Naturally Thornton: Our H₂Overhaul for Sustainable Landscapes

Purpose

A briefing to Council to review the plan to gradually convert select passive turf areas to Colorado-friendly community landscapes.

Agenda

- 1. Water Efficiency
- 2. Regional Trends
- 3. Passive vs. Active Turf
- 4. Conversion Process
- 5. Communication Strategy
- 6. Next Steps



Water Efficiencies

WHY?

Demand Management ater Security



- Aridification
- **Drought**
- Water efficiency projects are cost effective investments
- **Colorado's Water Plan prioritizes** municipal water efficiency

HOW?

- ThorntonWater.com
 - Customer focused programs: H₂Overhaul, rebates, education, free services, home water reports
- **Utility management**
 - system audits, leak detection, Advanced **Metering Infrastructure**
- Landscape Code and Rules
- Naturally Thornton Our H₂Overhaul for **Sustainable Landscapes**

Perspective: Thirsty Turf

Kentucky Bluegrass requires 3 feet of water each summer

- about one foot of water comes from rain (if we're lucky!)
- the remaining 2 feet of water comes from irrigation

Each acre of Kentucky Bluegrass requires an Olympic-sized swimming pool worth of **EXTRA** water to keep it alive in Colorado

The same amount of water as:

- 33,000 loads of laundry
- 10,560,000 glasses of water
- 515,625 toilet flushes
- Showering for 230 days

Benefits

Colorado-friendly

- Drought and climate resilient
- Reduces energy use and chemical applications
- Improves wildlife habitat and attracts pollinators

Improved Water Security

- Prioritizes water uses
- Reduces water demand

Maximize Parks Resources

- Less resource intensive chemicals and mowing
- Reduction in water bills

Lead by Example

 Encourage water customers to do the same





TIMES-CALL

LIFESTYLES

Firestone to replace turf grass with native seeds in two parks next spring; Longmont could follow



Matthew Jonas / Staff Photographer

Cristina Gonzalez and Abigail Gonzalez, 2, both of Loveland, throw the ball for their dog, Amy, at Settlers Park in Firestone on Thursday. The park is one of two in the town that will be reseeded with native grasses in the spring.

By SAM LOUNSBERRY | slounsberry@prairiemountainmedia.com |

Longmont Times-Call September 13, 2018 at 10:19 p.m.



5.5 Support Resource Efficiency



Example: Community Gardening

Continuing to use limited resources in the most efficient manner possible is a key to being good stewards of the system. Three resources are particularly important to the ongoing efficiency of Longmont's parks, recreation, and trails system: water, energy, and staff time.

Water efficiency

Reduce water use through capital improvements and maintenance practices, including conversion of appropriate areas to low water landscapes, using raw water for irrigation where feasible, water harvesting, and adoption of technologies or materials that reduce water use. Inclusion of water quality treatment will protect water resources.



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Turf Conversion

Why Is The Grass Brown?

Since 2013, the City of Westminster has been moving toward more sustainable park maintenance practices. On a limited basis, Park Services is repurposing outlying, underused portions of existing bluegrass areas and converting them to a drought tolerant, native seed mix that reduces water and maintenance needs. These areas are signed to inform the public of the department's intention and to avoid the misunderstanding that the grass has inadvertently died.

Staff estimates it will take two years to establish conversion areas to their full potential. These areas will be closely monitored for weed control and seed mix success. Scheduled over-seeding will also improve the overall look of the conversion areas. Westminster hopes to demonstrate acceptable bluegrass alternatives not only for the parks, but also for homeowners' lawns and landscaping. You too can move toward sustainable practices.

Example of mowed and un-mowed:







Highlands Ranch



HOW DOT

Parks & Open Space

Parks

Staycation Activities
Park Rules

Trails

Dog Parks

Reservation & Fees

Nature EdVentures

Water Conservation

Seasonal Services

Snow Removal

Field & Skate Park Closures



Calenda



Highlands Ranch Metro District > Services > Parks & Open Space > Parkway Conversion Demonstration Sites

Parkway landscape conversion demonstration sites

The Metro District maintains more than 285 acres of landscape along the community's major roads. Some of these parkway areas are almost 40 years old and were designed at a time when maintenance costs and water conservation were not as big of a concern.

Transforming our roadside landscaping

In an effort to move to more sustainable maintenance practices, the Metro District, with support from Centennial Water & Sanitation District, is exploring options for converting some areas of bluegrass along the parkways to more drought tolerant, lower maintenance landscaping. This is a Major Repair Fund project, and the intent is to reduce future operations costs.

Three locations have been approved by the Metro District Board of Directors as demonstration sites for conversion. After new landscaping at these three sites has had a chance to establish, input from the community will be gathered to determine the next steps of the program. Establishing conversion areas to their full potential could take multiple growing seasons. Updates will be provided to both the public and the Metro District Board of Directors. If you have any questions about the project, contact Park Planner Brittany White at bwhite@highlandsranch.org or 720-240-5923.

Goals and objectives of the Parkway Landscape Conversion Program

- Reduce overall water and maintenance needs by providing a more sustainable landscape and irrigation program.
- Maintain and enhance the existing aesthetics and experience of the streetscape.
- Educate the community in the value of landscape conversions.

Before and After Images



Before



Colorado Springs





Barnes Median, before and after native grass conversion.

Saving Water with Landscape Conversion: What practices can stretch our water supply?



Our community continues to grow but our water supply is limited. Where are the best opportunities for saving water and stretching our supply? Colorado Springs Utilities has proven some valuable, water saving options through the Parks Efficiency Program.

Since 2010, Colorado Springs Utilities has worked collaboratively with City Parks to identify important ways to improve irrigation efficiency, save water and sustain valuable landscapes across Colorado Springs. Through 2013, nearly 70% of all neighborhood parks have received irrigation system upgrades resulting in 12.4 million gallons of water saved (overall irrigation efficiency savings of nearly 20%).

Parks Efficiency Program Savings					
	2010	2011	2012	2013	Total
Number of Parks	20	21	17	20	78
Acres	91.13	106.2	96.85	103.34	397.52
Annual Savings* (million gallons)	3.04	3.14	3.40	2.85	12.44

^{*}Savings based on assumption that City Parks waters to the prescribed requirements to maintain bluegrass. In recent years, Parks has not had the budget to water bluegrass in our parks to the prescribed levels; during these years efficiency programs have helped Parks stretch their available watering budget.

Situation

As part of the Parks Efficiency Program, Colorado Springs Utilities selected areas of Kentucky bluegrass to convert to native grasses. By converting low-use, high maintenance and high water use areas with a

Springs experienced sustained drought conditions (2002-2014), poor economic conditions forced a

significant decrease in the City Parks budget (85% decrease across 2007-2010). Kentucky bluegrass suffered throughout the city and such conditions led Colorado Springs Utilities and City Parks staff to

consider other, more sustainable landscaping options that require less irrigation.

sustainable and attractive landscape, Colorado Springs Utilities goal was to improve Parks Efficiencies and identify new solutions for city managed areas. The results have demonstrated dramatic improvements in the appearance and cost of watering and maintaining our Parks.

Before Colorado Springs was developed, much of the original vegetative cover was native grasses. From 1970-2000, large areas of Kentucky bluegrass were installed in Colorado Springs parks and medians. At the same time Colorado

Kentucky Bluegrass

3x/week watering 1x/week mowing Suffers during drought Less sustainable

Native Grass Mix

2x/month watering 3x/year mowing Withstands drought well Better appearance





Keller Park, before and after native grass conversion.

Greeley

Bittersweet Park Improvements

The Bittersweet Park irrigation replacement and turf conversion project will be kicking off in early 2020. Winter construction will bring heavy equipment and construction crews to Bittersweet park. The park will remain open during this time but we ask residents to avoid construction activity and remain on the internal path system. Questions and concerns may be directed to Parks@greeleygov.com or 970-350-9390.

See the Bittersweet Park StoryMap

About the Project

In early 2019 the City of Greeley hired the landscape architecture team of Matrix Design group to help lead three community outreach and engagement sessions aimed at identifying opportunities for water conservation and site amenity improvements at Bittersweet Park. At thirty years old, the irrigation system had become inefficient and was experiencing failure. Park staff felt this was a unique opportunity to partner with water resource teams and Greeley citizens to implement water conservation measures and identify park improvement opportunities. Greeley residents chose to implement a water conservation project that will convert 21 acres of high water use turf grass to alternative varieties that once established, will reduce water consumption, improve urban habitat, reduce maintenance hours and add additional pathway improvements throughout the park. It is not surprising that residents chose an aggressive approach given that Greeley has been a leader in water conservation for many years.

Starting immediately in the New Year residents can expect to see construction teams mobilizing equipment in the south parking lot of Bittersweet Park. The lot will remain open but space will be limited. Residents are encouraged to use the parking lot on the west side of the park. During construction the park will remain open but residents can expect construction fencing, work crews, and construction equipment inside the park. At times pedestrians may be rerouted and surfaces may be uneven. Construction work is anticipate to last through July of 2020.

Why these changes?

- Conserve water with efficient irrigation and native plants
- Increase park's drought-tolerance, landscape resiliency, and resource sustainability
- Provide additional wildlife habitat and plant diversity
- Reduce fertilizer and chemical applications to existing bluegrass
- Provide community access to park's natural resources
- Enhance existing recreational opportunities within park

Typical Wildlife in Front Range Natural Areas

Current Water Use

PARKS ARE THIRSTY!

Did you know Bittersweet Park consumed 20,838,000 gallons of water for irrigation in 2018?

That's enough water to provide 706 households with water for I year!!







OR it would be like leaving your faucet running for...

79 years!!

Passive Turf vs. Active Turf

Passive

Purpose: aesthetic and utility



Active

Purpose: play and recreation



Convert Low Use/Passive Turf to Native/Sustainable Landscapes



Process requires the chemical killing off of the current ground cover followed by seeding, watering, and weed control.

Convert Low Use/Passive Turf to Native/Sustainable Landscapes

The full process will take approximately three to five years at each site, depending on conditions.



Communication Strategy

- Website:

 https://www.thorntonco.gov/thornton
 -parks/Pages/sustainable parks.aspx
- Onsite signage
- Social media
- Utility bill insert
- Newsletters
- Video documentation of transformations



Next Steps

- 1. Continue managing parks in 2020 using reduced resources
- 2. Continue implementing communication strategy
- 3. Pilot Tier 3 conversion 15-20 acres in 2020
- 4. Other Tier 3 conversions as resources allow

