



Draft Guidance for Amending Urban Soils with Organic Soil Amendments

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FOR THE

#GATORGOOD

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Overview

- Guidance Document Organization
 - Document Objectives
 - Recommendations
- Example Ordinance
- Ongoing Study Results

Guidance Document Objectives

Goal: documenting methods for enhancing soil quality within new developments and improving practitioner's awareness and understanding of soil health and management

Objectives:

- Review existing guidance and research on using organic soil amendments to develop document
- Provide educational information to practitioners (developers and landscape installers) on factors driving soil quality in new landscapes and their long-term implications of management practices

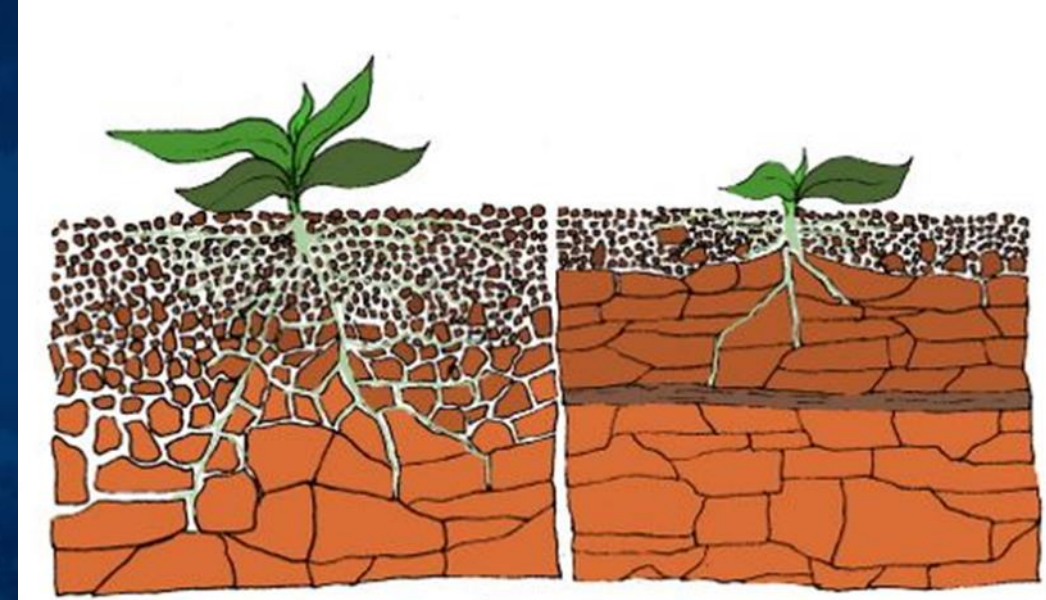
Guidance Document Organization

Parts:

1. Introduction to Soils in Urban Environment
2. Soil Amendments
3. Implementation
4. Longer-Term Considerations

Part 1: Urban Soils

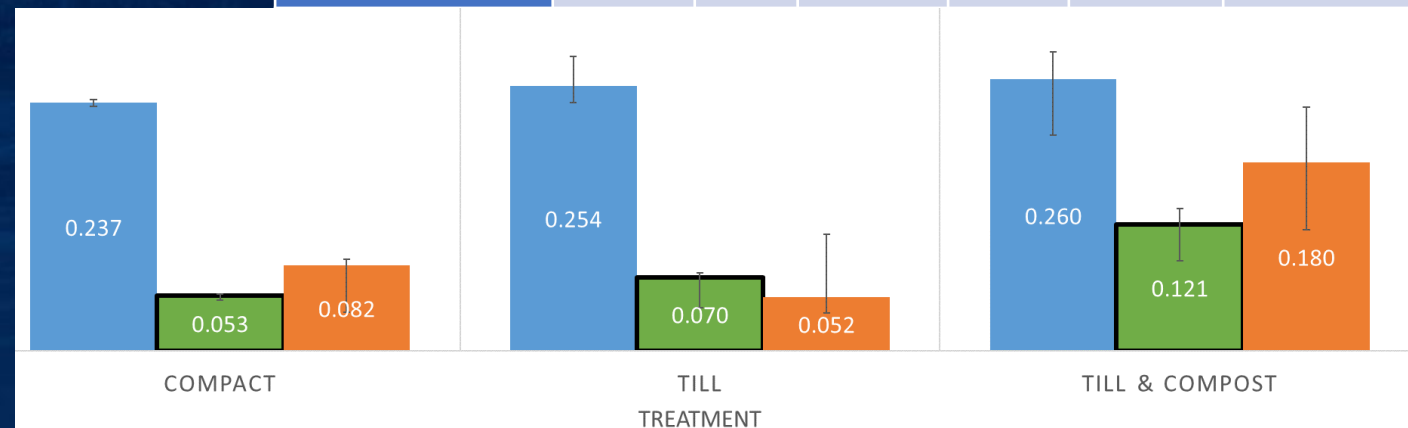
- General Soil Characteristics and Properties and Function
- Urban Soils – Altered Characteristics and Functions
 - Development Process
- Defines the Problem



Part 2: Soil Amendments

- Types of Organic Amendments
 - Compost Properties
 - Compost Production
 - Compost Quality
- Benefits of Compost Incorporation
 - Soil Structure
 - Water Conservation
 - Landscape Quality

Property	Units	Min	Median	Max	USCC STA ^a	
					Preferred	Acceptable
Density	lbs./ft ³	30	45	48		
Screened Particle Size	in.				3/8	1/2
Water Content	% wt.	30.7	40.5	65.9	40-50	35-65
pH		7.2	7.6	8.3	6.0-7.5	5.5-8.5
Conductivity	mmhos/cm ^b	1.6	2.0	2.2	≤ 5	≤ 15
C:N		11.6	14.6	20.0		
OM	% dry wt. (% dw)	27.2	33.3	43.8	35-60	25-65
% N	% dw	0.9	1.3	2.0		
% P	% dw	0.4	0.5	0.8		
% K	% dw	0.6	1.0	1.8		



Part 3: Implementation

- Soil Evaluation
 - Physical & Biochemical properties of soils/fill materials
 - Texture, organic matter, bulk density, pH
- Amendment Characteristics for Urban Landscaping
 - Compost for now
- Compost for Urban Soil Amending
 - Sourcing Quality Material
 - US Composting Council STA Program
- Amendment Incorporation Considerations
 - Initial Nutrient Leaching



Part 3: Implementation

- Practical Instructions for Installers
 - Preparing Amended Areas
 - Sodded Areas
 - Landscape Beds and Trees
 - Evaluating Incorporation
 - Post Incorporation Activities
- 1-page Field Guide



Part 4: Longer-term Considerations

- Information Gaps and Limitations
- Current & Future Research Needs
- Still a Developing Practice and Science

Recommendations

- Recommendations:
 - 1 in. into top 6 in. (4 cy/1000 ft²)
 - 25% (**at least**) Reduction in IFAS Irrigation Run Times
- Developing Area of Research: Amendment, Irrigation, Rates

Example Ordinance

- Developed with Tom Ankersen & UF Environmental Law Clinic
- Reviewed Ordinances from Western States
- Adaptable to Communities

Structure

1. Basis of Ordinance (Finding of Fact, Where As..)
 2. Applicability
 3. Soil Treatment Requirements
 4. Compliance and Enforcement
 5. Other Clauses
- Stakeholder Review

Soil Amendment Studies

- 120 Plot Study Evaluating:
 - 6 Amendment Types
 - Control, Comand, Black Kow, 3x Scotts
 - 3 Amendment Rates
 - 1, 2, & 4 cy/1000 ft²
 - 4 Irrigation Rates
 - 0%, 25%, 50%, 75% of IFAS Rec.
- St. Augustinegrass (Floritam)
- 2-yr study (began August 2019)
- Funders: TBW, FNGLA, SWFWMD



Questions?

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