay loam) soils will require higher application rates. Soil test results are helpful in establishing application rates.

Lower compost application rates may be necessary for salt-sensitive crops such as geraniums or where composts with higher salt levels are used. The soluble salt concentration of the amended soil should not exceed approximately 1.25 dS/m where seeds, young seedlings, or salt-sensitive crops are to be planted. Although salt-related injury is not common, thorough watering at the time of planting can further reduce potential problems. Care should be given when using composts possessing a high pH near acid-loving species.

Instructions for Compost Used as a Soil Amendment for:

Planting Bed Establishment

Step 1:

Evenly apply compost at a rate of 135-270 cubic yards per acre (1-2 inch layer) or 3-6 cubic yards per 1,000 square feet. Rates range from 90-400 cubic yard (2/3-3 inch layer) or 2-9 cubic yards per 1,000 square feet. Application rates will vary depending upon soil conditions, climate, compost characteristics, and plant species to be established.*

Step 2:

Apply compost by hand, using rakes or shovels, or mechanically with a front-end loader, grading blade, manure spreader, York rake, or other appropriate equipment.

Step 3:

Incorporate the compost to a depth of 6-8 inches by hand or mechanically using a rototiller or other appropriate equipment until the compost is uniformly mixed.

Instructions for Compost Use, continued

Step 4:

Establish a smooth planting bed by raking or dragging the soil surface.

Step 5:

Plant transplants or woody plants into the amended soil and firm them in place. Seeds should be applied and lightly incorporated into the soil surface using a rake.

Step 6:

Water to assure proper establishment and fertilize as necessary

(see Section 11 Fertilizer Application).‡

*‡ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: DK Recycling Systems, Inc., Lake Bluff, IL

Compost as a Landscape Mulch

Mulch for Garden Beds & Tree and Shrub Planting

Depending on a particular compost's physical properties, it may be a good alternative to standard organic mulch products such as fir, pine, shredded hardwood, cypress bark, pine straw, etc. Yard trimmings and biosolids derived composts are commonly used as mulches by landscape professionals and homeowners. Aside from fulfilling the cultural functions of a mulch, compost also has the ability to provide plant nutrients.

Preferred Compost Characteristics*
Landscape

Parameter	*Value Range*
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	May vary but must be reported; acceptable size is based on customer preference and mulching objectives
Stability	Moderately to highly stable, thereby providing nutrients for plant growth
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost must also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety regulations.

* More in-depth information regarding compost characteristics/parameters can be found in Section 5.

What has field experience with compost shown us? Step 2:

For most, the aesthetic characteristics, i.e., texture and color, or “look” of a mulch is the most important feature. Since this feature is very subjective, it is important to understand customer preferences and regional trends. Typically, aesthetically acceptable mulches are consistent in appearance, contain no man-made materials (e.g., rocks, trash), and have minimal odor.

Coarser-textured compost mulches may be more effective in reducing weed growth and preventing wind erosion, compared to finer products. The stability of the compost used may vary widely, as everything from fine, well-composted bark products to uncomposted wood chips are used as mulch. Although not verified by research at this time, some believe that the use of unstable or raw wood mulches may compete with plants for nitrogen, potentially causing plant stunting and chlorotic foliage.

Composts containing high salt levels, high ammonium levels, or other phytotoxins should not be used if crops exist on the site or are to be established on the site soon after application. However, composts possessing these characteristics may be ideal on sites where plant establishment is not planned immediately, or where the mulch is specifically used for weed suppression. Composts possessing a high soluble salt concentration can be detrimental to salt-sensitive species. Thorough irrigation may help to leach excess salts. Where soluble salt levels of the soil are problematic, repeat applications of biosolids compost should not exceed one inch per year. Care should be given when using composts possessing a high pH near acid-loving species.

Instructions for Compost Used as a:

Landscape Mulch

Step 1:

Evenly apply compost at a rate of 135-400 cubic yards per acre (1-3 inch layer) or 3-9 cubic yards per 1,000 square feet. Generally, biosolids composts should not be applied at a depth greater than 2 inches, while most yard trimmings composts can be applied to a depth of 3 inches. Salt sensitive species, however, may react negatively to application rates greater than 1 inch.*

Step 2:

Compost can be spread from a wheel-barrow or dump truck. For small projects, the use of bagged compost may be more convenient.

Step 3:

Carefully apply the compost around the base of trees, shrubs, and other plant materials using a shovel, rake, or blower unit. Avoid placing mulch against the plant's trunk or stem to avoid potential disease and insect damage.

Instructions for Compost Use, continued

Step 4:

Smooth and further distribute compost with a rake or by hand to create a solid mulch layer.

Step 5:

For singular trees and shrubs, mulch is typically applied from near its trunk or stem to the drip line. A soil rim or berm may be formed around the tree trunk before mulching to help capture water.

Step 6:

Once applied, the mulch may be watered to help keep it in place. To improve weed control, plastic mulches, landscape fabric, newspaper, or herbicides may be applied prior to mulching.

The use of stable, nutrient rich compost may reduce or eliminate the need for fertilizer application during the first twelve months following compost application.‡ This effect may occur in annual beds after one application, whereas the effects may only occur after repeat application for woody, deep rooting plants. Additional nutrients and nitrogen, in particular, may be necessary where less stable or woody composts are used. On annual beds, at the end of the season, the compost mulch layer can be incorporated into the bed. In perennial beds or around trees and shrubs, where the compost mulch has not been incorporated, use a rake or shovel to break up the existing layer of mulch, ensuring that a crust layer has not formed before applying new mulch.

*‡ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: Ronald Alexander, Cary, NC

Compost as a Backfill Mix Component

Component to Backfill Mixes for the Establishment or Planting of Various Trees and Shrubs

The use of compost and other organic amendments as a component to backfill mixes is a popular practice even though there is little quantifiable data showing its long-term benefit. Research has shown, however, that early improved root growth (proliferation) can be attributed to backfill amendment. Some researchers believe that juvenile plants benefit from backfill amendment more than mature plants. Other researchers and industry professionals believe that amending the backfill mix encourages plant establishment and survivability, and may even reduce soil-borne disease damage. All agree that plants transplanted in poor soils benefit from using quality organic amendments.

Preferred Compost Characteristics*
Backfill Mix Component

Parameter	*Value Range*
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	Pass through 1-inch screen or smaller
Stability	Stable to highly stable, thereby providing nutrients for plant growth
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; 3.0 dS/m (mmhos/cm) or less is the preferred salt content for the soil/compost blend

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety regulations.

* More in-depth information regarding compost characteristics/parameters can be found in Section 5.

What has field experience with compost shown us? Step 2:

Nutrient, and specifically, nitrogen-rich composts are preferred, while the use of unstable or immature compost is discouraged. Care should be given when using composts possessing a high pH near acid-loving species.

Although soluble salt related plant injury should not be a significant problem with most woody ornamentals, or in most soil conditions, care should be given when bare root or salt-sensitive species such as ericaceous crops (e.g., rhododendrons, azaleas), specific conifers (e.g., narrowleaf species), and dogwoods are planted. The soluble salt concentration of the amended soil must be compatible with the plant's maximum tolerance levels.

Instructions for Compost Used as a:

Backfill Mix Component

Step 1:

Compost can be used at an inclusion rate of 25%-50%, blended with native soils, with the most common inclusion rate being 33%.* Inclusion rates will vary depending upon soil conditions, climate, compost characteristics, and plant species to be established.

Step 2:

Dig a planting hole slightly shallower than the rootball and two to four times its width. In dense or poor draining soils, the planting hole can be dug only 2/3 the depth of the rootball. The sides of the planting hole should be “roughed up” with a shovel to encourage root penetration.

Step 3:

Place the plant in the planting hole and blend the stockpiled soil with the compost until uniform.

Instructions for Compost Use, continued

Step 4:

Apply the amended soil around the rootball, firming it occasionally to remove air pockets and to assure a firm footing. Tamping or watering may be used to firm the plant.

Step 5:

Larger trees should be anchored or supported.

Step 6:

Construct a soil berm circling the root ball to help capture and hold water. Water the plant well, then mulch around the plant and bermed area. Irrigate with one-inch of water per week until established.

Fertilizer and pH adjusting agents (e.g., lime and sulfur) should be applied after planting, if necessary. The use of stable, nutrient rich composts may eliminate initial fertilizer application. If fertilizer application is made at planting, only slow-release forms should be used. Where salt-sensitive ornamental crops are planted, apply half the recommended fertilizer rate.*‡

*‡ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: Ronald Alexander, Cary, NC

Turf Establishment With Compost

Soil Amendment for the Establishment of Turfgrass (seed, sod, or sprig)

Composts of various feedstocks have been used successfully in turf establishment and renovation. Soils that are low in organic matter, or possess low nutrient or water holding capacity will greatly benefit from the addition of compost. Recent research has even shown that the use of quality compost, at proper rates, can degrade commonly applied turf pesticides over time, making them less likely to impact water quality. Quality compost may also suppress specific soil-borne diseases and plant pathogens.

Preferred Compost Characteristics*
Turf Establishment

Parameter	*Value Range*
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	Pass through 1-inch screen or smaller
Stability	Stable to highly stable, thereby providing nutrients for plant growth
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; 4 dS/m (mmhos/cm) or less is the preferred salt content for the soil/compost blend

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety standards.

* More in-depth information regarding compost characteristics parameters can be found in Section 5.

What has field experience with compost shown us?

Lower application rates can be used when composts possessing higher organic matter contents are used or where soil quality is moderate. Excessively coarse-textured (sandy) or fine-textured (clay, clay loam) soils will require higher application rates. Soil test results are helpful in establishing application rates.

The use of coarse composts in turf establishment may be problematic if substantial amounts of coarse particles are left on the soil surface; as they will impede seed-to-soil contact. Acceptable compost particle size depends on the quality of turf to be established (e.g., utility vs. sports turf).

Instructions for Compost Used as a Soil Amendment for:

Turf Establishment

Step 1:

Evenly apply compost at a rate of 135-270 cubic yards per acre (1-2 inch layer) or 3-6 cubic yards per 1,000 square feet.* Application rates will vary depending upon soil conditions, climate, compost characteristics, and turf species to be established.

Step 2:

Apply compost with a front-end loader, grading blade, manure spreader, York rake, or other appropriate equipment.

Step 3:

Incorporate the compost to a depth of 5-7 inches, resulting in a compost inclusion rate of 20%-30% by volume, using a rototiller, rotovator, or disc until the compost is uniformly mixed. Compost application rates should be adjusted depending upon the anticipated tillage depth.

Pre-plant fertilizers and pH adjusting agents (e.g., lime and sulfur) may be applied before compost incorporation, as necessary. The use of stable, nutrient rich composts may reduce or eliminate pre-plant fertilizer application.

Instructions for Compost Use, continued

Step 4:

Establish a smooth seed bed by raking or dragging the soil surface; roll if necessary. Rake to remove any clumps of soil/vegetation, larger rocks, or debris.

Step 5:

Seed may be applied using a hydroseeder, culti-pack seeder, or it may be broadcast over the soil surface, then lightly incorporated using a drag mat or rake.

Vegetation may also be established by sprigging into or sodding onto the modified soil, followed by rolling as necessary.

Apply a starter fertilizer as necessary and water to assure proper turf establishment.‡

*‡ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: Dr. William Mitchell, West Lebanon, NH

Upgrading Marginal Soils with Compost

Upgrading Compacted, Disturbed, Unirrigated, Low-Maintenance Sites, or Marginal Soils for the Establishment of Various Crop Species

In all areas of the country, there are sites where the soils are of such poor quality that it is extremely difficult to establish most plant or crop species. Some sites may be void of nutrition or organic matter, compacted, lacking any actual topsoil, or simply under-maintained. On these sites, practical experience and research has shown that the addition of quality organic matter, in sufficient quantities, can make marginal soils productive. The addition of compost to such soils supplies both beneficial microbes and nutrition, allowing for an on-going nutrient cycle to be established.

Preferred Compost Characteristics*
Upgrading Marginal Soils

Parameter	*Value Range*
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	May vary but must be reported
Stability	Moderately to highly stable. Less stable composts may be used if planting is delayed
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; will be highly dependent upon the crop to be established

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety standards.

* More in-depth information regarding compost characteristics/parameters can be found in Section 5.

What has field experience with compost shown us?

Lower application rates can be used when composts possessing higher organic matter contents are used or where soil quality is moderate. Excessively coarse-textured (sandy) or fine-textured (clay, clay loam) soils will require higher application rates. Soil test results are helpful in establishing application rates.

Various amounts of compost have been used successfully in upgrading marginal soils. Research has shown that inclusion rates as low as 4%-17% have been beneficial in specific circumstances, when applied along with fertilizer for 2-3 consecutive years. Marginal soils have even been transformed into productive agricultural soils using compost. Some sites may benefit from deep cultivation prior to compost application.

Since marginal sites may possess a very high or very low pH, pH adjustment must be carefully considered along with compost addition. In soils possessing a pH of 7.0 or higher, where compost having an elevated ammonium level (has an ammonia scent) is used, delay seeding or planting for 1-2 weeks. This is because ammonium will be converted to ammonia under these circumstances and ammonia can be toxic to young plants and seedlings.

Instructions for Compost Used as a Soil Amendment for:

Upgrading Marginal Soils

Step 1:

Evenly apply compost at a rate of 135-400 cubic yards per acre (1-3 inch layer).* Application rate will vary depending upon soil conditions, climate, compost characteristics, and crop species to be established.

Step 2:

Apply compost with a front-end loader, bulldozer, grading blade, manure spreader, York rake, blower, or other appropriate equipment.

Step 3:

Incorporate compost to a depth of approximately 6 inches, resulting in a compost inclusion rate of 20%-50% by volume, using a rototiller, rotovator, plow, or disc until the compost is uniformly mixed. Compost application rates should be altered depending on the anticipated tillage depth.

Pre-plant fertilizers or pH adjusting agents (e.g., lime or sulfur) may be applied before compost incorporation, as necessary. The use of stable, nutrient rich composts may reduce or eliminate pre-plant fertilization.

Instructions for Compost Use, continued

Step 4:

Establish an appropriate seed or planting bed by raking or dragging the amended soil surface, as necessary.

Step 5:

Seed may be applied using a hydroseeder, culti-pack seeder, or it may be broadcast over the soil surface, then lightly incorporated using a drag mat or rake. Turf sprigs or sod, other ornamental and forest species, and agricultural crops may also be planted, based on the intended use of the soil.

Step 6:

Apply a starter fertilizer as necessary and water to assure proper crop establishment.‡

*‡ Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: Compost America, Doylestown, PA

Compost as a Blended Topsoil Component

Component to Blended or Manufactured Topsoil for the Establishment of Various Crops

The production and sale of blended or manufactured topsoils is on the rise as more people are finding it difficult to obtain quality topsoil. Many buyers realize that much of the material sold as topsoil is actually subsoil or sand that is deficient nutritionally, organically, and structurally. Some buyers prefer a soil rich in organic matter for specific planting projects, or desire a soil darker in color. For these reasons, more topsoil dealers are using compost to create organic soil blends, while others are creating products equivalent or superior to native topsoil using subsoil or sand and compost.

Preferred Compost Characteristics*
Blended Topsoil Component

Parameter	***Value Range***
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	May vary but must be reported; particle size is based on the producers ability to screen and specific use of the soil blend
Stability	Moderately to highly stable. Less stable composts may be used if at low inclusion rates or if the topsoil blend is aged
Maturity/Growth	Must pass maturity tests or demonstrate its ability to enhance plant growth
Soluble Salt	May vary but must be reported; 6 dS/m (mmhos/cm) or less is the preferred salt content for the media blend

Other Important Characteristics Include:

Nutrient content, water-holding capacity, bulk density, and organic matter content. Their actual values may vary but should be reported. Compost should also be weed free, contain only minimal natural or man-made materials, and meet federal and state health and safety

regulations.

* More in-depth information regarding compost characteristics/parameters can be found in Section 5.

What has field experience with compost shown us?

Lower application rates can be used when composts possessing higher organic matter content are used or where soil quality is moderate. Excessively coarse-textured (sandy) or fine-textured (clay, clay loam) soils will require higher application rates. Soil test results are helpful in establishing application rates.

Different types of soils will benefit from different types of compost. Therefore, a variety of compost types are used in topsoil blending in order to match the varying soil characteristics. Also, since finer-textured soils, those containing more silt and clay, generally possess a higher cation exchange and buffering capacity, they can better accept composts with a wide range of characteristics. Although not typically a concern, composts containing large quantities of very fine particles (less than one millimeter) may reduce soil porosity.

Salt related plant injury is unlikely in most compost amended soils, but it is important to understand that all crops have maximum salt tolerance levels. Maximum salt tolerance for most vegetables and fruits is 6 dS/m, 4 dS/m for most turf species, and 3 dS/m for many ornamental species. Within all of these crop groups, there are salt sensitive species that may only tolerate 1 dS/m. Therefore, when blending custom soil blends, it is helpful to test all components for soluble salt concentration, then test the finished blend. The pH of the finished blend must also be compatible with the plant species to be established.

Instructions for Compost Used as a:

Blended Topsoil Component

Step 1:

Determine blended topsoil components and inclusion rates. A common soil test or a more in-depth physical/chemical analysis of the components may be beneficial.

Aside from the compost and soil, peat, bark, sand, and other materials may be used as topsoil components. Product combinations are based on their function within the blend, such as water and nutrient retention, pH, aeration and drainage. A compost inclusion rate of 20%-30% is recommended, although extremely poor soils, subsoils, or soil-like aggregate by-products may benefit from higher rates. Inclusion rates of 10%-50% compost are commonly used in the industry. *

Step 2:

Mix the soil blend components using rotating drum-type mixer, front-end loader, auger, or soil shredder. Various other amendments or additives may also be added at the time of blending. Where soil shredders are used, pre-mixing the blend components to some degree before shredding will allow for more thorough mixing.

Step 3:

Screen the soil blend, where appropriate, to meet customer requirements using standard screening units or a soil shredder.

Instructions for Compost Use, continued

Step 4:

Stockpile or load the finished product.

* Compost and fertilizer application rates and pH adjustment requirements are influenced by plant selection, soil/media and site characteristics, compost quality and feedstock, and other factors. For best results, before planting have your compost, soil, and soil/compost blend tested by a reputable laboratory and discuss the results of the tests with a trained agricultural professional.

Photos: Kurtz Bros. Compost Services, Inc., Akron, OH and E&A Environmental Consultants, Inc., Cary, NC

TABLE 2.1 Compost Use Guidelines – Preferred Parameters Summary Charts

Parameter	*pH*	*Soluble Salt Concentration*	*Moisture Content*	*Particle Size*	*Stability*	*Growth Screening*	*Trace Elements/Heavy Metals*
Turf	5.5 - 8.0	must report, 4 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Vegetable Crop	5.0 - 8.0	must report, 6 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Silviculture	5.5 - 8.0	must report	35% - 55%	must report	moderately to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Marginal Soils	5.5 - 8.5	must report	35% - 55%	must report	moderately to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Planting Beds	5.5 - 8.0	must report, 2.5 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Field Nursery	5.5 - 8.0	must report, 3 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Nursery Beds	5.5 - 8.0	must report, 3 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Growing Media	5.5 - 8.0	must report, 3 dS/m max. for soil blends	35% - 55%	1/2" minus	highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Blended Topsoil	5.5 - 8.0	must report, 6 dS/m max. for soil blends	35% - 55%	must report	moderately to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Backfill Mix	5.5 - 8.0	must report, 3 dS/m max. for soil blends	35% - 55%	1" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Sod Production	5.0 - 8.0	must report, 3 dS/m max. for compost	35% - 55%	3/8" minus	stable to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Landscape Mulch	5.5 - 8.0	must report	35% - 55%	must report	moderately to highly stable	must pass	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits
Erosion Control	5.5 - 8.0	must report	must report	must report	must report	test not required	must meet U.S. EPA Part 503, Exceptional QualityConcentration Limits

* For all of these end uses, nutrient content, water- holding capacity, bulk density, and organic matter content levels may vary, but must be reported (REFER TO Test Methods for the Examination of Composting and Compost for the appropriate analytical procedures (TMECC) .