




## CITY COUNCIL TRANSMITTAL

  
rachel.otto (Dec 4, 2023 15:34 MST)

Rachel Otto, Chief of Staff

**Date Received:** 12/04/2023

**Date sent to Council:** 12/04/2023

**TO:** Salt Lake City Council  
Darin Mano, Chair

**DATE:** 11/27/2023

**FROM:** Blake Thomas, Director, Department of Community & Neighborhoods



**SUBJECT:** Landscaping and Buffers Chapter Text Amendment

**STAFF CONTACT:** Nan Larsen, Senior Planner  
[nannette.larsen@slcgov.com](mailto:nannette.larsen@slcgov.com) or 801-535-7645

**DOCUMENT TYPE:** Ordinance

**RECOMMENDATION:** Adopt the Landscaping and Buffers Ordinance as recommended by the Planning Commission.

**BUDGET IMPACT:** None

**BACKGROUND/DISCUSSION:** This is a text amendment for a complete rewrite and reorganization of the Landscaping and Buffers Chapter of the zoning ordinance to better support the City's adopted policies related to reducing water use, enhancement of the urban forest, reduction in the urban heat island, improve air quality, and improvements to air quality and green infrastructure city-wide. Reorganization and clarity of the ordinance was of upmost importance for both the public's understanding and for city administration.

On [September 6, 2022](#), the Planning Division and Public Utilities held a work session with the City Council to get initial feedback on priorities related to changes to landscaping regulations to help achieve city policies and goals. The report that was prepared for the City Council briefing is included in the staff report to the Planning Commission as found in [Planning Commission records b](#)). The proposed Landscaping and Buffers Chapter changes are based on the feedback received

from the Council during the briefing, feedback from several departments including Public Utilities, Urban Forestry, and Enforcement, begins to implement strategies in the [Urban Forest Action Plan](#).

## **ZONING REGULATIONS AND LANDSCAPING:**

Title 21A, SLC zoning code, regulates landscaping in several ways for several purposes. Generally, landscaping is regulated in the zoning code to reduce the heat island effect, reduce stormwater runoff, reduce auditory and visual impacts of certain uses, improve aesthetics, and make use of the health benefits of being in a more natural environment. These goals are accomplished by regulating landscaping in certain locations of a property depending on the use or district.

The zoning code regulates landscaping in the following locations:

Park strips: The strip of vegetation that is usually between the street and the sidewalk. Park strips vary in size and form, different standards for different park strip sizes are proposed.

Yard areas: Front or corner side yards are identified as required landscaped yards. Yard areas are where the building is required to be setback from the property line, where buildings are prohibited, and other structures like fences and sheds are limited. Outside of a required landscaped yard, there are no specific vegetation requirements in a required yard, except for buffer yards (if required) or parking lot landscaping (if applicable).

Buffers: The purpose of buffer areas is to mitigate potential impacts between dissimilar zoning districts. Landscaping in buffer areas is utilized to reduce auditory or visual impacts on an adjoining property.

Parking lots: Landscaping standards in parking lots are utilized to reduce the auditory, visual, or temperature impacts of a large surface area that is paved. This type of landscaping takes the form of interior and perimeter parking lot landscaping and generally applies to parking lots with 10 or more stalls.

## **PROPOSED AMENDMENTS:**

### **What's Staying?**

Several standards that are currently required in the landscaping chapter will remain;

- Regulated landscaping locations.
- 33% vegetation standard.
- 20% hard surfacing limitations.
- Landscaping and irrigation designed depending on watering needs.
- Drip and spray irrigation on separate valves.
- Park Strip less than 36" in width are exempt from some landscaping standards.
- Landscaping buffer tree and shrub quantities.
- Mulching depth and permeability standards.

- And encroachment standards in the park strip or public right of way.
- Maintaining the City's resident's eligibility for "rip your strip" rebate programs through the CUWCD (Central Utah Water Conservancy District) and Utah Department of Natural Resources.

### **What's New?**

The significant new additions to the landscaping chapter aim to:

- Improve water conservation by:
  - o Requiring a landscaping or irrigation professional letter of compliance with irrigation and landscaping standards.
  - o Requiring a WaterSense automatic irrigation controller.
  - o Prohibiting water waste.
  - o Creating standards for irrigation systems to be designed and maintained to maximize water efficiency.
- Simplify and clarify through:
  - o Requiring separate plans for planting, grading, and irrigation.
  - o Addressing artificial turf.
  - o Consolidating buffer sizes.
  - o Updating the Freeway Landscape buffer better comply with goals and intent of chapter.
  - o Creating tables and graphics where possible.
  - o Removing duplicate or wordy standards that were difficult to implement.
  - o Quantifying, where possible, minimum landscaping standards.
- Prioritizing trees by:
  - o Allowing tree canopy to count toward vegetation coverage standards and requiring the largest tree appropriate to the landscape location in most zoning districts.
  - o Ensuring tree health by requiring Urban Forestry review of alterations to street trees and root zone protection.
  - o Improving tree survival rates by requiring a permanent irrigation system for street trees when a landscape plan is required (new construction, or a commercial property where the landscaping is being updated by 50% or more, or a commercial addition that increases the floor area by 50% or more).
  - o Requiring trees in the Northwest Quadrant.
- Reduce the urban heat island by:
  - o Creating parking lot landscaping standards directed at reducing the urban heat island effect.
  - o Establishing rock mulch limitations.
  - o Allowing tree canopy to count toward landscape coverage and requiring street trees where new construction is proposed.
- Reduce stormwater runoff by:

- Allow stormwater curb cuts.
- Require bioretention for parking lots with 50 or more stalls in the Parking Chapter (21A.44).

#### SUMMARY OF PROPOSED LANDSCAPING AND BUFFERS CHAPTER:

The proposed Landscaping and Buffers Chapter is outlined and briefly described below:

#### 21A.48: Landscaping and Buffers

Purpose and Intent:	<p>Explains the purpose of establishing a landscape chapter and the intent of the standards.</p> <ul style="list-style-type: none"> <li>- Increase tree canopy, protect and preserve public trees, reduce heat island, reduce stormwater runoff, improve air quality, enhance community appearance from the public realm, mitigate impacts through buffer between uses, and promote water conservation.</li> </ul>
Applicability:	<p>Applies to all properties in SLC, any updates must comply. Existing landscaping that does not comply with the regulations of the chapter do not need to come into compliance unless there is a change made to the landscaping for single- and two- family districts, or if the floor area or the number of parking stalls required increases by 50% or more for all other uses.</p>
Authority:	<p>What modifications can be applied; Zoning Administrator may make modifications to standards to better comply with the intent of the chapter, or in coordination with the Urban Forestry, Police, or Public Utilities.</p>
Responsibility & Maintenance:	<p>Establishes the responsibilities of the property owner and ongoing maintenance required in regard to landscaping maintenance in general, landscape yards, park strips, street trees, and irrigation.</p> <ul style="list-style-type: none"> <li>- Clearance from the public right-of-way.</li> <li>- Maintained in good condition.</li> <li>- Lists specific responsibilities for street trees and irrigation systems.</li> <li>- Height limitations within the sight distance triangle to prevent vision obstructions from approaching traffic.</li> </ul>
Landscape Plan:	<p>Required for new construction of a primary structure and when an addition increases the floor area by 50%, or modifies any required landscaping by 50% .</p> <ul style="list-style-type: none"> <li>- Landscape plans require a planning plan, a grading plan, and an irrigation plan. Lists specific criteria for each.</li> </ul>

	<ul style="list-style-type: none"> <li>- Requires Landscape Architect licensed with the State or a US-EPA WaterSense certified professional signature and letter of completion.</li> </ul>
Landscape Requirements:	<p>Describes required landscape locations, landscape location sizes, and specific landscape standards per location. Landscape locations include park strip, landscaped yards, surface parking lot landscaping, and buffer areas.</p> <ul style="list-style-type: none"> <li>- Establishes minimum ground coverage and tree planting in all landscape areas.</li> <li>- Describes locations where turf is permitted, and the coverage allowed.</li> <li>- Describes impervious surface coverage maximums.</li> <li>- Establishes where landscape buffers are required, the size, location, and coverage, shrub, and tree planting requirements.</li> </ul>
Parking Lot Landscaping:	<p>Applies to surface parking lots with 10 or more stalls.</p> <ul style="list-style-type: none"> <li>- Interior landscape areas and perimeter parking lot landscaping required. Describes size, location, exceptions, and vegetation requirements in these areas that include trees, shrubs, and ground cover.</li> <li>- Curbs are required where no bioretention is utilized.</li> </ul>
Standards:	<p>Requires specific landscape installation and landscape material standards that apply to all regulated landscaping locations.</p> <ul style="list-style-type: none"> <li>- Requires drought tolerant, adaptive, or native species.</li> <li>- Establishes limitations and standards on turf, mulch, and berming. Prohibits artificial turf.</li> <li>- Describes specific park strip material standards that includes ground cover regulations, pathways, stormwater detention allowances, and permitted encroachments.</li> </ul>
Private Lands Tree Preservation:	<p>Establishes process and standards for removing a tree on private lands. This section has not been changed, it is expected the Urban Forestry Division will update this section in the coming years as they continue to work on updates to better respond to the Urban Forest Action Plan.</p>
Appeal:	<p>Right to appeal statement.</p>

## PLANNING COMMISSION RECOMMENDATION:

On April 26, 2023, the Planning Commission held a public hearing on the proposed text amendment and voted 10 to 1 to recommend that the City Council adopt the proposed Landscaping and Buffers Chapter amendments with two recommended modifications to the draft ordinance:

- **Define a landscape or irrigation specialist.**

The draft ordinance language has been updated to address this and now requires review and signature by a Landscape Architect, licensed with the State of Utah, or a US-EPA WaterSense Labeled Certified Professional. The previous draft included a generalized statement about a landscaping or irrigation professional, during the Planning Commission hearing comments questions were raised on the need to define what constitutes a landscaping or irrigation professional.

- **Remove all language that permits artificial turf.**

The existing Landscaping and Buffers chapter does not allow artificial turf in required landscaped locations. The chapter draft the Planning Commission reviewed on April 26<sup>th</sup>, permitted artificial turf in front and corner yard landscaping locations as an impervious surface, which is limited to a maximum of 20% of the required landscaping. In all other required landscaping locations, artificial turf was prohibited. Additionally, artificial turf would have had to meet certain material standards such as individual grass blade length and quantity as well as infill material type. With the Planning Commission's recommended modification, the artificial material standards and its inclusion in the impervious surface has been removed. Now included in the draft language is a statement that artificial turf is prohibited anywhere landscaping is regulated by the chapter. Where landscaping is not regulated in this chapter, artificial turf would be allowed (such as the rear yard), as it is today in unregulated landscaping areas. The commission's recommendation was based on a discussion centered around artificial turfs impact on stormwater runoff and possible harmful chemicals contained in the manufacturing process.

## MODIFICATIONS MADE AFTER PLANNING COMMISSION REVIEW:

Following the positive recommendation from Planning Commission, planning staff made corrections to the draft chapter for the City Council to consider. The current draft ordinance reflects these changes:

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Landscaping buffer table	- Inconsistencies were found and updated between specific district landscaping buffer references, within the I, RP, EI, and MU districts, and the proposed chapter's required landscaping buffers. Also updated the table to maintain a required landscaping buffer between multi-family residential and commercial districts, residential and Business Park, residential and Research Park, and required a landscaping buffer in Extractive Industries and Mobile Home Districts when abutting any zoning district. Added a buffer between manufacturing districts and open space.
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	<ul style="list-style-type: none"> <li>- Included language that a freeway landscape buffer is required on properties abutting a freeway.</li> </ul>
Parking lot landscaping	<ul style="list-style-type: none"> <li>- Added a provision that parking lot interior landscaping must include no less than 5% of the total parking lot. This provision ensures there is sufficient amount of landscaping to reduce the urban heat island effect regardless of the parking lot design.</li> <li>- Deleted the vehicle sales and lease lot provision that required a 5' landscaping buffer in the front and corner side yard. The parking lot perimeter landscaping provision already ensures that a greater setback with sufficient landscaping would apply.</li> <li>- Included in the perimeter parking lot landscaping specific section references of 21A.44.060 and 21A.36.020 that address where a parking lot may be allowed in a yard area.</li> <li>- Clarified that the perimeter parking lot landscaping that abuts a building does not need to be included in the tree calculation. Clarified that the vehicle overhang area may be included in the perimeter parking lot landscaping width.</li> <li>- Specified parking lot interior landscaping allowed locations, minimum size, and ratio of trees and shrubs required.</li> <li>- Specified in 21A.44.060 that parking lots with 10 or more stalls or within 20' of a lot line are subject to the landscaping chapter.</li> </ul>
Landscaping graphics	<ul style="list-style-type: none"> <li>- Consolidated the residential and nonresidential landscaping locations graphics into a single graphic that addresses both residential and nonresidential zoning districts. Updated the parking lot landscaping graphics to show the approximate number of trees required based on approximated scale and size of the interior and perimeter parking lot landscaping areas.</li> </ul>
Revision	<ul style="list-style-type: none"> <li>- Revised the purpose and intent section in the landscaping chapter that simplified language and listed purposes and intents based on priority.</li> </ul>
Multiple Section Deletions	<ul style="list-style-type: none"> <li>- Landscaping related terms and definitions as they are no longer referenced in the ordinance: Evapotranspiration rate, Best Management Practice, Landscape BMPs manual, Evergreen and Perennial, Overspray, Maximum extent practicable, Tier 2 water target, Treasured landscape, Landscaping vegetation, Water budget, and a duplicative Street tree definition.</li> <li>- Language in the applicability section that referenced that the entire chapter 48 may be exempted if permitted in other sections of the zoning code. There are no other sections that allow for an exception from the entire chapter 48, specific sections exception language within the proposed chapter have remained.</li> <li>- Removal of Bond requirement to comply with State Code.</li> </ul>
Multiple Section Clarifications	<ul style="list-style-type: none"> <li>- In the landscape requirements section of the landscaping chapter clarified that where conflict between specific district standards and this landscaping chapter the specific district standards shall prevail.</li> <li>- In the Foothills and Foothills Protection District removed titles in the landscape plan requirements to be consistent with the rest of the section.</li> </ul>

- Clarified precedence language in the Design Standards section where conflicting language may occur between the design standards and the district specific standards. Clarified where percent tree canopy coverage is required in the design standards table, the tree canopy cannot be counted toward vegetation coverage in the downtown districts. Removed vegetation coverage and streetscape landscaping to ensure vegetation coverage and streetscape landscaping applies to all properties not just the downtown and CG districts.
  - Included language that clarified landscaping installation process during winter months through a temporary certificate of occupancy.
  - In the park strip standards table, specified where the center of a park strip is.
  - In the authority section, stated simply which departments or divisions may provide input to the zoning administrator when the provisions of the landscaping chapter may be waived. Removed qualifying provisions required when departments or divisions may recommend a landscaping waiver.
  - Clarified in the landscape plan section, permitted modification if the change is from one plant species to another with similar watering needs.
  - Specified in the CSHBD district sufficient soil volumes for street trees must be approved by Urban Forestry.
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## **PUBLIC PROCESS:**

**Recognized Organizations:** All recognized organization chairs city-wide were notified on February 10<sup>th</sup>, 2023, of the proposed text amendments. The Planning Division presented the proposed code amendments to the Sugar House Community Council on March 20<sup>th</sup>, 2023 and accepted comments and answered questions.

**Open House:** A virtual open house was hosted on Planning's website and published via list serve on February 10<sup>th</sup>, 2023. The open house information included the most recent version of the landscaping and buffers chapter draft. The open house page was continually updated to include the most recent draft amendments and public hearing dates.

**Public Hearing Notification:** Notice of the public hearing was posted on City and State websites and emailed via list serve to subscribers on April 19<sup>th</sup>, 2023.

**Planning Commission Public Hearing:** The Planning Commission held a public hearing on the text amendments on April 26, 2023. The Planning Commission provided a positive recommendation to City Council on the proposed amendments.

[Planning Commission Staff Report](#)

**Public Comments Received:** We received 14 public comments, as of the date this memo was transmitted. The public comments ranged from concerns of enforceability of some of the standards, landscaping rocks and their contribution to the urban heat island, landscaping materials on the sidewalk and unkempt landscapes, vegetation and vegetation maximum height



in the park strip, costs associated with requiring permanent irrigation, water waste, allowing native grass species, and public noticing procedures. Comments included statements encouraging waterwise landscaping and improving water conservation in landscaping areas. There were also statements where there was some misunderstanding on when a street tree is required. Where possible staff clarified when a street tree is required to the public – in a park strip over 36” in width and for new construction for single- and two- family developments.

**PLANNING COMMISSION (PC) RECORDS:**

- a) [PC Agenda of April 26, 2023](#) (Click to Access)
- b) [PC Staff Report of April 26, 2023](#) (Click to Access Report)
- c) [PC Minutes for April 26, 2023](#) (Click to Access)
- d) [PC Video for April 26, 2023](#) (Click to Access)

**EXHIBITS:**

- 1) Project Chronology
- 2) Notice of City Council Public Hearing
- 3) Petition Initiation
- 4) Public Comments Received after Planning Commission Staff Report Published
- 5) Public Utilities Director Statement

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## **1) PROJECT CHRONOLOGY**

**Petition: PLNPCM2023-00098**

September 6, 2022	City Council briefing to get initial feedback on potential changes to landscaping regulations.
February 8, 2023	Text amendment to update the Landscaping and Buffers chapter initiated.
February 10, 2023	Notice emailed to recognized organizations City-wide.
February 10, 2023	The proposed code changes were posted to the Planning Division's Online Open House webpage.
March 20, 2023	The Planning Division presented proposed code changes to Sugar House Community Council. Public comments and questions were accepted.
April 19, 2023	Public hearing notices were posted on City and State websites.
April 21, 2023	Staff Report posted online and sent to the Planning Commission.
April 26, 2023	Planning Commission forwards a positive recommendation to City Council.
May 8, 2023	Draft ordinance forwarded to the Attorney's Office for review.
June 7, 2023	Ordinance corrections forwarded to the Attorney's Office.
June 12, 2023	Ordinance corrections forwarded to the Attorney's Office. Ordinance returned from the Attorney's Office.
June 15, 2023	Ordinance corrections forwarded to the Attorney's Office.
June 22, 2023	Reviewed ordinance returned from the Attorney's Office.
June 29, 2023	Ordinance forwarded again to the Attorney's Office, reviewed final received from Attorney's Office.
August 29, 2023	Corrected ordinance returned to Attorney's Office for final review.
September 26, 2023	Final ordinance version received from Attorney's Office.
September 27, 2023	Transmitted to CAN administration.
October 26, 2023	Council Office informed of needed modifications to the ordinance.

November 6, 2023	Ordinance with needed corrections forwarded to the Attorney's Office.
November 14, 2023	Corrected ordinance returned to Attorney's Office for final review.
November 15, 2023	Transmitted to CAN administration.

**2) NOTICE OF CITY COUNCIL HEARING**

## **NOTICE OF PUBLIC HEARING**

The Salt Lake City Council is considering Petition **PLNPCM2023-00098** – A petition initiated by Mayor Erin Mendenhall to amend the Salt Lake City Zoning Code for the Landscaping and Buffers Chapter Text Amendment. This proposal includes amendments that will be affected City-wide. The proposed code amendments seek to better address landscaping regulations and seek to reduce water consumption, enhance the urban forest, and improve air quality and green infrastructure city-wide. The proposed amendment also seek to clarify, simplify, and reorganize the landscaping and buffer chapter to be more user friendly. The City Council may consider modifications to other related sections of the code as part of this proposal.

**DATE: Date #1 and Date #2**

**TIME: 7:00 p.m.**

**All persons interested and present will be given an opportunity to be heard in this matter. his meeting will be held via electronic means, while potentially also providing for an in person opportunity to attend or participate in the hearing at the City and County Building, located at 451 South State Street, Room 326, Salt Lake City, Utah. If you are interested in participating during the Public Hearing portion of the meeting, please visit the website [www.slc.gov/council/virtual-meetings/](http://www.slc.gov/council/virtual-meetings/) or call 801-535-7654 to obtain connection information.**

**Comments may also be provided by calling the 24-Hour comment line at (801)535-7654 or sending an email to [council.comments@slcgov.com](mailto:council.comments@slcgov.com). All comments received through any source are shared with the Council and added to the public record.**

If you have any questions relating to this proposal or would like to review the file, please call Nannette Larsen at 801-535-7645 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday or via e-mail [nannette.larsen@slcgov.com](mailto:nannette.larsen@slcgov.com)

People with disabilities may make requests for reasonable accommodation no later than 48 hours in advance in order to participate in this hearing. Please make requests at least two business days in advance. To make a request, please contact the City Council Office at [council.comments@slcgov.com](mailto:council.comments@slcgov.com) , 801-535-7600, or relay service 711.

### **3) PETITION INITIATION**





# MEMORANDUM

PLANNING DIVISION  
DEPARTMENT of COMMUNITY and NEIGHBORHOODS

To: Mayor Erin Mendenhall

Cc: Lisa Shaffer, Chief Administrative Officer; Blake Thomas, Department of Community and Neighborhoods Director; Michaela Oktay, Deputy Planning Director

From: Nick Norris, Planning Director

Date: January 27, 2023

Re: Initiate Petition to Amend Text in the Zoning Ordinance to Update the Landscaping Chapter

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This memo is to request that a petition is initiated directing the Planning Division to update the Landscaping Chapter to better address the needs of the City and the changing climate being experienced along the Wasatch Front. Amendments to the Landscaping Chapter will also better conform to Plan Salt Lake.

In Plan Salt Lake direction to reduce water consumption, protect and enhance the urban forest, and improve green infrastructure in the City's neighborhoods is emphasized. To achieve these goals amending the landscaping chapter is necessary to reduce barriers to water conservation while improving water and air quality.

In addition to providing best management practices to reduce barriers and incentive water conservation, is promoting accessible conservation strategies and standards in the Zoning Ordinance. The updates to the Landscaping chapter will accomplish this by quantifying best practices and creating visual elements to the chapter to better achieve accessibility needs of the residents in the City.

As part of the process, the Planning Division will follow the City adoption process for zoning text amendments, which includes citizen input and public hearings with the Planning Commission and City Council. The adoption process will include collaboration with other City Departments and the Central Utah Water Conservancy District to ensure best management practices are utilized.

This memo includes a signature block to initiate the petition if that is the decided course of action. If the decided course of action is to not initiate the application, the signature block can remain blank. Please notify the Planning Division when the memo is signed or if the decision is made to not initiate the petition.

Please contact me at ext. 6173 or [nick.norris@slcgov.com](mailto:nick.norris@slcgov.com) if you have any questions. Thank you.

***Concurrence to initiate the zoning text amendment petition as noted above.***

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**Erin Mendenhall, Mayor**

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**Date**

**4) PUBLIC COMMENT RECEIVED AFTER PLANNING  
COMMISSIONS STAFF REPORT PUBLISHED**

**From:** [Amanda Dillon](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) Comment on new Landscaping Ordinance - Planning Commission Meeting  
**Date:** Tuesday, April 25, 2023 10:38:19 PM

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**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

Hey Nan!

I was chatting with Amanda Roman and she let me know that tomorrow is when the new landscaping ordinance goes in front of the planning commission. Congrats on getting these revised policies to this point! I had the chance to skim through it earlier today and wanted to submit two official comments. SLC's website said to reach out to you as the staff listed at the top of the report. Let me know if I should reach out somewhere else to get this comment officially recorded.

The first comment is in regards to plant height in the park strip. The proposed ordinance says: Plant height is limited to 22" to preserve clear views from intersection driveways, alleys, and streets, to preserve line of sights for people, and to prevent areas that some people may find unsafe when visibility is blocked.

One issue we've found with this limited plant height is that it makes it hard to put planter boxes or similar into the park strip because we are so limited in height. As a developer of infill multifamily housing, we find that many of our residents let their pets relieve themselves in the park strips on any planted vegetation. The high acidity of their urine/feces makes it so that most plants die immediately and don't really grow back, leaving barren and unattractive park strips. One solution we've found that helps keep the park strips vegetated and looking nice is putting plants in planter boxes, which makes it harder for pets to disturb them. However, to create one that is hard for pets to get into, the planter box needs to be at least 12" tall. With the plant height restriction, that means we can only put a plant in that will mature to 10" tall. This really narrows down the selection of plants we can use to beautify the park strips and prevents us from designing attractive landscaped right of way areas for the City. It would be great to have a slight modification in this part of the code that would allow for taller plant heights if those are planted in garden boxes or the like.

The second comment is more of a clarification question. On page 6 of the ordinance, in the second paragraph, it says "rocks (over a certain size)" but no where else in the code does it give any specifics about that size. Can more definition/clarity be added on this point?

Thanks so much! Let's get together soon.

Amanda  
**Amanda Dillon**  
  
**Giv Development**

**From:** [Bruce A. Hamilton](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) Case PLNPCM2023-00098: oppose vegetation requirements on park strips  
**Date:** Monday, April 24, 2023 10:54:24 PM

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Caution: This is an external email. Please be cautious when clicking links or opening attachments.

Re: Planning Commission, April 26 agenda, case PLNPCM2023-00098:

It is insane to require vegetation on park strips in this age of droughts. Please oppose all such existing and new zoning requirements.

--Bruce (Bruce A. Hamilton, Salt Lake City, UT)



**From:** [Margaret Holloway](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) PLNPCM2023-00098  
**Date:** Tuesday, April 25, 2023 10:40:34 AM

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The goal of the city is to increase the canopy throughout the city.

But what I see is a stumbling block is the fact of a permanent irrigation line to a street tree. I was quoted 3000 dollars just to connect a irrigation connection to my water line.

If this is required of ALL homeowners who would like a tree or are going to be required to have a tree planted To whom is going to pay this bill?

That quote was just to dig down to the water line and connect a meter. That does not include the line to the tree. I understand the need to encourage watering the tree. But if this is not done correctly you can have the water go into reverse and contaminate the water supply. It has happened when people try to do plumbing themselves. Now how is this even reasonable?

All you need is a hose . The city gave buckets to the homeowners that had their trees taken out by Rocky Mountain power on 900 west. They were told to haul 5 gallons to the tree each week or 10 days.

Which sounds reasonable... But how do you fill the bucket with a hose..... And if they had given them a hose instead maybe they would have watered the trees. But they didn't and they did not get watered

They all died except a couple that did..... The city plants trees into parks without water and then they die. The new trees the city planted on 1200 west there were 10 all but 2 died

Because the sprinklers were turned off

and the new trees need help for the first few years. The city turns off the sprinklers or cuts back and the trees die. But here you are requiring homeowners to spend upward of 3,000 to put a line in maintain it

when you just need a hose..... I water my street tree with a soaker hose every other week if it doesn't get enough water like last 2 years.... The canopy changes over the life of the tree..... You MUST water under

the canopy..... It only benefits the tree if you water under the growing canopy... This is where a soaker hose is important.. it goes straight to the roots....

But to make the decision that everyone has to pay upto 3,000 dollars to put a permanent line to where it isn't going to do what you want it to do.... seems misguided.

The city just planted 30 more trees in Rosewood In Rosepark..... if they have to cut off the water again will they make it? It depends this year they have a chance because of all the water in the soil.

But last year they lost 5 from the previous year lack of water. The west side needs the trees but forcing people to put in an expensive hook up when a 30 dollar hose will do ...

But last year you just drive around and see the trees they had planted in the parks that died. So why is the city going to require something of homeowners that the city does not do itself?

Please reconsider this it won't do the trees any good to water where they can't use it,...It will not get the city where it wants to go with the canopy.

If there are actually any new houses built in the city i can see where this might come into play

before everything is installed. But since we don;t have any place to build new houses you are telling existing homeowners what to do. after the fact of 60 or more years.

Margaret Holloway  
1412 west 1100 north  
SLC  


**From:** [REDACTED]  
**To:** [Larsen, Nannette; Planning Public Comments](#)  
**Cc:** [Wharton, Chris; City Council Liaisons; slcgreen;](#) [REDACTED]  
**Subject:** (EXTERNAL) Public Comment on Petition PLNPCM2023-00098 - 21A.48 Landscaping and Buffers Updates  
**Date:** Tuesday, April 25, 2023 12:51:52 PM  
**Attachments:** [21A.48 Nextdoor posting 1.4 K Views 5 Days .pdf](#)

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Public Comment on Petition PLNPCM2023-00098 - 21A.48 Landscaping and Buffers Updates  
From: Stanley Holmes [REDACTED]  
4-25-2023

Dear Salt Lake City Planning Commission,

I urge you to reject the proposed ordinance rewrite of 21A Zoning that was submitted as Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" as flawed and problematic on several fronts. The set of proposed amendments to Title 21A Zoning should be remanded back to Salt Lake City's Planning Division ("Division") for revision and a new, more appropriately noticed 45-day public comment period to be opened by the Division before a corrected set of proposed Title 21A Zoning amendments is brought before the Planning Commission ("Commission").

The proposed changes to Title 21A Zoning Chapter 48 under consideration now would have significant, wide-ranging, and costly impacts for many Salt Lake City ("City") property owners of various means and for all city taxpayers. That the Division would rely primarily on community council chairs to, at their individual discretion and in a timely manner, notify the general public of statutory/regulatory changes of this scope and magnitude can be most graciously characterized as cavalier.

Division records indicate that only four comments were received during the 45-day comment period and that Sugarhouse C.C. was the only community council to actively engage. I learned from city staff that the Division's notification system had been used, but found that there are no water conservation, landscaping, energy conservation, environment, or other sustainability categories listed. Through which category did the Division send the landscaping code updates notice; and how many city residents actually get notices through that means?

Please be advised, and let the public record show, that on April 20, 2023, I posted on the community blog --Nextdoor.com-- information about the proposed Title 21A Zoning changes and ways that interested citizens could submit public comments. Over the next five days, Nextdoor.com reported 1,400 views and there were 48 public comments. Please see evidence of this included with the Addendum at the close of my comment and attached.

Those folks on Nextdoor.com were Salt Lake City residents who missed the initial comment period that ended on March 27<sup>th</sup> and, quite likely, also did not know about your April 26 Planning Commission meeting or their opportunities to submit public comments before the zoning/ordinance changes had become a 'done deal.' Outrageous.

I am also quite surprised and disappointed that there was no input from the Sustainability Department, and wonder how their input was solicited. SLCGreen is copied on this comment, as are my District 3 Councilman Chris Wharton and the City Council Liaisons.

City officials should have known that not every community council would post or distribute the notice. Not every potentially interested and impacted citizen is on a community council distribution

list or regularly checks a community council's website. One might wonder to what extent the Division was truly desirous of robust public input, having solicited comments by such a narrow and undependable means. The Commission should insist upon a proper re-do of the public comment period and extend its further consideration of any Title 21A Zoning Chapter 48 amendments until legitimate opportunities for public input have occurred.

The proposed Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" are themselves in several ways inadequate and problematic. Their 'as is' endorsement by the Commission and the City Council would, upon attempted implementation and enforcement by the City, certainly result in strong opposition that would include costly litigation.

Please recall that the most recent revision of 21A.48 was in the year 2000, prior to over two decades of climate change-exacerbated heat increases and drought that finally prompted state and local officials to take action. The updates now under consideration were supposed to deal more effectively with the climate change-related impacts.

Let me begin with the proposed re-write of 21A.48.010, the Purpose and Intent section. While the earlier version calls for promoting "the prudent use of water", the update would remove this and make no mention of water conservation as a priority. The lead "purpose" of a revised chapter 21A.48 would be to "increase Salt Lake City's urban tree canopy"; and the lead "intent" would be to "promote and enhance the community's appearance."

While trees are nice, useful, and can be aesthetically pleasing, the City is located in the second driest U.S. state and is experiencing an unprecedented, worsening drought. Water conservation should not only have been mentioned in the proposed re-write of 21A.48.010, but been listed as a priority goal, as has been done by other Utah municipalities. Why was this not done?

Under the current zoning ordinance, Section 21A.48.060 refers to Park Strip Landscaping and one of the "intent" items is to "encourage water conservation". But the proposed re-write (update) would change the title of 21A.48.060 to "Landscape Requirements" and remove the water conservation reference.

The re-write of 21A.48.060 has a new "Park Strip Standards" section that adds the requirement of at least one "street tree" in the park strip. Additional park strip trees would be required, depending on the park strip length. The current ordinance has no park strip tree requirement. Therefore, residents who've implemented water-wise park strip measures --in compliance with the existing ordinance -- that do not include at least one street tree would be required to add a tree and, according to the 21A.48.040 re-write, see that it is "irrigated with a permanent automatic irrigation system." A hydrozoned irrigation system would be required, so that tree(s) watering can be isolated from any water needed for other vegetation.

The park strip abutting property owner would have to pay for the new park strip tree-plus-irrigation requirement. That could be quite costly, especially if the park strip has to be excavated to install the required irrigation system. The Commission should assume that some residents will be unable to afford this and that others who had been compliant would rather fight the compliance rules change in court. Please consider the burden on low-income families, especially if the \$25-per-day violation fine is retained.

The Commission should also consider that the City's Department of Community and Neighborhood's Civil Enforcement staff would have to be expanded and that additional budgetary provisions would have to be made for the City's legal team. Litigation could delay implementation and enforcement of parts or all of the proposed 21A.48 Landscaping and Buffers Updates for an extended period of time.



And aside from pushback from angry residents delaying implementation of the proposed ordinance updates, the sheer magnitude of any effort to achieve widespread compliance should sober city planners and policy-makers. Have Division staff conducted a city-wide, on-street survey of the number of park strips that would require tree-planting and new irrigation plumbing? Have they calculated how many contractors, and how many years, would be required to accomplish full implementation? Then, there's the additional per-tree water requirement times however many park strips would be affected.

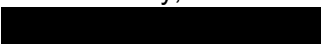
At this point, I'll add that there are some positive aspects of the proposed ordinance re-write, such as 21A.48.040.E.1., which says that "All irrigation systems shall be maintained in good operating condition to eliminate water waste and run-off into the public right-of-way." Drip irrigation is also mentioned in 21A.48.040.E, though it could have been promoted.

Some of the proposed re-write items are not clear. For example, 21A.48.040.C.2. "Exceptions" circles back to itself. And under 21A.62 "Definitions", the Park Strip Landscaping section says that park strip landscaping may include "lawn", which is normally a reference to turf. The re-write, under 21A.48.060 and 21A.48.080, prohibits turf in park strips. There is also a reference to the right-of-way line's relevance if there is no sidewalk, but the dimensions of the right-of-way line are not given.

As a final point to this comment, it concerns me that the City Planning Division failed to take a holistic view of the abutting residential property owner's landscape unless a new home is being constructed or the floor area of an existing structure(s) is being expanded by 50% or more. The overall vegetative contribution of individual residential properties that are not undergoing structural change is ignored by the proposed 21A Zoning rewrite's determination of compliance or non-compliance with new park strip requirements. I can imagine situations where the owner of a well-wooded, well-vegetated residential property is forced to install and water a park strip tree while the owner of a minimally vegetated property who happens to have a tree in the park strip is left alone. Where is the environmental justice in that?

Salt Lake City needs to do a better job of conserving water. The proposed amendments to Title 21A Zoning are inadequate to the task, as they do not give water conservation the top priority status our current megadrought crisis demands. I urge the Commission to deny Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" and send it back to the Division for revision and a properly noticed, 45-day public review and comment period.

I thank you in advance for your thoughtful consideration of the points I raised and your directive to have the ordinance revised in a more transparent way that better engages the public and serves the City's best interests.

Stanley Holmes  
846 N. East Capitol Blvd.  
Salt Lake City, UT 84103  


Addendum:

My attempt to use Nextdoor.com to notify the public of proposed 21A.48 changes, first posted on April 20, 2023, is copied below. In five days, 1,400 views and 48 resident comments. The Planning Division got 4 public comments in 45 days.

**Stan Holmes**  
Author

•[West Capitol Hills](#)•0 mi

SLC Park Strip, Landscape Policy Changes

Public comments are being taken by the Salt Lake City Planning Division and Planning Commission as they consider city-wide changes to the Landscaping Chapter of the Zoning Code. This includes proposed revision of the Park Strip ordinance under which many city residents have been penalized for their water conservation efforts. The proposed Park Strip policy revision would require one "street tree" every 30 feet and vegetation covering at least 30% of the area. See all proposed amendments at...

[www.slcdocs.com/Planning/Online%20Open%20Houses/2023/02\\_2023/PLNPCM2023-00098/02102023%20DRAFT%20Landscaping%20Updates\\_Posted.pdf](http://www.slcdocs.com/Planning/Online%20Open%20Houses/2023/02_2023/PLNPCM2023-00098/02102023%20DRAFT%20Landscaping%20Updates_Posted.pdf) The Planning Commission will consider landscape/park strip ordinance changes at its April 26 meeting. Public comments can be submitted in-person or via email to and . Reference case number PLNPCM2023-00098 in the subject line. The agenda for next Wednesday's (April 26) Planning Commission meeting is at...

[www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf](http://www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf)

Whatever the Planning Commission decides will then be presented to the City Council for final approval. Now is the time to shift from opinion to action and file a public comment.

**[Stan Holmes](#)**

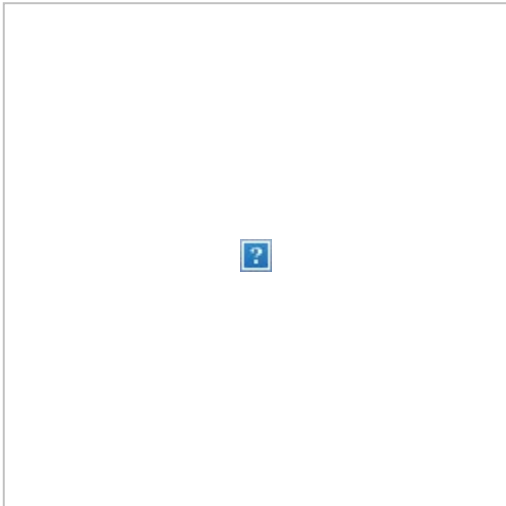
Author

•[West Capitol Hills](#)•0 mi

The email addresses that were stripped are planning.comments and nannette.larsen that are both at [slc.gov](http://slc.gov). They are also listed in the April 26 agenda at...

[www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf](http://www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf)

also attached:



**From:** [Chelsea Benjamin](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) Report to include as part of public record for today's planning commission meeting  
**Date:** Wednesday, April 26, 2023 11:00:08 AM  
**Attachments:** [2022 WRA Artificial Turf Report.pdf](#)

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**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

Hello Nannette,

I would like the following report to be included as part of the public record during the Planning Committee discussion on the new landscaping ordinance today. Here is a link to the report, and I have attached it as a PDF to this email. <https://westernresourceadvocates.org/publications/is-artificial-turf-a-beneficial-water-conservation-tool-in-the-west/>

Please let me know if there is anything else I need to do to include it in the Planning Commission's discussion today.

Thank you,

Chelsea Benjamin

photo



**Chelsea Benjamin**  
Water Policy Fellow

██████████ | [WesternResourceAdvocates.org](https://WesternResourceAdvocates.org)

████████████████████  
[2260 Baseline Road, Suite 200 | Boulder, CO 80302](#)



# Is Artificial Turf a Beneficial Water Conservation Tool in the West?



December 2022

Author: Chelsea Benjamin



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## Introduction

Artificial turf is a landscaping alternative made of plastic that mimics the look, feel, and function of a natural grass lawn or athletic field. Artificial turf has become more popular in Colorado and the West in recent years for its ability to reduce landscape water use in the face of unprecedented drought and water security challenges; the region now accounts for [24% of the artificial turf market share in the United States](#), with most being used for athletic fields. In recent years, many communities across the West have mounted turf replacement programs to encourage residents to save water used on outdoor landscapes in the face of prolonged drought. Communities are also limiting the amount of high water use, non-functional turf that can be installed in new development and instead requiring landscaping alternatives. As momentum continues to grow around reducing high water use turfgrass in our communities, water conservation practitioners, land use planners, landscape professionals and community members are asking: is artificial turf a worthwhile landscaping alternative, especially for residential properties? While artificial turf may reduce landscape water demand compared to traditional cool season turf, research shows that artificial turf can also have significant environmental and economic drawbacks. This report explores the current state of the research behind the benefits and drawbacks of artificial turf as it relates to: water management, temperature impacts, lifecycle analysis, PFAS contamination, harmful chemicals, microplastic contamination, pet waste buildup, and cost. While much of the data available are from studies of artificial turf athletic fields, most findings are applicable to properties with smaller footprints as well.

## Water Management

Artificial turf has gained popularity in large part for its ability to reduce outdoor water use. [One study](#) found that full-sized, 1.32 acre, natural grass sports fields can use up to [1.5 million gallons](#) of water for irrigation per year depending on geographic location. The Synthetic Turf Council estimates that same-sized artificial turf athletic fields [can save 500,000 to 1 million gallons of water](#) per year (8.7 to 17.4 gallons/sq-ft), and that a turf lawn of 1,800 square feet can save 99,000 gallons of water per year, or about 70% of a homeowner's water bill. In the arid Western United States, the need for water conservation has been a driver of artificial turf demand. Artificial turf for residences has proven especially popular in [drought-stricken California](#), where some areas were limited to one day of outdoor watering per week in the summer of 2022 due to water shortages.

While artificial turf companies tout water savings as a main benefit of artificial turf, this is not always the case. Studies have found that on a warm, sunny day artificial turf can measure [up to 80 degrees hotter](#) than the ambient air temperature. In one study, an artificial turf field [measured 160 degrees](#) while the ambient air temperature was 87 degrees. On an athletic playing field, one solution to this heat is to water the artificial turf. A large amount of water needs to be applied to achieve a cooling effect, and it has been found that this cooling effect lasts [only minutes before temperatures rebound](#). Some sports arenas have attempted to solve the problem by [installing misters](#) that apply water to the turf field throughout sports events. Others find that irrigation of artificial turf improves traction and athletic

performance; one university in North Carolina going so far as to apply for a business exemption to water their artificial turf athletic fields [during a drought](#).

An additional concern is the effect of artificial turf on groundwater recharge. Cities in California that once encouraged the replacement of natural grass with artificial turf have since changed their policies upon discovering that artificial turf can increase stormwater runoff and [prevent groundwater recharge](#). Los Angeles offered a rebate for homeowners who replaced irrigated grass with artificial turf until 2016, when they [revised their program's requirements](#) to provide a rebate only for replacement with xeriscape landscaping. Los Angeles realized that artificial turf reduces the amount of rainwater that soaks into the ground after a storm, and that more stormwater flushed out to sea via the stormwater system.

## Temperature Impacts

Artificial turf can reach temperatures [up to 80 degrees higher](#) than the ambient air temperature due to its material composition and color, as well as the color and heat retention abilities of infill materials used. This excess heat contributes to [urban heat island effect](#) in cities, as heat from the synthetic turf elevates the ambient air temperature and disperses into the local environment. One researcher found that [some of the hottest areas](#) in New York City are artificial turf fields, rivaling black colored roofs in their heat retention abilities. Research has shown that excessively hot artificial athletic fields can [lead to heat stress](#), especially in children who are more susceptible than adults, turf burns, and the cancellation of athletic events due to unsafe playing conditions. Artificial turf heat can also be an issue when used in landscaping, as pets and children use the turf for play on warm days. Urban heat island effect [can also increase the demand for energy](#) for air conditioning, and can increase pollution as natural grass areas are removed. [Natural grass absorbs the sun's heat](#) during the day, and slowly releases it at night, contributing a cooling effect to the surrounding environment, as well as removing pollutants from the air.

The artificial turf industry has responded to temperature issues and [has developed products](#) that can repel UV rays, better disperse heat, and even mimic the evaporative cooling effects of natural grass. Some types of artificial grass have been [developed specifically for areas like Arizona](#) that have extreme high temperatures during the summer. Manufacturers claim that heat-repellent synthetic turf [measures 10-20% cooler](#) than grasses with high heat retention. Another heat reduction measure is the infill material chosen; crumb rubber and sand infill materials can contribute to extreme artificial turf temperatures due to their color and heat-retention abilities. Special infill materials have been developed that when wet with water, will slowly release the water over time, [mimicking the evaporative cooling properties](#) of natural grass and reducing the hottest temperatures by 50 degrees. Cooling technologies seem to be distributed across price points, but largely cannot match the cooling properties of natural grass or other plants.

## Lifecycle Analysis

In the early 1990s, the United States had a mounting problem with the disposal of used automobile tires; they were costly to dispose of and created pest and fire hazards in landfills. It was then discovered



that discarded [tire rubber could easily be recycled](#) into small pellets to be used as “infill” to stabilize artificial turf athletic fields and lawns. The infill is now mainly used for large athletic field installations and industry experts estimate that the artificial turf industry now [recycles one-twelfth of all automobile tires](#) disposed of each year. One artificial turf athletic field can use [20,000 to 40,000 used tires](#) as crumb rubber infill. Infill is added during installation, and as needed to replace infill that migrates out of the artificial turf area.

Artificial turf has an [average lifespan of 8-10 years](#) before an athletic field becomes worn out, or a residential lawn loses its formerly lush appearance. The Synthetic Turf Council, an artificial turf industry group, [insists that artificial turf is recyclable](#), and that its members actively recycle the spent turf it sells. Investigative journalists and concerned citizens have documented otherwise in the Netherlands and in the United States.

The Netherlands requires artificial turf to be recycled. A few Dutch companies claim to be artificial turf recyclers; these companies accept payment to recycle spent turf and provide removal services. However, investigative journalists have found that several of these companies have [no active facilities for turf recycling](#). The companies do not recycle the artificial turf they accept, but either hold on to it indefinitely in growing piles in municipalities with lax regulations or sell it to new customers who repurpose the turf, rather than recycle its components into new materials.

In the United States, there are no regulations that pertain to the disposal or recycling of artificial turf. Most municipalities will accept artificial turf in local landfills. Fees to dispose of large amounts of turf, such as from athletic fields, can be extremely expensive. As artificial turf owners are not held responsible for the turf at the end of its life, it is often [illegally dumped](#), or a small fee is paid to store the turf on an abandoned lot rather than paying disposal or recycling fees. Piles of discarded turf [create fire and chemical hazards](#), just as discarded automobile tires did in the 1990s. Although a Danish artificial athletic field recycler, [Re-Match](#), has plans to open an [artificial turf recycling facility](#) in Pennsylvania, and has recently expanded its European operations to the Netherlands and France, life cycle concerns for end-of-life artificial turf athletic fields and synthetic residential landscaping remain an active problem the world over.

## Harmful Chemicals

Artificial turf eliminates the need for pesticides, herbicides, and fertilizers that are traditionally used to maintain a lawn or sports field; the plastic turf and its base layers block the growth of weeds and pests that otherwise might invade natural grass. However, artificial turf contains many chemicals of concern. These chemicals can migrate into the surrounding environment as the plastic material degrades when exposed to heat and light. The majority of research on artificial turf focuses on athletic fields, and many specifically on the chemicals related to crumb rubber infill. Crumb rubber infill is the cheapest infill material on the market and is often used in athletic field installations. It is less likely to be used for artificial lawns, but the following research discussed can at times apply to residential installations.

The cheapest infill material on the market is crumb rubber infill made from recycled discarded tires. Crumb rubber infill is most often used for athletic fields, as it provides a durable playing surface.



However, crumb rubber infill has been found to release chemicals as it degrades. Crumb rubber infill has been analyzed and found to contain [197 carcinogenic chemicals](#). Alternative infill materials include EPDM rubber, TPE plastic, and recycled athletic shoe material, as well as natural materials like sand, cork, and zeolite clay. A study comparing infill materials found that [almost all contain chemicals of concern](#), except natural infill materials, which may conversely be susceptible to mold growth, or cause negative respiratory effects. Studies have found that organic contaminants and heavy metals in crumb rubber leach into stormwater runoff, [posing hazards](#) to the surrounding environment, aquatic life, and human health. Studies have also found that Volatile Organic Compounds (VOCs) from crumb rubber infill can aerosolize during play on artificial turf athletic fields. VOCs can cause respiratory irritation and have been linked to the [development of cancer](#).

While there are no fully conclusive studies on the human health effects of exposure to artificial turf, studies have been conducted on the effects of crumb rubber infill chemicals on earthworms, an invertebrate, and on chicken embryos, a vertebrate. Two experiments have been conducted on the effects of earthworm exposure to crumb rubber infill. The first experiment tested the effect of exposure to new crumb rubber infill, and found that after one week of incubation in contaminated soil, the exposed earthworms [had noticeably lower body weight](#) than those in clean soil. A second, similar, experiment was conducted using recycled tire crumb rubber infill. In this experiment, the exposed earthworms [quickly died in a stress test](#), demonstrating a marked decrease in resilience to stress when exposed to chemicals in recycled tire rubber.

Another study that examined the effects of crumb rubber leachate on fertilized chicken embryos during their development process found that approximately half of the fertilized eggs exposed to the leachate [developed extreme malformations](#), while the unexposed group developed into healthy chicken embryos.

Although no conclusive studies have been conducted on the direct effects of artificial turf on human health, anecdotal collections of statistics have raised concerns about artificial turf's potential connection to cancer development in humans. In 2013, one women's soccer coach compiled [a list of 38 US soccer players who had developed cancer](#), mainly leukemia and cancers of the blood. Many of the players were goalies, who regularly dive into artificial turf. Health experts have been unable to reach consensus on whether artificial turf and the use of crumb rubber infill can be linked to cancer or other human health effects. Despite this lack of consensus, the presence of known carcinogens in artificial turf blades and infill and the results of the animal studies have raised alarm.

## PFAS Contamination

PFAS chemicals are widely found in artificial turf because they are used in the artificial turf production process and are typically added as a coating to the grass blades as they are manufactured. The chemicals can break down and leach into the environment when exposed to heat and light after artificial turf is installed.

PFAS chemicals are also known as "[forever chemicals](#)" because they do not break down under normal environmental conditions, and can last in the environment for hundreds of years, or longer. PFAS

chemicals are also associated with negative health effects in humans and wildlife. [Studies on the human health effects of PFAS](#) chemicals have found that the chemicals bioaccumulate in human tissues and can lead to liver effects, immunological effects, developmental effects, endocrine effects, decreased fertility, cardiovascular effects, and can contribute to the development of cancers. PFAS can cause similar problems in animals and can also bioaccumulate in plants.

In 2020, one New Hampshire community attempted to purchase PFAS-free artificial turf to minimize exposure risks. The community tested the turf they had been sold, and found that [it did contain PFAS chemicals](#). The company claimed that the levels of PFAS in the turf were below EPA accepted maximum levels of the chemical and could safely be labeled “PFAS-free”. However, the EPA has recently concluded that [no amount of PFAS chemicals are safe](#) in drinking water, which is concerning as many components of artificial turf installations regularly make their way into surrounding waterways.

## Microplastic Contamination

In addition to the chemical concerns surrounding artificial turf, there are also significant concerns relating to microplastic pollution. [Artificial turf plastic grass blades can break off](#) from the turf surface and migrate into the surrounding environment, creating microplastic pollution as they break down into smaller pieces over time. Artificial turf athletic fields that use crumb rubber infill can be even greater sources of microplastic pollution. One study in Norway found crumb rubber infill [pieces in 85% of water samples](#) taken in waterbodies downstream from artificial turf fields, and in 42% of samples taken from locations upstream. Microplastic pollution from artificial turf fields accounts for [over one third of total microplastic pollution](#) in Norway. Similarly, researchers have found that artificial turf fields are the [second highest](#) source of microplastic pollution in Sweden. Swedish authorities estimate that large artificial athletic fields [lose 2-3 tons of infill to the surrounding environment per year](#).

Microplastic pollution is a concern for actively used artificial turf fields, and for discarded fields that await recycling or incineration or are illegally dumped. Discarded fields have the potential to release microplastic pollution into the surrounding environment indefinitely. Artificial turf lawns also can release microplastics via the grass blades’ degradation over time, and depending on the choice of infill will also release infill particles into the environment. Researchers are only beginning to understand what the effects of this pollution might be.

Study of the effects of microplastics is relatively new. Studies have found the tiny particles worldwide, including in remote wilderness areas that have no human visitors, and in the umbilical cords of newborn babies. The effects of microplastic pollution on human health and the environment are still relatively unknown, but some early studies suggest that microplastic exposure and ingestion [can cause harm to human health and the environment](#). One study in particular found that [microplastics added to soil disturb natural biological processes](#) and change soil structure. Knowledge of the long-term effects of microplastics will continue to develop over time.

## Soil Quality

Artificial turf installation requires the removal of the existing top level of soil and heavy soil compaction to create a smooth surface for the turf. [Compaction negatively effects the soil structure](#), disturbs the

soil's microbial activity, and can damage tree roots. After soil is compacted for athletic field installation, [several layers are added between the soil and the artificial turf](#) surface to level the playing field, improve storm water drainage, and provide cushioning. In artificial turf lawn installations, plastic and wire layers may be added beneath the turf for protection from burrowing animals, and weeds. In addition to the effects of soil compaction, artificial turf changes the quality of the soil beneath it by starving the soil of water, air, and light. Artificial turf has also been shown to degrade over time, [leaching chemicals](#) from the plastic turf material and the infill materials into stormwater runoff that can soak into surrounding soils, further disturbing soil health.

## Pet Waste Buildup

Pet waste can build up over time on artificial turf, and additional maintenance is required to keep artificial lawns fresh. Artificial turf companies have designed special types of turf to improve pet waste drainage and [claim that it can better eliminate waste than natural grass](#). Pet-friendly infill has also been created with a special coating to prevent odors and the growth of bacteria. Despite these measures, artificial turf needs to be rinsed off after use by pets. To fully sanitize artificial turf when pet waste builds up, infill must be vacuumed out and a special cleaner applied to break down urine and other waste. Natural grass and other plant installations do not need this type of maintenance and special products; the elements naturally break down remnant pet waste.

## Cost

A [New York Times investigation](#) compared costs for artificial turf lawns. Bids to install a large artificial turf grass lawn averaged \$10,000. The average lifetime of artificial grass is 10 years or less and there are maintenance costs associated with artificial turf, and costs associated with removal and replacement at end of life. Natural grass lawns are likely to have longer lifespans if managed sustainably. Natural lawn costs increase substantially if located in an area that requires supplemental irrigation. One way to lower such costs is to install drought-resistant or low-water species of grass in drought-prone regions, though irrigation systems will likely be needed even if used less frequently.

Regarding athletic fields specifically, many schools and universities choose to install artificial turf rather than natural grass fields because artificial turf is a durable play surface that allows for continuous use, while natural grass can require rest between athletic activities. Artificial turf can also save on maintenance costs associated with irrigation and mowing. However, artificial turf has been shown to require heat related closures, maintenance such as brushing and sanitization, regular replacement of infill material, and even irrigation to improve heat conditions and playability.

The Toxics Use Reduction Institute (TURI) has conducted several studies comparing costs between artificial fields and natural grass fields that show that [organically managed natural grass fields can improve](#) play conditions, reduce wear and tear related closures, and lower maintenance costs. Costs to install a variety of natural grass field installations range from \$0.60-\$5.00 per square foot, and [estimates for artificial turf costs](#) range from \$4.50-\$10.25 per square foot. TURI's research concludes that [artificial turf athletic fields can cost 2 to 10 times](#) more than organically managed natural grass fields over their life cycles when accounting for installation fees, maintenance fees, and disposal and replacement fees at the end of an artificial turf's lifecycle. Many sports facilities decide that the investment is worth it

because artificial turf can extend playing time, and be used in any season or weather condition, including in snow.

## Conclusion

Artificial turf has gained popularity, particularly in the increasingly arid West, as it conserves water used on outdoor landscapes and sports fields, among other reasons, like extending playing time for athletic activities. While artificial turf eliminates the need for pesticides, herbicides, and fertilizers used on natural grass, it can have considerable drawbacks. Artificial turf can have unexpected negative impacts to water supplies including requiring watering for cooling on hot days and hindering groundwater recharge. The heat generated by artificial turf can increase urban heat island effect and cause heat-related injuries. To date, there are few sustainable options for artificial turf recycling, leading to stacks of discarded artificial turf building up the world over. In addition to the above issues, the chemicals and microplastic particles that make up artificial turf can leach into the environment, causing environmental and health impacts not yet entirely known. And, while many artificial turf companies tout the material as more cost-effective, cost comparisons with natural grass show that in some cases artificial turf is significantly more expensive. Better alternatives to artificial turf exist in the form of water wise landscaping, including drought-resistant and native species of grasses, trees, shrubs, and perennials. Water-wise landscaping can reduce irrigation water use significantly, with some native plants and grasses requiring no or very little supplemental irrigation. While water savings vary depending on what is installed, compared to cool season turf, water-wise plantings provide numerous other benefits such as pollinator habitat, reduced fertilizer and pesticide use, and groundwater recharge. As the West faces a hotter and drier future, we must continue to research and assess opportunities for reducing landscape water demand while maximizing benefits and minimizing negative consequences. For residential property owners seeking to be more water efficient or wanting lower maintenance landscaping, artificial turf is likely not the hoped-for solution due to costs and wide-ranging environmental and potential health impacts.

**From:** [Christopher C. Nixon](#)  
**To:** [Planning Public Comments](#); [nannette@slcgov.com](mailto:nannette@slcgov.com)  
**Cc:** [Jan Nixon](#)  
**Subject:** (EXTERNAL) Comment on Landscaping, Park Strip Changes to Code 21A.48  
**Date:** Wednesday, April 26, 2023 12:25:04 PM

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Caution: This is an external email. Please be cautious when clicking links or opening attachments.

To Whom It May Concern,

I just learned of this public comment opportunity through our neighborhood social media, not from city officials. Apparently, the first comment opportunity has come and gone with little publicity.

Salt Lake City must try harder to not only save water, but also to provide the public with more chances to have a say in what we can do as individuals and neighbors. The water crisis is serious. City officials need to get serious, too.

What Salt Lake City needs to do first is to stop all the water waste on park strips and adjoining properties. Every day in the summer, I see broken and badly adjusted sprinklers watering the street and sidewalks. I've received two citations from SLC Civil Enforcement wanting to penalize me for getting rid of park strip turf and putting in a water-wise, attractive rock garden.

What is Civil Enforcement doing about the gutter rivers from the wastrels that are mismanaging their landscape and park strip water? Do city planners need water-wise residents to submit photos and addresses of these residential, commercial, and industrial wastrels across the city?

I know neighbors who would like to have a say in this but also missed the opportunity. The city planning division should re-open the public comment period and have it properly noticed in the Deseret News and Salt Lake Tribune. KSL and KUER would air PSAs to let people know.

Please get serious about the drought situation and bring the residents onboard to find solutions.

Thank you.

Jan Nixon  
Salt Lake City

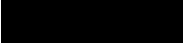
**From:** [Margaret Holloway](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) design presented on landscaping last night  
**Date:** Thursday, April 27, 2023 11:25:34 AM

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**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

I see a design with a tree in the corner with mulch and drought bushes spotted around. The problem with mulch is that leaves that fall from the tree can not be raked or blown without removing the mulch with the leaves.

So that is a problem I was going to put bark and mulch like this buyt my trees drop small leaves and large leaves during the year. WHich i saw before i did this new landscaping. So it sounds and looks good until the trees drop leaves.

Margaret Holloway  
1412 west 1100 north  
Salt Lake City, Utah  


**From:** [Kyle Deans](#)  
**To:** [Larsen, Nannette](#)  
**Subject:** (EXTERNAL) PC  
**Date:** Tuesday, May 16, 2023 12:41:42 PM

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**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

Nannette,

I am sending this in regards to the Landscaping and Buffers Amendments.  
I am in full support of anything that can help reduce the consumption of water by SLC residents, especially when it comes to non essential ornamental landscapes.

Kyle Deans  
SLC Resident



August 1, 2023

Re: Landscaping and Buffers Chapter Amendments

Dear Nannette, Mayor and City Council

Proposed Park strip requirements allowing up to 50% rock and not allowing any turf grass as approved in the Planning Commission's final draft of the landscape requirements is a bad idea and defeats the larger goal of reducing the heat island effect and promoting mature tree growth. Park strip water use needs improvement, but the code as written needs revision.

Rock mulch and no turf at all hurt our city. No turf is a negative for families with children that like to play in their front yard.

North Dakota State Horticulturist Tom Kalb has written,

*"Do you enjoy torturing plants? If yes, get some rock mulch and put it around your plants. Rock mulch does nothing for a plant. A rocky bed may look good to us, but the plants are crying in pain."*

<https://www.ndsu.edu/agriculture/extension/extension-topics/gardening-and-horticulture/trees-and-shrubs/choosing-mulch-trees-and>

**50% rock will add to the heat island effect and hurt tree growth!**

Rock is a material that absorbs heat and bakes the surface roots of any plants and trees within the park strip. It retains heat throughout the day and contributes to the heat island effect and evaporation of water in the soil. Also rocks add no nutrients to park strip plants or trees. Rock mulch should not be encouraged as it contributes to the heat island effect.

50% rock mulch mow strip will retain and reflect heat all day, cook plants and trees and evaporate more moisture in the ground







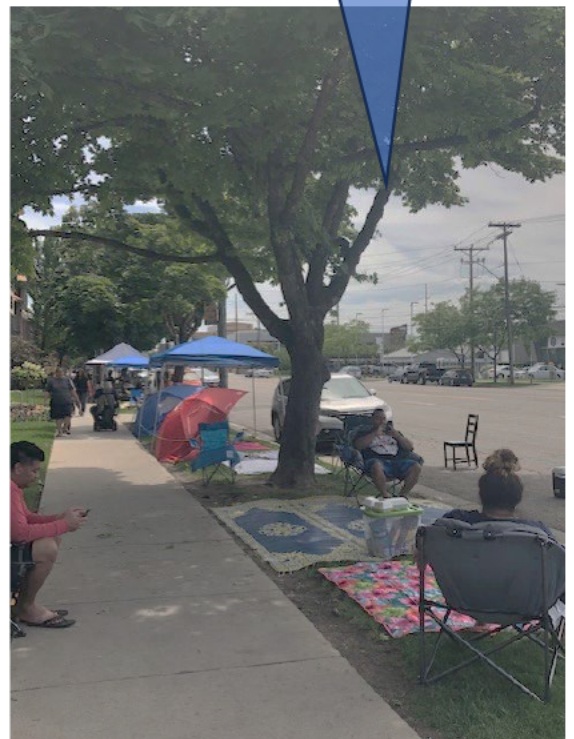
Large shade trees allow turf grass to use less water and trees grow better and cool neighborhoods

Families with children have front yards where children play soccer and other sports. Turf grass in a residential mow strip should be allowed to extend this play area for families. Turf is easy to maintain, fun to play on, and when it is under a large, shaded canopy of trees uses much less water. Native turf is available. Products like **Habiturf** offers waterwise planting, "The resulting Habiturf® is a blend of *Bouteloua dactyloides* (buffalograss), *Bouteloua gracilis* (blue grama) and *Hilaria belangeri* curly mesquite). It establishes quickly and, best of all, conserves precious resources once established. It does especially well in the dry regions of Texas, Oklahoma, New Mexico and Arizona."

Obviously not everyone should have turf for their mow strip and when poorly irrigated they can waste water, but in many places, it makes good sense. For example, our family and many other families sat on grassy mow strips downtown to watch the Pioneer Day parade. Also, our family with small children play sports in our yard and the mow strip turf extends that play area.

In addition, the turf mow strip areas are cooler, tend to have trees that grow better because it is cooler than rock mulch and hardscape. Turf absorbs rain and snow moisture and contributes to city cooling better than rock mulch.

People waiting for the parade





Children play and swing in mow strip space



I would recommend that turf be allowed with an approved irrigation plan that minimizes any water run off into the street and includes shade trees that at mature canopy cover 75% of the mow strip.

A balance of shade trees and turf grass can be water efficient and urban cooling. We can save water in other ways by reducing the width of our wide streets, reducing the amount of surface parking lots and all the unnecessary asphalt. Of course, other mow strip plants and shrubs and grasses can be beautiful and should be encouraged, but turf should not be banned completely. Rock is not a good alternative to turf grass.

Sincerely,

Josh Stewart

Architect and Urban Designer  
1867 Princeton Ave  
Salt Lake City



**From:** [REDACTED]  
**To:** [Larsen Nannette](#)  
**Cc:** [Planning Public Comments](#); [City Council Liaisons](#); [Gilot Tony](#); [REDACTED]  
**Subject:** (EXTERNAL) Second Public Comment on 21A.48 Landscaping and Buffers Updates  
**Date:** Thursday, July 20, 2023 4:57:24 PM  
**Attachments:** [West Side Street UHI Despite Park Strip Trees.jpg](#)  
[Freshly Black Topped West Side Street UHI.jpg](#)

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**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

Public Comment Follow-Up to 21A.48 Landscaping and Buffers Updates

From: Stanley Holmes [REDACTED]

7-20-2023

Dear Salt Lake City Planning Division,

As a follow-up to my 4-25-202 public comment [copied further below] urging the S.L.City Planning Commission to reject the proposed 21A.48 Landscaping and Buffers Updates, I submit the following inquiry along with suggestions for improvement of your Urban Forest Action Plan adopted Feb. 2023.

First, the inquiry.

Some residents have asked me whether the new park strips street tree requirement applies to park strips abutting existing homes as well as to new homes and remodeled homes. My responses have included references to the Salt Lake City Planning Division's ordinance revision proposal report that was submitted to the SLC Planning Commission on April 26, 2023, the day the Commission considered proposed Landscape and Buffers Chapter [21A.48] Amendments. That report included the Planning Commission Draft as Attachment B.

My counsel to residents for whom the ordinance revision is unclear is that, as worded, the new park strips street tree requirement applies everyone, with few exceptions. I point to the following document components which, taken together, substantiate this:

The 4-26-2023 document states that it is intended to "Specify responsibilities of **the** property owner."

Applicability [21A.48.020] chapter provisions state that the ordinance "[A]pplies to **all** properties within the city, unless otherwise exempted in another chapter."

Responsibility & Maintenance [21A.48.040] chapter provisions state that, with reference to park strips, "The owner of the property abutting the park strip shall be responsible for the correct installation, maintenance, repair, or replacement of all landscaping vegetation..." and include "Providing sufficient irrigation to a **street tree** located in the abutting park strip." That section proceeds to list multiple requirements for irrigation systems.

The Landscape Plan chapter, 21A.48.050, indicates that a landscape plan is only required for "[New] construction of a primary structure" and alterations to an [existing] property that increase the floor area by 50% or more.

The next chapter, Landscape Requirements [21A.48.060], however, makes no distinction between properties requiring a landscape plan and those that do not, when it states that "Where there are conflicting standards in this chapter, the more restrictive requirements shall apply." Park Strip Standards include "**Minimum of 1 street tree**..." and, for overall vegetation, "Minimum 33% coverage."

The General Standards chapter, 21A.48.080, states that "All landscape improvements in the required landscape locations, as described in 21A.48.060 and 21A.48.70 shall meet the regulations described in this section." Under the chapter's Specific Park Strip Standards section, the Street Trees:Substitutions rule is that the Urban Forester "may approve a substitute of the **required street tree** provision for a cash in lieu payment..."

In the Key Considerations section, under Consideration 2, the SLC Planning Division's 4-26-2023 document references its Urban Forest Action Plan, then concludes that the proposed landscaping chapter will include the requirement that "**[S]treet trees are required in every park strip** depending on the length of the park strip."

[Attachment A, Water Conservation and Landscaping Regulations Council Briefing Report, includes specific observations and recommendations in its Water Conservation and Landscaping Regulations. It acknowledges that "property owners are not aware" of landscape zoning rules and criticizes the current landscape chapter's "lack of

clarity" and consequent problems that include resident violations and subsequent [civil] enforcement actions. My takeaway is that the Division has identified a problem, but not corrected it.]

Looking again at the Planning Commission Draft:

The first textual content specifying applicability to new construction does not occur until chapter 21A.48.050, Landscape Plan, where it states that such a plan shall be required for new construction and modification of an existing property's floor plan by 50% or more. Up to that point, the revision suggests that requirements apply to all residences...with a few exceptions.

Prior to 21A.48.050 we have:

~ 21A.48.020: Applicability... "The provisions of this chapter apply to all properties within the city, unless otherwise exempted..."

~ 21A.48.040: Responsibility and Maintenance ... "The owner of the property abutting the park strip shall be responsible for...all landscaping vegetation." "Providing sufficient irrigation to a street tree located in the abutting park strip." "shall provide water adequately and efficiently to each street tree..."

Then, in 21A.48.060 under Park Strip Standards, the document sets a minimum of one street tree per park strip and a minimum 33% vegetation. No distinction is made between existing properties and those requiring a landscape plan. If the Commission intended to exempt existing properties, it should have stated that.

I therefore conclude that the SLC Planning Division document fails to convince me that the revised ordinance requirements would only apply to new projects or non-residential landscape sites. While there are separate chapters in the Division and Commission portions of document that apply to new projects and changes to existing residential property floor plans, and there are later chapters citing variations for certain areas, such as the Northwest Quadrant, there are no residential park strip requirement waivers or exemptions specified in prior chapters. Nor is it stated in introductory sections, such as Project Description or later in Purpose & Intent, that the ordinance update does not apply to most existing residential properties. General applicability of the park strip street tree requirement should have been clearly stated up front, but was not.

Since the proposed ordinance update is not clear about all who would be subjected to the new park strip street tree requirement, my counsel is that SLC residents whose park strips have no trees should assume they will be required to make changes if the Commission-approved ordinance update is adopted by the Salt Lake City Council.

What would you say to SLC residents who feel threatened by the proposed ordinance update?

Finally: Some comments on the Urban Forest Action Plan (UFAP)...

Inasmuch as the City is concerned about the urban heat island (UHI) effects of <33% vegetation covered park strips, and is focusing on irrigated park strip street trees as a solution, I am surprised that the UFAP lacks details about the UHI of super-wide residential streets, especially on the West Side. For example, 1100 West and 400 North are 77 feet wide. That's the width of seven or eight car lanes...all imposing intense UHI effects and trying-to-stay-cool cost burdens on economically vulnerable families.

The only [passing] reference to the option of street trees median strips is a sketch on page 76. There's no discussion of the functionality of street trees median strips, which could be quite useful in reducing UHI on wide residential streets. I have attached to this comment the photo of a West Side street block whose park strips are full of trees. Notice the huge area of exposed street pavement still drawing and radiating heat. Another attached photo shows a recently black-topped street. Why is the City still coating streets with black when lighter alternatives are available?

There are other cost-burden, mitigation responsibility, and water conservation topics that should inform improvements to the Urban Forest Action Plan and the revision of city ordinance 21A.48 prior to the City Council's scheduling of public hearings and its final vote.

Thank you for your attention to questions and suggestions raised in this, my second, public comment to the City regarding plans, policies, and programs to address climate change impacts that threaten our quality of life.

And please let me know when any potential revisions are available to the public prior to City Council hearings. Thanks.

Stanley Holmes  
846 N. East Capitol Blvd.  
Salt Lake City, Utah 84103  
[REDACTED]

Quoting "Larsen, Nannette" <[Nannette.Larsen@slcgov.com](mailto:Nannette.Larsen@slcgov.com)>:

Stanley,

Thank you for your comments. I will forward them to the Planning Commission for commission members to view before the public hearing tomorrow.

Best,

 **NANNETTE LARSEN** | *(She/Her)*  
Senior Planner  
PLANNING DIVISION | SALT LAKE CITY CORPORATION  
Mobile: (801) 535-7645  
Email: [Nannette.Larsen@slcgov.com](mailto:Nannette.Larsen@slcgov.com)  
[WWW.SLC.GOV/PLANNING](http://WWW.SLC.GOV/PLANNING) [WWW.SLC.GOV](http://WWW.SLC.GOV)

**From:** [REDACTED]  
**Sent:** Tuesday, April 25, 2023 12:52 PM  
**To:** Larsen, Nannette <[Nannette.Larsen@slcgov.com](mailto:Nannette.Larsen@slcgov.com)>; Planning Public Comments <[planning.comments@slcgov.com](mailto:planning.comments@slcgov.com)>  
**Cc:** Wharton, Chris <[Chris.Wharton@slcgov.com](mailto:Chris.Wharton@slcgov.com)>; City Council Liaisons <[City.Council.Liaisons@slcgov.com](mailto:City.Council.Liaisons@slcgov.com)>; slcgreen <[slcgreen@slcgov.com](mailto:slcgreen@slcgov.com)> [REDACTED]  
**Subject:** (EXTERNAL) Public Comment on Petition PLNPCM2023-00098 - 21A.48 Landscaping and Buffers Updates

**Caution:** This is an external email. Please be cautious when clicking links or opening attachments.

Public Comment on Petition PLNPCM2023-00098 - 21A.48 Landscaping and Buffers Updates  
From: Stanley Holmes [REDACTED]  
4-25-2023

Dear Salt Lake City Planning Commission,

I urge you to reject the proposed ordinance rewrite of 21A Zoning that was submitted as Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" as flawed and problematic on several fronts. The set of proposed amendments to Title 21A Zoning should be remanded back to Salt Lake City's Planning Division ("Division") for revision and a new, more appropriately noticed 45-day public comment period to be opened by the Division before a corrected set of proposed Title 21A

Zoning amendments is brought before the Planning Commission ("Commission").

The proposed changes to Title 21A Zoning Chapter 48 under consideration now would have significant, wide-ranging, and costly impacts for many Salt Lake City ("City") property owners of various means and for all city taxpayers. That the Division would rely primarily on community council chairs to, at their individual discretion and in a timely manner, notify the general public of statutory/regulatory changes of this scope and magnitude can be most graciously characterized as cavalier.

Division records indicate that only four comments were received during the 45-day comment period and that Sugarhouse C.C. was the only community council to actively engage. I learned from city staff that the Division's notification system had been used, but found that there are no water conservation, landscaping, energy conservation, environment, or other sustainability categories listed. Through which category did the Division send the landscaping code updates notice; and how many city residents actually get notices through that means?

Please be advised, and let the public record show, that on April 20, 2023, I posted on the community blog --Nextdoor.com-- information about the proposed Title 21A Zoning changes and ways that interested citizens could submit public comments. Over the next five days, Nextdoor.com reported 1,400 views and there were 48 public comments. Please see evidence of this included with the Addendum at the close of my comment and attached.

Those folks on Nextdoor.com were Salt Lake City residents who missed the initial comment period that ended on March 27<sup>th</sup> and, quite likely, also did not know about your April 26 Planning Commission meeting or their opportunities to submit public comments before the zoning/ordinance changes had become a 'done deal.' Outrageous.

I am also quite surprised and disappointed that there was no input from the Sustainability Department, and wonder how their input was solicited. SLCGreen is copied on this comment, as are my District 3 Councilman Chris Wharton and the City Council Liaisons.

City officials should have known that not every community council would post or distribute the notice. Not every potentially interested and impacted citizen is on a community council distribution list or regularly checks a community council's website. One might wonder to what extent the Division was truly desirous of robust public input, having solicited comments by such a narrow and undependable means. The Commission should insist upon a proper re-do of the public comment period and extend its further consideration of any Title 21A Zoning Chapter 48 amendments until legitimate opportunities for public input have occurred.

The proposed Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" are themselves in several ways inadequate and problematic. Their 'as is' endorsement by the Commission and the City Council would, upon attempted implementation and enforcement by the City, certainly result in strong opposition that would include costly litigation.

Please recall that the most recent revision of 21A.48 was in the year 2000, prior to over two decades of climate change-exacerbated heat increases and drought that finally prompted state and local officials to take action. The updates now under consideration were supposed to deal more effectively with the climate change-related impacts.

Let me begin with the proposed re-write of 21A.48.010, the Purpose and Intent section. While the earlier version calls for promoting "the prudent use of water", the update would remove this and make no mention of water conservation as a priority. The lead "purpose" of a revised chapter 21A.48 would be to "increase Salt Lake City's urban tree canopy"; and the lead "intent" would be to "promote and enhance the community's appearance."

While trees are nice, useful, and can be aesthetically pleasing, the City is located in the second driest U.S. state and is experiencing an unprecedented, worsening drought. Water conservation should not only have been mentioned in the proposed re-write of 21A.48.010, but been listed as a priority goal, as has been done by other Utah municipalities. Why was this not done?

Under the current zoning ordinance, Section 21A.48.060 refers to Park Strip Landscaping and one of the "intent" items is to "encourage water conservation". But the proposed re-write (update) would

change the title of 21A.48.060 to "Landscape Requirements" and remove the water conservation reference.

The re-write of 21A.48.060 has a new "Park Strip Standards" section that adds the requirement of at least one "street tree" in the park strip. Additional park strip trees would be required, depending on the park strip length. The current ordinance has no park strip tree requirement. Therefore, residents who've implemented water-wise park strip measures --in compliance with the existing ordinance -- that do not include at least one street tree would be required to add a tree and, according to the 21A.48.040 re-write, see that it is "irrigated with a permanent automatic irrigation system." A hydrozoned irrigation system would be required, so that tree(s) watering can be isolated from any water needed for other vegetation.

The park strip abutting property owner would have to pay for the new park strip tree-plus-irrigation requirement. That could be quite costly, especially if the park strip has to be excavated to install the required irrigation system. The Commission should assume that some residents will be unable to afford this and that others who had been compliant would rather fight the compliance rules change in court. Please consider the burden on low-income families, especially if the \$25-per-day violation fine is retained.

The Commission should also consider that the City's Department of Community and Neighborhood's Civil Enforcement staff would have to be expanded and that additional budgetary provisions would have to be made for the City's legal team. Litigation could delay implementation and enforcement of parts or all of the proposed 21A.48 Landscaping and Buffers Updates for an extended period of time.

And aside from pushback from angry residents delaying implementation of the proposed ordinance updates, the sheer magnitude of any effort to achieve widespread compliance should sober city planners and policy-makers. Have Division staff conducted a city-wide, on-street survey of the number of park strips that would require tree-planting and new irrigation plumbing? Have they calculated how many contractors, and how many years, would be required to accomplish full implementation? Then, there's the additional per-tree water requirement times however many park strips would be affected.

At this point, I'll add that there are some positive aspects of the proposed ordinance re-write, such as 21A.48.040.E.1., which says that "All irrigation systems shall be maintained in good operating condition to eliminate water waste and run-off into the public right-of-way." Drip irrigation is also mentioned in 21A.48.040.E, though it could have been promoted.

Some of the proposed re-write items are not clear. For example, 21A.48.040.C.2. "Exceptions" circles back to itself. And under 21A.62 "Definitions", the Park Strip Landscaping section says that park strip landscaping may include "lawn", which is normally a reference to turf. The re-write, under 21A.48.060 and 21A.48.080, prohibits turf in park strips. There is also a reference to the right-of-way line's relevance if there is no sidewalk, but the dimensions of the right-of-way line are not given.

As a final point to this comment, it concerns me that the City Planning Division failed to take a holistic view of the abutting residential property owner's landscape unless a new home is being constructed or the floor area of an existing structure(s) is being expanded by 50% or more. The overall vegetative contribution of individual residential properties that are not undergoing structural change is ignored by the proposed 21A Zoning rewrite's determination of compliance or non-compliance with new park strip requirements. I can imagine situations where the owner of a well-wooded, well-vegetated residential property is forced to install and water a park strip tree while the owner of a minimally vegetated property who happens to have a tree in the park strip is left alone. Where is the environmental justice in that?

Salt Lake City needs to do a better job of conserving water. The proposed amendments to Title 21A Zoning are inadequate to the task, as they do not give water conservation the top priority status our current megadrought crisis demands. I urge the Commission to deny Petition PLNPCM2023-00098 - "21A.48 Landscaping and Buffers Updates" and send it back to the Division for revision and a properly noticed, 45-day public review and comment period.

I thank you in advance for your thoughtful consideration of the points I raised and your directive to have the ordinance revised in a more transparent way that better engages the public and serves the City's best interests.



Stanley Holmes  
846 N. East Capitol Blvd.  
Salt Lake City, UT 84103  
[REDACTED]

Addendum:

My attempt to use Nextdoor.com to notify the public of proposed 21A.48 changes, first posted on April 20, 2023, is copied below. In five days, 1,400 views and 48 resident comments. The Planning Division got 4 public comments in 45 days.

**Stan Holmes**

Author

•[West Capitol Hills](#)•0 mi

SLC Park Strip, Landscape Policy Changes

Public comments are being taken by the Salt Lake City Planning Division and Planning Commission as they consider city-wide changes to the Landscaping Chapter of the Zoning Code. This includes proposed revision of the Park Strip ordinance under which many city residents have been penalized for their water conservation efforts. The proposed Park Strip policy revision would require one "street tree" every 30 feet and vegetation covering at least 30% of the area. See all proposed amendments at... [www.slcdocs.com/Planning/Online%20Open%20Houses/2023/02\\_2023/PLNPCM2023-00098/02102023%20DRAFT%20Landscaping%20Updates\\_Posted.pdf](http://www.slcdocs.com/Planning/Online%20Open%20Houses/2023/02_2023/PLNPCM2023-00098/02102023%20DRAFT%20Landscaping%20Updates_Posted.pdf) The Planning Commission will consider landscape/park strip ordinance changes at its April 26 meeting. Public comments can be submitted in-person or via email to and . Reference case number PLNPCM2023-00098 in the subject line. The agenda for next Wednesday's (April 26) Planning Commission meeting is at... [www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf](http://www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf) Whatever the Planning Commission decides will then be presented to the City Council for final approval. Now is the time to shift from opinion to action and file a public comment.

**Stan Holmes**

Author

•[West Capitol Hills](#)•0 mi

The email addresses that were stripped are planning.comments and nannette.larsen that are both at [slc.gov](mailto:slc.gov). They are also listed in the April 26 agenda at... [www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf](http://www.slcdocs.com/Planning/Planning%20Commission/2023/PC04.26.2023/PC04.26.2023agenda.pdf)

also attached:





**5) PUBLIC UTILITIES DIRECTOR STATEMENT**

**From:** [Briefer, Laura](#)  
**To:** [Larsen, Nannette](#)  
**Cc:** [Thompson, Amy](#); [Bench, Nikole](#); [Rice, Marian](#); [Duer, Stephanie](#); [Draper, Jason](#)  
**Subject:** RE: Landscaping Chapter Planning Commission Public Hearing Tonight  
**Date:** Wednesday, April 26, 2023 1:02:05 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)

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Good afternoon, Nannette – please let me know if this will be useful tonight for the questions concerning artificial turf– see below:

Artificial turf has the potential to impact water quality and stormwater runoff in the following ways:

1. The combination of soil compaction in the installation of artificial turf and the material that is used does not allow water to be retained onsite. As such, this is considered an impermeable surface. This contributes to additional stormwater runoff from a site, which can have negative downstream impacts, such as flashier and increased stormwater flows.
2. As stormwater flows across impermeable surfaces it picks up and carries pollutants that get deposited in receiving water bodies, such as the Jordan River and streams that flow through our city. All stormwater that flows through Salt Lake City ultimately heads toward Great Salt Lake.
3. Pollutants of concern that can emanate directly from artificial turf include micro-plastics and PFAS compounds (<https://www.epa.gov/pfas/pfas-explained>). PFAS compounds are “forever chemicals” that pose health risks to people and animals. It is unclear whether all artificial turf contains PFAS compounds, but there is evidence that at least some of it does. To our knowledge, it is not currently tested and certified regarding the presence or absence of PFAS. Microplastics also pose health risks to people and animals. Both PFAS and microplastics are ubiquitous in the environment, and there is much concern nationally and globally about this pollution.
4. Artificial turf also needs to be washed periodically, which could contribute runoff that contains cleaning chemicals. Pet feces needs to be removed from artificial turf, and pathogens from pet feces could be introduced into stormwater during cleaning.

**Regulatory and health considerations with respect to PFAS compounds:** Salt Lake City Public Utilities is obligated to comply with drinking water and clean water regulations promulgated by the US Environmental Protection Agency (EPA) and enforced by both the Utah Department of Environmental Quality and the EPA. The EPA is prioritizing the regulation of PFAS in drinking water and in cradle to grave hazardous materials regulations (<https://www.epa.gov/pfas/key-epa-actions-address-pfas#:~:text=On%20August%2026%2C%202022%2C%20EPA,for%20cleaning%20up%20their%20contamination>). In March 2023, EPA proposed new very stringent regulations for six PFAS compounds with a proposed maximum contaminant level of four (4) parts per trillion, showcasing that EPA is extremely concerned about the health risks associated with PFAS in drinking water. The EPA is also considering new regulations under the Clean Water Act which would affect stormwater and wastewater discharges. Finally, EPA is considering new PFAS regulations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund). This primarily impacts environmental remediation for PFAS-contaminated soil and water, and there is some concern about the potential long thread of liability associated with PFAS contamination.

Please let me know if you have any further questions. I have added Jason and Stephanie to this email thread too.

LAURA BRIEFER, MPA | (*She/Her/Hers*)  
DIRECTOR



Department of Public Utilities | Salt Lake City Corporation  
Office: (801) 483-6741  
Cell: (385) 252-9379  
Email: [Laura.Briefer@slcgov.com](mailto:Laura.Briefer@slcgov.com)  
[www.slc.gov/utilities](http://www.slc.gov/utilities)  
[www.slc.gov](http://www.slc.gov)

Signature:   
Alejandro Sanchez (Dec 4, 2023 13:15 MST)

Email: [alejandro.sanchez@slcgov.com](mailto:alejandro.sanchez@slcgov.com)

---












# 11152023 Transmittal FINAL

Final Audit Report

2023-12-04

Created:	2023-11-27
By:	Aubrey Clark (aubrey.clark@slcgov.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA0PzvbpGjNz77WUcjaXmTX2mPGTprNRHF

## "11152023 Transmittal FINAL" History

-  Document created by Aubrey Clark (aubrey.clark@slcgov.com)  
2023-11-27 - 6:43:40 PM GMT
-  Document emailed to Blake Thomas (blake.thomas@slcgov.com) for signature  
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