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MEMORANDUM


DATE: June 27, 2023

TO: Mayor Arndt and Councilmembers

THROUGH: Kelly DiMartino, City Manager 

Gretchen Stanford, Utilities Deputy Director, Customer Connections 

Jason Graham, Director of Water Utilities 

FROM: Kathyne Marko, Environmental Regulatory Affairs Manager 

Katie Collins, Water Conservation Specialist 

RE: Council Priorities Update: Additional Details for Soil Amendment Inspections and Artificial Turf

Bottom Line

The purpose of this memo is to provide additional background for the current and proposed soil amendment compliance program and the proposed restriction of artificial turf on all new development. These topics relate to a larger code update project that originated from two City Council priorities:

14. Effective soil amendment policies and compliance (water usage)

19. Xeriscape – Increase rebates and education, less green lawns with new development

Background

On November 21, 2023, Council will consider adoption of landscape-related codes, that promote water conservation, stormwater quality, and resilient urban landscapes. Staff will present a preview of the ordinance to discuss final direction of the proposal at the October 10, 2023 Council Work Session. The package of proposals will include artificial turf and soil amendment standards as well as standards related to general soil health, limits on irrigated grass, irrigation efficiency, and tree canopy protections. These items were discussed at the January 10, 2023 Council work session. Up to date details for these other proposals may be found in the most recent Council Priority Update.

Soil Amendment

The Soil Amendment Program is currently implemented via an administrative review process using site knowledge gained from other required field inspections for erosion control. The ability to resource and scale-up soil amendment inspections from an administrative review process to onsite inspections is dependent on numerous variables, including availability, existing workload, and timing of soil amendment submittals. A qualitative analysis of different scalability options is provided in this memo; this initial



evaluation indicates that to increase inspections with any significance, additional staffing/funding would be needed.

Soil amendment information is provided to address two questions from the January 10, 2023, Work Session: Land Use Code Changes to Address Xeriscape and Soil Amendment:

- How does the city enforce current soil amendment code?
- Resource analysis to scale up soil amendment inspections

Enforcement of Current Soil Amendment Program

The Soil Amendment Program is run through the Environmental Regulatory Affairs (ERA) Erosion Program staff. Staff consists of three FTE's – Two Senior Inspectors and one Senior Specialist. The core function of this work group is to manage the City's Erosion Control Program which is mandated by the City's Municipal Separate Storm Sewer System (MS4) Permit. Typically, construction sites that disturb over 10,000 ft² are inspected every two weeks during active construction for adequate erosion control. The following table is an overview of the activities performed by the Erosion Program staff.

Activity	2022 Statistics
Soil Amendment Certifications	350 Soil Certifications 127 Temporary Waivers
Soil Amendment Site Inspections	<10 sites
Development Review	566 Projects
Erosion Control Inspections	170 sites 2115 routine inspections
Permanent Stormwater Quality Feature Inspections (SWQF)	58 sites 67 SWQF Inspections
Vegetation / Site Stabilization Inspections	65 sites 283 Vegetation Inspections
Other Responsibilities	– Spill response – Fugitive dust complaints – Construction site complaints – Erosion enforcement

The review and approval process consists of reviewing a certification form along with amendment receipts. During winter, when soil conditions do not allow for tilling, a temporary waiver is issued and staff tracks completion of the soil amendment the following Spring. In most cases, knowledge of the site from erosion control inspections feeds into review of the soil amendment certification review. Soil amendment verification site inspections are performed based on indicators such as:

- Delivery dates not consistent with certification date
- No Area to Amend Certification
- New compost supplier
- Inconsistent ratio of cubic yards to lot size (3 yds / 1,000 SF)
- Timing of soil amendment not consistent with phase of construction



If field verification determines soil amendment was not consistent with the requirements, staff will not sign off for a Certificate of Occupancy (CO). If a CO has been issued, as is the case for Temporary Waivers, other building permits can be put on hold.

Resource Analysis to Scale Up Soil Amendment Inspections

Qualitative analysis for scaling up soil amendment inspections is summarized in the following table.

Inspection Type	Considerations/Limitations	Feasibility/Needs
Investigative Inspect if indicators of deficiencies	– Solely reactive, based on indicators	– Status Quo
Sporadic Inspect as time allows	– Likely would not occur during busy construction season	– Without additional resources, a significant increase would not be likely with the existing workload.
Seasonal Focus inspections during busy landscape season	– Increase existing staff time for hiring and/or training. – Likely based on grouping of submittals and available staff time.	– Additional resources/funding needed. – Consider the use of temporary hourly employees or consultant
Percentage Inspect a certain percentage of sites	– Likely based on grouping of submittals and available staff time.	– Additional resources/funding is needed to ensure consistent coverage. – Resource and funding needs dependent on percentage.
Full with adjusted thresholds Inspect all except Single Family Residential (SFR) landscape renovations	– SFR landscape renovations currently do not get permitted and survey results show existing homeowners do amend soil. – Could evaluate other thresholds	– Need higher additional resources/funding to ensure consistent coverage.
Full Inspect all vegetated landscape projects	– Requires significant process changes to add SFR landscape renovations to permit and inspection procedures.	– Highest increase of additional resources/funding needed to address both inspections and process change for SFR.

To conduct a full evaluation of selected alternatives, the following topics will need to be considered for a sustainable soil amendment inspection program:

- **Timing of certification submittal** related to when soil amendments occur and/or when CO is requested and staff's availability to perform a site inspection on short notice.
- **Staffing to ensure consistent coverage** for all work and avoid conflicting priorities with other regulatory permit requirements, while also considering coverage for all work throughout vacations, sick leave, and seasonal workload changes. Staffing considerations may also include use of 3rd Party consultants.
- **Software** improvements can help with efficiency and documentation. Both new and expanded capabilities of current systems are being explored, some being part of the City's digital transformation efforts.



- **Consider results from the *Assessment of Compliance with Local Environmental Policy* project which** will evaluate how various city workgroups address compliance with local environmental policy and provide recommendations to improve our approach.

Artificial Turf

Current Policy in Land Use Code

Land Use Code 3.2.1 restricts the use of artificial plants as a “Landscape Area Treatment.” Except for single-family detached dwellings, all development and building permit applications are subject to review by this standard. Historically, a few projects have been approved for artificial turf installation given that the area proposed for installation was not considered landscape area by the code’s definition.

During the “Land Use Code Changes” discussion at the January 10, 2023, work session, Council responded to a proposal that would have allowed the use of artificial turf in the city by exception if installed to high-standard specifications. Council overwhelmingly opposed the proposal, preferring not to allow artificial turf in Fort Collins.

While the benefits of artificial turf can include reduced water use, maintenance and chemical inputs, a growing body of research suggests the negative impacts of artificial turf to human health and the environment may outweigh the benefits. Potential risks include chemical exposures and contamination from the materials themselves, such as the release of per- and polyfluoroalkyl substances (known as PFAS) and carcinogens, and non-chemical impacts such as increased heat and heat island and waste-stream implications.

Proposed Policy Changes in Land Use Code

On November 21, Council will consider an ordinance that clearly restricts the use and installation of artificial turf on all new development and major redevelopment including non-residential and multi-family properties and single-family residential front yards. The artificial turf restriction ordinance will be packaged with additional landscape standards.

Impact

The restriction of artificial turf on single-family residential front yards will require review of landscape plans for new single-family residential development, a process that does not currently exist. This process would also serve the other landscape standards discussed at the January 10 work session for new single-family residential properties. The added review will impact the development review process and require additional staffing needs, which are being considered and will be discussed further during the October 10, 2023 Council Work Session. There will be an impact on owners challenged with finding suitable alternatives for high-traffic, low-water ground cover. Staff will continue to engage with landscape professionals and the community to identify and promote suitable alternatives.

Attachments

January 10 Council Work Session Materials

cc: Kendall Minor, Utilities Executive Director
Jill Oropeza, Sr. Director, Integrated Sciences & Planning
Mariel Miller, Water Conservation Manager
Eric Potyondy, Assistant City Attorney