



Xeriscaping Code Updates and Best Practices

April 2, 2024

Purpose and Intent

- Outline prior xeriscaping work and review current xeriscaping regulations.
- Discuss proposed changes to the Land Development Code and the possible formation of a residential xeriscaping incentive program.



Prior Xeriscaping Efforts

- On July 10, 2023, staff debriefed Council on the Growing Water Smart Workshop and associated Water smart Action Plan, and held a preliminary xeriscaping discussion with Council.
- Council approved a motion seeking to pause review and approval of all landscaping permits that pertain to xeriscaping for a period of 90-days until regulations could be established.
- This item was scheduled to go to Council on October 9, 2023, but was continued to early 2024.



Staff Involved

- Staff members from Community Development, E3, Public Works, and the City Manager's Office were involved in this project.
- SACWSD, SACFD, and the Sonoran Institute were also involved in the review process.



Xeriscaping: Benefits

- There is an average annual savings of 12.5 gallons of water per square-foot of converted turf.
- A 500 square-foot turf conversion will save around 6,000 gallons of water per year.
- An average-sized front yard turf conversion will save between \$70-\$100 in maintenance costs on an annual basis.
- Xeriscape can increase property value by as much as 15%.

*Source: Colorado Water Conservation Board and Colorado WaterWise



Xeriscaping: Current State

- Sec. 21-7510 (3):
- Rear yards: no requirements
- Front and side yard requirements:
 - Two trees
 - 12 shrubs
 - 75% live plants
 - Turf limit $\leq 50\%$
 - One mulch type
- Tree lawn requirements:
 - Sod
 - Trees



Xeriscaping: Current State

- Sec. 21-7550 (7):
 - Xeriscape design principles may be incorporated whenever appropriate in accordance with the requirements identified in the Planting Standards.
 - Tree lawn planting designs in industrial areas may include planting designs other than turf grass.



Xeriscaping: Current State (City)

- Sec. 21-7510 (2):
 - Landscape areas may include the following elements: (a) Turf grass. High-use areas should be planted with irrigated turf grass. Non-irrigated. shortgrass prairie grasses or other adapted grasses that have been certified as Xeriscape landscaping, may be established in remote, low-use, low-visibility areas.



Xeriscaping: Current State (State)

- The State of Colorado has recently adopted two xeric-centric laws within the past year:
 - SB23-178: Requires HOAs to loosen guidelines on drought tolerant plants, vegetable gardens, and the use of non-vegetative turf grass backyards.
 - SB24-005: Beginning in 2026, this bill will prohibit local governments from allowing the installation, planting, or placement of nonfunctional turf, artificial turf, or invasive plant species in non-residential areas.



Xeriscaping: Suggested Changes

- Suggested changes have been modeled after surrounding municipalities and Colorado best practices.
- Landscape Areas:
 - a) Standards
 - i. Allow alternatives to turf:
 - a) Rock
 - b) Mulches
 - c) Native grasses and other approved plants
 - b) Xeric designs can be used for the following:
 - i. Detention Landscaping
 - ii. Parking lot landscaping
 - iii. Other primary landscape areas



Xeriscaping: Suggested Changes

- Applicability
 - Residential
 - Non-residential
 - ROW landscaping (tree lawn)
- Required Review
 - Landscape Plan
 - Exceptions
 - Inspections



Xeriscaping: Suggested Changes

- Standards/Approval Criteria:
 - Live plant area requirement
 - Plant materials and rock/mulch types
 - Temporary irrigation plan



Xeriscaping: Suggested Changes

- Plants must be appropriate to the C3 climate and will be selected from the Approved Plant List.
- Plants with similar water requirements must be grouped together.
- Hardscaping elements are okay if water can pass through (drainage plan required).
- Tree lawns may contain xeric plant material.



Xeriscaping: Suggested Changes

- Automatic irrigation zones must be retrofitted to water remaining grass adequately and irrigate the new landscape efficiently.
 - Drip irrigation is preferred. If overhead sprays are used, high-efficiency nozzles are required. Hand watering and semi-automatic irrigation is permissible.
- Trees must have dedicated irrigation.
- Soil amendment is required in areas that are cleared and set to hold plant material.
 - This includes plant-based compost, manure-based compost, organic and inorganic materials.



Xeriscaping: Suggested Changes

- All xeriscaping applications would mandate that the applicant submit a plan that addresses drainage impact.
- Inspections:
 - Initial inspections would provide an opportunity to ask questions and address any installation issues.
 - Inspections would be scheduled after plants, irrigation, soil amendments, and hardscapes have been installed, but before the mulch goes down.



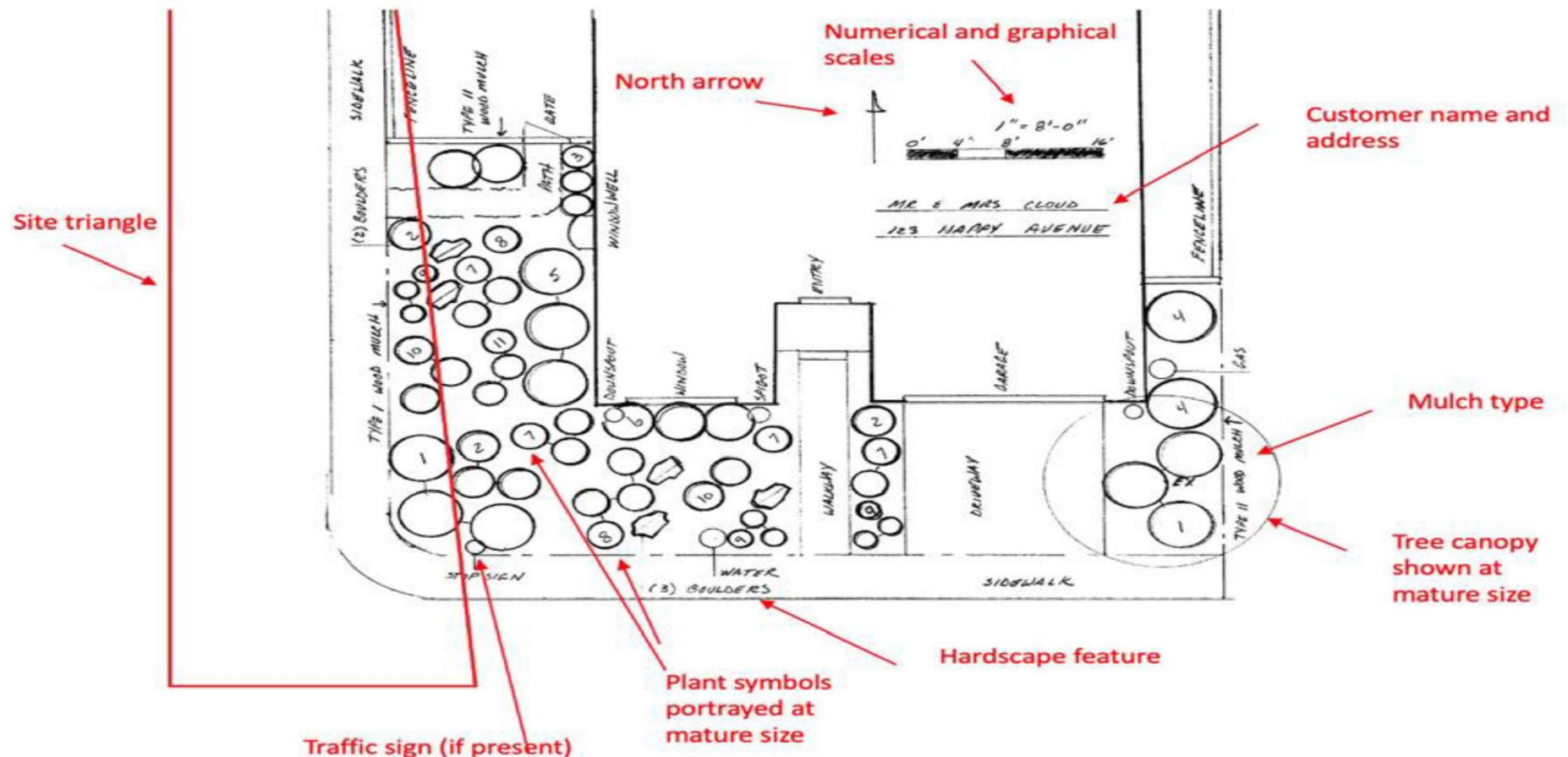
Xeriscaping: Suggested Changes

- The following would be inspected:
 - Plant type/size matches the plant list, and plant locations match the approved design.
 - Plant holes have appropriate backfill of soil.
 - Use of approved soil.
 - Irrigation system including backflow prevention device and rain sensor are installed, in compliance with SACWSD watering schedules, if applicable.
 - Site is free of weeds and hazards.
 - Edging is present to separate beds from turf sections.
 - Erosion control BMPs in place where needed and public ROWs are clean.



- All participants must have a landscape design approved prior to beginning installation or demolition.

This design includes all requirements listed in the previous section. Important elements have been identified in red.



Xeriscaping: Best Practices

- If Council is supportive of improving xeriscaping requirements, staff recommends that at least one xeriscape demonstration garden be built in the City.
 - Several municipalities have at least one example garden, including Boulder, Fort Collins, Aurora, and Adams County.
 - Growing Water Smart technical assistance grant was awarded for design of a demonstration garden on City-owned property.
 - Actual Garden would need to be budgeted for.
 - RFP for design contractor has been posted.
 - Seeking additional grant funding for project.
- Staff can also explore grant opportunities for non-functional turf conversion.



Approved Plant List

- The City's Approved Plant List for xeriscaping includes 19 trees, 23 shrubs, six vines, and six native grasses.
- All plants on the list are suitable for Colorado's semi-arid climate.
- Many plants on this list are fire-resistant.
- Staff will review the list on a regular basis with external resources, such as the Botanic Gardens, to ensure it is up to date.



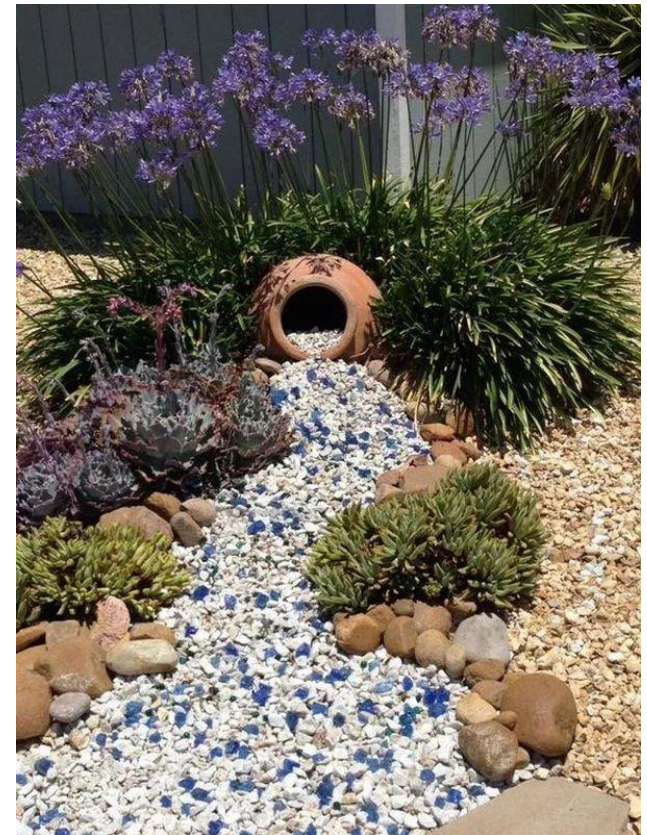
Native Grasses

- Would be permitted in yards, medians, parking islands, tree lawns, and other low-use areas.
- Increase biodiversity and require little or no irrigation.



Rocks

- Would be permitted as mulch in xeric designs.
- Can provide architectural interest to gardens and can be effectively used as borders in conjunction with other materials.
- Best Management Practices:
 - Rock used as mulch should be less than 1/2" in diameter.
 - Rocks should not be artificially colored or sprayed with a tint.
 - Rocks should be lighter in color to reduce heat exacerbation effect.
 - At full plant maturity, rocks should comprise <50% of the garden.



Artificial Turf: Current State

- The Land Development Code states “partial or entirely synthetic material designed and manufactured to simulate living turf grass shall be prohibited, with the exception of public or private recreation fields.”
- There are many residential areas in the City that have installed artificial turf, even though it is disallowed in the LDC.
- Staff is reviewing BMPs for artificial turf, should Council decide to allow it in the future.



Artificial Turf: Surrounding Municipalities

- Aurora: Allows artificial turf in front and backyards, commercial developments, street buffers, and dog parks.
- Thornton: Allows artificial turf in the backyard, side-yards that aren't visible to the public, and up to 25% of the front yard.
- Arvada: Allows artificial turf in the backyard and side-yard if it is not visible to the public.
- Cities that do not allow artificial turf for residential landscaping include Parker, Littleton, Erie, and Lakewood.



Discussion

