Open Space Restoration

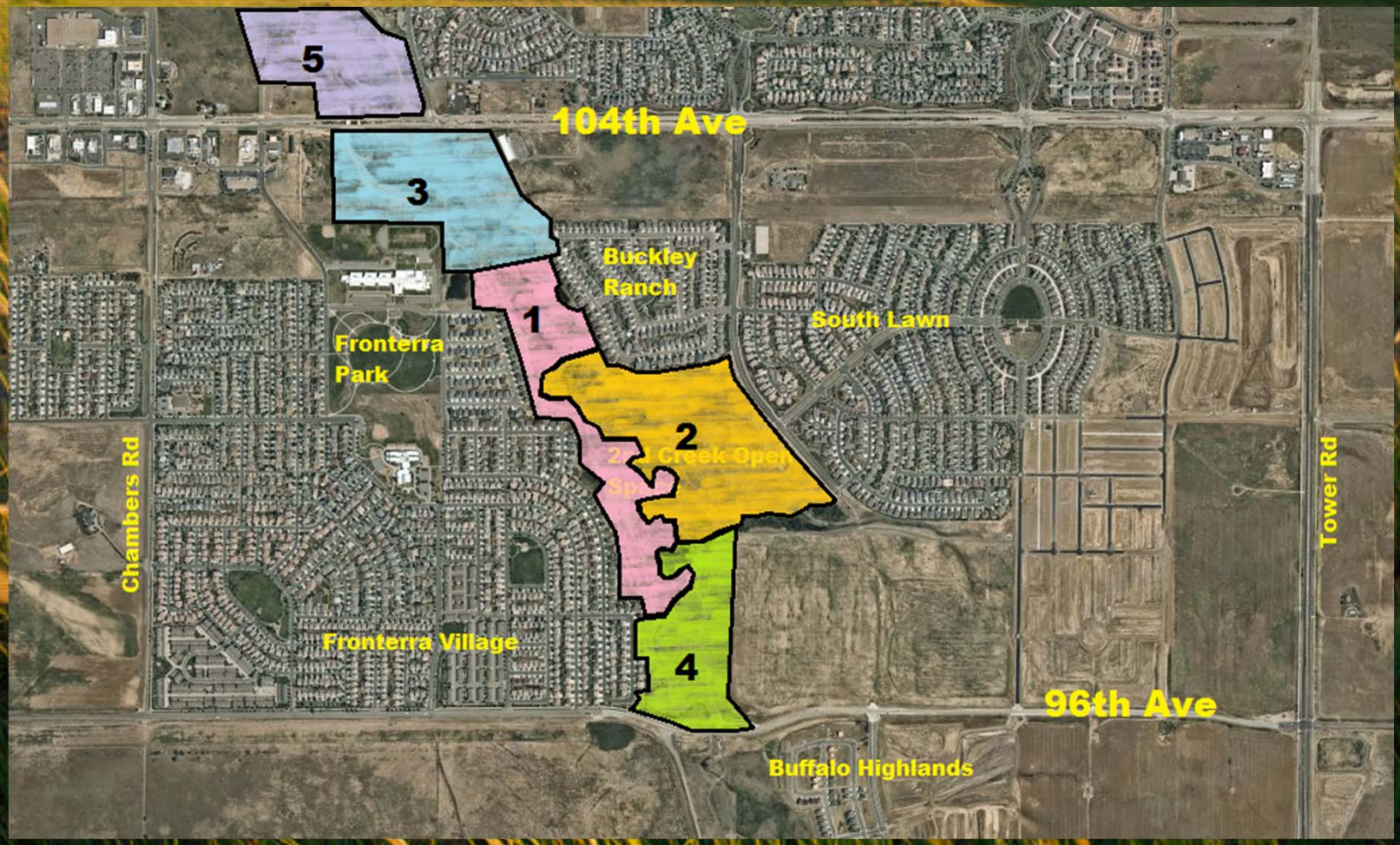
Commerce City Parks, Recreation & Golf
April 8, 2019

Open Space Restoration Objectives

- Weed Mitigation
- Erosion Controls
- Revegetation with Native Species
- Wildlife Management
- Seamless Continuity of Greenspace from RMANWR to 2nd Creek Open Space.

2nd Creek Open Space Preliminary Phasing Plan

(187 Acres)



Current Conditions Priority Area #1
June 2018

Current Conditions Priority Area #5
June 2018

Restoration Process

- Integrated Pest Management
  - Weed Control
  - Wildlife Management
- Native Vegetation Restoration
- Monitoring and Observation

Coordination and Communication with USFWS and RMANWR Throughout Process

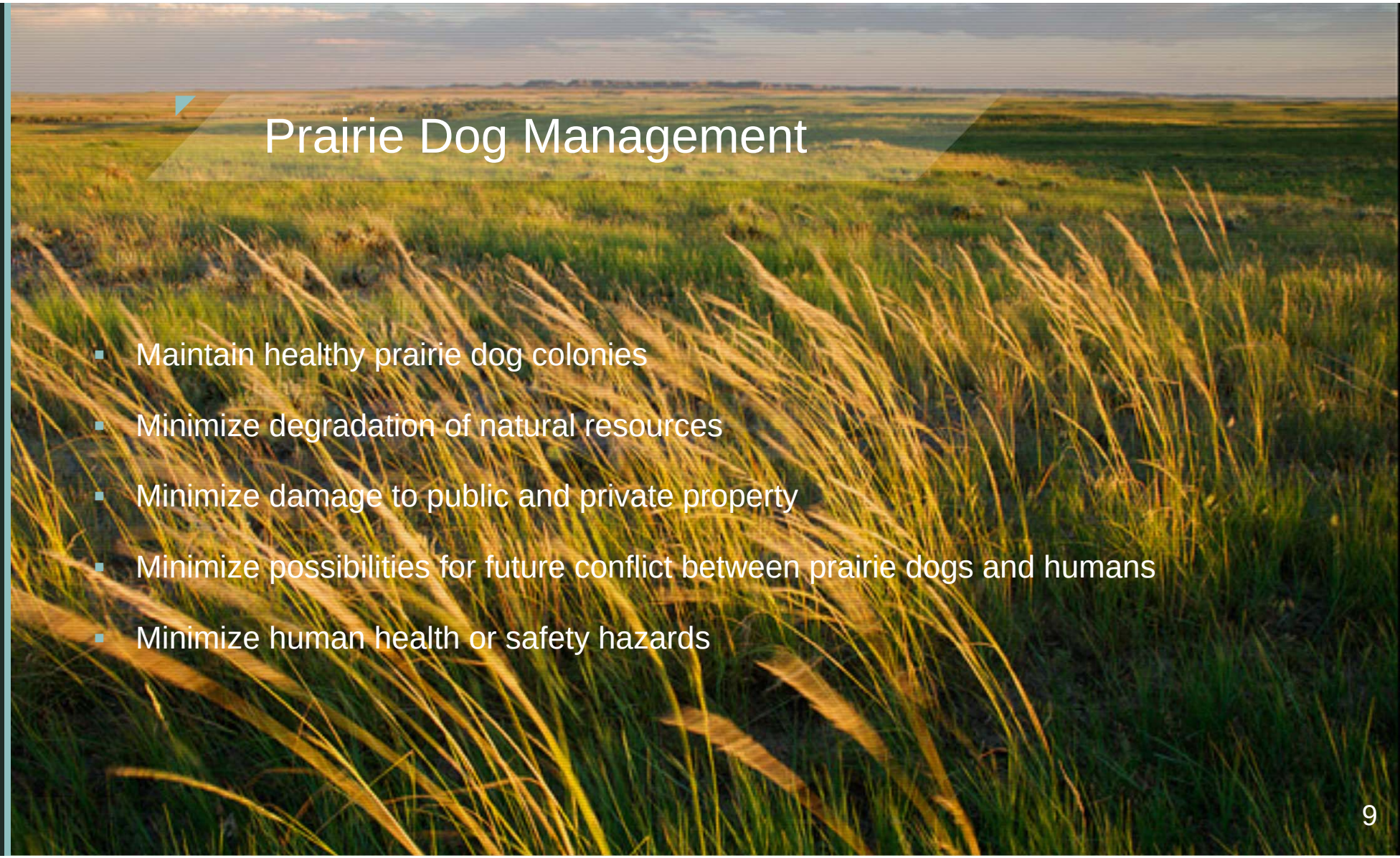
Remnant Shortgrass Prairie – Pawnee National Grasslands

Weed Control

- Biological (insects)
- Physical/Mechanical (hand pulling, cutting, tillage)
- Chemical
- Weed Control in partnership with Adams County Open Space and Colorado State University

Wildlife Management

- Wildlife Management Plan Adopted by City Council 15th of September, 2008
  - Goals: (1) Conservation and Management of Wildlife Populations (2) Integrated Pest Management
  - Integrated Pest Management at these sites: Prairie Dogs
  - Native Species may be considered for control if the species:
    - Harms or destroys natural resources in parks or open space area
    - Poses a human health hazard
    - Threatens Public Safety



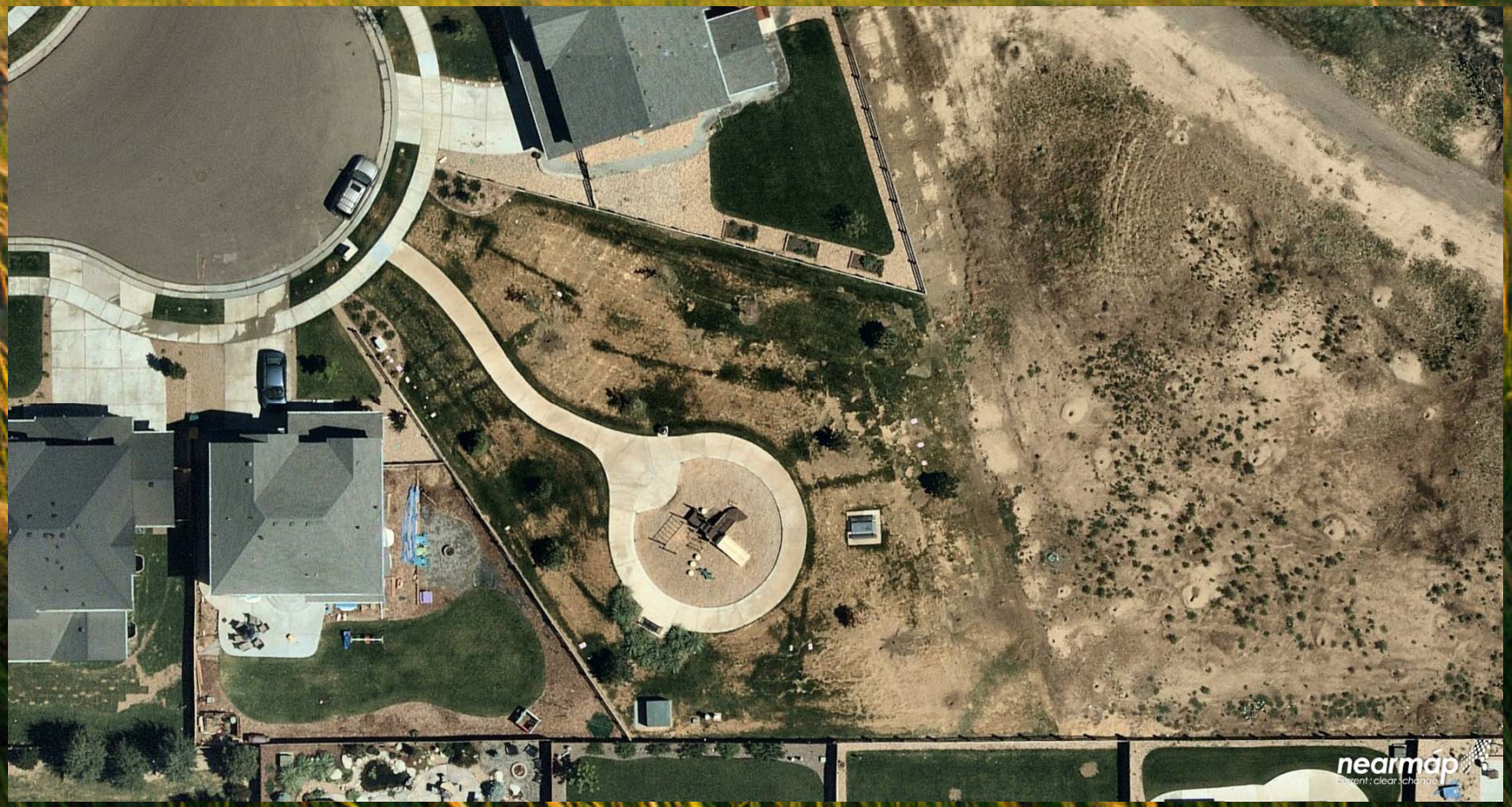
Prairie Dog Management

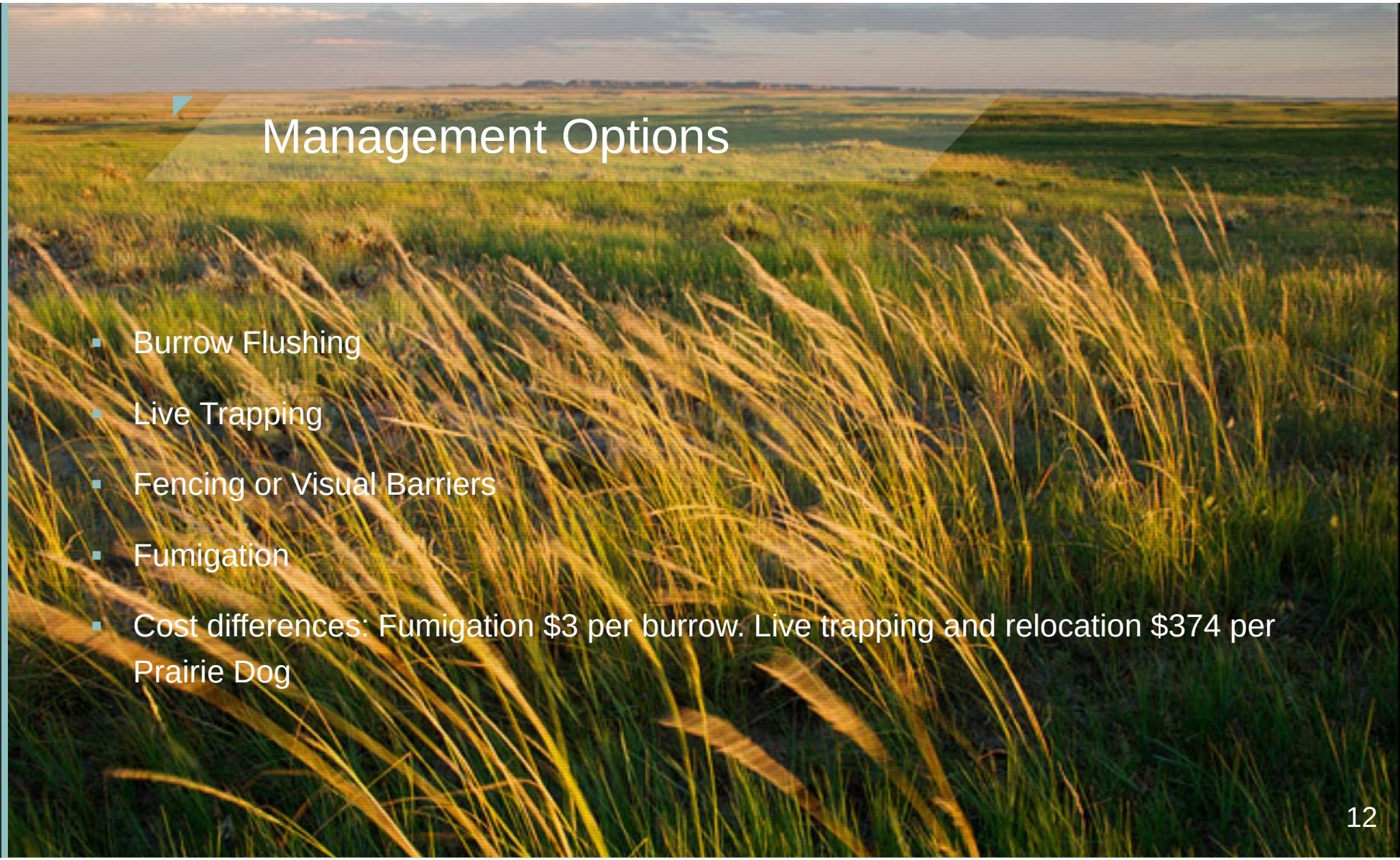
- Maintain healthy prairie dog colonies
- Minimize degradation of natural resources
- Minimize damage to public and private property
- Minimize possibilities for future conflict between prairie dogs and humans
- Minimize human health or safety hazards

Guidelines for Management

- Prairie Dog Populations Exceed Carrying Capacity in this area
- 20% bare ground in colony boundary indicates carrying capacity has been met or exceeded, dozens of acres in this area have over 80% bare ground
- Destruction of City owned and private property (homes, schools and businesses backing to open space)
- In this area colonies over carrying capacity have created “moonscapes” where there is little to no vegetative cover, resulting in heavy erosion sediment flowing over trails and into 2nd Creek
- Overpopulated colonies have high likelihood of collapse from infectious diseases that can spread to humans and pets
- Trail Safety
- Noxious Weed Infestations of Colonies

Buckley Ranch West HOA Park





Management Options

- Burrow Flushing
- Live Trapping
- Fencing or Visual Barriers
- Fumigation
- Cost differences: Fumigation $3 per burrow. Live trapping and relocation $374 per Prairie Dog

Difficulties with Relocation

- CRS 35-7-203 Bans releasing prairie dogs into any county without the permission of the board of county commissioners, except for the county in which the prairie dogs were trapped
- High costs and extended periods for trapping, need permit from State
- Need relocation area. That location must have been prepped with holes already in existence or dug. The survival rate among transplanted prairie dogs averages between 30% to 50%
- Estimated Prairie Dog population in 2nd Creek is 1600-2400, which could cost $600,000 to $900,000 to relocate
- Wildlife Refuge directly adjacent to Second Creek contains large colonies of Prairie Dogs- not able to relocate but preserves the population in the overall prairie range

Re-Establishment of Prairie

- Seedbed Preparation
- Weed Control

Seedbed Preparation

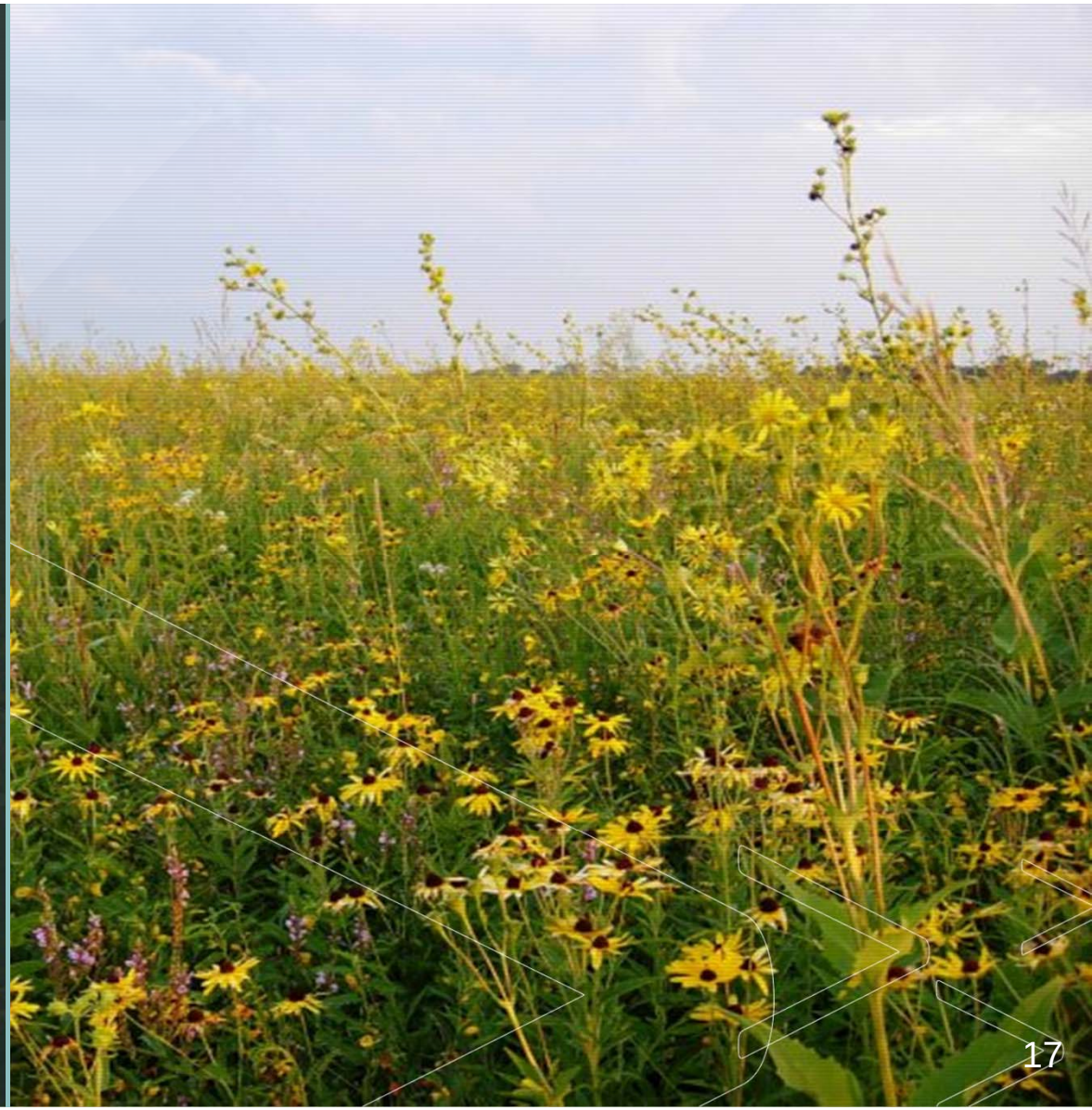
- Multifaceted approach using various methods nearly simultaneously
  - Mechanical tillage – turn soil, break up compaction, prep for seed, mitigate weeds and some minor regrading to repair erosion damage
  - Choosing correct seed mix
  - Following RMANWR Habitat Management Plan
  - Seeding method – City equipment and staff
  - Timing of planting – small window in spring and fall, non irrigated area reliant upon natural precipitation for seed germination and growth

Coordination

- Work with RMANWR and USFWS to create a landscape that is similarly managed outside the refuge so that animals have a corridor for travel along 2nd Creek that minimizes human interaction and has similar vegetative species
- Continue work with CSU on studies of biological agents (insects) for controlling invasive non-native weed species, where applicable
- Continue working with Adams County on weed management (mechanical and chemical controls), where applicable

Benefits of Restoration

- Protect Water Quality and Integrity of Floodplain
- Create habitat for a variety of species: birds, pollinators and other wildlife
- Educational opportunities for the community – Stuart Middle School and 2nd Creek Elementary using as learning landscape
- Eliminate about 2 tons of carbon from the atmosphere per acre
- Enhance visual aesthetic in the area and in the City



Citizen Outreach Plan

- Citizen knowledge and cooperation is important to success of project
- Door hangers
  - Will include general information for homeowners adjacent to 2nd Creek Open Space with links to City website for detailed information
- Signage
  - Posted at entrances to Open Space
  - Posted where revegetation has closed parts of open space off trail
  - Posted in conjunction with integrated pest management (weed and wildlife)
- Digital communications campaign
  - Social Media Outreach – Facebook, NextDoor, Etc.
  - HOA notifications
  - City website and publications


Questions?