



EAGLE MOUNTAIN CITY

STAFF REPORT

JULY 12TH, 2022

Project: An Ordinance of Eagle Mountain City, Utah, Approving Eagle Mountain Municipal Code Regarding Water Efficient Landscape Standards

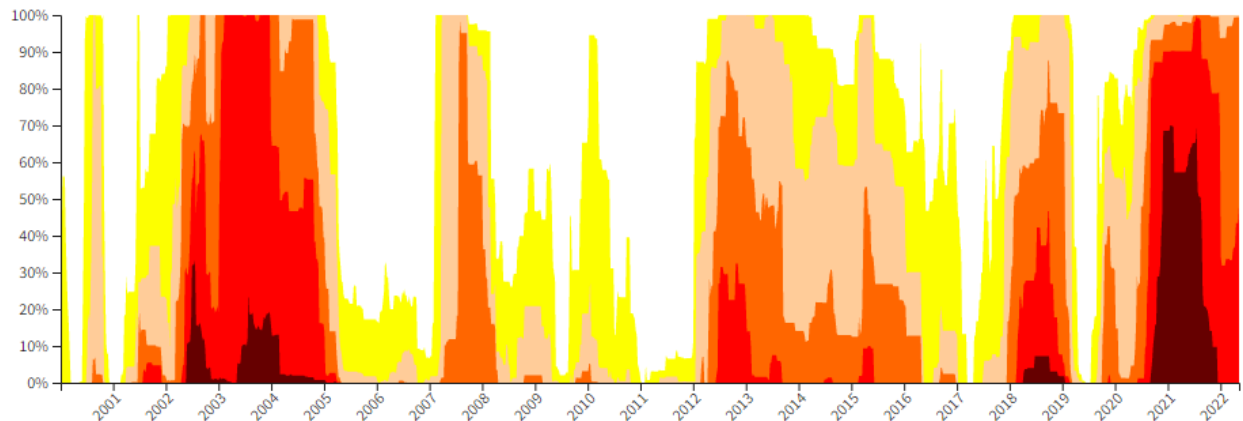
Applicant: Evan Berrett – Assistant to the City Administrator

Request: Approval of Draft Code

Type of Action: Action Item

Background

Utah has been in a state of severe drought for the past two years, straining water resources. When the state is not in a drought period, water resources will still be strained due to limited sourcing and high growth. The Cedar Valley does not provide annual runoff or surface water sources. Underground aquifers provide reliable sources of water, if they are able to adequately replenish over time. Eagle Mountain is also at risk of enhanced water restrictions due to Utah’s “Doctrine of Prior Appropriation” which essentially means that those of earlier and consistent water acquisition has rights to water before those who acquire rights to water later.



Eagle Mountain City is projected to continue to grow substantially over the next 40 years, potentially tripling in that time. A recently completed wastewater re-use study conducted by Barr Engineering showed that if all re-use strategies are implemented, Eagle Mountain would still be unable to meet the water demand 40 years from now. Therefore, the City must consider other means of reducing water depletion to enhance overall water supply.

Currently, every single-family residential lot is allocated 0.9 acre/feet of water. The typical Eagle Mountain resident fills their lot primarily with turf grass. Given Eagle Mountain’s abnormally high median household size of over 4.3 persons per household, having plenty of turf space is expected. A recently completed analysis of water use behaviors in Eagle Mountain by Utah State University showed that the actual average water use equated to about 0.65 acre/feet of water per year. The analysis also showed that despite using less water than allocated, residents are applying twice as much water as needed

on their lawns. Several agencies, universities, and other reliable sources have identified irrigation of turf grass as the largest use of water and the biggest opportunity for reducing overall water depletion.

Several agencies now provide rebate programs to encourage homeowners to examine their front and side yards as opportunities to eliminate turf grass. The general reasoning for this is that front and side yards are commonly landscaped with turf grass and yet rarely used for activities, only for aesthetics. Eagle Mountain City residents are currently eligible to use rebates from the Central Utah Water Conservancy District (CUWCD) for making changes to their park strips or front and side yards. Residents will lose access to these rebates at the end of 2022 if Eagle Mountain City does not enhance its landscaping solutions.

Many residents have expressed through social media and other communications channels an interest in removing their lawns in favor of landscape that is easier to manage and uses less water. Several properties can be seen throughout Eagle Mountain who have either already undergone conversions or are in the process. These conversions are seen at properties both large and small but have mixed results. In some cases, conversions were made that included introducing materials or using methods that violate existing Eagle Mountain city code. Other conversions were successful to begin with but either made some errors that affect the overall effect or did not adequately design and install a landscape that would reduce the maintenance and have consequently seen massive growth of weeds or other issues.

Residents who have made conversions to their landscapes did so before the landscaping was put in, or only when they had the sufficient money on hand to make it possible. Despite the available rebates, a complete Localscapes conversion of the front and side yards can still cost the average family \$1,500 - \$2,000 based on analysis done on current Eagle Mountain properties.

Home builders and developers have expressed interest in and started making changes towards more water efficient landscapes. Again, the results have been inconsistent, often only partially successful, and at times actually creating greater inefficiency. Developers have also expressed concerns with the increased costs of landscaping enhancements. It is simply cheaper to install turf grass rather than localscape or xeriscape landscaping. Eagle Mountain City staff have determined that opportunity exists to reduce the water rights allocations per lot to reduce costs to developers.

Furthermore, although residential irrigation is a significant majority of the water use in the city, Eagle Mountain residents have repeatedly felt some contradiction or hypocrisy in messaging due to commercial, institutional, or other property types having grass in areas that are unnecessary. The City of Las Vegas, Nevada recently enacted a ban of non-functional turf, or in other words, turf that serves no other purpose than to add to aesthetics of a property. Eagle Mountain City has non-functional turf in many neighborhoods, commercial developments, on city property, and so forth.

Recommendation

The Central Utah Water Conservancy District in conjunction with the Jordan Valley Water Conservancy District has developed and distributed a recommended draft water efficiency standard for cities to adopt. This standard primarily impacts front and side yard water efficiency measures in new home construction projects. Localscapes, the practice of using highly water efficient and functional landscape designs comprised of native vegetation is the focus of the standard. Several cities including Herriman, South Jordan, Bluffdale, and Salt Lake City have already adopted this standard and in some cases word for word.

Eagle Mountain City staff reviewed the draft standard and found that while everything would indeed promote the ideal use of front yard and side yard spaces while maximizing water efficiency, there were some aspects that would be too burdensome to enforce, are unnecessarily specific or prohibitive, and also lacked some needed direction in other areas of concern. Consequently, Eagle Mountain City staff made

several modifications to the draft standard and those modifications are seen in the draft code being shared with you.

Indoor Fixture Requirements: The standard requires water sense labelled plumbing fixtures in new homes. This requirement will result in no change for most builders as many are already installing Water Sense labelled fixtures.

Smart Irrigation Controller: All new homes will need to have a smart irrigation controller installed. Again, most new homes are already being outfitted with these controllers already.

Prohibition of Non-Functional Turf: Similar to Las Vegas, NV, non-functional turf would be prohibited. Staff, Planning Commission, and City Council will need to expand on current efforts to reduce non-functional turf during plat and site plan reviews.

Grass in Park Strips and on Slopes: Grass would be prohibited in park strips and on slopes greater than 25%. Park strips would still be required to have some plants, trees, etc. Lawns are also to be free of obstructions. For example, trees should not be planted in the middle of a grass area due to that tree either leading to obstruction of irrigation or adapting with over-irrigation to compensate.

Limit of Grass in Front & Side Yards: Front and side yards would be limited to 35% of the total landscaped area. Properties that have back yards that are half the size of the combined square footage of the front and side yards or smaller would be permitted to have 50% of the front or side yards be lawn with the expectation that their front or side yards are providing activity areas that the back yard might not be able to.

Irrigation Design: Irrigation must be appropriate for the type of landscape, irrigation types will be on separate valves, and so forth. This is an element that city staff are working to expand our capability to monitor.

50% Plant Cover and use of Mulch: Per Localscape design principles, we are not aiming for zeroscape wherein residents would be simply converting to a sheet of gravel that could lead to weed management issues and potentially negative impacts on property values. 50% plant cover promotes the use of other mulches that, when properly installed, keep properties weed free and add a positive impact to the neighborhood.

Commercial and other Properties: Lawn space limited to 20% of the total landscaped area.

Eagle Mountain's draft code strips away much of the Localscapes requirements from the CUWCD provided standard. These requirements, while positive, would be overly burdensome to residents and limit their use and design of their landscapes too much. The draft code also modifies some of the standard to apply to the entire property when logical. Additionally, Eagle Mountain would be unique in Utah by prohibiting non-functional turf, and making exceptions for properties that are designed with smaller back yards.

City staff believes that this draft code would be an effective way to reduce the overall water demand from new residential properties over the next 40 years. Enforcement apparatuses are being explored and we hope to assist residents any way possible to ensure they are successful with conversions. We also anticipate builders being satisfied with a potential reduction in the water rights allocation per property. Given the current water use data of properties, and the reduced water use these standards would promote, we believe that we can reduce the water rights allocation per property from 0.9 acre/feet to 0.75 acre/feet, saving developers about \$2,700 per property. Those savings more than make up the cost of installing landscapes that meet this standard instead of using turf grass throughout.

Conclusion

The City's rapid growth and limited water supply creates an environment wherein water efficient landscaping standards are a reasonable expectation. Eagle Mountain City staff have worked hard to consider all the implications and benefits of this draft code and believe it is the right path forward at this time.

Comments from City Council Discussion on June 7, 2022

- Concern about not being overly restrictive, resulting in encounters like the recent issue that occurred in Lehi: <https://www.ksl.com/article/50412723/lehi-man-ordered-to-rip-out-his-new-xeriscape-landscaping-by-his-hoa>. No desire to restrain style or be otherwise overbearing.
- Desire to potentially limit size of rocks to reduce likelihood of children throwing rocks and causing damage to property.
- Request to consider landscape fabric weed barriers.
 - Information from the Conservation Garden Park and Localscapes program was sent to City Council to explain why such a requirement was not included.

Additional Recommended Code Changes Required to Avoid Conflict or Duplication

17.60.090 Required landscaping

A. Portions of property that are not developed with structures, rights-of-way, driveways, and parking areas shall be required to be landscaped in all zones (except in the RA1, RA2, RD1, RD2, and FR zones and the agriculture areas). Commercial, industrial, and multifamily dwellings shall adhere to the minimum landscaping standards contained in Table 17.60.170(a), Required Landscape Improvements for Multifamily. The planning commission shall have authority to waive these standards as circumstances dictate.

B. Water-Wise Landscaping Standards. The following are the minimum standards for water-wise landscaping for any park strip, median, or landscaped area located within a public right-of-way, a commercial, or industrial development:

~~1. At least 50 percent of the required landscape area shall be live vegetation.~~

~~2. Live vegetation shall be distributed throughout the landscape area, and shall not be segregated.~~

3. Bark, lawn clippings, chipped wood, and similar loose materials are not permitted.

4. Decorative rock material shall be a minimum of one-inch aggregate, and shall be at least three inches deep and be placed completely on top of a weed fabric barrier that allows the permeation of water. Rock materials shall not exceed the height of the sidewalk/trail or the top back of curb, when placed along a public right-of-way.

5. White quartz rock, lava rock, and gravel, or any other material that approximates the color of concrete, are not permitted.

~~6. All water wise landscaped areas shall be improved with a drip irrigation system.~~

7. Any individual, corporation, or other entity that uses water-wise landscaping in an area within a public right-of-way shall be responsible for any damage caused by rocks or other materials that migrate onto a sidewalk, trail, street, storm drain, or other public facility, regardless of how such migration occurs. [Ord. O-36-2020 § 2 (Exh. A); Ord. O-08-2016 § 2 (Exh. A); Ord. O-05-2008 § 2 (Exh. A § 12.9); Ord. O-23-2005 § 3 (Exh. 1(1) § 12.9)].

17.60.070 Planting standards.

The planting standards are the minimum size of landscaping that the city will accept towards meeting the landscaping required in this chapter. The planning commission and city council shall use the planting standards in evaluation of any landscaping plan. The following are planting standards for required landscaping that shall be followed for all new development:

A. Trees. Deciduous trees shall have a minimum trunk size of one and one-half inches in caliper measured eight inches above the soil line. Evergreen trees shall have a minimum size of six feet in height. The applicant may elect to use either deciduous or evergreen trees to meet this requirement.

B. Ornamental Trees. All ornamental trees shall have a minimum trunk size of one and one-half inches in caliper measured eight inches above the soil line.

C. Shrubs. All shrubs shall be a minimum of one-gallon containerized stock planted that will attain a height of at least two feet.

~~D. Turf. No landscaping shall be composed of more than 70 percent in turf.~~

E. Drought-Tolerant Plants. Fifty percent of all tree and shrub species shall be required to be drought-tolerant.

F. Weed Barrier. Planting beds are required to have a weed barrier with mulched wood chips, rocks, or other similar treatment. [Ord. O-05-2008 § 2 (Exh. A § 12.7); Ord. O-23-2005 § 3 (Exh. 1(1) § 12.7)].

17.60.110 Required buffer widths and improvements.

Table 17.60.170(b), Required Buffer Widths and Improvements, defines the presumptive standards for minimum required buffer widths and improvements for adjacent land uses. Where the combination of land uses is not found in the table, the planning director shall make a recommendation to the planning commission. The planning commission shall then determine an appropriate buffering requirement. The planning commission may also approve alternative buffering requirements that may be more or less restrictive than the standards contained in the table when the planning commission determines that the alternative standard eliminates nuisance concerns. Required buffers may be crossed by driveways, utility lines, sidewalks, and trails. Permitted freestanding signs may be based in required buffers. Outdoor sales, displays, or storage shall not be permitted within a required buffer. The required buffer areas are required to be landscaped ~~with turf grasses~~, live ground cover, or an approved xeriscaping that meets the following requirements:

Water Efficient Landscaping Standards

Purpose

The purpose of these Water Efficiency Standards is to conserve the public's water resources by establishing water conservation standards for indoor plumbing fixtures and outdoor landscaping.

Applicability

The following standards shall be required for all developer/contractor installed residential, commercial, institutional, and industrial construction, as applicable. The Outdoor Landscaping Standards shall also be required for new landscaping construction installed by homeowners.

Indoor Fixture Requirements

All new and future construction and future additions, remodels, or refurbishments shall install plumbing fixtures that have the Water Sense label including: lavatory faucets, shower heads, sink faucets, water closets (tank and flushometer-valve toilets), and urinals, to the extent Utah law allows municipalities or local districts to require these fixtures.

Outdoor Landscaping Standards

All new and rehabilitated landscaping for public agency projects, private development projects, developer-installed landscaping in multi-family and single-family residential projects and two-family dwellings shall comply with the landscaping standards below:

Definitions

- A. Active Recreation Areas: Areas of the landscape dedicated to active recreation where Lawn may be used as the playing surface (ex. sports fields and play areas).
- B. Front Yard: A yard extending across the full width of the lot, the depth of which is the shortest distance between the main building and the front lot line. See Appendix A.
- C. Hardscape: Durable landscape materials, such as concrete, wood, pavers, stone, or compacted inorganic mulch.
- D. Lawn: Ground that is covered with grass or turf that is regularly mowed.
- E. Mulch: Any material such as rock, bark, compost, wood chips or other materials left loose and applied to the soil.
- F. Nonfunctional Turf: An irrigated grass area not providing functional use and generally maintained for aesthetic purposes only.
- G. Park Strip: A typically narrow landscaped area located between the back-of-curb and sidewalk.
- H. Paths: Designed routes between landscape areas and features.
- I. Planting Bed: Areas of the landscape that consist of plants, such as trees, ornamental grasses, shrubs, perennials, and other regionally appropriate plants.
- J. Rear Yard: a yard extending across the full width of the lot and more or less opposite to the front lot line. The depth of the rear yard is the shortest distance between the rear of the main building and the rear lot line. See Appendix A.
- K. Side Yard: a yard between a building and the adjacent side lot line, extending from the front yard setback to the rear yard setback. On corner lots, the side yard adjacent to a street shall extend

from the front yard setback to the rear lot line. The width of the required side setback shall be the shortest distance between the side of the main building and the side lot line. See Appendix A.

- L. Small Residential Lots: Lots with a total square footage of 3,000 square feet or less.
- M. Total Landscaped Area: Improved areas of the property that incorporate all of the completed features of the landscape. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, and other non-irrigated areas intentionally left undeveloped.

Landscaping Requirements

- A. Landscaped areas shall be provided with a Water Sense labeled smart irrigation controller which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities.
- B. Nonfunctional turf is prohibited.
- C. All irrigation shall be appropriate for the designated plant material to achieve the highest water efficiency. Drip irrigation or bubblers shall be used except in Lawn areas. Drip irrigation systems shall be equipped with a pressure regulator, filter, flush-end assembly, and any other appropriate components.
- D. Each irrigation valve shall irrigate landscaping with similar site, slope and soil conditions, and plant materials with similar watering needs. Lawn and Planting Beds shall be irrigated on separate irrigation valves. In addition, drip emitters and sprinklers shall be placed on separate irrigation valves.
- E. At least 3-4 inches of Mulch, permeable to air and water, shall be used in planting beds to control weeds and improve the appearance of the landscaping. Approved materials shall be used in areas located within a public right-of-way per EMC 17.60.090.
- F. The following requirements shall apply to single family residential properties.
 - i. Lawn shall not be installed in Park Strips, Paths, or on slopes greater than 25% or 4:1 grade, and be less than 8 feet wide at its narrowest point. To the extent reasonably practicable, Lawn shall be free from obstructions (trees, signs, posts, valve boxes, etc.).
 - ii. Lawn areas in the front and side yards shall not exceed the greater of 250 square feet, or 35% of the total landscaped area.
 - 1. Single family residential properties 0.25 acres or smaller wherein the combined square footage of the front and side yards is twice as large or greater as the rear yard square footage shall be permitted lawn areas up to 50% of the total landscaped area in the front and side yards.
 - 2. Small residential lots, which have no back yards, which the total landscaped area is less than 250 square feet, and which the front yard dimensions cannot accommodate the minimum 8 feet wide lawn area requirement of the landscaping requirements in section i, are exempt from the 8 feet minimum width Lawn area requirement.
 - iii. At maturity, landscape areas shall have enough plant material to create at least 50% living plant cover at the ground plane, not including tree canopies.
- G. In commercial, industrial, institutional, and multi-family development common area landscapes, lawn areas shall not exceed 20% of the Total Landscaped Area, outside of Active Recreation Areas.
- H. Certain special purpose landscape areas (e.g. stormwater management areas, etc.) may receive exceptions from the slope limitations and other elements of the Landscaping Requirements (see

Paragraph F, above). Applications to receive exceptions are to be considered on a case-by-case basis.

- I. These outdoor standards are not intended to be in conflict with other landscaping requirements as defined by Utah law, including stormwater retention requirements and low-impact development guidelines. Notwithstanding these outdoor standards, whenever any requirement may be in conflict with Utah law, such conflicting requirements shall not apply.

APPENDIX A:

