



CITY COUNCIL TRANSMITTAL



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TO: Salt Lake City Council
Dan Dugan, Chair

DATE: August 2, 2022

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



SUBJECT: Water Conservation and Landscaping Regulations Report

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RECOMMENDATION: Review

BUDGET IMPACT: None

BACKGROUND/DISCUSSION: Staff is seeking direction on updating the Zoning Code in response to the extended drought conditions, rapid population growth, and impacts from climate change – all of which significantly affects Salt Lake City's water supply availability. City residents and businesses are showing an increased awareness and desire to modify their outdoor water use. This desire sometimes conflicts with the landscaping requirements found in the City's zoning code, creating issues between the code and the desire to cut outdoor water use. The goal of the attached report is to provide city decision makers with basic information regarding how the zoning code regulates landscaping and identify changes that could promote the conservation of water and increase public awareness of landscaping regulations.

Specifically, we are seeking direction on whether or not landscaping regulations should focus on goals of reducing the head island index, reducing storm water runoff, and emphasize the use of native plant species, and if so, what code changes are appropriate to help achieve these goals.

Discussion on strategies to further the goals of the landscaping regulations and water conservation are welcome. Strategies may include:

- Expand and protect urban forest (particularly street trees),
- Avoid increasing nonpermeable lot coverage,
- Use native vegetation (instead of turf) in park strips, front yards, parking lots, and buffer areas,
- Consider different ways to calculate vegetation during plan review and enforcement that is more objective.

EXHIBITS:

- 1) Water Conservation and Landscaping Regulations Report

1. WATER CONSERVATION AND LANDSCAPING REGULATIONS REPORT



WATER CONSERVATION AND LANDSCAPING REGULATIONS



PLANNING DIVISION
DEPARTMENT of COMMUNITY *and* NEIGHBORHOODS
And
DEPARTMENT OF PUBLIC UTILITIES
June 2022

Landscape Regulations and Water Conservation in the Salt Lake City Zoning Code

Introduction

Salt Lake City's water supply availability is impacted by drought, climate change, and population growth. Salt Lake City's water supply and demand forecasting through the year 2060 indicates additional and sustained water conservation is required now and in the future decades in order to have a reliable water supply. Additional water conservation will also support maintenance of flows to Great Salt Lake, which is shrinking.

Collectively, City residents, institutions, and businesses have been successful in water conservation over the last 20 years, decreasing overall water use by 25% since the year 2000, even though population grew during this time. The community's awareness of water scarcity issues is increasing and contributing to a desire to conserve more through modification of outdoor water use. This desire sometimes conflicts with the landscaping requirements found in the City's zoning code, creating issues between the code and the desire to reduce outdoor water use. This report summarizes the current landscaping regulations, identifies the conflicts between landscaping requirements and water conservation, and identifies potential changes that may reduce water consumption in outdoor irrigation, reduce conflicts, and improved outcomes from administering and enforcing the code that benefits the residents and business in the city.

Background

The City's water supply planning dates to its earliest days in 1847 and continues to take a long view to ensure adequate water is available for current and future generations. Detailed water resource planning and water conservation planning efforts form a technical basis in which to take action and set water-related policies. The City has recently completed an updated water supply and demand plan (2019) through the year 2060 to factor climate change, drought, and growth. The City also recently adopted a companion Water Conservation Plan (2020) with updated conservation goals and strategies through the year 2060.

The City's actions specific to water conservation typically fall into four categories: planning, incentives, public education, and requirements. The City uses all of these to reduce water consumption, and has resulted in overall water use reduction of 25% compared to the year 2000. water conservation savings.

Examples of different types of the City's conservation strategies include:

- Economic incentive signals embodied in a tiered system of water rates is in place to encourage water customers to use less water to keep their water bill lower.

- Participation in water incentive programs such as irrigation efficiency programs and landscape incentive programs.
- Public engagement and education programs.
- Culinary water regulations, such as those found in City Code Chapter 17.16, including Article 11 of that chapter concerning water shortages.
- Land use regulations concerning landscape, and the recent zoning amendment restricting high water consuming land uses.
- Building code regulations regarding water efficient appliances.

Water is used outdoors primarily to supplement vegetation. As the city has developed, most of the vegetation that has been planted in the developed area of the city is not native. Non-native vegetation is not typically able to survive the hot, dry summers that we experience in the valley. This results in non-native vegetation needing supplemental water to survive. While outdoor watering is not the only factor influencing total water consumption during any given year, it is the primary contributor to high peak water demands during the summer which stresses water supplies and infrastructure. Reduction of peak demand water use is an critical conservation goal for the City. Reducing outdoor watering is one of the important ways that individuals are responding to prolonged drought, and is a necessary long-term strategy for sustaining water resources into the future, as identified in the long-range 2060 plans.

It should be noted that Salt Lake City must meet regulatory and environmental requirements concerning stormwater runoff quality via a state-issued Municipal Separate Storm Sewer Permit (MS4). The MS4 permit requirements are met in part through requiring permeable surfaces and green infrastructure to slow down runoff flows and filter pollution. Vegetated areas throughout the city are important for this purpose, especially since the Jordan River, which is the ultimate receiving surface water body for Salt Lake City's runoff, is impaired under the Clean Water Act and Utah Water Quality Act.

Unfortunately, the desire to reduce water can create situations where a property owner inadvertently violates the zoning code. The zoning ordinance does require vegetation in some situations and prohibits the use of some materials in others. Property owners are not typically aware that these rules exist, resulting in frustration when they are trying to conserve water, an endeavor that is supported by most.

The goal of this report is to provide city decision makers with some basic information regarding how the zoning code regulates landscaping and identify changes that could promote the conservation of water and increase the awareness of landscaping regulations.

ZONING REGULATIONS AND LANDSCAPING

The SLC zoning code (Title 21A of the code of ordinances) regulates landscaping in several ways. First, the code requires landscaping for park strips. Park strips are the strip of vegetation that is usually between the street and the sidewalk. They vary in width and the code includes different standards for different widths. Second, the code identifies some yards, typically front or corner side yards, that are required to be landscaped. A yard is a space where most buildings are prohibited and

structures like fences and sheds are limited. Third, the code requires buffer yards which are intended to reduce the impact between zoning districts and most often apply when non-residential zoning districts are adjacent to residential zoning districts. Lastly, the code includes landscaping requirements for parking lots. The requirements are intended to reduce the impact of a parking lot and to reduce the heat island effect of large, paved areas.

There are several reasons for requiring vegetation. These include:

- Reduce the heat island effect caused by our hot, dry summers and the built environment absorbing the heat from the sun;
- Absorbing storm runoff to reduce the amount of water entering the storm drain system and to protect water quality;
- Aesthetics;
- Habitat and food for animals and insects;
- Benefits to overall soil health;
- Reduce the impact of noise, light, and other similar impacts from adjacent land uses; and
- Health benefits of being in a vegetated environment.



Heavy rains overwhelm the gutter on Kensington Ave (July 2021)

The first two reasons are objective and provide a direct and more measurable outcome. For example, the heat island effect is easily measured through temperature readings. The known water absorption rates of different soils compared to impervious surfaces is also something that can be calculated. There is also a clear public benefit and justification.

However, the other reasons are much more subjective and will likely mean different things to different individuals. The public benefit is also more difficult to measure. From a zoning perspective, these are the types of standards where it is appropriate for the property owner to have discretion.

The zoning regulations are mostly rigid in the requirements. Most of instances where the zoning code requires landscaping include a prescribed amount of vegetation, usually measured in total area coverage but also including the number of plants. Vegetation is regulated based on type: ground cover (which includes sod), shrubs, and trees. In some developments, plants are required to be grouped based on water need and tied to a sprinkler system that can deliver the appropriate amount of water.

Aligning the purpose for regulating landscaping with the realities of the local climate should be a consideration when determining the appropriate level of regulation. Given drought and long term water supply considerations, the City should consider modifying landscape regulations with more importance placed on vegetation that is appropriate for our climate, that can help reduce the heat island effect, and that helps absorb stormwater runoff.



Most property owners will choose to exceed the minimum landscaping requirements

It is important to remember that the landscaping regulations reflect the minimum required. Property owners often choose on their own to exceed the minimum required landscaping amounts and often do so to reap the benefits that vegetation provide. More and more people are also turning their yards into outdoor living spaces and ensuring those spaces are comfortable, purposeful, and enjoyable are motivations that should be celebrated. Growing vegetables and applying permaculture concepts to landscapes are also values being applied. Conserving water and using climate appropriate vegetation is an equally rewarding endeavor and the regulations should support both.

CURRENT CODE REQUIREMENTS

The landscaping regulations in the zoning code do not have a significant link to the current climate issues that our region is facing. The code primarily focuses on the amount of vegetation required. It does not require certain types of vegetation and rarely prohibits specific plants, the exceptions being a prohibition on sod on steep slopes and native vegetation requirements in the foothill protection zones and Northwest Quadrant Overlay. The code does require matching plants with watering needs based on hydrozones in new construction. This is intended to prevent plants with different watering needs from being overwatered.

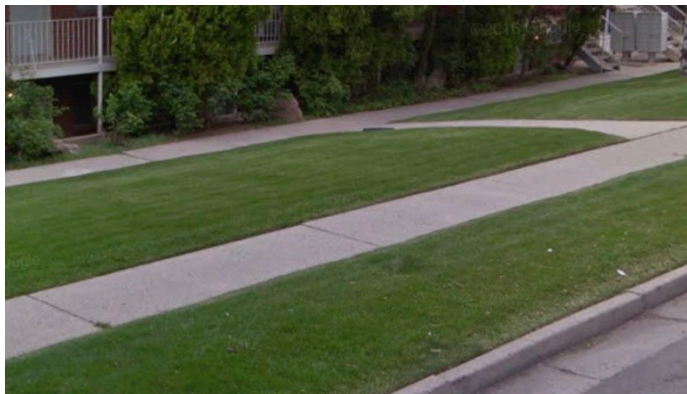
This section summarizes the landscaping regulations found in the zoning code by the area regulated. It is not intended to provide every requirement or standard and is provided for informational purposes. The length of the summary provides an indication of how extensive landscape regulations are in the zoning code.

Park Strips

A park strip is the area between the curb and sidewalk. Park strips vary in size, with the more urban parts of the city not having a defined park strip to some that are 30 feet or more in depth. Park strips play an important role in the city by providing space for street trees, utilities, access to streets, absorbing storm water, providing places to store snow plowed from the streets, and many other uses. The zoning regulations for park strips also vary based on width, as the following chart demonstrates.

Size	Vegetation Coverage	Street Tress	Paving Allowed	Artificial Turf
Less than 24"	None	One every 30'	100%	No
24"-36"	None	One every 30'	100%, must be pavers	No
36" or greater	33%	One every 30'	Pavers, mulch, carriageways, outdoor dining, can cover the rest.	No

In park strips, there are no specific requirements for type of vegetation, except plants with thorns are prohibited in the park strip unless approved by the zoning administrator. Coverage is measured as the mature height of the plant. 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. This is particularly important for people who feel vulnerable when visibility is blocked.



Park strips have traditionally been planted with sod

Areas that are not required to be landscaped can be covered in other materials, such as mulch, pavers, rocks (over a certain size) and carriageways. Completely covering a park strip in concrete is only allowed if the park strip is less than 24" in width.

Landscaped Yards

There is a difference between how the zoning code defines "yard" and "landscaped yard." A yard is the area where buildings are not allowed, also referred to required setbacks. A landscaped yard is a required setback that is also required to be landscaped by the zoning code. Vegetation in a front, corner side, interior side, or rear yard is only required if the code specifically says that it is required. The chart below summarizes required landscaped yards. 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).

Zone	Required landscaped yards	Vegetation Coverage	Other Materials Allowed	Required Open Space Area	Artificial Turf
All Residential Districts	Front and Corner Side yards RO zone: one interior side yard	33%	Yes	RMU zones	No
Commercial Districts	SNB: front and corner side yard CB: front and corner side yard CC: 15' in front and corner side yard CG: 10' in front and corner side yard	33%	Yes	TSA zones CG zone (when extra height is approved)	No

Zone	Required landscaped yards	Vegetation Coverage	Other Materials Allowed	Required Open Space Area	Artificial Turf
Form Based	None		Yes	For some building types (proposed to be added in FB-UN2)	No
Manufacturing Zones	Front and Corner Side yards	33%	Yes		No
Downtown Zones	D2: front and corner side yards (if provided)	33%	Yes		No
Special Purpose Zones	RP: all required yards BP: All or a portion of all yards AG2: Front and corner side yard AG5: front and corner side yard PL: front and corner side yard PL2: front and corner side yard I: all required yards UI: all required yards (hospitals exempt) OS: all required yards MH: all required yards EI: all required yards up to 30' MU: Front and corner side yards	33%	Yes	BP: 33% of open space area has to be vegetation.	No

Buffer Yards:

Buffer yards are yards that are required when a residential district abuts another type of zoning district. The purpose of a buffer yard is to reduce impacts between land uses. Some of the buffer requirements only apply to districts that abut a single or two family zoning district, while others apply to any residential district. The buffer yard requirements include a minimum width that varies based on the intensity of the nonresidential zoning district and two levels of vegetation: shrubs and trees. The buffer yards vary based on the intensity of the zoning district. The chart below shows the size of the buffer required in zoning districts when that district abuts a residential district.

Zoning Districts	Abutting Zoning District	Size of Buffer
RMF-30, RMF-35, RMF-45, RMF-75, RMU-35, RMU-45, RMU, RO, MU, PL, PL2, and OS districts	Single or Two Family (FR, R-1, R-2, SR-1, SR-1A)	10'
CC, CB, CC, CSHBD	Any residential district	7'
CS and CG	Any residential district	15'
M-1	Any residential, AG-2, AG-5 districts	15'
M-2	Any residential district	50'

Zoning Districts	Abutting Zoning District	Size of Buffer
RP and BP	Any residential district	30'
I	Any residential district	15' or equal to the average height of the building in the I district.
UI	Any residential district	15'
MH	Perimeter of the park, regardless of adjacent use	20'
EI and LO	Perimeter of the use	30'
TSA districts	Abuts an OS, R-1, R-2, SR, RMF-30, RMF-35, RMF-45 district	10'
All other non residential districts	Abuts an R-1, R-2, SR, RMF-30, RMF-35, RMF-45 District	7'

The following zoning districts do not require a buffer yard when adjacent to any other zoning district:

- Foothill Residential Districts (3)
- R-1 Districts (3)
- R-2 Districts
- SR-1, SR-1A, SR-3 Districts
- FB-UN1 District
- RB District



An example of a buffer yard between a residential zoning district on the right and a commercial district on the left.

The vegetation requirements in the landscape buffer varies by zoning district.

District	Shrubs	Trees	Fence
RMF-30, RMF-35, RMF-45, RMF-75, R-MU-35, R-MU-45, R-MU, RO, MU, PL, PL-2 And OS Districts: In the RMF-30, RMF-35, RMF-45, RMF-75, R-MU-35, R-MU-45, R-MU, RO, MU, PL, PL-2 and OS Districts	Continuous hedge with a mature height of at least 4'	1 shade tree for every 30 linear feet	6', but can be combined with the shrub hedge. (code does not explain what this means).
CN, CB, CC, CSHBD	Shrubs with a mature height of at least 4 feet	1 shade tree for every 30 linear feet	A solid fence between 4' and 6' in height is required unless waived (no guidance on when it is appropriate to be waived)
CS, CG, TSA, M-1, I, UI, MH, RP, and BP Districts	2 rows of shrubs, alternatively spaced along entire length of the buffer. Shrubs must have a mature height of at least 4 feet.	1 shade tree for every 25 linear feet. Evergreen trees may be substituted for some shade trees (no guidance in the code for how to calculate this substitution)	A solid fence 6' in height is required unless waived (no guidance on when it is appropriate to be waived)

District	Shrubs	Trees	Fence
M-2	2 rows of shrubs, alternatively spaced along 75% of the length of the buffer. Shrubs must have a mature height of at least 4 feet.	1 shade tree for every 20 linear feet. Evergreen trees may be substituted for some shade trees (no guidance in the code for how to calculate this substitution)	None
EI and LO	No specifics, rather requires a landscaping plan showing how it will mitigate noise, dust, and other impacts	No specifics, rather requires a landscaping plan showing how it will mitigate noise, dust, and other impacts	

Parking Lot Landscaping:

Parking lots that include more than 7 parking stalls are required to include perimeter landscaping and interior parking lot landscaping. The perimeter landscaping is required when a parking lot is located in a required yard (when allowed) or within 20 feet of a property line. The perimeter parking lot landscaping area is required to be at least 7 feet wide and include trees (every 30 or 50 feet depending on the yard), one shrub or every 3 feet of perimeter length, and 33% of the ground area must be covered in vegetation.

The interior parking lot landscaping is required to be at least 5% of the total area of the parking lot and requires a shade tree for every 120 square feet of landscaped area; 50% of the ground surface must be covered in vegetation.



Interior parking lot landscaping is required to include ground cover and trees.

Freeway Scenic Landscaping Setback

The zoning code requires landscaping for land uses that abut an interstate highway, except single and two family residential districts. The landscaping setback is required to be a minimum of 20 feet in width, but can be reduced to 10 feet if the reduction is necessary to comply with the minimum parking requirement. The setback must be planted with the following:

- One shade tree for every 300 square feet of setback area. Evergreen trees can be substituted for the shade trees if the microclimate conditions support evergreen trees.
- Ornamental trees may be substituted for up to 30% of the shade trees.
- Large shrubs may be substituted for up to 10% of the shade trees.
- Ground cover is required to be native plants, but there is no minimum requirement for ground cover.

This section can be waived when the elevation difference between the landscaping and the interstate would not allow for views of the scenic landscape setback.



The Freeway Scenic Landscape Setback is intended to improve the aesthetics of interstates

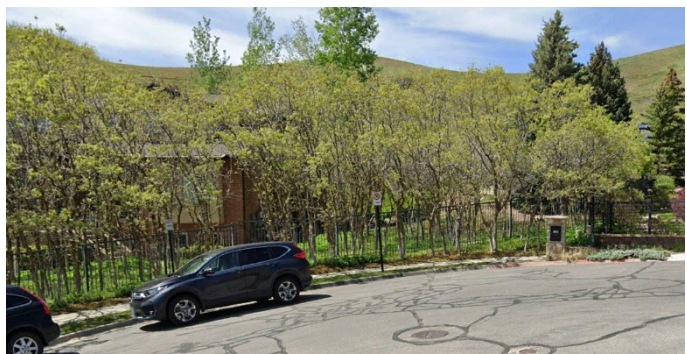
Special Landscaping Provisions

Foothill Protection Zone Landscaping Regulations

The foothill protection zone includes a specific landscaping regulation that limits the total area of a lot that can be altered from its native state and limits turf grass to no more than 30% of the disturbed area.

FR-1 and FR-2 Districts

The special provisions require tree preservation and replacement, slope revegetation, and erosion protection plans.



Some native trees are required to be preserved in Foothill Zones

CC Commercial District

There are special provisions related to required vegetation in the required front and corner side yards that include planting shrubs under 3 feet in height for every 2 feet of lot width, one tree planted for every 25 feet of lot width and any area of the required landscape yard not covered in shrubs or trees must be maintained as turf or vegetative ground cover.

D-1 and D-4 Zoning District

The special standards in this zone requires landscaped areas to be setback at least 2 feet from the curb. Street trees are required, although the standard includes some vagueness. The code requires shrubs and ground covers if it is suitable, and says that determining the amount is subject to the beautification plan. This really means there is no standard and as long as an applicant provides something, it is acceptable. Vacant lots are required to be landscaped with perimeter landscaped area that is at least 15 feet wide along the perimeter of the site and requires a shade tree every 30 feet, one shrub for every 3 linear feet, and 100% vegetative ground cover.

Transitional Overlay

Requires all front and corner side yards to be landscaped. The landscaping required to be planted is required to be “consistent with the character of the residential neighborhood.” That is fairly vague and likely unenforceable as written. If the interior side yard is adjacent to a residential use, an 8 foot wide landscaped area must be provided. A fence is also required in this area and has to be at least 7 feet from the property line. This would bifurcate the required yard, leaving a one foot strip on one side of the fence. A deciduous shade tree is required to be planted at a rate of one for every 30 linear feet of the side yard. In the rear yard, a solid fence is required, unless the conditions of the lot eliminate the need for the fence. This is also likely a meaningless regulation.

Northwest Quadrant Overlay Requirements

The NWQ Overlay only permits vegetation that is native to the soil types found in the area where the overlay is mapped, which is generally west of the airport and north of I-80. Street trees are not required and any required tree that is otherwise required under the landscaping chapter of the zoning code can be replaced with shrubs.

Issues with Current Regulations

Vegetation Coverage Requirements

The zoning code requires that at least 33% of an area required to be landscaped to be covered in vegetation. The coverage can be ground cover, including sod, shrubs, and trees. The requirements apply to park strips, required landscaped yards, landscape buffers, and parking lot landscaping requirements.

This is also one of the sections of code that is frequently violated. Violations range from removing all vegetation and replacing it with mulch to covering an entire area with concrete or asphalt. This is primarily an issue in park strips and in front yards when front yards are required to include vegetation.

Ground coverage for vegetation is not necessarily difficult to administer on a landscaping plan, but does consume more resources to enforce depending on the nature of a violation. If all vegetation has been removed, it is easy to identify and document a violation. However, if someone removes some of their landscaping and a complaint is received, the civil enforcement officer must determine how much of the area is covered by landscaping. This would require determining the size of the park strip or landscaped yard and then measuring the amount of that area that is covered by vegetation. If the plants are spaced out, the coverage of each plant has to be measured. Estimating the amount of coverage would not likely hold up to a challenge because the enforcement officer could not, with complete certainty, determine the coverage.

This is an area of code that could be modified in several ways.

1. Provide options for calculating the amount of landscaping required. While the ground coverage requirement is easy to calculate for sod, it is difficult for other types of plants. Using a different metric such as number of plants required per square foot is much easier to measure and determine compliance. For example, a 50 foot by 8-foot park strip could be covered in 33% ground cover or include one plant for every x amount of square feet. This could work particularly well for nonresidential uses.



Measuring the total vegetation coverage in this yard would be difficult.

2. Allow tree canopy coverage to count towards vegetation coverage. This could potentially eliminate the need for any ground cover type of vegetation, which is one of the issues that property owners have when they try to remove sod, particularly in the park strip. A large street tree for example may cover an entire park strip and a significant portion of the front yard. This achieves both of the objective standards for regulating landscaping and the subjective standards. This could be done by exempting properties with a shade tree with a canopy that exceeds a certain radius from the required vegetation coverage, which is a simply code change.



The tree canopy completely covers this park strip and provides shade and large areas for the trees to absorb

3. Eliminate or reduce the vegetation coverage requirement. This option could lower or reduce the % of an area required to include vegetation. It also would reduce the benefits that landscaping provide and would likely result in a hotter environment and increase storm runoff into the storm water system. For comparison purposes, the city of Tucson, which receives an average of 11.3" of precipitation per year, requires 50% of a park strip to include vegetation, but does not appear to require vegetation in required yards. If vegetation is not included, the site must be covered with appropriate mulch.ⁱ Las Vegas, NV



This park strip likely does not comply with the 33% vegetation coverage requirements.

requires 50% of a site, park strip that is not otherwise occupied by a building, driveway, walkway, etc. to be covered with landscaping.ⁱⁱ Las Vegas receives 4.2” of precipitation per year. Salt Lake City receives more precipitation than both cities, with the amount varying from around 16” near the airport and nearly 20” near the east bench. While a small sample, the requirements in SLC are lower than other cities in hotter or drier climates than SLC. Please note, the info provided here is based on a quick read of those cities landscaping requirements. There are always nuances to local zoning codes that may produce a different outcome.

Enforcement and Administration

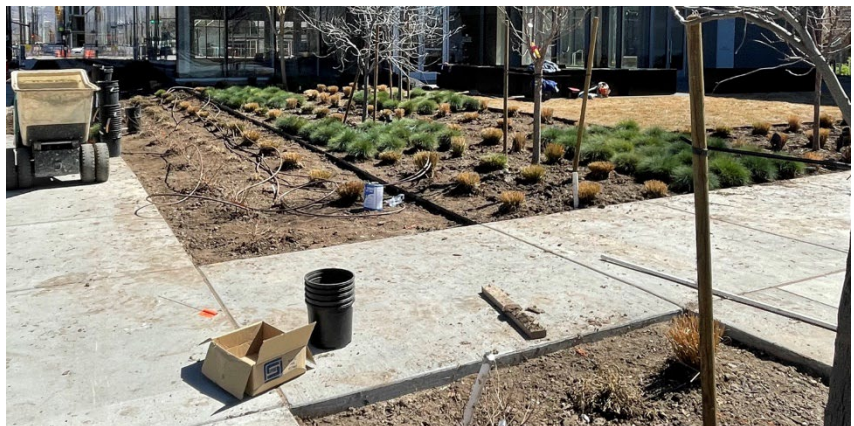
Administering and enforcing codes requires resources. The amount of resource varies based on a number of factors:

- The extent and scope of the regulations
- The applicability of the regulations
- The number of complaints and violations
- The complexity of the regulation

Extensive requirements require more resource to administer and enforce. For the purpose of this discussion, administering the code refers to zoning reviews associated with building permits and landscape regulations. Enforcement refers to addressing violations.

The hydrozone requirements will be used as an example to demonstrate the relationship between administering a code and enforcing a code. A hydrozone is a landscaped area where plants with similar watering needs are grouped. The city rules require a landscape plan that shows what plants are grouped together, the plants watering needs, and appropriate irrigation system for that grouping of plants. A plan includes the type of plants, the plants watering needs, the number of plants, and the type of sprinkler heads that will be used. These requirements kick in for some development and expansions of existing development. They do not apply to the construction of new homes unless the home is part of a new subdivision that includes more than 10 homes.

The zoning review for this requirement is extensive. The zoning reviewer has to check each plant and grouping of plant to ensure that each plant in a group has the same watering needs. This could require hours of time if the landscape plan is extensive or the project has a large area. Some landscaping plans will include hundreds of plants and dozens of hydrozones. This is partly a function of the landscaping requirements for landscaped yards, park strips and parking lot



Reviewing a landscaping plan requires checking every plant to ensure it is on the correct hydrozone, calculating the landscape area of all plants, and checking the irrigation system.

landscaping. If sod is used, preparing the plans and the permit review is far simpler and much less time consuming. It literally takes minutes to check a site plan that chooses sod to achieve the 33% vegetation coverage where it is required because all you are checking is the amount of coverage required and how it is being achieved. Once the plans are reviewed and approved, the administration function is nearly complete. The only remaining piece is an inspection. There is not a specific zoning

inspection. That inspection is currently done by the building inspector. In summary, there are at least two people involved in the administration of landscaping requirements: a planner doing the zoning review and the inspector reviewing the installation. It is also important to note that there are no permits required to replace vegetation or replace damaged sprinkler heads. This is common and basic maintenance that is not always done with “like for like” replacements.

Enforcement is typically only involved if a complaint is received. Complaints that are received are generally regarding weeds, lack of landscape maintenance, and removal of landscaping. Once a complaint is received, a civil enforcement employee will visit a location to document the violation. Violations of weeds are fairly straightforward and are typically resolved by the property owner cutting down the weeds. Maintenance of landscaping is similar, although it is more difficult to enforce regulations related to perceived lack of maintenance, such as grass that has turned brown. The removal of landscaping is more time intensive. An inspector will visit the property and determine if all landscaping has been removed, if the area where it was removed is required landscaping, and if the removal is a violation. The inspector may have to make judgement calls about how much landscaping is remaining. When all landscaping is removed a determination is straightforward. However, if someone removes some of their landscaping and a complaint is received, the civil enforcement officer must determine how much of the area is covered by landscaping. This would require determining the size of the park strip or landscaped yard and then measuring the amount of that area that is covered by vegetation. If the plants are spaced out, the coverage of each plant has to be measured. Estimating the amount of coverage would not likely hold up to a challenge because the enforcement officer could not, with complete certainty, determine the coverage. This requires more precise measurement. Our inspectors use their best judgement with the information they are given to determine compliance with the regulations. If the vegetation meets the intent of the code, then there will likely not be any further enforcement activity.

Artificial Turf

There is a growing desire for some to install artificial turf instead of vegetation. The reported benefits of artificial turf include no mowing, trimming, or edging, less water use for the property owner, improved aesthetics, and other similar benefits. The zoning code prohibits artificial turf in park strips, in required landscaped yards, and from counting towards the required vegetation coverage. The code does allow artificial turfs elsewhere on private property.

There are water-related downsides to the use of artificial turf. These include (1) decreased infiltration of stormwater runoff due to its impermeability; and (2) increased impacts to water quality due to lack of filtration as well as the potential for microplastics from artificial turf degradation to be introduced into river systems.

In addition to water related issues, there are environmental lifecycle costs associated with artificial turf embedded in its manufacture and disposal that are not present with natural vegetation. Artificial turf contributes to heat island effects as opposed to mitigation of heat island effect provided by natural vegetation. The use of artificial turf may damage soils and create a habitat loss for pollinators. Whether there are actual water savings between the use of artificial turf and other types of vegetation on a residential scale has not been well studied (in practice, water is applied to artificial turf fields for cooling and cleaning purposes, for instance).

However, more and more people are interested in installing artificial turf in park strips and on their property. There have been several enforcement cases that have been appealed to the appeals hearing

officer and each time the appeals hearing officer has upheld the city's interpretation of the code. The code could be improved to more clearly identify where artificial turf can be installed, or if, it should be prohibited. Recently, West Valley City adopted regulations allowing artificial turf, but it is limited in how it can be used in lieu of vegetation. One of the key provisions is that artificial turf is mostly prohibited in park strips with the exception of a few streets and it is only allowed to reduce the city's required vegetation from 50% down to 25%. That would only be 8% of the area difference compared to what Salt Lake City's zoning code requires for vegetation.

Vague Code Language

There are multiple sections of the landscaping chapter that provide discretion to the zoning administrator in determining if the requirement should be required. However, the code provides no direction on how to determine if a requirement should be waived or modified. This creates administrative issues because if a code does not strictly prohibit or require something, the code has to be interpreted to favor the property right. These situations should be eliminated due to the inability to administer or enforce.

There are also multiple sections where the code requires the amount of vegetation to be consistent with existing character. This is an impossible regulation to be enforced because landscaping is constantly changing, there are endless landscaping designs, and the choice of vegetation is up to the desires of the property owner.

Another example of vague language is with the requirements for buffer yards. The hedge requirements for some zones is vague and does not provide any standard for how many shrubs are required to be planted and worded differently in each section of the code. The fence provision is also vague and different in each zoning district, so sometimes it is required and sometimes it is not. The provisions in the EI and LO districts are also vague and providing any landscaping would probably have to be accepted.

The parking lot landscaping requirements are also problematic to interpret and administer. For example, the amount of landscaping increases based on size of the parking lot. As the amount of landscaping required increases, so do the number of shade trees. However, the area for the trees does not increase at a rate that provides adequate space for shade trees and the trees end up being crammed into relatively small permeable spaces and they never fully mature. A better approach to this issue would be to require a landscaped area for every x number of stalls and require one shade tree in each landscaped area or if the landscape area is combined, one tree every x feet of length and width of the landscaped area.

Special Landscaping Requirements

With the exception of specific water wise requirements and tree preservation, mostly in the foothills and the NWQ overlay, most special landscaping provisions can be eliminated. Many of them are repetitive to the landscape yard or buffer yard requirements. Often times the special requirements, landscape yards, and buffer yard requirements overlap and sometimes include conflicting regulations for types and spacing of vegetation. Replacing the special landscaping requirement with more drought tolerate requirements would also help reduce the water needed, particularly where there are duplicative requirements or there are vegetation requirements that result in higher water consumptions.

Potential Regulations

The City could consider adding regulations to help reduce outdoor water use. A common approach that cities in hot and dry climates are taking is prohibiting non-functional turf. Examples of non-functional turf is grass in park strips, as ground cover in landscaped yards, and in other places where the primary value is aesthetics.

ⁱ Tucson Landscaping Requirements: https://codelibrary.amlegal.com/codes/tucson/latest/tucson_az_udc/0-0-0-5895

ⁱⁱ Las Vegas Landscaping Requirements: http://nlasvegas-nv.elaws.us/code/coor_title17_ch17.24_sec17.24.060