



# Broomfield Prairie Dog Policy Update, Great Western Relocation Site Review, and Lowell Midway Project Status March, 2017

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## Policy Purpose and Goals

- To preserve prairie dogs and other wildlife in Broomfield, while limiting constraints on property rights, private development rights, and use of City-owned lands to meet other societal needs.
- To ensure humane treatment and minimize the loss of wildlife.
- To strike a balance between differing attitudes, visions, and the needs of the community.
- The Policies also reflect the small geographic size of Broomfield.
- Designed with foresight that public land would not be able to accommodate all prairie dogs displaced from public and private land.

# Policy Designed to Achieve Balance of Differing Viewpoints

## Survey of Residents from Policy:

- Morally opposed to killing wildlife etc.
- Enjoy watching prairie dogs
- Enjoy watching raptors and other species in prairie dog towns
- Appreciate local history of prairie dogs
- Appreciate importance to ecosystem
- Key to preservation of raptors
- Concerned that control may harm other species
- Concerned about health impacts of disease
- Concerns about impacts to landscape/vegetation
- Concerns for range/livestock and potential livestock injuries
- Concerns of using open space for prairie dogs instead of other incompatible uses
- Concern with costs to taxpayers





# Prairie Dog Importance in Local Ecosystem

-Prairie dogs play an important role in the shortgrass prairie ecosystem, providing food and habitat for a variety of mammals and raptors.





## **When Does the Policy call for Live Relocation?**

-When a property with an established colony needs to be removed for development or a land use change.

## **When Does the Policy call for Donation to a Wildlife Recovery Program?**

-When a property with an established colony is being removed for development, and relocation is not possible.

## **When Does the Policy Allow for Lethal Control?**

-When an established colony is being removed for development, and neither relocation or donation to wildlife recovery are possible  
(this option has not been exercised)

## **Prairie Dog Management Endowment Fee**



## When Does the Policy allow for Pro-forma extermination?

-Pro-forma lethal control is allowed in the Policy for situations where prairie dog migrate into new areas of unsuitable habitat. Types of unsuitable areas include ballfields, playgrounds, private yards, landscaped areas, agricultural fields, livestock ranges, trails, or areas where there is a health/public safety concern.

-Pro-forma lethal control is not allowed for the removal of an entire established prairie dog colony.

-Broomfield manages prairie dogs on all (public and private) sites through the Policy.

# Explanation of buffer areas

2003



2006

# Explanation of buffer areas



# Broomfield County Commons Management Master Plan

## 1 Agricultural Fields

### OPPORTUNITIES

- PRESERVE AGRICULTURE
- RESTORE NATIVE OR NONNATIVE GRASSLAND
- EXPERIENCE VIEWS

## 2 Le Gault Reservoir

### OPPORTUNITIES

- CREATE OPEN WATER ENVIRONMENT
- PRESERVE INTIMATE EXPERIENCE OF NATURE

## 3 The Meadow

### OPPORTUNITIES

- PROVIDE UNIQUE TRANSITION LANDSCAPE
- INTEGRATE WATER QUALITY WITH NATURAL SYSTEMS

## 4 Channel Corridor

### OPPORTUNITIES

- ENHANCE LANDSCAPE DIVERSITY
- ENHANCE HABITAT

## 5 Southfacing Upland

### OPPORTUNITIES

- RESTORE NATIVE OR NONNATIVE GRASSLAND
- MAINTAIN PRAIRIE DOG COLONY



## 6 Tom Frost Reservoir

### OPPORTUNITIES

- ENHANCE RESERVOIR EDGE
- ENHANCE FISHING ACCESS / PUBLIC USE
- RESTORE VEGETATION
- ENHANCE WETLAND COMPLEX

## 7 Gateway

### OPPORTUNITIES

- CREATE "FRONT DOOR" TO OPEN SPACE
- RESTORE VEGETATION
- DEMONSTRATE SUSTAINABLE LANDSCAPES





## Substances Allowed by Policy:

- Aluminum phosphide
- Carbon monoxide cartridges

## Continued Research on Best-Management Practices:

- Currently reviewing Pressurized Carbon Monoxide Control through a pilot project on several sites





## Projected Prairie Dog Population in Policy

- Projected prairie dog habitat of 325 acres of City-owned open space.
- 325 acres based on projection of population and available potential City-owned open space sites.
- This number was an approximation in terms of both the current population of prairie dogs and the relocation capacity of preliminarily identified release sites.





## Maps of Current Prairie Dog Habitat on Broomfield Open Space

- Great Western - 140 acres
- Ridgeview - 36 acres
- Lac Amora - 14 acres
- Broomfield County Commons - 35 acres
- Willow Run - 5 acres
- West Midway Area - 2 acres
- Anthem Ranch Western Greenbelt - 22 acres

Acreeage Total: 254 acres

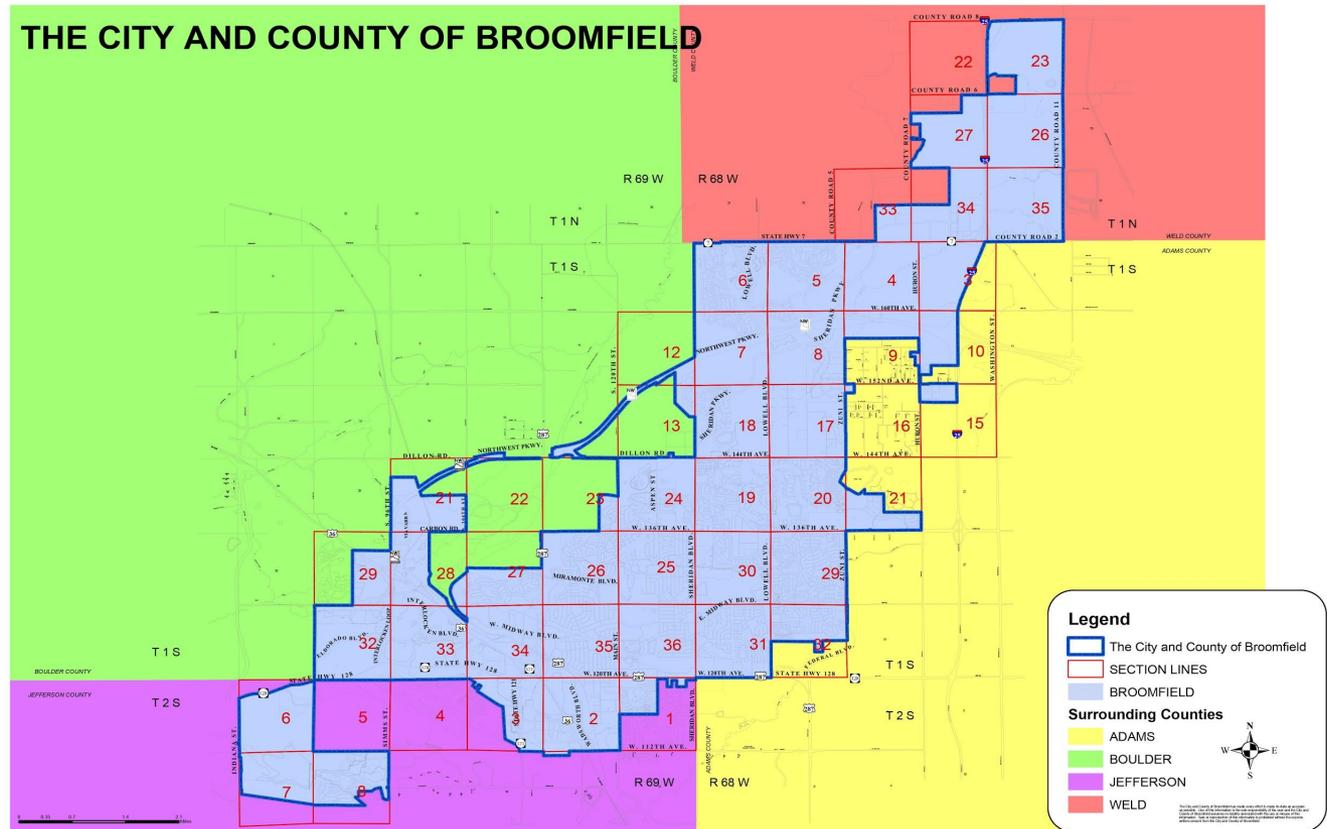




# Senate Bill 99-111:

Prohibits the relocation of prairie dogs across county boundaries without approval from the Board of County Commissioners. CPW also requires a permit for them.

## Broomfield County (in light blue):





**County**

**Weld County**

**Adams County**

**Jefferson County**

**Boulder County**

**Denver County**

**Broomfield County**

**Size**

**4,017 sq. miles**

**1,184 sq. miles**

**774 sq. miles**

**740 sq. miles**

**155 sq. miles**

**34 sq. miles**

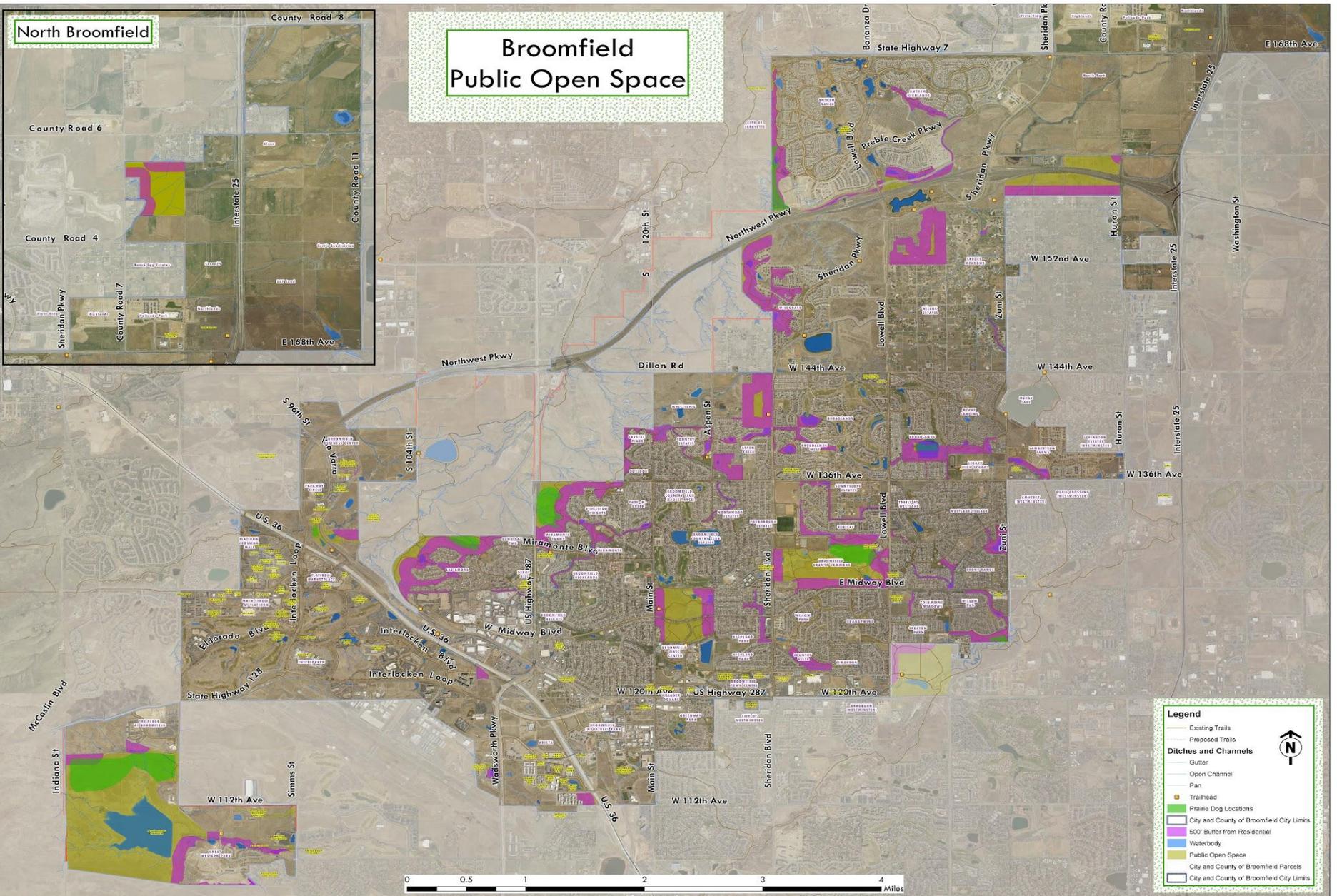


# Process for Relocation Site Approval

- Habitat and Vegetation Review
- Size of Site
- 500' Setbacks/Proximity of Neighbors
- Review of existing wildlife on site
- Public Notice, Comment, or Opposition
- Does not pose an unacceptable risk of disease, nuisance, or damage to landscaping of adjacent landowners
- Risk of adverse impact to high-quality native grasslands or other sensitive habitat types or species
- Approval of Colorado Parks and Wildlife
- Approval from Broomfield City Council



# Review of Other Possible Relocation Sites in Broomfield





## History of Great Western Relocation Site

- Approved as a prairie dog relocation site by Broomfield City Council in 2003
- Relocations began in 2002
- Site was deemed full in 2005 (8 relocations)
- Plague event occurred in 2009
- Relocations took place between 2011-2013
- Site determined to be at capacity between 2013-2016 (6 relocations)
- Policy calls for 1-year waiting period after plague



<b>Year</b>	<b>Capture Site</b>	<b>Receiving Site</b>	<b>Contractor or Staff</b>	<b>Number Relocated</b>
<b>2002</b>	<b>Colonies at Preble Creek/Anthem Property</b>	<b>Southwest Corner of Anthem Property</b>		<b>230</b>
<b>2002</b>	<b>Derda Recreation Center Site, BCC</b>	<b>Great Western Open Space</b>	<b>Roe Ecological Services</b>	<b>107</b>
<b>2002</b>	<b>West side of Lowell Blvd. (sewer line install)</b>	<b>Great Western Open Space</b>	<b>Prairie Dog Action, volunteers</b>	<b>63</b>
<b>2002-03</b>	<b>Brunner Reservoir Area</b>	<b>Great Western Open Space</b>	<b>Prairie Dog Action, volunteers</b>	<b>48</b>
<b>2002-03</b>	<b>BCC Athletic Fields, east of Sheridan</b>	<b>Great Western Open Space</b>	<b>Prairie Dog Action, volunteers</b>	<b>237</b>
<b>2004</b>	<b>Cross of Christ Church</b>	<b>Great Western Open Space</b>	<b>Prairie Dog Action, volunteers</b>	<b>3</b>
<b>2004</b>	<b>Drive-in Movie site and Arvada Pediatric site</b>	<b>Great Western Open Space</b>	<b>Prairie Dog Action, volunteers</b>	<b>120</b>
<b>2005</b>	<b>Broomfield County Commons</b>	<b>Great Western Open Space</b>	<b>Prairie Preservation Alliance, volunteers</b>	<b>50</b>

**In late 2005, Great Western Open Space relocation site was determined to be at capacity. No other relocation sites were available. In late 2009, there was an outbreak of sylvatic plague at the Great Western Open Space, which nearly eliminated the entire prairie dog population at the site. After a 1-year waiting period (per CPW regulations) relocations were allowed at the site again, in the spring of 2011.**

## Relocation Summary Table Continued

<b>2011</b>	<b>Willow Run – Solar Panel area</b>	<b>Great Western Open Space</b>	<b>Smith Environmental</b>	<b>3</b>
<b>2011</b>	<b>Midway/Sheridan, southeast corner</b>	<b>Great Western Open Space</b>	<b>Smith Environmental</b>	<b>4</b>
<b>2011</b>	<b>Anthem area, west of Spruce Meadows</b>	<b>Great Western Open Space</b>	<b>SWCA/Animal and Pest Control</b>	<b>42</b>
<b>2011</b>	<b>Heurer Property, Lowell and 120<sup>th</sup></b>	<b>Great Western Open Space</b>	<b>Smith Environmental</b>	<b>8</b>
<b>2012-13</b>	<b>Dry Creek/Arista parking area</b>	<b>Great Western Open Space</b>	<b>Growing Ideas, LLC</b>	<b>20</b>
<b>2012-13</b>	<b>Legacy High School, trail area</b>	<b>Great Western Open Space</b>	<b>Growing Ideas, LLC</b>	<b>128</b>
<p><b>In 2013, Great Western Open Space relocation site was determined to be at capacity and the site is reviewed periodically to determine if the space and habitat is suitable for relocations. At this time the site remains at capacity and no other relocation sites are available.</b></p>				
<b>Total</b>				<b>1,063</b>

# What is a Healthy Prairie: Approaching Habitat Assessments



## Native vegetation

- Especially grasses



Root Systems of Prairie Plants

Credit: Conservation Research Institute



## Wildlife

- Bison, ungulates, coyotes, birds of prey, and *prairie dogs*

## Well-developed soils

- Thick A-horizon



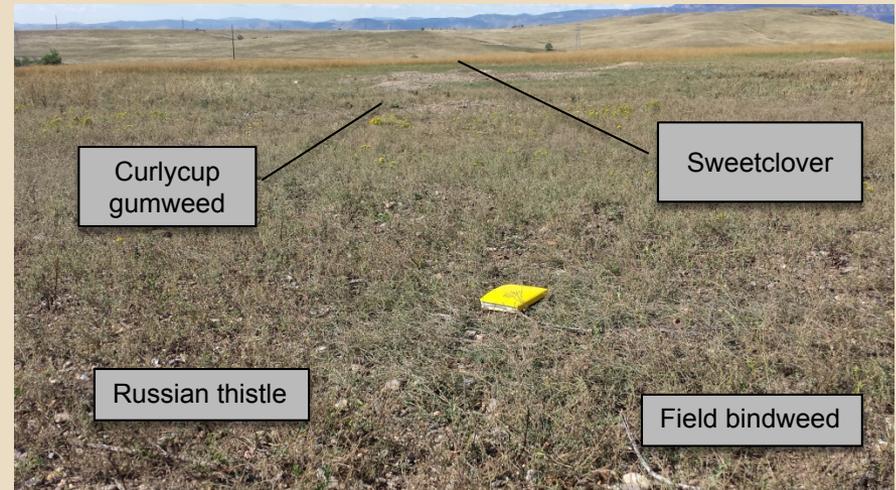
Prairie

Credit: NRCS

# Great Western Reservoir 2014



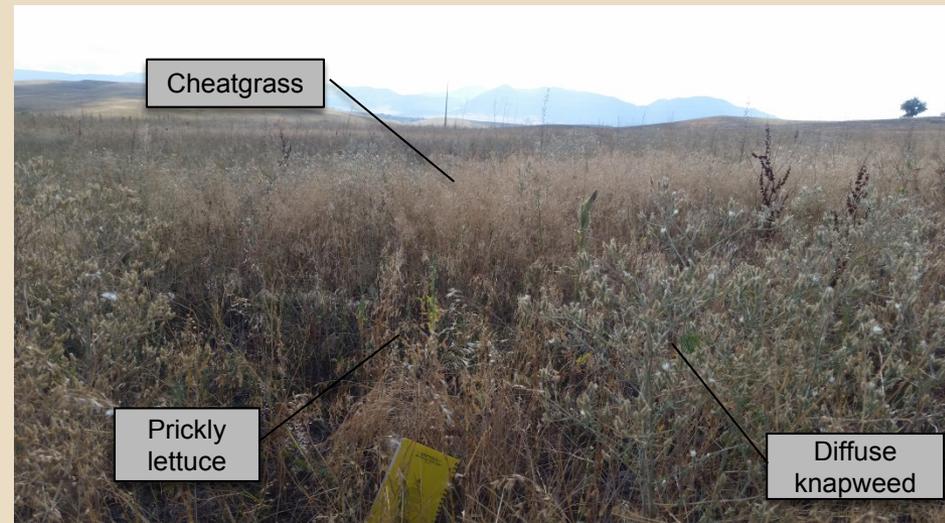
- 58 acres occupied by prairie dogs (34 acres within designated release area)
  - No formal population estimate
- Mixture of native and nonnative species
  - Only 2 native grasses
  - Forbs (especially sweetclover, prickly lettuce, field bindweed) dominant in colony interior
- Little to no soil structure, thin A horizon



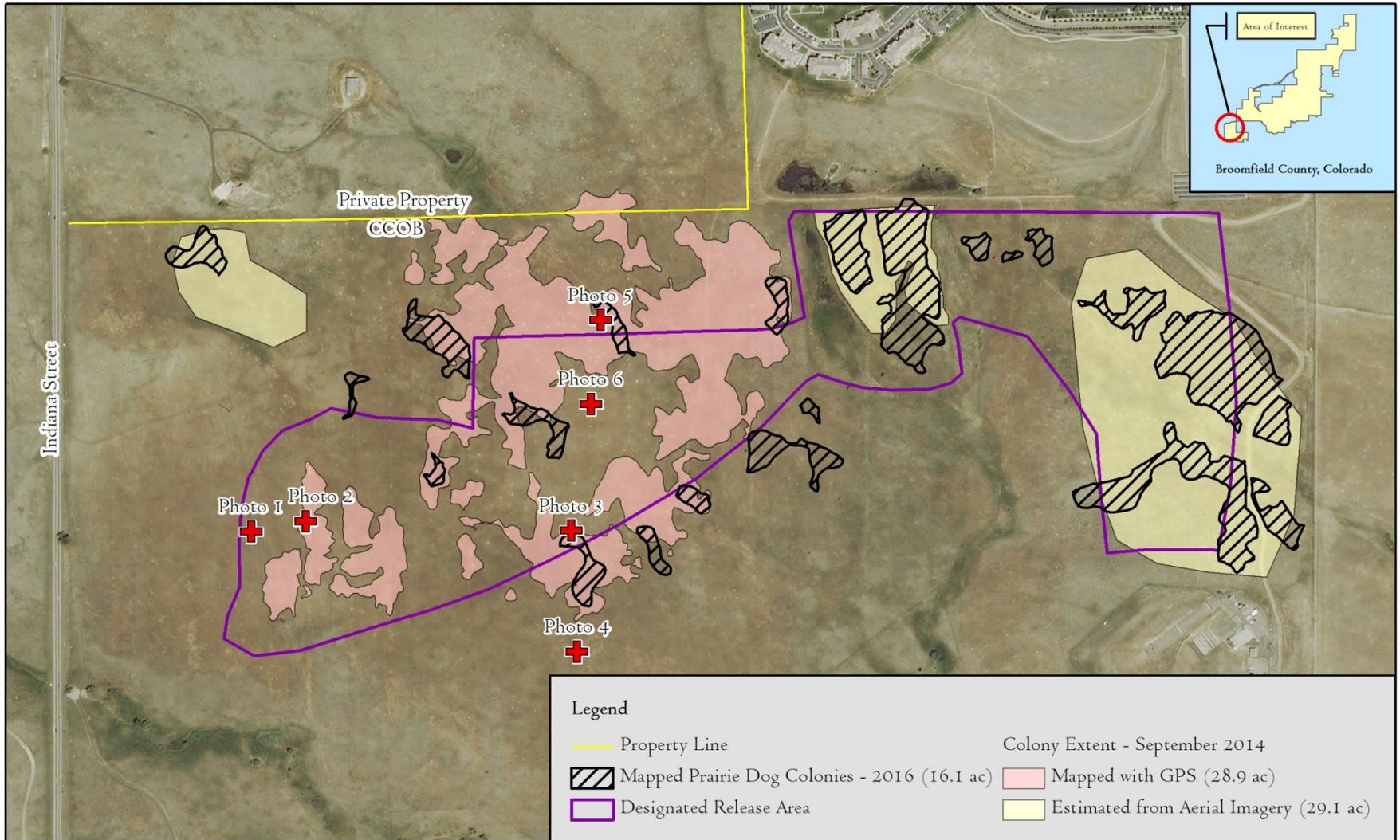
# Great Western Reservoir 2016



- 16 acres occupied by prairie dogs (9.2 acres within designated release area)
  - Maximum count of 108 prairie dogs – almost entirely in eastern section
- Extensive forb cover
  - Sweetclover, prickly lettuce, curlycup gumweed, diffuse knapweed, field bindweed
- Persistent degraded soils
  - Exacerbated by wind and water erosion



# Colony Extent 2014-2016





## Habitat Improvement Projects at Great Western Open Space

- Large scale Volunteers For Outdoor Colorado youth project to remove Russian Knapweed
- Multiple goat herd grazing projects covering 150 acres
- Manual removal of invasive Russian Olive Trees and tamarisks
- Biological controls, via beetle releases, for removal of knapweed and toadflax
- Herbicidal weed treatments
- Construction of prairie dog fencing on north side
- Shrub plantings on northern edge
- Development of comprehensive weed management plan
- Placement of large raptor perch





## Current Conditions at Great Western

- Plague activity per Colorado Department of Public Health and Environment, large die-off across site
- Some small pockets of remaining prairie dogs observed
- Coordinating with Colorado Parks and Wildlife, Colorado Department of Public Health and Environment, and Broomfield Health and Human Services

# Site at Midway and Lowell



OPEN SPACE AND TRAILS





## South Site at Midway and Lowell

Broomfield Municipal Code 1-12-020: ...Any person convicted of a violation shall be punished by a fine not exceeding \$1,000 or by imprisonment not exceeding one year or by both such fine and imprisonment...





## Next Steps:

- Review Great Western relocation site in 2017 to assess habitat and determine possible causes for population declines/die-off.
- Get current population estimate from development property at Midway/Lowell and continue to coordinate with developer on timeline.
- Coordinate with Public Health officials and Colorado Parks and Wildlife on die-off/plague concerns.
- Coordinate with Colorado Parks and Wildlife on due diligence at Great Western relocation site and the potential approval of the site for possible prairie dog relocations. This includes dusting plan.



## Next Steps (cont):

- Ongoing research on delta dusting related to plague.
- Review Research with the Prairie Dog Working Group of surrounding municipalities
- Coordinate test plot vegetation study
- Investigate designation of additional relocation site under guidance from City Council and OSTAC (Potential Restoration Costs = \$4,500/acre, not including soil amendments)