

St. Vrain Lakes Native Areas

July 1, 2026

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Owner and Principal Consultant

Resilient Roots Ecology

Outline

- Introductions
- Native open space: what it is and why it's there
- Establishment process
- Maintenance
- How to help

Nice to meet you!

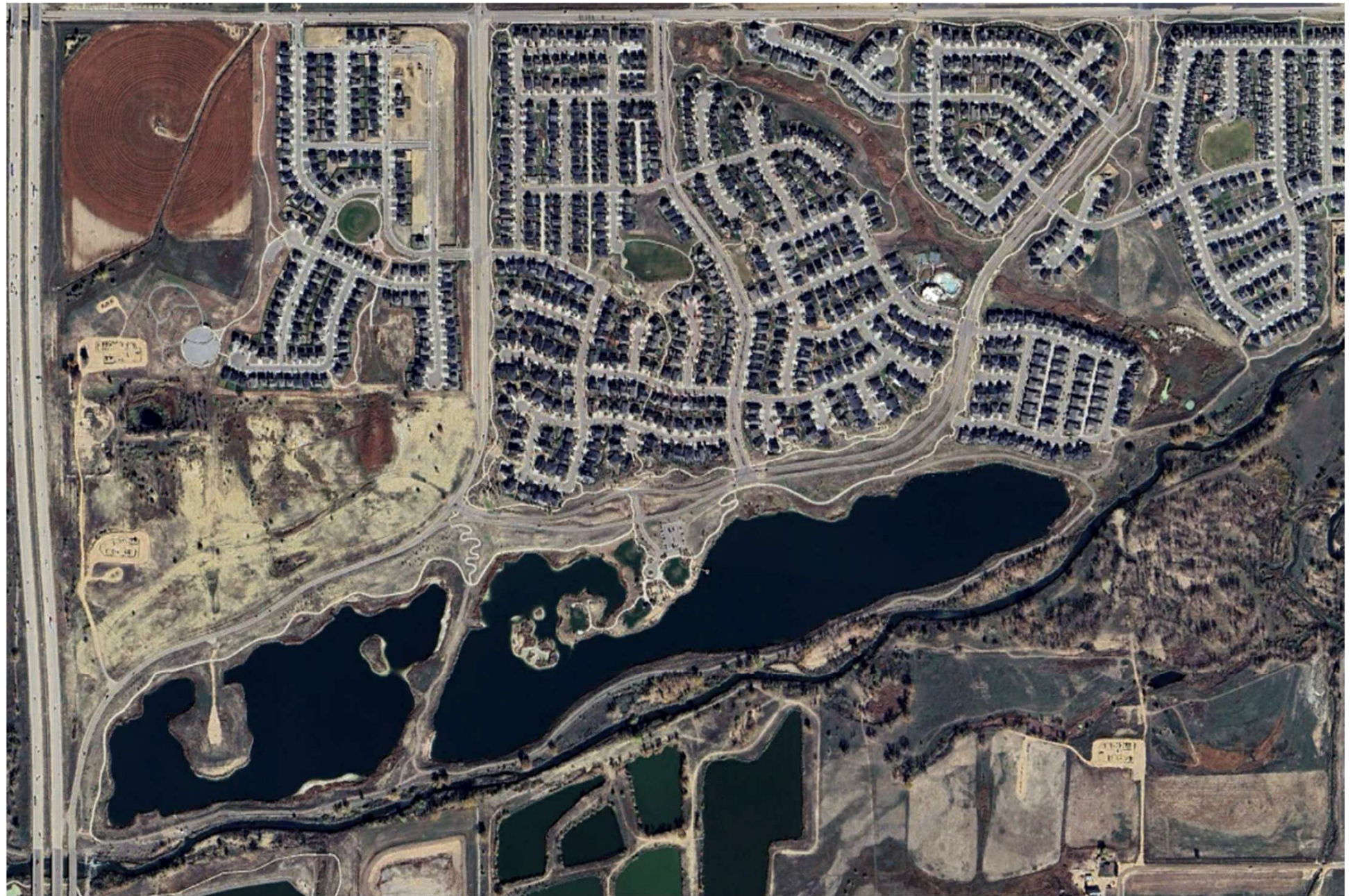
- Kristin Oles
 - B.S. Rangeland Ecology (conc. Restoration Ecology) - CSU
 - M.S. Horticulture and Agronomy (focus Rangeland Ecology) – UC Davis
- Involved at Barefoot since 2018
 - Open space maintenance 2018 – 2024 (High Plains Environmental Center)
 - Weed management around lakes after likely decades of non-management
 - Expanded into other phases
 - Some seeding work
 - Current role: consultant
 - Resilient Roots Ecology (www.resilientrootsecology.com)

2018



Resilient Roots Ecology (2026)

2025

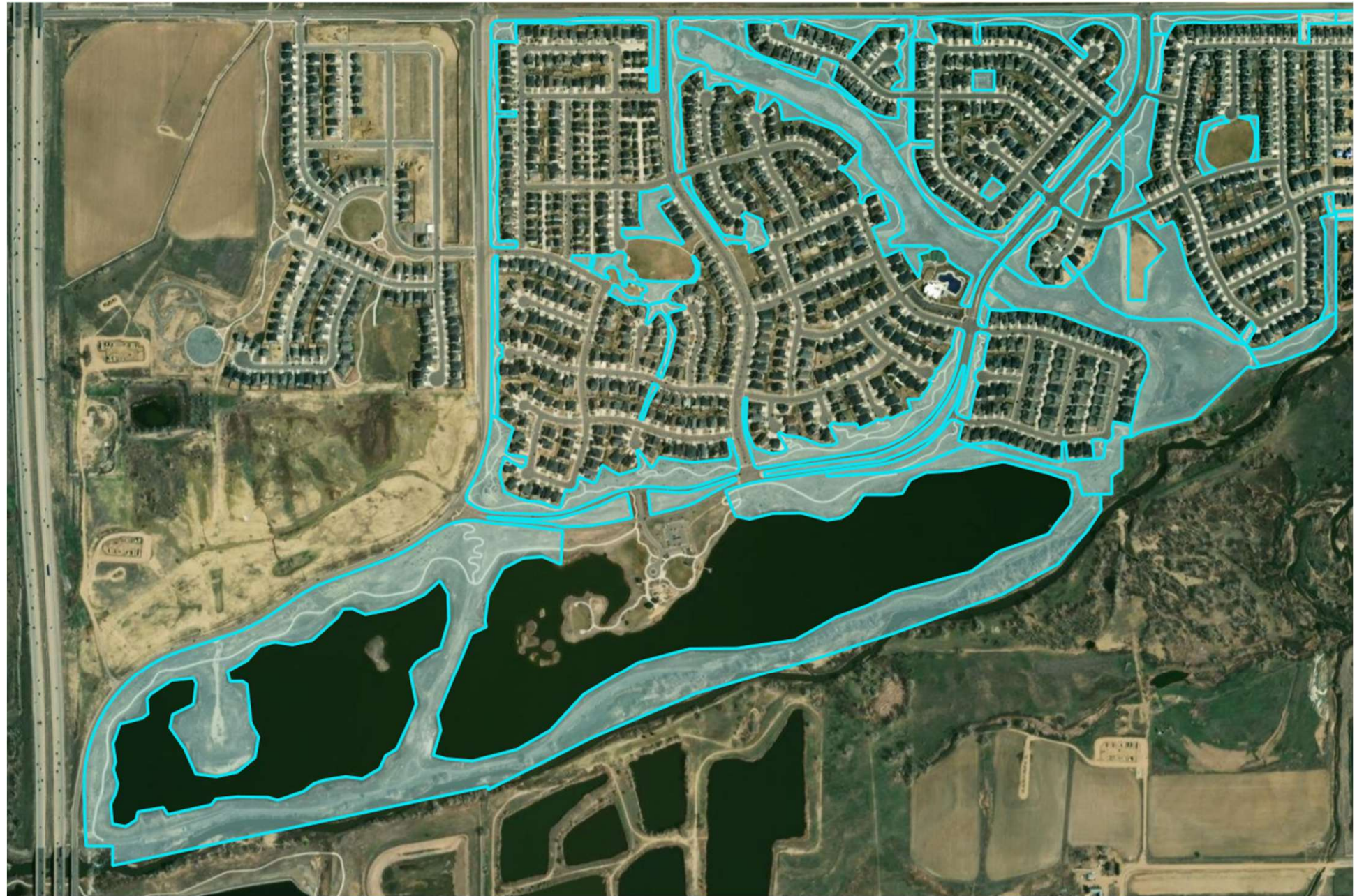


Resilient Roots Ecology (2026)

2025

Filings 1-5

~240 acres of
native area



CO Front Range – native ecosystems

- Climate

- Annual precipitation: 14-17 inches
- Summer is hot and dry; winter is cold and dry

Avg. annual precip.
Chicago, IL: 38”
Tucson, AZ: 11”
Vail, CO: 20”

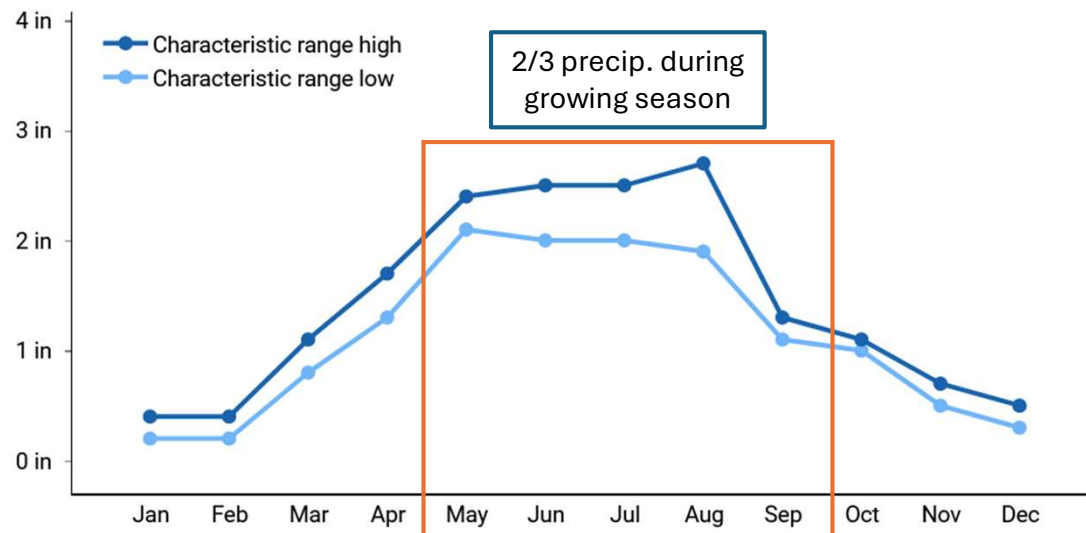


Figure 3. Monthly precipitation range

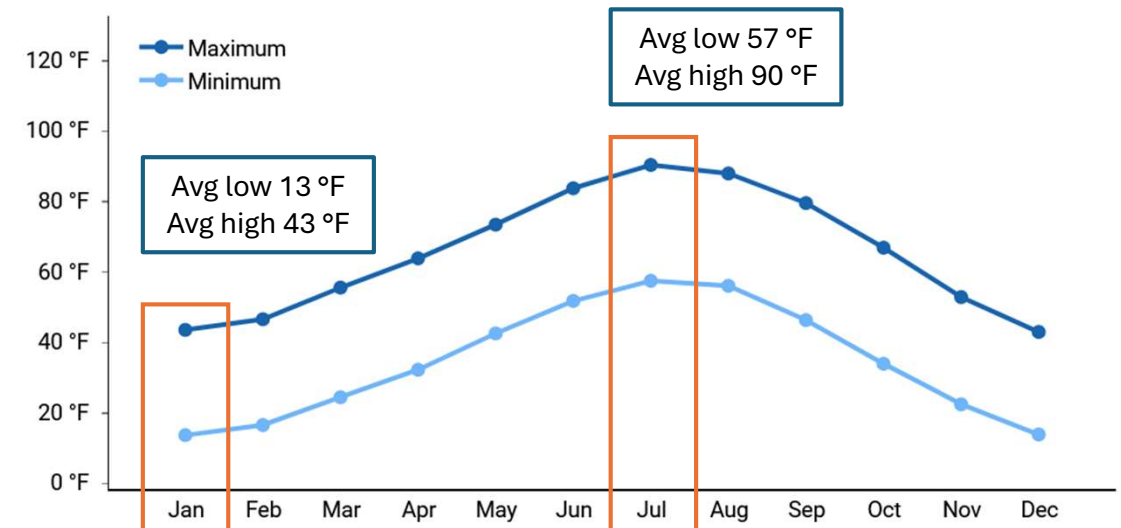


Figure 6. Monthly average minimum and maximum temperature

CO Front Range – native ecosystems

- Shortgrass prairie



Photo: Chris Light
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Resilient Roots Ecology (2026)

CO Front Range – native ecosystems

- Shortgrass prairie
 - Dominated by short (<4') grasses with scattered forbs and small shrubs
 - Key plant species – Grasses
 - Buffalograss (*Bouteloua dactyloides*)
 - Blue grama (*Bouteloua gracilis*)
 - Western wheatgrass (*Pascopyrum smithii*)
 - Key plant species – Forbs, Shrubs
 - Hairy goldenaster (*Heterotheca villosa*)
 - Scarlet globemallow (*Sphaeralcea coccinea*)
 - Soapweed yucca (*Yucca glauca*)
 - Rubber rabbitbrush (*Ericameria nauseosa*)



Benefits of native open space

Photo: [Dwight Burdette](#)
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Self-sustaining and functional ecosystem

- Water savings
 - No supplemental irrigation needed
- Lower maintenance costs, inputs
 - No fertilizer, insecticides, etc.
 - Less fuel burned
- Wildlife habitat
 - Pollinators
 - Small mammals and the predators they support
 - Mitigate human impacts
- Aesthetic beauty



Native “Landscape”

- Starting from scratch – bare soil, graded to plan design
- Frequent disturbance and human impacts
 - Equipment, recreation, pets, lawn runoff, etc.
- Surrounded by weed sources
- Prioritized human use and aesthetic preferences
 - Trail construction, mowing, expectations, etc.
- Staggered establishment timelines
 - Developed in phases = phased planting times



Establishing Native Grass

- Start with bare soil, minimal (if any) existing native vegetation
- Plant native grass seed
 - Method: drill seeding vs. broadcast/hydroseeding
 - Timing: late fall/early winter through spring
 - Seed mix: native vs. dryland, diversity



Grass growing from drill-seeding rows

Establishing Native Grass

- Erosion control – various methods
- Wait...and wait some more
 - With irrigation: ~2-5 years to establish
 - Faster, but more weeds
 - Irrigation system cost, feasibility
 - Without irrigation: ~4-10 years to establish
 - Highly variable, non-linear
 - Lower cost



Establishing Native Grass

- Facilitating establishment – Weed Control
 - Non-native weeds better able to utilize extra water, nutrients
 - Early on, mostly mechanical control (mowing, pulling)
 - As grasses grow, switch to chemical control (no more mowing)
 - Some weed species are higher priority (e.g. noxious weeds)



Regular Maintenance

- Objectives:
 - Manage invasive weeds
 - Minimize disturbance, support ecosystem function
 - Harmony between people and nature

Regular Maintenance

- Objective: Manage invasive weeds
 - Long-term process
 - Annual weed management plan
 - Adaptive to real conditions
 - Integrated pest management
 - Combination of tools: chemical, mechanical, cultural
 - Aim to support the ecosystem's ability to resist weed encroachment
- Monitoring



Common weed species

- Whitetop/hoary cress (*Cardaria draba*)



Common weed species



Common weed species

- Curly dock (*Rumex crispus*)



Common weed species

- Canada thistle (*Cirsium arvense*)



Common weed species

- Musk thistle (*Carduus nutans*)



Common weed species

- Kochia (*Bassia scoparia*)



Regular Maintenance

- Objective: Minimize disturbance, support ecosystem function
 - **Minimal mowing**
 - No irrigation, no fertilizer
 - Spot-seeding if needed



Resilient Roots Ecology (2026)

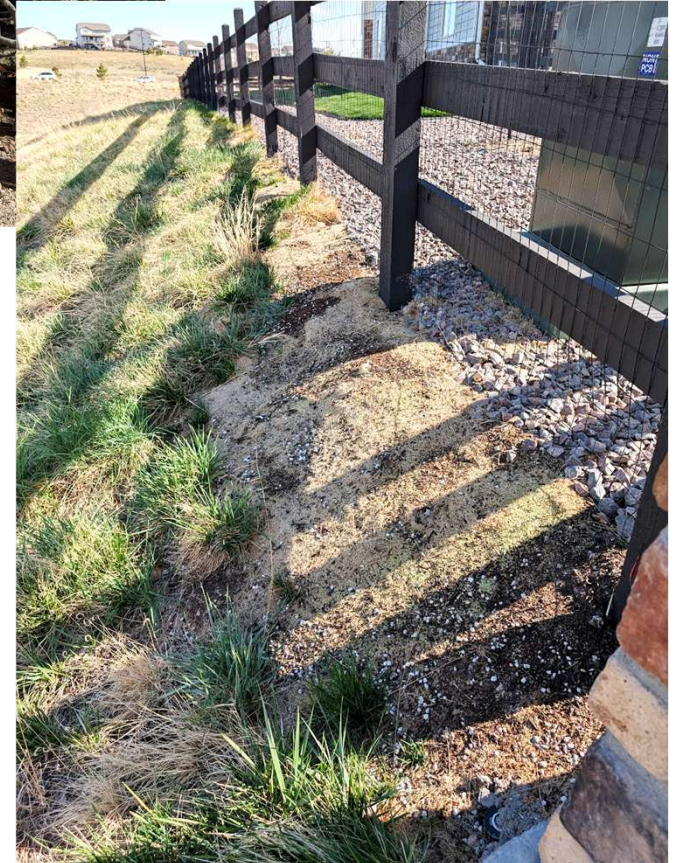
Regular Maintenance

- Objective: Harmony between people and nature
 - “Beauty bands” to create transition buffers
 - Trail edges
 - Property lines
 - Maintain trails (gravel and concrete)
 - Signage
 - Community education



How you can help

- Stay on the trails
- Keep pets on leash
- Don't dump yard or food waste in native areas
- Don't mow, spray, or plant outside your yard



Thank you!

