

## CREDENTIALS

High Plains Environmental Center is an environmental nonprofit located in Loveland, Colorado that works to “Restore Nature Where We Live, Work, and Play.” Our team of experts, which includes Horticulturists, Botanists, Restoration Ecologists, and Environmental Educators specializes in managing invasive species, growing and installing native plants, creating wildlife habitat, educating the public, and restoring ecological function.

Since our inception in 2001, HPEC has managed 76 acres of land on our site, 196 acres of water rights, and hundreds more acres of contracted property around Northern Colorado. Over two decades our team has restored this land from a disturbed, barren, weed wasteland to a functional ecosystem that supports a myriad of wildlife. Our work made history in Colorado. In 2018 our community, Centerra, was awarded the first National Wildlife Federation “Community Wildlife Habitat” certification in Colorado. In 2022 we became the first Certified Sustainable Landscape Management Community in Colorado, awarded by the Association of Landscape Contractors.

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## FAST FACTS

### What is a native plant?

A plant species that has evolved in a particular region for thousands of years. In our case, we are referring to plant species of the Rocky Mountain and Prairie ecoregions.

### What is an invasive plant?

A plant species that is not native to this area. Ecosystems are healthiest when there are many different species of plants in a small area - we call that *biodiversity*. An invasive plant outcompetes other plant species, creating a *monoculture* - a system in which one plant dominates the landscape. Not all introduced species have this same unfair advantage, in which case they may be referred to as “non-native,” “exotic,” or “introduced.”

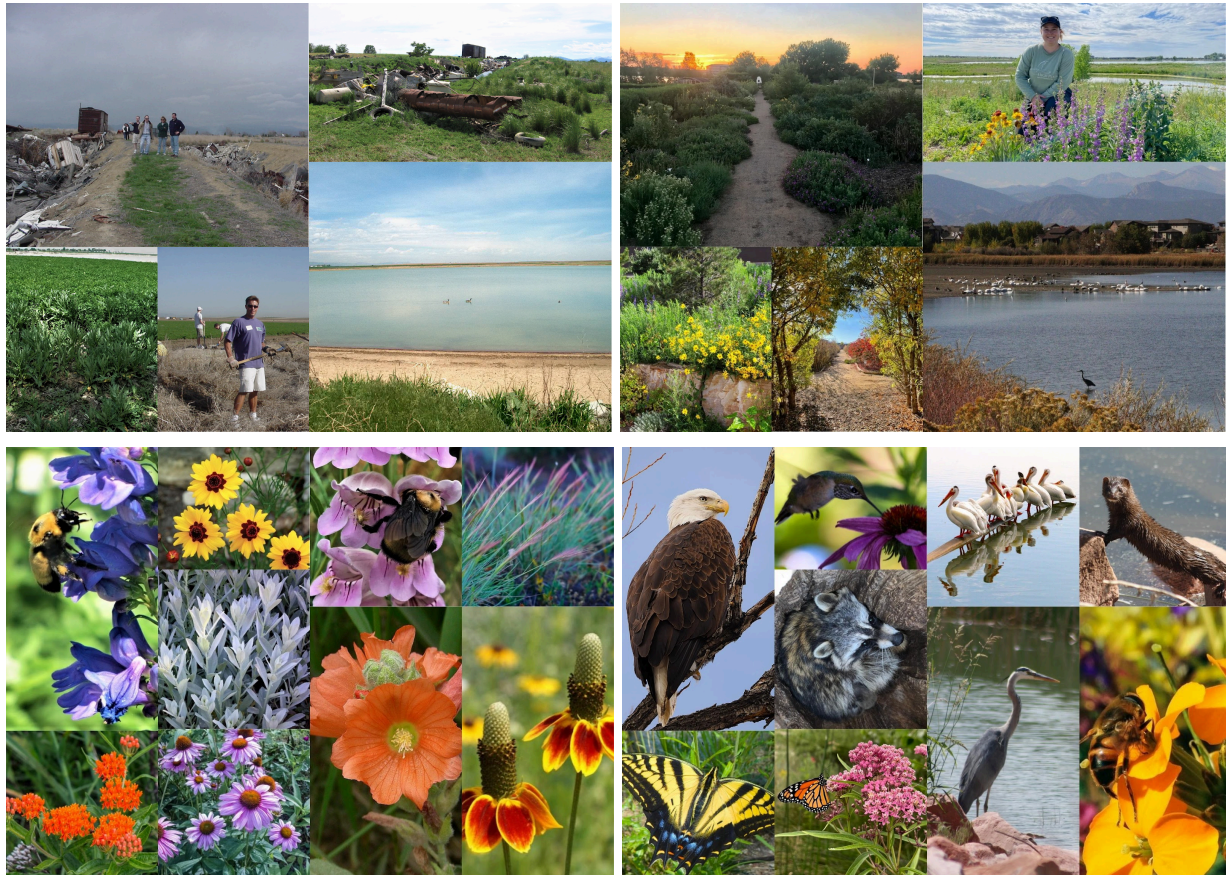
### Why are native plants important to pollinators?

Research shows that native plants are 4 times more attractive to pollinators than non-natives. Insects have evolved with their native region plants to form specialized relationships, such as special mouthparts to access nectar from specific flowers, or life cycles that coincide with bloom time. In fact, 90% of native insects can only eat plants they have co-evolved with for thousands of years.

## Why are native plants better landscaping choices than non-native?

Native plants are well adapted to survive in a particular geographic area according to the climate, soils, rainfall, availability of pollinators, and availability of seed dispersers. Because they are adapted to a specific region, they usually require little-to-no fertilizers, pesticides, or mowing.

**Proof is in the pudding.** High Plains Environmental Center's restoration work shows what is possible, even on land far more disturbed than the Hughes Stadium site. Remember that these changes have taken place over 20+ years! Science, planning, hard work, and patience made our land the jewel it is today.





We, being amongst the foremost experts in native plants and restoration ecology for the Rocky Mountain and Prairie ecoregions, strongly suggest **against** the notion that leaving a landscape to its own devices will successfully repair an ecosystem. We endorse careful, thoughtful management of the land that prioritizes biodiversity and ecological function.

Disturbed ecosystems do not possess the tools to repair themselves. Rather, they must be intentionally repaired. Invasive species must be removed repeatedly over several years. Native plants must be returned to the landscape and cared for as they establish. Reseeding areas several seasons in a row may be necessary. Invasive weeds have the potential to increase during periods of disruption. Waiting several years for healthy native plant populations to establish, and outcompete noxious weeds, is to be expected. Throughout your project outreach and education will be crucial. Onlookers, even those with pure intentions, may become upset about the state of an early restoration project because it isn't "filling out" as quickly as they may expect. Parcels may look sparse or overgrown, which some people may consider to be undesirable. Remember, the Earth takes hundreds of years to create healthy, functional systems. We must consider ourselves fortunate to be able to expedite that process to mere years.

After time and effort the balance will begin to tip in favor of the native populations. Plants will begin to self-seed without human intervention and populate the landscape, leaving little room for invasive weeds to re-emerge. Eventually, pollinators such as native bees, butterflies, moths, birds, bats, and hummingbirds will begin to emerge on the landscape in increasing volume. All of those creatures support other life forms in a food web. Native plants and wildlife are the missing "tools" the ecosystem needs to thrive. Once that balance has been reached, the land *can* be left largely to its own devices **so long as** other factors - pollutants, extreme drought, fire, overbrowsing, predation, stress from dogs or humans, etc - do not go unchecked.

## **INFORMAL SITE ASSESSMENT**

Date: March 1, 2025

Surveyors: High Plains Environmental Center staff Evans, Van Vleet, and Kinzer

Season: Spring

Weather: 60 - 65F, Scattered rain/sun

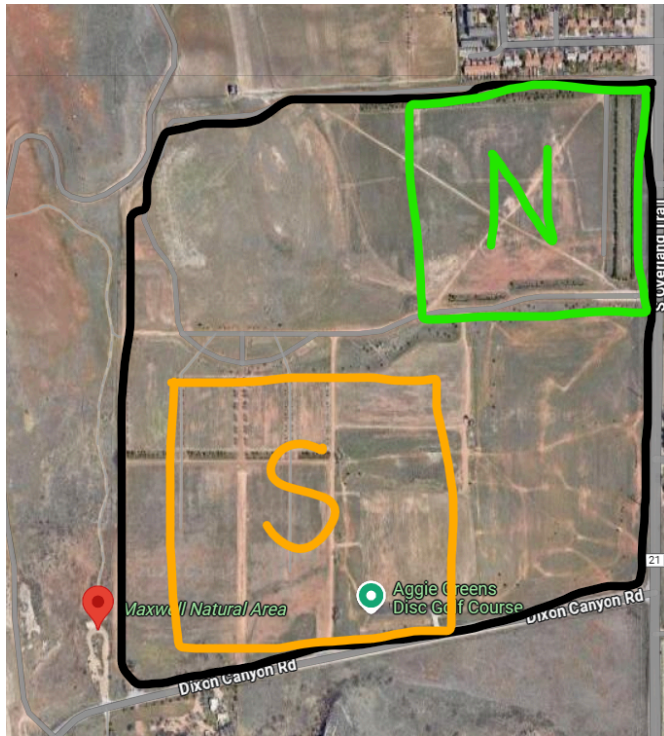
Time spent: 3 hours (11am - 2pm)

Area covered: 2 miles

We made observations in two corridors. For the purposes of this document they will be referred to as North and South lots. We worked in a zig-zagging pattern, making observations adjacent to and further from the trail to more fairly represent the entirety of the lot.

North = Green. Parked [here](#) (40.563817, -105.134140) and began to walk South through the field.

South = Orange. Parked [here](#) and began to walk North. Paid special attention to trees and drainage area in search of wildlife habitat signs.



*Disclaimer - The information in this report is not intended to be used as a management plan. This information is provided strictly to inform the delegation about the current state of the land. Formal, in-depth assessments are required before creating management plans.*

## **OVERALL IMPRESSIONS**

The Northern section of the lot (*shown above in green*) appears to be in great condition. We observed an encouraging number of native plant communities with minimal weeds.

The Southern section of the lot (*shown above in orange*) does not have as diverse, healthy native populations. There are higher numbers of noxious, invasive weeds threatening to dominate the landscape. The contrast provides valuable information about what can be expected in recreation (higher traffic) versus conservation areas (lower traffic).



## PHOTO DOCUMENTATION

*Photo rights reserved. Contact HPEC for permission to use.*

Northernmost edge of lot near homes. More foot traffic often = more weeds.



Photos taken from the North side of the lot, facing west.





This photo was taken at the 4-way trail junction facing North. Immediately south of this junction is where we started to observe a distinct uptick in the amount of weeds.



Shortly after reaching the junction we retraced our steps to the Northern border and hopped back in the car. We drove to the Southern section of the land, parking at the disc golf course. We walked Northbound from that parking lot. The following photos are from what we are referring to as the South side.



Below is a list of all the species we observed on the lot during our visit. Scientific names available upon request.

## GRASSES

- Crested wheatgrass



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- Buffalo grass
- Switchgrass



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- Western wheatgrass
- Smooth brome (grass)
- Crested brome (grass)
- Side oats grama (grass)

## FORBES

- Sand lily - beautiful, abundant populations of this outstanding native flower.





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- Wild rose



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- Dwarf sunflower (*left: ours, right: Google photo shows bloom*)



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- Native thistle (*left: ours, right: Google photo shows bloom*)





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- Prairie sage



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- Fringed sage



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- Yucca (right) & Prickly pear cacti (left) - Proof this site will support xeric plants! That is, plants that require no supplemental watering and will thrive with only rain water. In fact, unless there is irrigation lines we did not see, all of the plants listed here are subsisting on purely rain.



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- Tufted Evening Primrose (*left: ours, right: in bloom from Google*)



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- Blue flax (*left: our photo, right: in bloom from Google*)



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- Locoweed - Can bloom white or purple. (*left: ours, right: google*)





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- Viola nuttallii



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- Showy fleabane (*left: our photo, right: in bloom, from Google*)



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- Foothill milkvetch, One of our favorite finds of the day. (*both photos from site*)





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- Hairy dwarf golden aster (*left: our photo, right: in bloom, from Google*)



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- Fringed puccoon



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- Desert parsley



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- Alfalfa - Native, provides good pollinator forage, but can be an aggressive spreader. Monitor.





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## SHRUBS

- Rabbitbrush and Dwarf Rabbitbrush - Encouraging additional rabbitbrush will provide shelter for small mammals, which are prey for raptors. (*left: ours, right: Google*)



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- Chokecherry and plum - Nice choices! Good bird forage.
  - Warning: These are planted along the Eastern edge of the North side of the lot. The fruit of these shrubs are very attractive to bears during hyperphagia. If that presents a human-wildlife conflict, consider planting similar shrubs along Western border so they do not have to come so far onto the land to forage. (*left: ours, right: fruiting Chokecherry*)



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## TREES

- Japanese trees, unknown species, on a small ridge on the North side.
  - It is fine to leave them if they are not (1) outcompeting natives, or (2) toxic.



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- Elm trees lining the Southern path provide some of the only nesting sites for songbirds, plus it is very pleasant to walk through.



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- Pine trees along the drainage culvert (about a dozen) are all dying, suspected beetle infestation based on tunneling marks.





○ **WEEDS** were seen in highest density (a) near the homes on the Northern border, and (b) starting from the 4-way trail junction (approximately 0.25 miles South of the Northern boundary) extending South to the disc golf course.

- Curly doc
  - Currently at manageable levels in the North field. Posing a more serious, imminent threat in the Southern field.
  - Recommendation: Curly doc can be mechanically controlled through seed head bagging in the fall. Can be done as a volunteer project. Stay consistent!



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- South side - worse
- Kochia - Seen in dense population, especially on the North edge. These start as a low, mat-like plant that quickly grows tall and colonizes the area, creating a monoculture.





○ Young



○ Mature

- Clover
- Bindweed - Spreads by underground rhizome. Hard to treat. Prevent spread.



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- Flixweed

- North: Small populations, observed only where plants were sparse.



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- South: Larger populations, concerning. All of the lime green in this photo.



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- Recommendation: Responds well to mechanical control (pulling). Remove flixweed and then fill in empty spaces with densely planted desirable plants.



- ⚠ Leafy Spurge - List A noxious species. This plant is bad enough that it made our ecologists gasp in horror when they saw it! Control immediately to prevent rapid spread. (left: our photo, right: Google photo shows spread)



- Goosefoot - Not a noxious weed, aka it doesn't spread very aggressively.



## WILDLIFE

Not too many animals present, but not an alarming scarcity either. Will improve with attention to habitat needs.

- Western Meadowlark - Thriving, predominant species observed.



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- Small beetles
- Red ant hills
- Butterfly (1)
- Mantis egg casing



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- Chipping sparrow
- Spotted Towhee
- Robin with eggs
- Grasshopper
- Black-capped chickadee
- Black-billed magpies
- Red tailed hawks (3)
- Mule deer scat
- American Kestrel (1)
- (off-site) Across the street from disc golf there is a prairie dog colony.



## **WILDLIFE WE DID NOT SEE**

Disclaimer: Many factors may contribute to why we did not see these creatures. Weather (it was cloudy and rained at about 12pm), season, time of day, forage/prey availability, lack of shelter, human activity in the area, and more. These creatures could be present on the land and we just did not get to observe them.

- Bees
- Moths, butterflies (only 1 observed across whole lot in 3 hours)
- Rabbits or other rodents

**SOIL** looks good. Mix of small and large particles. Perfect for native plants. Some patches of old asphalt throughout the lot but the plants don't seem bothered.



## **WATER**

N/A - There is a drainage ditch/culvert on the South side of property. It was dry during our visit.

## **HUMAN ACTIVITY**

Very little trash was found, 3 pieces on the whole lot.

Dog poop and tracks are abundant, even far from the trail.

A visitor was flying a drone, which will stress birds, especially raptors.

Weeds were worst in areas of highest human traffic.

## **Our General Recommendations for the Hughes Stadium Site**

- Employ a restoration ecologist to perform a formal site assessment to determine the existing plant communities, % of native plants present, soil and water quality, bird, insect, and wildlife populations. They will create restoration plan that includes hydrological zones, soil types, sun exposure, wildlife habitat areas, etc. Plans must also include realistic establishment timelines, support during establishment periods (supplemental watering schedule), and long-term maintenance protocols.
- Have trained, sustainability-focused landscape management crews and supervised volunteers perform the removal of invasive species and installation of native species over a period of several years, according to the guidance of your hired Restoration Ecologist(s).
- Close off seeded/planted areas to the public so that they may become established without disruption from foot traffic, pollutants, dogs, etc. Closing areas of land again may be necessary any time your experts determine it to be experiencing elevated stress.
- Monitor progress diligently with notes, photos, videos, and intermittent sample collection. Continue to seed, plant, and remove invasive species as needed. Note that this process will take several years and the landscape will not look pristine for some time.
- Invest in Outreach and Education efforts to inform the public about realistic timelines and outcomes. Share messages about uplifting content such as blooms, wildlife, and any progress photos to soothe potential public frustration.
- Pets are a major source of ecosystem disruption. Enforce strict on-leash and waste removal regulations to protect plant and animal communities.
- Prohibit drone or RC-car use to protect raptors.
- Prohibit rodenticide for tenants of site.
  - Provide education about the effects of rodenticide to neighboring residential areas.
- Leave the North side of the property mostly in-tact. Minimal action is needed.
- Manage weeds with IPM strategies. Several of the species listed in this report will respond well to consistent mechanical control, which can be done by volunteers.
  - Do not broadcast herbicides as it will have harmful effects on pollinators & birds.
  - When appropriate, spot spray selective herbicides to target invasive plants.
  - Avoid using weed barrier. It is ineffective and prevents robust soil communities from forming. Instead, plant densely to crowd out weeds.
- Install native, tall-growing trees around the edges of the lot for nesting birds.
- Install some additional shrubs (such as rabbitbrush) to provide shelter for rodents.