Open Space Board of Trustees
Council Chambers, 1777 Broadway
February 12, 2020

MEETING AGENDA

(Please note that times are approximate.)

I. (6:00)	Approval of Minutes
II. (6:05)	Public Comment for Items Not Identified for Public Hearing
III. (6:30)	**The Board will convene into a study session on the Expedited Review of Irrigated Lands Occupied by Prairie Dogs**
IV: (9:00)	Adjourn ***(this meeting will reconvene February 13 at the OSMP HUB: 2520 55th Street)***

Open Space Board of Trustees Members:

Tom Isaacson *(2015-2020)*
Curt Brown *(2016-2021)*
Hal Hallstein *(2019-2022)*
Karen Hollweg *(2018-2023)*
Dave Kuntz *(2019-2024)*

OPEN SPACE BOARD OF TRUSTEES
Action Minutes
Meeting Date January 8, 2020

Video recording of this meeting can be found on the City of Boulder's Channel 8 Website. (Video start times are listed below next to each agenda item.)

BOARD MEMBERS PRESENT

Tom Isaacson	Curt Brown	Hal Hallstein	Karen Hollweg	Dave Kuntz

STAFF MEMBERS PRESENT

Dan Burke	Mark Davison	John Potter	Lauren Kilcoyne	Maki Boyle
Leah Case	Erika Jensen	Alison Ecklund	Burton Stoner	Jennelle Freeston
Jarret Roberts	Jasmine Sim	Dave Gustafson	Hilary Dees	Deryn Wagner
Megan Grunewald	Phil Yates	Jim Reeder	Heather Swanson	Don D'Amico

CALL TO ORDER
The meeting was called to order at 6:02 p.m**.**

AGENDA ITEM 1 – Approval of the Minutes (00:48)
Hal Hallstein moved that the Open Space Board of Trustees approve the minutes from Dec. 11, 2019. Dave Kuntz seconded. This motion passed four to zero, Curt Brown abstained as he was absent at that meeting.

AGENDA ITEM 2 – Public Participation for Items not on the Agenda (1:36)
Elias Houssney, Jacob Springs Farm, showed a video on regenerative grazing and why it is beneficial.

Andre Houssney, Jacob Springs Farm, said the Lewis Property is an ideal property for regenerative grazing. This type of grazing relies on a contiguous property so animals can be moved frequently. There are also many ecosystem benefits such as carbon sequestration. He asked the Board to keep these properties together whenever possible, and to favor regenerative grazing on properties that have these attributes.

Michelle Shewchuk, Boulder, said she purchased a home in Boulder that backs up to the Shanahan Ridge property. Over the last six months, they have seen multiple occasions of dogs chasing wildlife. She said she wanted to bring this to staff's attention. She suggested having dogs remain on leash from dust to dawn.

Paula Shuler, Boulder County, said during the prairie dog open house, lethal control was not discussed despite that being the reason why many people were there. She added that it felt it was rude that the moderator said neighbor issues would not be talked about that evening, even though many neighbors had showed up. In the draft report, it doesn't mention the property damage to neighbor land and Open Space's numbers on damage are not accurate as neighbors are taking a lot of the problem.

Donna George, Boulder, said the public outreach for the Gunbarrel Hill ISP was not well done. She said she found out about the third meeting by accident when she received an email, but this topic was not in the headline of that email. She said Daily Camera posted an ad, but a lot of people don't look there. She received another several emails, but neither were specific just to Gunbarrel Hill. She added that bicycle commuting is not what this trail is for. It seems like this ISP is a way to sneak that in. Said staff needs to get more public input before taking a vote.

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John Antognozi, Jacob Springs Farm, said as a chef and farmer he is always trying to explore ways to make a difference in regard to climate change. People do not talk enough about food waste despite the volume of food waste going straight into the landfills is creating methane. This could be remedied using properties such as the Lewis property; regenerative grazing is one option as well as taking food waste from the community to do permaculture.

Susan Sommers, Boulder, said animal-based agriculture contributes to climate change. She said we are diverting water to feed agriculture at the expense of our wildlife. We cannot keep doing this. We are now looking at killing prairie dogs to keep this old antiquated system; this needs to change.

Pam Wanek, Adams County, said the cost for prairie dog relocation that is referenced in the memo seems quite high and very biased. She added that this document reads as very pest biased.

AGENDA ITEM 3 – Matters from the Department (41:18)
Alison Ecklund, Community Relations Officer, and Jennelle Freeston, Volunteer, Service Learning & Partnership Supervisor, presented on the 2019 OSMP Partnership and Sponsorship Efforts.

John Potter, Resources and Stewardship Service Area Manager, gave an update on the Expedited Management Review of Irrigated Lands occupied by Prairie Dogs. Tom noted that the February Board meeting will be on February 12 and 13. Public comment will take place prior to the study session on February 12.

AGENDA ITEM 4 – Public hearing and consideration of a motion to recommend the preferred alternative for the Gebhard Integrated Site Project (1:48:00)
Deryn Wagner, Planning Supervisor, presented this item.

Public Comment (2:20:45)
Jim Illg, Boulder, said losing this trail would be a big loss. He asked the Board to please consider the staff proposal and insist that the closure of this one trail only happen if another is opened. Please also reach out to neighbors with questions.

Jeff Robinson, Boulder, said please do not close the west trail until the east side can be open. If a bridge is put in, please make it small and easy to use.

Tony Gannaway, Boulder, said he has walked this property four or five times a week for fifty years. He said he is concerned that there is lots of wildlife in this area and would doubt that it is wide enough to put two trails in without disturbing wildlife that is there. Putting pedestrians on Bobolink trail is dangerous with so much high bike traffic.

Sarah Davis, Boulder, said she supports the preferred method; it incorporates feedback from those who use trail daily. She said a lot of people who use that trail who are not in this neighborhood. They use it with intent to not be on a trail with bikes. Strongly asked the Board to consider moving fence so no bikes can access the new trail.

John Albers, Boulder, said separation is critical. People on bikes are going much too quickly and it is dangerous. That trail is there because of enjoyment for no bikes and would agree that the other trail should be opened prior to closing the first. He said it was really nice to see this final proposal and have it include resident's needs.

Magdalena Rzyska, Boulder, requested that the new bridge be very small so bikes can't go there. She asked additionally for a sign to be put up letting people know that the trail will go to a residential area.

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She also expressed concern about having a trail open to all users at once. Please make sure one trail remains open to just pedestrians.

Return to the Board (2:38:40)
The Board discussed the preferred alternative.

Motion (2:53:00)
Curt Brown moved the Open Space Board of Trustees recommend that staff advance the preferred alternative for the Gebhard Integrated Site Project into detailed design, work plan implementation and execution. Tom Isaacson seconded. This motion passed unanimously.

AGENDA ITEM 4 – Matters from the Board (3:05:00)
The Board discussed their upcoming retreat. Curt and Hal will work with staff on a draft retreat.

The Board will plan to attend both the upcoming tribal consultation as well as the February City Council study session on South Boulder Creek flood mitigation.

ADJOURNMENT – The meeting adjourned at 9:47 p.m.

These draft minutes were prepared by Leah Case.

DRAFT

STUDY SESSION MEMORANDUM

TO: Open Space Board of Trustees

FROM: Dan Burke, Director, Open Space and Mountain Parks
John Potter, Resource and Stewardship Manager
Mark Gershman, Senior Planner
Andy Pelster, Agricultural Stewardship Supervisor
Val Matheson, Urban Wildlife Conservation Coordinator, Planning Department
Heather Swanson, Ecological Stewardship Supervisor

DATE: February 12, 2020

SUBJECT: Expedited Review of Irrigated Lands Occupied by Prairie Dogs

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EXECUTIVE SUMMARY

In the spring of 2019, the Open Space Board of Trustees (OSBT) and City Council identified that the city's prairie dog management approach had affected OSMP's ability to fully meet the City Charter purpose for open space and has contributed to soil degradation and soil loss. Following an April recommendation by the OSBT, the City Council directed Open Space and Mountain Parks (OSMP) staff in May to undertake an expedited review of the management of irrigated OSMP lands occupied by prairie dogs. The geographic focus for this expedited review has been an area north of Jay Road (project area).

Working with the OSBT, staff developed a process for this management review including community engagement with three phases or "windows." The first engagement window was completed in fall 2019. The second engagement window opened January 6 with the release of staff's evaluation of possible management actions for addressing conflicts related to prairie dogs on irrigated agricultural lands. This engagement window will continue through February 16 with opportunities for on-line engagement as well as time for public comment at the beginning of the February 12 and 13 OSBT meetings. Community engagement to date has confirmed that both agricultural uses of open space and prairie dog conservation are important to community members and that the community is divided in their thoughts on the use of lethal control.

The study session is an important part of the expedited review process that will inform the actions that staff will recommend to the OSBT in March. Specific goals of the study session are to review and discuss:

- Staff's evaluation of the current situation
- Community input received to date
- Potential management responses and how different integrated packages of responses may address the open space goals in the City Charter
- High-level cost estimates associated with each of the packages and any city policy changes that each package may require

KEY ISSUES IDENTIFIED

Feedback received to date shows that community members are largely split in their views of how best to address conflicts between prairie dog occupation and irrigated agriculture. Community perspectives of lethal control as a management tool range from strong support to strong opposition. Management responses need to be informed by these perspectives as well as the economic and ecological inter-relationships of grassland management. Staff would benefit from understanding OSBT members' perspectives on these and other issues prior to developing a recommendation for consideration by OSBT in March.

Study Session Questions for OSBT:

1. Do staff's key assumptions as described in this memo seem appropriate?
2. What potential factors as described in this memo would you focus on for prioritizing removal efforts?
3. Can the Board provide guidance on which package(s) to focus on as a preferred alternative?
4. Do estimated spending and staffing levels seem appropriate?
5. What other information needs are there to be included with staff's recommendation in March?

BACKGROUND

The City of Boulder Charter identifies "the preservation of agricultural uses and land suitable for agricultural production" as an open space purpose. The city has made significant investments in the purchase of open space lands and water and has invested in the development and maintenance of water delivery infrastructure to support irrigated agriculture to achieve this charter purpose. Because of the high levels of production supported by supplemental water, irrigable lands have been identified as OSMP's best opportunity to support successful agricultural operations. These irrigated agricultural lands also represent soils that play an important role in carbon sequestration and contribute to climate change resilience and offer good opportunities to address climate change mitigation. Working as part of the city's cross-departmental Climate Mobilization Action Planning process and in response to City Council direction, irrigated pastures and hayfields, in particular, can be large terrestrial carbon sinks, with carbon accumulating in the vegetation, soil and root systems.

Black-tailed prairie dogs have far-reaching effects on the grasslands that they inhabit, and their presence provides prey and landscape structure necessary for many associated species that would not otherwise be present. Because of their cascading ecological effects, prairie dogs are often considered a "keystone" species in native grassland ecosystems. In recognition of their role in defining a unique animal community, the city has also made large investments in the conservation of prairie dogs and their associated species as well as direct management of prairie dog populations.

The city has established objectives for the management of both irrigable fields and prairie dogs across the OSMP system. For example, the city seeks to ensure that all irrigable fields are leased and in agricultural production and that the water delivery infrastructure that supports irrigated agriculture is in acceptable condition.

The city also seeks to maintain prairie dog colonies on OSMP in the range of 800 to 3,137 acres. The city has also established policies and a regulatory framework that requires that significant time and effort be allocated to the exploration and use of non-lethal techniques (e.g., relocation) as alternatives to lethal control where there is conflict between prairie dog occupation and other land uses.

City policies developed in the Grassland Ecosystem Management Plan (Grassland Plan) were intended to limit the overlap of irrigable lands and areas where prairie dogs are protected. All OSMP prairie dog management designations allow for the removal of prairie dogs for the purpose of maintaining irrigated fields and irrigation infrastructure. However, prairie dogs currently occupy many irrigable fields. Irrigation and associated agricultural practices are almost always incompatible with the burrowing and foraging requirements of prairie dogs. Burrowing and feeding by prairie dogs in irrigated fields are likewise incompatible with agricultural production and water management.

The most widespread impacts from prairie dog occupation on irrigated lands are reduced agricultural productivity and changes to the type of agricultural use. The typical trajectory of irrigated agricultural properties occupied by prairie dogs can be described as follows:

- Initially, irrigated hayfields are switched to irrigated grazing land as prairie dog occupation makes the operation of haying equipment difficult or impossible.
- As populations increase and the area of prairie dog occupation increases, irrigation becomes too difficult or impossible.
- Once prairie dogs fully occupy an irrigated field, there is typically no benefit to continue irrigation or agricultural operations, and the property is taken out of agricultural production – and often removed from the agricultural lease program.
- Lack of irrigation and agricultural management in the vegetation communities dependent on these activities leads to continued land degradation and soil loss over time.
- Damage to the irrigation infrastructure from the direct effects of prairie dogs or from lack of use and maintenance result in degradation of open space assets and increased costs to restore the land, reducing the long-term agricultural or ecological sustainability of the land.

In the project area, generally north of Jay Road, there are a total of 2,300 acres of irrigable land managed by the city as open space which is about 35 percent of the 6,403 irrigable acres managed by OSMP. Of this, approximately 250 acres have been removed from agricultural leases because of incompatibility with prairie dog occupation.

Table 1 summarizes the acreages discussed here and elsewhere. Almost 690 acres (or over 40 percent) of the leased, irrigable acreage, and most (almost 70 percent) of the irrigated fields in the project area are occupied by prairie dogs[1]. The total overlap of prairie dog occupation and irrigable fields stands at 967. In addition to the over 250 acres which have been removed from agricultural leases because of the presence of prairie dogs, five of OSMP's agricultural tenants in the project area have over 10 percent of the irrigable portion of their leasehold occupied by prairie dogs; and prairie dogs occupy over half the irrigable acreage of the two tenants with the largest leaseholds in the project area.

Table 1: *Acreages of interest*

Acreage Description	**System-wide** *Acres*	**Project Area** *Acres*
Total OSMP managed ownership	37,683	5,301
Leased for agriculture	16,404	2,860
Irrigable land	6,403	2,252
Land occupied by prairie dogs (2019)	4,457	2,693
Leased land occupied by prairie dogs (2019)	1,845	1,340
Irrigable land occupied by prairie dogs (2019)	1,257	967
Irrigable land (no longer leased) and occupied by prairie dogs (2019)	465	254

<u>Prairie Dog Management on OSMP Lands</u>

The City Council-approved Grassland Plan includes a process by which management categories are established for all prairie dog colonies. The plan also has objectives for maintaining or enhancing prairie dog populations in three designations (Prairie Dog Conservation Areas, Multiple Objective Areas and Grassland Preserves).

The Grassland Plan also identifies two management designations where the activities of prairie dogs are *not* compatible- Transition and Removal Areas. Most irrigable land is designated as a Removal or Transition Area (with a few Grassland Preserve and Multiple Objective Area exceptions). There are currently over 1,000 acres of prairie dog colonies system-wide that occur on Transition or Removal Areas where the removal of prairie dogs is anticipated. The Grassland Plan designation descriptions allows the removal of prairie dogs at any time for maintenance of existing irrigation facilities, such as a headgate, ditch, lateral ditch, reservoir or irrigated field in any of the five prairie dog management designations.

[1] Prairie dog mapping across all OSMP-managed lands is completed annually in the fall. The numbers presented here represent the most recent available data collected in 2019.

Table 2: *Grassland Plan prairie dog management designations (system-wide)*

Designation	Prairie Dog Compatibility	Occupied Acres *fall 2019 mapping*	Acres as of 2015 *not necessarily currently occupied*	Prairie Dog Removal Allowed
Removal Area	Not compatible	295	410	Unlimited, subject to ordinance and state permitting
Transition Area	Not compatible	731	1,053	Unlimited non-lethal, lethal for up to 20 individuals, subject to ordinance and state permitting
Multiple Objective Area (MOA)	Compatible	576	755	Only based on exception for maintaining water rights (which includes irrigated fields), otherwise not allowed
Prairie Dog Conservation Area (PCA)	Compatible	385	583	Only based on exception for maintaining water rights (which includes irrigated fields), otherwise not allowed
Grassland Preserve (GP)	Compatible	2,470 *occupied. Total area of GP = 8,000*	3,436 acres of colonies. *Total area of GP = 8,000*	Based on exception for maintaining water rights (which includes irrigated fields), as well as removal for native vegetation degradation at high occupancy levels (>26%)

OSMP's non-lethal relocation efforts depend upon the availability of receiving sites; permitting by the state; as well as the availability of contractors and funding. Until very recently, relocation from areas other than OSMP lands were the highest city priorities and relatively few relocation projects from irrigable agricultural lands could be implemented. Consequently, prairie dog populations continued to expand in irrigable agricultural fields.

Responding to the limitations described above, the city has allocated additional funding to support relocation. However, even with additional resources, OSMP estimates that a maximum of about 40 acres of prairie dogs (approximately 1,200 prairie dogs) can be relocated each year. This rate of removal is not likely to keep up with the typical annual rates of expansion of prairie dog populations in removal and transition areas currently being observed. Thus, current relocation practices will not make timely and noticeable improvements in the situation facing tenants with prairie dogs on the irrigable lands in their leasehold.

Background Community Feedback

In 2019, the city included a question in the OSMP Master Plan Community Survey about trade-offs associated with management of prairie dogs and agricultural lands. In the results from this survey, 52 percent of 1,306 respondents either strongly supported or supported the use of lethal control to remove prairie dog colonies from areas on or near irrigated farmland when other management tools had not been successful. Thirty-six (36) percent of respondents either opposed or strongly opposed the use of lethal control. Eleven percent of respondents did not have an opinion or didn't know enough to respond to the question. Table 3 shows a summary of responses to the survey question.

***Table 3**. Survey response on prairie dog management from OSMP Master Plan survey*

When other management approaches have been unsuccessful at controlling PRAIRIE DOG POPULATIONS ON OR NEAR IRRIGATED FARMLAND, how much would you support or oppose lethal control to remove prairie dog colonies from these areas?	Percent	Number
Strongly support	19%	N=251
Support	33%	N=432
Oppose	19%	N=249
Strongly oppose	17%	N=228
No opinion/Don't know	11%	N=146
Total	100%	N=1306

Development of Current Expedited Review Project

In the spring of 2019, the OSBT and City Council identified that conflicts with the city's prairie dog management and viable agricultural operations have affected OSMP's ability to fully meet the Charter purposes for open space and have contributed to soil degradation and soil loss. Following an April recommendation by the OSBT, the City Council directed OSMP staff in May to undertake an expedited review of the management of irrigated lands occupied by prairie dogs.

The project area is focused on irrigable lands managed by OSMP north of Jay Road, generally west of the Diagonal Highway (CO Hwy 119) and east of Foothills Highway (US 36). A small area immediately east of the Diagonal at Mineral Road (CO Hwy 52) is also included in the project area. This geographic scope encompasses much of the irrigable land on OSMP property currently with high prairie dog occupation.

The project area contains approximately 5,300 acres of OSMP-managed land, of which approximately 2,300 acres is irrigable. Based upon 2019 mapping, prairie dogs occupy about 967 (40 percent) acres of these irrigable fields. Of the irrigable fields occupied by prairie dogs, about 690 acres are leased to agricultural producers and approximately 250 acres of occupied irrigable fields are no longer able to be leased and are currently maintained by OSMP staff. **Attachment A** shows the relative location of OSMP-managed lands, prairie dog occupation, irrigable fields and leased fields.

Working with the OSBT, staff developed a process for this management review including community engagement consisting of three phases or "windows." The first engagement window focused on describing the situation, gathering information about values and developing improvements to the current situation. The engagement window opened Oct.

23, 2019 with a community meeting and included opportunity for online engagement through November 13. Approximately 80 people attended the community meeting and there were close to 200 responses through on-line engagement.

First Engagement Window, Fall 2019 Community Input

The dominant topic of public comment was around the need to reduce prairie dogs on irrigable agricultural lands and preventing them from spreading onto neighboring private lands. There was support for lethal control reflecting concerns for the losses faced by OSMP agricultural tenants when prairie dogs inhabit irrigable lands; a perspective that lethal control is a reliable and effective way of improving the situation; and a belief that sustainable agriculture is not possible with prairie dogs occupying irrigable lands. Other comments linked with support for the use of lethal control were concerns over the loss of the city's investment in lands and waters, the increasing scarcity of farms and ranches around Boulder, and the importance of soil conservation for futures that include both agriculture and grassland restoration. Some comments included reservations about the use of lethal control, such as describing it as "necessary but not preferred" and recommending that lethal control be humane and minimized.

Some people opposed the use of lethal control of prairie dogs because of the reductions in populations of the black-tailed prairie dog throughout its historic range. Several people commented that prairie dogs should not be killed because they were present on the landscape before agriculture and are acting naturally in their native range, whereas agriculture is introduced and artificial. Others alluded to the important role that prairie dogs play in structuring grasslands and the cascading effects on other species from killing prairie dogs. Other comments expressed a belief that killing prairie dogs is fundamentally wrong, disrespectful and does not demonstrate compassion for life or that lethal control takes an emotional toll on the community.

Community members were also asked to provide their input about actions that OSMP could take to improve the situation. Staff reviewed these suggestions to determine if they were within the scope of the project. About 50 ways of acting in response to conflicts arising on irrigable lands occupied by prairie dogs were suggested. Staff's review of potential actions revealed that most of the ideas contributed could be grouped into either on-the-ground land and water management actions or recommendations for plan or policy changes. The on-the-ground actions, in turn, could be generally placed into the categories: Removal; Exclusion; Restoration; Potential Plan and Policy Changes; and Assumptions for Decision Making.

The full summary of public feedback from Engagement Window 1 can be found in **Attachment B**.

Draft Approach and Evaluation of Potential Actions

The second engagement window began on Jan. 6, 2020 when staff released the "Draft Approach and Evaluation of Potential Actions" (the Evaluation) (**Attachment C**) for public review and comment. The Evaluation describes the situation in detail as well as

provides information on a large variety of management tools and options with information on potential benefit and feasibility of each potential action.

Management options were packaged into four broad categories which include:

1. Removal - both non-lethal and lethal options for removing prairie dogs
2. Exclusion - tools to exclude prairie dogs from irrigated land either after removal or to prevent prairie dogs from moving in
3. Restoration - actions needed to restore productive agricultural use on properties where prairie dogs are removed
4. Potential plan and policy changes - changes related to use of tools analyzed and also stand-alone changes that could diminish conflicts between prairie dogs and irrigated agriculture

Within these categories, staff organized their evaluation around a list of management tools generated through the first engagement window of public comment as well as staff knowledge of techniques and tools used by others to manage prairie dogs and agricultural lands. One pillar of City of Boulder prairie dog policy revolves around use of humane tools for management and control of wildlife. As a result, several lethal control tools were described in the Evaluation but not analyzed in depth because they were considered inhumane.

The Evaluation also identified multiple levels of action for further analysis. The levels of action include:

- Doubling current levels of removal
- 25 percent removal
- 50 percent removal
- 75 percent removal
- 100 percent removal

These levels of action were used in developing full implementation cost estimates discussed later.

<u>Second Engagement Window Community Input</u>
The evaluation was posted to the project website on January 6, the beginning of the second engagement window, and is available for review and comment through midnight on February 16.

Public review and comment during the second engagement window are primarily on-line. Two help sessions have been held (Mon. January 27; 5-7 p.m. and Tue. February 4; 2-4 p.m.) to assist those unfamiliar or uncomfortable with on-line engagement tools. Communications for this project have informed recipients that input shared by February 4 will be provided to the OSBT at this February 12 study session.

The on-line interface provides opportunities for community members to indicate their level of support for potential recommended actions and affirm that the list is complete or

submit other ideas they feel should be considered. There are also opportunities for community members to provide more detailed feedback via email.

As described in the verbal updates/presentations to the OSBT in June and August 2019, no project-specific community meeting is planned for the second engagement window. However, the public comment period at the February 12 and 13 OSBT meetings will provide an opportunity for in-person feedback and comments.

The results of online engagement received through midnight on February 4, are provided in **Attachment D**. The engagement window for this second phase will not close until February 16, and full results of community feedback will be provided with the memo for the March 11 OSBT meeting.

The second engagement window was publicized through a variety of means including a press release; a Daily Camera article; signs at OSMP's trailheads in and around the project area; the project web site, social media posts through City of Boulder social media accounts; NextDoor posts; emails through OSMP's volunteer, Natural Selections and Field Notes email lists; and emails to agricultural lessees, those interested in prairie dogs and local wildlife, Prairie Dog Working Group members and representatives of community organizations.

Key Assumptions

In further analyzing potential strategies, staff identified several key assumptions for decision-making which could help inform the creation of a staff recommendation. They are also important for a transparent discussion of possible approaches. These key assumptions (based on public feedback, direction from OSMP plans and policies, feasibility analysis, and staff consensus) are suggested as follows:

- We want to support farmers and ranchers so they can continue to lease OSMP lands
- We want to be efficient in our actions so that we meet our goals while removing as few prairie dogs as possible over the long term
- We want to remove prairie dogs using effective, efficient, and humane methods
- We want to be able to maintain (use) our water rights and infrastructure
- We need to exclude prairie dogs after they are removed
- We need to invest in restoration of land after prairie dogs are removed
- We want to minimize soil erosion and loss
- We want to reduce conflicts with neighbors
- We do not want prairie dog removal to result in large scale, landscape level impacts to associated species
- Impacts to overall OSMP budget and staffing allocation must be sustainable
- We need to work with the staffing we have if possible, recognizing the difficulty and expense of adding additional staff
- We need to consider other priority projects and work that staff are assigned to in evaluating costs and trade-offs of new management actions
- We need to adjust city plans, policies, and ordinances as necessary to balance Charter purposes

ANALYSIS
To further refine the potential options for management, staff evaluated the plan and policy guidance relevant to our prairie dog management. This is summarized in **Attachment E**. In addition, to provide further information for use in determining the best package of management options to move forward, staff evaluated cost and impact of the most humane and feasible lethal control options at the five levels of use described in the evaluation report. This information is included in **Attachment F**.

Potential Factors for Prioritizing Removals
Staff have identified several areas where feedback from OSBT would be helpful. These include discussion around how to best prioritize implementation of new or enhanced management actions and focusing on what package of actions best meets the needs of balancing multiple Charter purposes.

The first of these is determining which factors should be used to prioritize removal in irrigated lands (regardless of what the final package of management actions includes). Staff ideas of potential factors include focusing removal efforts on:

1. Lease holdings (leased by single tenant) most impacted by prairie dog occupation
2. Properties that provide some degree of relief to the greatest number of tenants
3. Properties where exclusion is most likely to be successful based on landscape context
4. Properties where removal will have least impact to associated species (e.g., raptors)
5. Properties with highest degree of neighbor conflict
6. Properties where prairie dogs have recently colonized or expanded
7. Properties where a larger area of removal and exclusion can be successfully implemented over time (concentrated area rather than spread out)

Staff considered cost and feasibility and public feedback received and prepared five potential packages of actions for the board's consideration (Table 4). Each of these is built based on a baseline of the status quo which consists of:

Status Quo (40 acres relocation + barriers + restoration annually)

- Subject to state permitting annually
- Relocation trapping in a field up to 95+ percent removal, then move to in--burrow lethal control
- Following plague, funding and relocation efforts shift to removing small remaining populations, future exclusion and restoration
- $400,000 budgeted in 2020 to cover costs of relocation, Prairie Dog Working Group implementation items for 2020, and other prairie dog management needs. This funding includes barriers for exclusion of prairie dogs and some restoration once prairie dogs are removed.

All five packages build from the status quo and include the following recommended common elements:

1. Create an exception to the city burrow destruction ordinance to allow for agricultural activities (specifics of exemption to be determined)
2. Create an exception in city ordinance to the six-step process for lethal control of prairie dogs in irrigated fields (specifics of exemption to be determined)
3. Accomplish removal with contractors managed by staff with a goal of 100 percent removal for each field addressed
4. Accompany all removals with barriers or other exclusion methods to prevent recolonization
5. Restore all areas for irrigated agricultural use following removal
6. Accomplish lethal control through a combination of trap and donate (to raptor facility) and in-burrow use of pressurized exhaust (PERC)

The alternative packages for consideration are:

A. <u>Increase removal by 25 percent</u> (slight increase in use of lethal control)

- 50 acres relocation + barriers + restoration annually (larger number due to lower threshold for lethal control) focused across Transition and Removal Areas
- Relocation trapping up until 80 percent removal then move to in burrow lethal control

B. <u>Increase removal by 100</u> percent (balance relocation and lethal control)

- 40 acres of relocation + barriers + restoration annually focused on Transition Areas
- 40 acres of one-week trapping and euthanizing for donation to raptors followed by in-burrow lethal control + barriers + restoration focused on Removal Areas

C. <u>Increase removal by 240 percent</u> (increased focus on lethal removal)

- 40 acres of relocation + barriers + restoration annually focused on Transition Areas
- Up to 97 acres (~10 percent of occupied acres) removal annually through lethal control using trap and donate for 1 week then in-burrow lethal control + barriers + restoration focused on Removal Areas

D. <u>Increase removal by 260 percent</u> (sole focus on lethal removal)

- Up to 145 acres (~15 percent of occupied acres) removed annually through lethal control using trap and donate for one week, then in burrow lethal control + barriers + restoration focused across Transition and Removal Areas

E. <u>Increase removal by 500 percent</u> (sole focus on lethal control and quick restoration of agricultural lands)

- Up to 242 acres (~25 percent of occupied acres) (242 addressed through lethal control annually using trap and donate for one week, then in burrow lethal control +barriers + restoration focused across Transition and Removal Areas

Table 4: *Matrix of packages for prairie dog removal from irrigated agricultural lands within the project area*

Package	Total Acres of Removal per Year	Estimated Annual Growth Rate (% acres over previous year)	Years to 100% Removal	Total Prairie Dogs Relocated per Year	Prairie Dogs Lethally Controlled per Year	Total Annual Cost Estimate[2]	Funding Transferred from PDWG Projects	Funding Reallocated from Other OSMP Priorities	Estimated Additional Staffing FTE Needed
Status Quo	40	-1% to +3%	41+	1,164	40	$200K – 300K	$0K-100K	0	0
A. 25% increase	50	-2% to +2%	27+	1,164	336	$250K – 350K	$50K - 130K	$0K-20K	0
B. 100% increase	80	-5% to -1%	13-20	1,164	1,236	$350K – 450K	$50K - 130K	$20K – 120K	0.3
C. 240% increase	137	-11% to -7%	7-9	1,164	2,946	$550K –650K	$50K - 130K	$220K – 320K	1.0
D. 260% increase	145	-12% to -8%	7-8	0	4,350	$450K – 550K	$130K (all funding)	$120K – 220K	0.5
E. 500% increase	242	-22% to -18%	<5	0	7,260	$800K – 900K	$130K (all funding)	$470K – 570K	2.0

Calculations are based on the following assumptions:

- Cost estimates do not include additional staff time required
- Contractors are available for this work
- Current acreage = overlap of prairie dogs in 2019 and irrigable ag land in study area = 967 acres
- Cost estimates (packages B, C, D and E) assume one week of trapping and use of CO_2 chambers resulting in 25% of animals captured using this method, leaving 75% of control using pressurized exhaust (PERC)
- Barriers = 25% metal, 75% mesh wire
- Density averages are 30 prairie dogs per acre
- Baseline growth rate in acres = +3% to +7% (based on last several years data)
- Approximately $400,000 is currently budgeted for prairie dog management including relocations, Prairie Dog Working Group (PDWG) project implementation and other items
- FTE = full-time equivalent (2,080 hours)
- No plague occurs in the area

[2] Includes estimated costs for removal, exclusion and restoration for each package.

NEXT STEPS

The second engagement window will close on February 16 (Table 5). Based on feedback received from the community and input from the OSBT at this study session, staff will develop a preferred alternative package. This recommendation will be included in the memo packet for the March 11, 2020 OSBT meeting.

The third engagement begins on March 5 with the distribution of the materials for the March 11 OSBT meeting. At the March meeting, staff will present a recommendation and request that the OSBT recommend it to City Council. Since the Board will be asked to vote on how to proceed, there will be a public hearing providing further opportunity for community input at the March 11 meeting.

Depending upon the outcome of the March meeting, staff may provide recommendations to City Council at their April 21 meeting followed by any necessary follow-up meetings for associated ordinance changes.

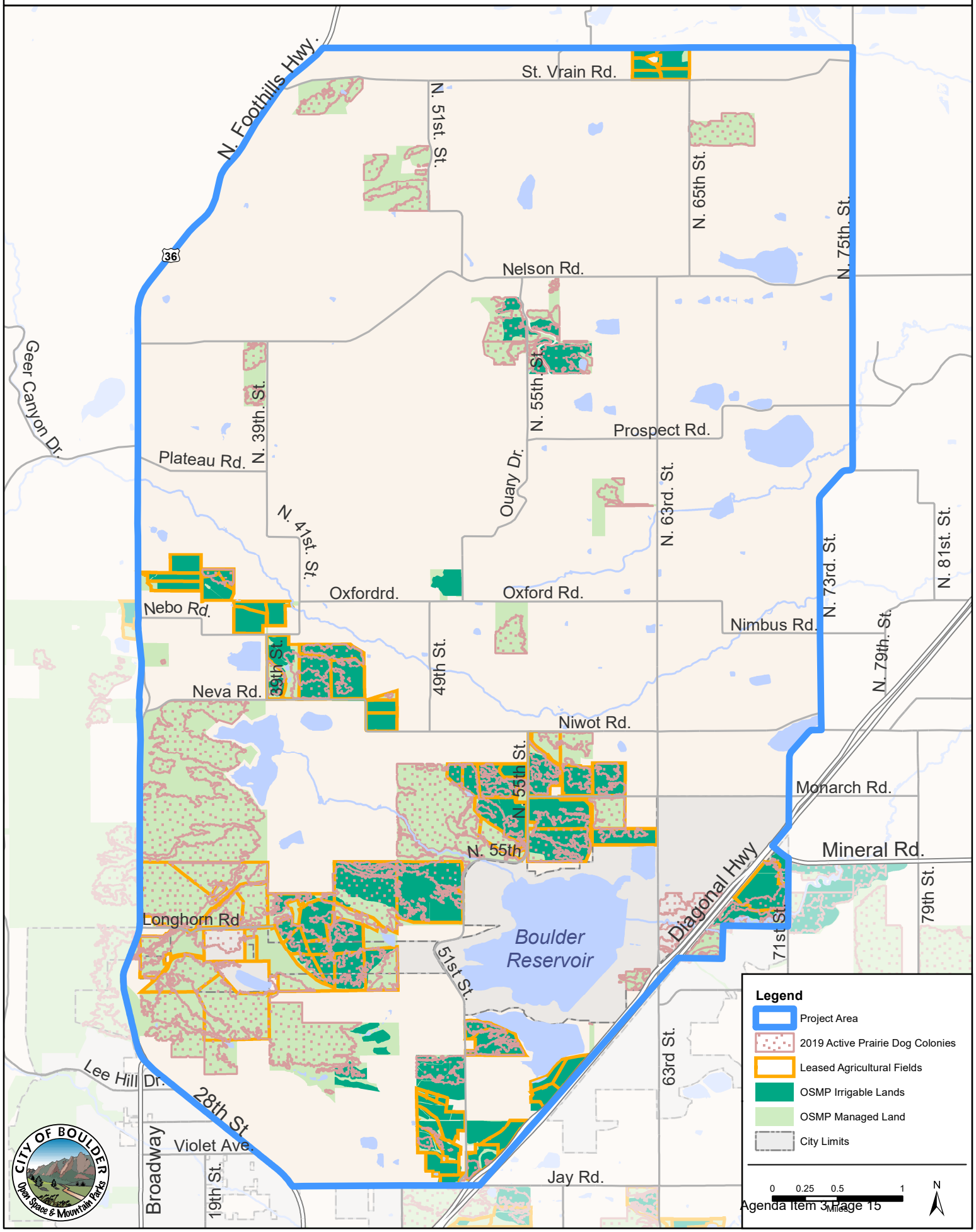
Table 5: *Project dates (future dates are subject to change)*

Dates	Item
January 6	Second Engagement Window Opens: Potential Recommended Actions posted to Be Heard Boulder
January 27 February 4	Drop in sessions to assist in use of Be Heard Boulder
February 4	Intermediate deadline for comments to be provided as part of Feb 12 OSBT study session materials.
February 12	<u>Open Space Board of Trustees Meeting</u> Public Comment to the Board Study Session
February 16	Second Engagement Window closes
March 5	Third Engagement Window opens Preferred alternative package posted to OSBT web page.
March 11	<u>Open Space Board of Trustees Meeting:</u> Public Hearing on Staff Recommendation- end of Engagement Window 3.
TBD, currently scheduled April 21	City Council

ATTACHMENTS

- **Attachment A:** Map of OSMP Lands, Irrigable Fields and Leased Fields in Project Area
- **Attachment B:** Summary of Engagement Window 1
- **Attachment C:** Draft Approach and Evaluation of Potential Actions
- **Attachment D:** Engagement Window 2 Public Feedback through February 4
- **Attachment E:** Policy and Plans Guiding OSMP Conservation of Prairie Dogs
- **Attachment F:** Cost Table for Lethal Control Alternatives

Attachment A: Project Area



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Expedited Management Review of Irrigated Lands Occupied by Prairie Dogs

OUR LANDS.
OUR LEGACY.
OUR FUTURE.

PUBLIC ENGAGEMENT WINDOW 1

Jan 2020

Executive Summary

In spring 2019, the Open Space Board of Trustees (OSBT) recommended and City Council directed the OSMP staff to undertake an expedited public process to look at agricultural uses on the northern grasslands including factors affecting the ecological conditions of the land, high soil health, healthy agricultural uses, wildlife health, and other conditions. In their motion City Council stated that new land management tools can be considered, including key-lining, soil amendments, lethal control and other measures to achieve charter open space goals.

Board and council action came in response to a perception by the OSBT and members of City Council that prairie dog levels on numerous Open Space and Mountain Parks (OSMP) irrigated agricultural properties have created a conflict between the city prairie dog and agricultural policies and prevent OSMP from fully meeting Charter purposes, has caused some degradation of soil and that it may be infeasible to address these problems only by non-lethal means in a timely or economical fashion. The main purpose of the first engagement window, October 23 – November 13, was to provide a description of the current situation, gather information about community values and offer an opportunity for people to advance their ideas about how the situation could be improved. Community members had the opportunity to share their thoughts at a community meeting (Oct 23) and through online engagement, Feedback resulted in:

- Improved understanding regarding community perceptions of prairie dog and irrigated agriculture management
- Greater shared understanding about the role of prairie dogs and irrigated agriculture on OSMP and how staff conserves both prairie dogs and irrigated lands.
- A broader of community values involved in managing irrigated lands occupied by prairie dogs
- The identification of potential strategies for evaluation

Future opportunities for community members to share comments on the project (dates may be subject to change):

Jan 6	Second Engagement Window Opens: Evaluation of Actions and Draft Approach posted on online for community review.
Jan 27 & Feb 4	Drop in sessions for assistance using on-line engagement
Feb 4	Intermediate comment deadline. Comments provided by Feb 4 will be included in Feb 12 OSBT study session materials.
Feb 12	Open Space Board of Trustees Meeting Public Comment to the Board Study Session
Feb 26	Third Engagement Window Opens: Final Recommendations posted to Open Space Board of Trustees web page.
March	Open Space Board of Trustees Meeting: Public Hearing
TBD	City Council

How We Listened

Purpose

The Expedited Management Review uses the City of Boulder's Engagement Strategic Framework. As such, staff established clear windows—that is specific time periods of public engagement opportunities to clarify when and why staff would seek community input and how that input would be used.

For the first engagement window, goals included:

- ***INFORM/CONSULT*: Community at Large**
  Describe the current situation and develop a shared understanding about it. Provide opportunity for community members to ask questions of city staff about the situation. Respond to questions about the situation. Request participants to share their initial ideas of ways that could be used to improve the situation.

- ***INFORM: Open Space Board of Trustees through updates***
  Update on the purpose of EW #1 and the outcomes of the October community open house.

Communications

To allow for maximum exposure and input, many communications were used to advertise this engagement window. These include announcements and/or reminders:

- Mailers to approximately 330 landowners within 150' of OSMP land in the project area
- Signs at OSMP trailheads in the project area;
- OSMP Webpage updates and "Featured Page"
- Project Webpage updates that included a link to Be Heard Boulder;
- A press release;
- A Daily Camera article (October 16);
- NextDoor posts to City of Boulder residents;
- Social media posts through OSMP *and* the city's Twitter (more than 85,000 followers), and OSMP Facebook (more than 2,600 followers) accounts;
- Emails to OSMP Field Notes (more than 2,500 subscribers), Natural Selections (4,200), City of Boulder News (6,000), OSMP Volunteer email lists (> 2,500), Wildlife Stakeholders, Energy Future; Project Stakeholders
- An Inside Boulder News spot on Boulder TV8.

Prairie Dog Management Open House

The October 23, 2019 open house provided an opportunity for community members to share their interests related to prairie dog management on irrigated agricultural land. Approximately 80 people attended the open house. The open house was facilitated by an external facilitator, Heather Bergman. The first part of the open house was the annual update on the implementation of the Prairie Dog Working Group recommendations. Part two was the opening of community engagement for OSMP's project reviewing the management of irrigated fields occupied by prairie dogs in northwestern OSMP grasslands. Part two also included three presentations and a values exercise and a poster session. The facilitation contractor provided a report which is attached as Appendix A.

Online Engagement

OSMP provided opportunities for online engagement including a questionnaire and email. Comments and input received through Wed. November 13 were used to understand community values and inform the development of potential recommended actions. The engagement window was extended to

November 13 in response to requests from community members. Input from Be Heard Boulder and through e-mail is available online.

What We Heard

This section provides a summary of what was heard during the first engagement window. The subsequent section How Feedback Was Used, provides detailed information on how input was incorporated into Master Plan materials.

Values

Both the community meeting and on-line engagement asked participants to answer the question: "*What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?".* The respondents were prompted with the suggested responses in the table to the right and were given the opportunity provide other entries if the available options did not reflect what was important to them.

Response Options (or "write in" others)
Animals dependent upon prairie dogs
Farming and ranching on OSMP
Grasslands plants and soils to capture carbon
Land management goals of OSMP neighbors
Lives of individual prairie dogs

Although not a statistically valid survey, the responses to this question was a way to get an impression about what was important to community engagement participants. This information was useful to staff in the selection of strategies and strategy packages, and to identify potential future projects based upon areas of community concern that fall outside the scope of this project. Weighted values provide a useful model to look across ranks to a cumulative value. The ranking used here assumes that an item ranked "1" is three times as important as an item ranked "3", 1.5 times as important as an item ranked "2" and that an item ranked "2" is twice as important as an item ranked "3". The table below provides weighted tallies for the combined responses from the open house and on-line engagement.

Table 1: Weighted values for combined responses to "What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?".

Subject	**Ranked 1** weighted 3x	**Ranked 2** weighted 2x	**Ranked 3** weighted 1x	**TOTAL** Weighted Values
Farming and ranching on OSMP	138	20	25	**183**
Lives of individual prairie dogs	78	42	9	**129**
Land management goals of OSMP neighbors	69	1	19	**121**
Grasslands plants and soils to capture carbon	57	18	45	**120**
Animals dependent upon prairie dogs	54	19	27	**104**

Themes

Input from the Oct 23 meeting can be found in Appendix A, details of online engagement are available online. These public comments were organized and the comments that were most common shown in **bold blue font**.

- **Removal of Prairie Dogs**
  - **Lethal Control**
    - **Support for the use of lethal control on prairie dogs**
      - Ranchers and farmers face real and significant economic losses when prairie dogs inhabit irrigable lands
      - Approvals for the purchase of expensive water rights/irrigated lands were made with the understanding the lands would be used for agriculture rather than prairie dog habitat.
      - Sustainable agriculture is not possible with prairie dogs occupying irrigable lands.
      - It is more reliable than non-lethal control
      - Ranching and farming are become more scarce
      - Support killing even with an understanding it is not what is preferred
      - Soil conservation is critical to the health of grasslands including prairie dogs.
    - Several types of lethal control were suggested.
    - OSMP tenants (ranchers and farmers) should be able to use lethal control on their leaseholds like other agricultural operators.
    - Lethal control techniques should be humane

    - **Opposition to the use of lethal control on prairie dogs**
      - The relatively few numbers of prairie dogs throughout their original range,
      - Lethal control is not a sustainable practice, and the use of it to promote agriculture means the agriculture is also not sustainable
      - Killing animals (esp. Native wildlife) is wrong
      - Prairie dogs were here before agriculture
      - Prairie dogs are innocent, acting naturally agriculture is not part of the natural order
      - Killing is disrespectful and does not demonstrate compassion for life
      - Killing has an emotional/mental effect on community
      - Killing has cascading negative effects upon other wildlife—amplified because prairie dogs are keystone species

  - **Relocation as a preferred removal tool**
    - Does not require killing
    - Other parts of OSMP may need prairie dogs if populations decline or die off
    - Several types or ideas about relocation were provided
  - **Need for more relocation sites**
  - **Contraceptives to remove prairie dogs without poisons and do not require a receiving site**

- **Restoration of irrigable lands taken out of production should follow prairie dog removal including because**:
  - **Soil is fundamental to supporting the ecosystem including grasses, agriculture and prairie dogs.**
  - **Restoration will help support the value of lands for other species including prairie dogs**
  - **Several aspects of reclamation were identified; as was the work of agencies and organizations as potential examples of how to proceed**

- **Exclusion of prairie dogs from irrigable lands to avoid cost of repeated removal and potential need for lethal control.**

- **Changes to the city's ordinances governing lethal control of prairie dogs and burrow destruction to allow or exempt agricultural activities.**

- **Compensating farmers and ranchers for lost revenues associated with prairie dog occupation.**

- **Stop irrigating or leasing areas where OSMP will not or cannot remove prairie dogs**

The engagement process also elicited comments that were related to the questions being asked but not central to the scope of this project. These include:

- **Importance of agriculture as part of what OSMP does**
  - Sometimes communicated specifically as:
    "Agriculture is more important than prairie dogs in irrigable lands"
  - **Concern/opposition to the city's support/promotion of prairie dogs**
- **Importance of prairie dog conservation as part of what OSMP does**
  - **Sometimes communicated specifically as:**
    "Prairie dogs/native species are more important than agriculture"
  - **Concern/opposition to the city's support/promotion of agriculture**
- **Effects of city policies upon neighbor's land management goals.**
  - City is viewed as a bad neighbor
  - Cost to neighbors managing prairie dogs
  - Lethal control being used by neighbors would decrease with increasing management by OSMP.
- **The current situation is the result of prairie dogs no longer having extensive habitat for colony expansion as existed pre-European settlement.**
- **The current situation is the result of inaction/lack of management by OSMP.**
- **Negative changes to the visitor experience have resulted from the deterioration of the landscape (views) and the dangers holes present to horses and pedestrians.**
- **Positive changes to visitor experience among those who enjoy watching prairie dog and the wildlife they attract or simply knowing they are being protected on OSMP**
- **Employ and exhaust the non-lethal Prairie Dog Working Group recommendations.**
- **The use of insecticides as part of the relocation process**

How Feedback Was Used

Input from the public, staff experience managing irrigated lands and prairie dogs on OSMP and consulting with partner agencies have informed the identification and evaluation of strategies. All strategies suggested will be evaluated by staff according to their benefit and feasibility. Order of magnitude cost estimates will be developed for strategies considered to be beneficial and feasible. Other comments are being used to devise a framework for linking and scaling strategies into realistic and viable packages. The strategies, evaluations and linked packages will be provided for public review and input during the second engagement window which begins January 6, 2020.

Next Steps

Upcoming Opportunities to Participate:

Following the first engagement window, members of the public will have the following opportunities to share comments with staff, the OSBT and City Council members:

- Jan 6: Second engagement window opens, potential recommended actions available online.
- Feb 4: Deadline for comments via Be Heard Boulder/e-mail to be provided as part of Feb 12 OSBT study session materials
- Feb 12: Public comment at OSBT meeting
- Feb 12: Deadline for providing comments through Be Heard Boulder/via e-mail
- Feb 12: Close of Second Engagement Window
- Feb 26 Third Engagement Window Opens: Staff Recommendations posted to Open Space Board of Trustees web page
- Mar 11 OSBT Meeting: Public Hearing
- TDB City Council

Note: Dates may be subject to change.

Appendix A:

City of Boulder Open Space and Mountain Parks Prairie Dog Management Open House October 23, 2019 Meeting Summary

Appendix B:

Unweighted and Weighted Response Tallies to: What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?”

APPENDIX A:

City of Boulder Open Space and Mountain Parks
Prairie Dog Management Open House
October 23, 5:30 pm – 8:00 pm
Meeting Summary

OVERVIEW

On October 23, 2019, the City of Boulder Open Space and Mountain Parks (OSMP) held an open house to provide an opportunity for community members to share their interests related to prairie dog management on irrigated agricultural land. Approximately 80 people attended the open house. The first part of the open house was the annual update on the implementation of the Prairie Dog Working Group recommendations. Part two was the opening of community engagement for OSMP's project reviewing the management of irrigated fields occupied by prairie dogs in northwestern OSMP grasslands. Part two included three presentations and a poster session. The first presentation in part two dealt with prairie dog ecology and management. The next presentation was about the City of Boulder's prairie dog protection ordinances. The third presentation provided information about OSMP's agricultural resources program as it relates to the management of irrigated lands occupied by prairie dogs. Each of the presentations are available on the OSMP website. Attendees of the open house were invited to ask questions between each presentation.

Following the presentations, attendees were invited to stay for a poster session and share their interests and ideas about prairie dog management on irrigated agricultural land with OSMP employees. Posters are available on the OSMP website. Attendees had the opportunity to write their comments and questions on notecards. There was an additional activity in which attendees were given colored chips to rank different subjects related to prairie dog management based on their importance to the attendee. The questions, comments, and results of the ranking activity are summarized below.

PART ONE: 2019 UPDATE ON THE IMPLEMENTATION OF PRAIRIE DOG WORKING GROUP RECOMMENDATIONS

QUESTIONS FOLLOWING THE PRESENTATION ON PRAIRIE DOG WORKING GROUP UPDATES

Following the presentation on the Prairie Dog Working Group updates, audience members asked questions. Questions are indicated in italics with corresponding answers in plain text.

Will the presentations be available online?
Yes, presentations can be found on the OSMP website.

What is the rationale for a plague management program for prairie dogs? The plague seems like a natural control for managing prairie dog populations.
The Prairie Dog Working Group recommended creating a comprehensive plague management plan, which staff will undertake in 2020. One of the reasons for this recommendation was that the plague threatened the long-term sustainability of prairie dog populations on a range-wide basis. Another reason for the recommendation is that to reintroduce the black-footed ferret, prairie dog populations on the southern grasslands would need to recover substantially. The plague management program is a method for recovering those populations.

Douglas County is conducting pilot studies on using contraceptives to manage prairie dog populations. Are you aware of these projects in other areas?
OSMP staff is aware of other projects and studies occurring in areas outside of Boulder. If there are studies and projects of which others are aware, please share them with OSMP staff.

How much does it cost to vaccinate prairie dogs?
A bottle of vaccine covers about 80 acres of prairie dog colony and costs approximately $900 per bottle. It requires a four-person crew over two mornings to administer the vaccine, which increases the cost as well.

How much does it cost to transplant prairie dogs on a per prairie dog basis?
The cost of transplanting prairie dogs on a per prairie dog basis varies depending on the project and who the contractor is. The 2019 expenditures are approximately $136,000 for moving 28 acres of prairie dogs. It can be quite expensive.

What is a managed buffer zone?
A bugger zone can refer to a variety of circumstances where an area adjacent to an irrigated agricultural field is maintained as prairie dog free to discourage colonization of the field by prairie dogs. Currently, OSMP implementation of a buffer zone will follow removal of prairie dogs from an irrigated agricultural field. OSMP then installs a barrier, which in current projects will be made of wire mesh and cloth, that prevents the prairie dogs from seeing through the barrier. OSMP buries the mesh several feet underground to keep prairie dogs from digging underneath the barrier. They place these barriers so that there is space between the prairie dog colonies and the hay fields. This technique creates a buffer that prevents the prairie dogs from immediately returning to the irrigated agricultural land.

How does OSMP decide where to relocate prairie dogs?
The OSMP Grassland Plan outlines where they can relocate prairie dogs. There are two management designations that can serve as receiving sites for prairie dogs. OSMP uses a set of criteria to examine the vegetation, potential for neighbor conflicts, and current management of the land to determine the suitability of an area for prairie dog populations. They also have to go through a state permitting process to approve the site, which requires OSMP to evaluate the ecological suitability and social context of the receiving land. OSMP has to submit a plan to address any social conflicts with neighbors should they arise.

Is the intent to eventually remove the prairie dogs from the irrigated agricultural lands?
The Grassland Plan designates most irrigated fields as transition or removal areas with the intention to eventually have them prairie dog-free. The feasibility of moving all the prairie dogs is a challenge. OSMP is continuing to relocate prairie dog to take small steps towards reaching that goal.

Is the goal to relocate prairie dogs on all 4,457 acres of prairie dog-occupied OSMP land?
No. The 4,457 acres of OSMP land where there are prairie dog colonies include areas designated for the protection of prairie dogs, including grassland preserves, prairie dog conservation areas, and multiple objective areas, as well as irrigated agricultural land, non-irrigated agricultural land, and non-agricultural land. The goal is not to relocate prairie dogs on all 4,457 acres.

OSMP is relocating prairie dogs to save them on the southern grasslands. Then, they are reintroducing black-footed ferrets to kill them. Can you explain that rationale?
The relocation of prairie dogs to the southern grasslands has several benefits. One is removing them from areas where they conflict with irrigated agricultural lands or development. The other is that prairie dogs play an important ecological role by supporting other species that rely on them. These associated species include predators, like the black-footed ferret, that prey on them. Sustaining prairie dog populations are not only to benefit the prairie dogs themselves but also to benefit associated species, including predators. At this time, OSMP has not determined whether to pursue the reintroduction of black-footed ferrets. Evaluation of this potential will begin in 2020.

How many black-footed ferrets are in the recovery program now, and how many are necessary to control prairie dog populations?
The US Fish and Wildlife Service (USFWS) manages the black-footed ferret program. OSMP staff is not aware of how many captured black-footed ferrets they have and how many offspring the ferrets are producing. OSMP is currently not involved in the black-footed ferret reintroduction programs. In the future, it is not possible to say whether black-footed ferrets will be able to control the prairie dog population; although, a self-sustaining black-footed ferret population does tend to maintain prairie dog populations at a stable level. A population of 30 adult black-footed ferrets in 1,500 acres of prairie-dog occupied land is the threshold that the USFWS uses to determine a self-sustaining black-footed ferret population. More information on the black-footed ferret can be found here.

What is the maximum density of prairie dogs on the southern grasslands that would establish a healthy population and not devastate the grasslands?
OSMP is continuously evaluating the conditions on the ground and the impact that prairie dog populations have on the vegetation. The impact of density on the landscape varies based on several conditions of the landscape, such as soil and vegetation type. OSMP uses different thresholds to evaluate prairie dog impacts depending on the conditions of the specific area. OSMP does not have specific density goals, but the Grassland Plan does establish a goal of 10-26% occupancy of grassland preserves to meet OSMP's multiple conservation goals for these areas.

Are there areas where prairie dogs live harmoniously with the grasses?
The southern grassland preserve when it sustained a larger population of prairie dogs was a good example of prairie dogs living in a way that sustained the vegetation communities. Although there were areas where the disturbance to vegetation was more intense, there was no evidence of widespread, landscape-scale vegetation degradation. The good condition of the grassland was in part because the prairie dogs had enough space to move around and distribute impacts.

PART TWO: MANAGEMENT REVIEW OF IRRIGATED LANDS OCCUPIED BY PRAIRIE DOGS

QUESTIONS FOLLOWING THE PRESENTATION ON PRAIRIE DOG MANAGEMENT
Following the presentation on prairie dog management on OSMP land, audience members asked questions. Questions are indicated in italics with corresponding answers in plain text.

Can OSMP explain why they made Jay Road the boundary of the pilot project for managing prairie dogs on irrigated agricultural land?
Most of the overlap between prairie dogs and irrigated hay fields were north of Jay Road. The project also needed to be limited spatially to make it feasible. There are some exceptions that OSMP made to include irrigated agricultural fields that are east of Diagonal Highway, which otherwise forms the eastern boundary of the project area. OSMP wanted to focus their analysis on the places where people were experiencing the most conflict and hardships as a result of prairie dogs on irrigated agricultural land.

Does the property owner or the city pay the costs of installing barriers?
If the barriers are on city property, then the city pays for the installation of the barrier. If the barriers are on private property, the private owner traditionally is responsible for the cost. In 2020, OSMP will be organizing a cost-sharing grant program to share the cost of installing barriers with neighboring landowners.

The maps in the presentation are different from the maps on the OSMP website. Are the maps in the presentation the most recent maps?
OSMP staff created the maps in the presentation last week, so they are more recent than the maps on the OSMP website.

How does OSMP consider the proximity of prairie dog populations to golden eagle nests when relocating prairie dogs?
Golden eagles are on the list of associated species for which OSMP sets conservation targets. The impact that relocating prairie dogs will have on golden eagle populations is the type of information that OSMP will consider as they evaluate alternatives. This type of site-specific information is something that OSMP will be gathering during the next step of the process. Because there are specific targets for associated species like the golden eagle in the Grassland Plan, OSMP has to track and measure what the impact on golden eagles as a part of their analysis.

QUESTIONS FOLLOWING THE PRESENTATION ON THE CITY OF BOULDER ORDINANCES
Following the presentation on the City of Boulder's prairie dog protection ordinances, audience members asked questions. Questions are indicated in italics with corresponding answers in plain text.

What is required to obtain a permit to damage burrows? This ordinance sounds like it would make it difficult to plow a field.
The ordinance against damaging burrows does make it difficult to plow a field. There is a stipulation in the ordinance that allows for public projects or utility projects to go through areas where there is a burrow if best management practices are followed. An example of a best management practice includes avoiding prairie dog holes or putting down a plate over the entry of a burrow every time a wheel of a vehicle needs to pass over it.

If the City of Boulder OSMP relocates prairie dogs from city open space and those prairie dogs end up on private property in the county, do the private property owners have to follow the city's rules and ordinances?
No, private owners in the county do not have to follow these rules. These ordinances are for the City of Boulder owned land only. (Note: The ordinances also apply to private land within Boulder's city limits).

QUESTIONS FOLLOWING THE PRESENTATION ON THE OSMP AGRICULTURAL PROGRAM AND PRAIRIE DOGS
Following the presentation on agricultural resource management and prairie dogs, audience members asked questions. Questions are indicated in italics with corresponding answers in plain text.

Does the public at large understand the role that the agricultural community plays in the stewardship of the land? Is there an education campaign or program to educate the public on this topic?
OSMP staff was trying to be intentional when they adopted a stewardship model in the Agricultural Resources Management Plan. A stewardship model is OSMP's method to determine if they will renew a lease; if there is stewardship on the land, OSMP will renew the lease with the operators. OSMP has not done the best job with educating the community on this model. The Agricultural Resources Management Plan identifies opportunities for education and for connecting the community to agricultural programs. OSMP would like to improve these types of educational efforts in the future.

There is a property where there are prairie dogs on which OSMP changed the agricultural usage from hay fields to grazing. The grazing, in combination with the prairie dogs, has led to unproductive land on the property. When and why was the usage changed from hay production to grazing?
OSMP tries to work with agricultural producers to provide needs for their operations. There are times when OSMP has to make management changes on certain parcels. These changes may be due to the business choices that operators have to make to be successful. OSMP tries to accommodate multiple uses. Attendees can leave comments to identify areas where they would like to see a different agricultural use, and OSMP potentially could incorporate that comment as part of the solution.

How does OSMP designate irrigated properties?
OSMP examines if the property is in a historic service area or if there is historic infrastructure on the property, like a ditch or concrete irrigation structures.

Does OSMP look at the historical value of ditches if the ditches are not in use?
Overall, OSMP water shares are used to support the agricultural program. Some of the ditch companies are fungible, and OSMP can move water anywhere through the ditch system. OSMP does make some choices regarding the quality of irrigated land and may move water from less productive areas on a property to more productive areas.

The City of Boulder and Boulder County controls a lot of the water that moves through the ditches. Does the city use its water rights? If so, what percentage of its water rights does the city use?
OSMP includes water rights in their agricultural leases. OSMP does not have measurements throughout the system to determine what percentage of its water rights are in use, but they do believe they are fully using the water rights allocated to them.

What is OSMP's plan for the land south of Jay Road that is experiencing degradation?
City Council and the Open Space Board of Trustees asked OSMP to conduct the initial analysis on the area north of Jay Road to allow the process to go more quickly and to implement pilot projects. If the pilot projects are successful and scalable, OSMP can apply them to different areas on OSMP land if appropriate. There is no less concern for other areas of open space outside of the Jay Road boundary, but the City Council needed to select a place to start.

QUESTIONS SUBMITTED VIA NOTECARDS
During the open house, attendees had the opportunity to submit questions to OSMP via notecard for OSMP to answer. The questions submitted via notecard are listed below with responses *prepared* by OSMP after the conclusion of the meeting.

Has OSMP measured how much the prairie dog is worth to the grassland ecosystem?
No, not in the terms of calculating a numerical worth. The ecological value of prairie dogs and associated species in the context of OSMP grasslands is reflected in OSMP's Grassland Ecosystem Management Plan. The plan looks at OSMP grasslands as eight systems for which specific and measurable conservation objectives have been developed. One of the eight systems is "Black-tailed Prairie Dogs and Associates". The identification of this system as a focus of the plan is one way that the city expresses the value of this system as a part of OSMP grasslands. The development of conservation objectives and measures of success provide a means for the city to report out on how well we are addressing the conservation of this system. The same approach was used in the Grassland Plan for other systems including Mixed Grass Prairie Mosaic, the Xeric Tallgrass Prairie, the Mesic Bluestem Prairie, Wetlands, Riparian Areas, Agricultural Operations and the White Rocks.

What is the quantified economic impact prairie dogs have in each agricultural area?
Staff has not quantified the economic impact of prairie dogs on each agricultural area. Prairie dog colonies are mapped on an annual basis and staff can determine how many acres of each agricultural area are occupied by prairie dogs. This information is used to determine the relative impact of prairie dog occupation to each agricultural lease area.

Can OSMP change some of the irrigated agricultural land designations to protected prairie dog habitat?
Yes, OSMP can make such a change. However, prior to making such a change, staff would consider the effects that such a change would have upon agricultural tenants, the objectives of the agricultural program, water rights and other factors.

What economic alternatives has OSMP tried to replace any of the income lost to the lessees?
OSMP has reduced or waived agricultural lease payments to operations that have been significantly impacted by prairie dogs occupying irrigated agricultural land.

How does OSMP quantify if native wildlife or irrigated agricultural lands are more beneficial to the grassland/open space?
Since both native wildlife and irrigated lands are consistent with the charter purposes of Open Space and Mountain Parks, the city has sought to find the best opportunities to conserve these and other parts of the city's grasslands. In some cases, we can address multiple charter goals in the same place. For example, we have found that irrigated agricultural areas in the South Boulder Creek floodplain are among our best opportunities to promote sustainable agricultural operations and conserve rare plant communities and federally threatened plant and animal species. In the case of prairie dogs and irrigated agriculture however, we have found that our conservation objectives cannot be met in the same place and have designated most prairie dog colonies in irrigated fields as transition or removal areas—which indicates our management preference to remove prairie dogs from these areas.

Can OSMP increase the acres of hayfields under their agricultural leases?
In general, OSMP does not influence what lessees grow other than identifying sites suitable for diversified vegetable / livestock farms. OSMP currently has a very limited amount of irrigated agricultural land used for crops other than hay crops. Much of the land used for annual crops has been planted to hay crops in the past several years. There is one diversified vegetable / livestock farm in the project area that has a limited number of acres used for growing annual food crops.

Why do prairie dogs have high priority over other species and concerns in natural grasslands (i.e., birds, grasses, soil health, etc.)?
The city seeks to conserve the full range of biological diversity in open space grasslands. In some areas (Prairie Dog Conservation Areas) prairie dogs and their associated species are the focus of management. However, there are other parts of the OSMP land system that are managed for species that require or do better in grasslands undisturbed by prairie dogs. Bird and grass species richness and soil health factors are indicators of grassland health used by OSMP to measure the success of our management.

Was it the decision of Boulder City Council or OSMP to not discuss the damage and migration of prairie dogs to neighboring private property?

The City Council and city staff continue to evaluate and address neighbor issues. However, the approaches to deal with neighbor conflicts were already endorsed by City Council after being identified by the Prairie Dog Working Group (PDWG) and included in staff's recommended implementation program for the work of the PDWG. The scale of conflicts with neighbors make solutions expensive and limited in distribution. In its direction to undertake the current process, City Council directed OSMP staff to focus the conversation on irrigated agricultural lands on OSMP. However, some recommendations to address the issues associated with prairie dog occupation of irrigated lands on OSMP are likely to have cascading benefits for neighboring property owners. Staff has also sought to understand the relative level of importance among community members of several values including neighbor's land management goals, to evaluate where to place the emphasis as we develop and recommended packages of action.

How can regenerative agroforestry transform prairie dogs from a problem into a solution?

Staff has been implementing regenerative practices on a trial basis in selected prairie dog occupied agricultural areas with limited success. We will continue to experiment with various practices in hope of finding regenerative practices that can be used that will at least prevent continued degradation of occupied irrigable agricultural land.

Are all of the 1,000 acres actually in conflict or do their designations just create a conflict alone?

These areas are in conflict. While most of these prairie dog colonies in conflict are designated as transition and removal areas, there are also colonies designated as a grassland preserve or multiple objective area. The designations are not what are being used to calculate conflict, simply the overlap of irrigable land and prairie dog occupation.

How are you going to keep prairie dogs protected from sylvatic plague in prairie dog conservation areas?

Currently prairie dogs that reside in the Southern Grasslands are receiving two doses of the sylvatic plague vaccine (spring and fall) annually. For prairie dogs that are being relocated, they receive a dose of the sylvatic plague vaccine at their original location and the second after they are relocated to the Southern Grasslands. In addition, as part of the relocation project, their burrows are dusted with insecticidal dust at the capture site and the prairie dogs are sprayed with liquid insecticide prior to release in the Southern Grasslands. This plague management will continue until the City finalizes a comprehensive plague management plan as recommended by the prairie dog working group. This is anticipated to occur in 2020 and it will direct what plague management will occur where and under what conditions.

COMMENTS SUBMITTED VIA POST IT NOTES

During the open house, attendees had the opportunity to submit comments to OSMP via post it notes. The comments submitted via post it notes are listed below.

Partnerships with Boulder County

- Align OSMP practices with the county's practices for managing prairie dogs.
- Contract with Boulder County to supplement their lethal control team to remove and eradicate prairie dogs from both city and county lands.

- Adopt and implement county policies regarding prairie dogs.

City of Boulder Ordinances

- Immediately amend/repeal the wildlife ordinance to allow burrows to be disturbed on agricultural land by normal and customary agricultural practices, like plowing, planting, and cultivation. Each season delay has serious implications.
- Allow lessees to use lethal control to eradicate prairie dogs that start to occupy their lands.
- Allow farmers to level the holes in the fields. Farmers cannot plow the fields or operate machinery with the burrows in the way.

Management of Neighboring Lands

- Stop buying land in the county if OSMP cannot manage it as the county does.
- Address how city-owned property is affecting neighboring landowners in the county.
- Listen to the concerns of neighboring landowners.
- Host a forum to address impacts to properties that are neighboring irrigated agricultural land to which prairie dogs migrate.

Management of Agricultural Resources

- Require/fund OSMP to actively irrigate and monitor irrigation on all properties that have water rights, even if OSMP does not lease them.
- Reintroduce pulse grazing in combination with lethal management to revitalize the soil and grasslands, establish a large ecosystem of birds and other species, and sequester carbon.
- Label irrigated OSMP lands as prairie dog exclusion zones.
- Soil conservation is fundamental to any discussion of prairie dogs. Without soil, there are no grasses to feed prairie dogs. In areas where prairie dogs have disturbed the land, the topsoil blows away.
- Prairie dogs breed disease and denude the landscape, increasing wind and water erosion. The weeds that grow on the landscape following the presence of prairie dogs blow onto neighboring properties.
- In some areas, topsoil is missing entirely because of prairie dog populations. In 2018, OSMP attempted to remediate the Bennett Property by planting cover crops in small experimental test plots. Few of those test plots were successful. Most of the test plots ended up covered only with bindweed. It does not seem possible to effectively remediate degraded sites.
- Prairie dog holes can be dangerous to animals, like horses.
- On lands where the agricultural usage changed from hay production to grazing, return those fields to hay production. On irrigated agricultural lands, there are no longer any tall grasses or hay, which seemed to prevent prairie dog colonies from establishing.

Population Control Methods

- Consider a contraceptive program for prairie dogs.
- Buy four pressurized exhaust rodent controller (PERC) machines, like Boulder County.
- Become involved with the black-footed ferret reintroduction program.
- Use live trapping for one week and then switch to lethal control to remove the remaining prairie dogs from an area. This method would decrease the costs of relocation and removal.
- Develop a budget for barrier fencing on all neighboring lands and open space
- Consider using barriers on grasslands that are adjacent to irrigated agricultural lands. For example, there needs to be a barrier on Neva at 39th going west on Beech.
- Install perches for eagles and hawks in Heatherwood to control the number of prairie dogs.
- Lethal control is not a sustainable solution for prairie dog management.

- Consider a prairie dog hunting season. Natural predators cannot manage the prairie dog population.
- Transporting prairie dogs is only spreading the problem around.

Overall Goals and Planning Process

- Eliminate prairie dogs from all irrigated land to support soil sequestration.
- Achieve less than <6% prairie dog occupation on irrigated agricultural land.
- Reduce the amount of taxpayer money spent on managing prairie dogs.
- Abide by the city charter and preserve agricultural lands free of prairie dogs.
- Evaluate and treat properties before they are in crisis mode to prevent future destruction of land while also working on a solution to reclaim the land that is not in sustainable condition due to the current lack of management.
- Increase the speed of the planning process. OSMP is not doing enough to prevent the destruction of property while they are developing a long-term project. The growth of the prairie dog population is outpacing the planning process to solve the issue.
- Respond more quickly when prairie dogs begin to occupy a new parcel of irrigated agricultural land.
- Include the McKenzie property in the project boundary. This property includes cropped land and an irrigation pond.

Other Considerations

- Abolish the Western Association Fish and Wildlife Agencies 2006 Memorandum of Understanding for the Conservation and Management of Species of Conservation Concern Associated with Prairie Ecosystems.
- Do not lease land to grow marijuana or hemp.

WEIGHTED RANKING ACTIVITY RESULTS

During the open house, there was an activity in which attendees received three different colored chips (blue, white, and red). Each colored chip represented a different degree of prioritization, with the blue chip representing the participant's top priority, the white chip representing the participant's second priority, and the red chip representing the participant's third priority. There were five boxes labeled with different subjects (i.e., animals depending on prairie dogs, farming and ranching, etc.). Participants placed their chips according to which of these subjects were most important to them. Participants also could write in an option if any of the available options did not reflect what was important to them. To analyze the results, each colored chip was assigned a corresponding weighted value, with blue chips (top priority) having a value of three, white chips (second priority) having a value of two, and red chips (third priority) having a value of one. Using this value system, subjects with higher values indicate a higher level of prioritization from participants. The results of the activity are summarized below.

Note: During the activity, some participants accidentally received extra chips because some of the chips were stuck together. Although the activity produced informative results, the results of the activity should be interpreted with this error in mind.

Results of the Ranking Activity by Chip Count

Subject	Number of Blue Chips (top priority)	Number of White Chips (second priority)	Number of Red Chips (third priority)	Total Chip Count
Farming and Ranching	19	20	15	54
Grassland Plants and Soils to Capture Carbon	7	14	6	27
Land Management Goals of OSMP Neighbors	8	2	11	21
Animals Depending on Prairie Dogs	2	1	5	8
Lives of Individual Prairie Dogs	1	1	1	3

Results of the Ranking Activity by Weighted Value

Subject	3x Weighted Value of Blue Chips (top priority)	2x Weighted Value of White Chips (second priority)	1x Weighted Value of Red Chips (third priority)	Total Weighted Value
Farming and Ranching	57	40	15	112
Grassland Plants and Soils to Capture Carbon	21	28	6	55
Land Management Goals of OSMP Neighbors	24	4	11	39
Animals Depending on Prairie Dogs	6	2	5	13
Lives of Individual Prairie Dogs	3	2	1	6

Write-In Options
Population management of prairie dogs on all open space (submitted by three participants).

Appendix B: Unweighted and Weighted Response Tallies to:
What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?".

Be Heard Boulder (BHB)

Subject	Ranked 1	Ranked 2	Ranked 3	TOTAL
Farming and ranching on OSMP	27	20	10	**57**
Lives of individual prairie dogs	25	13	8	**46**
Animals dependent upon prairie dogs	21	27	14	**62**
Grasslands plants and soils to capture carbon	12	18	39	**69**
Other	11	7	12	**30**
Land management goals of OSMP neighbors	7	17	16	**40**

Subject	Ranked 1 weighted 3x	Ranked 2 weighted 2x	Ranked 3 weighted 1x	TOTAL Weighted Values
Farming and ranching on OSMP	81	40	10	**131**
Lives of individual prairie dogs	75	26	8	**109**
Animals dependent upon prairie dogs	63	54	14	**131**
Grasslands plants and soils to capture carbon	36	36	39	**111**
Other	33	14	12	**59**
Land management goals of OSMP neighbors	21	34	16	**71**

Open House

Subject	Ranked 1	Ranked 2	Ranked 3	TOTAL
Farming and Ranching	19	20	15	**54**
Grassland Plants and Soils to Capture Carbon	7	14	6	**27**
Land Management Goals of OSMP Neighbors	8	2	11	**21**
Animals Depending on Prairie Dogs	2	1	5	**8**
Lives of Individual Prairie Dogs	1	1	1	**3**

Subject	Ranked 1 weighted 3x	Ranked 2 weighted 2x	Ranked 3 weighted 1x	TOTAL Weighted Values
Farming and Ranching	57	40	15	**112**
Grassland Plants and Soils to Capture Carbon	21	28	6	**55**
Land Management Goals of OSMP Neighbors	24	4	11	**39**
Animals Depending on Prairie Dogs	6	2	5	**13**
Lives of Individual Prairie Dogs	3	2	1	**6**

Combined from BHB and Open House

Subject	Ranked 1	Ranked 2	Ranked 3	TOTAL
Farming and ranching on OSMP	46	40	25	**111**
Lives of individual prairie dogs	26	14	9	**49**
Animals dependent upon prairie dogs	23	28	19	**70**
Grasslands plants and soils to capture carbon	19	18	45	**82**
Land management goals of OSMP neighbors	18	19	27	**64**
Other (enumerated on-line responses only)	11	7	12	**30**

Subject	Ranked 1 weighted 3x	Ranked 2 weighted 2x	Ranked 3 weighted 1x	TOTAL Weighted Values
Farming and ranching on OSMP	138	20	25	**183**
Lives of individual prairie dogs	78	42	9	**129**
Land management goals of OSMP neighbors	69	1	19	**121**
Grasslands plants and soils to capture carbon	57	18	45	**120**
Animals dependent upon prairie dogs	54	19	27	**104**

Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs:

Draft Approach and Evaluation of Potential Actions

Updated January 8, 2020 with revisions and corrections for typos

Background

Direction

In the spring of 2019 , the Open Space Board of Trustees (OSBT) and the Boulder City Council identified that conflicts with city's prairie dog management and viable agricultural operations have affected Open Space and Mountain Park's (OSMP) ability to fully meet the charter purposes of open space and have caused soil degradation and loss. Following an April recommendation by the OSBT, in May the City Council directed OSMP staff **to undertake an expedited review of the management of irrigated lands occupied by prairie dogs, with a focus north of Jay Road.** The actual motion was to:

"direct OSMP to undertake an expedited public process that looks at agricultural uses on the northern grasslands including factors affecting the ecological conditions of the land, high soil health, healthy agricultural uses, wildlife health, and other conditions. New land management tools can be considered, including key-lining, soil amendments, lethal control and other measures to achieve charter open space goals."

To address this direction, OSMP used community feedback to create an overall approach and prepare an evaluation of the potential management actions listed in the "Evaluation of Potential Actions

Staff then evaluated each of the potential actions regarding their benefit and feasibility. For benefit, staff considered several factors:

a) **Scope:** The degree to which the action would allow OSMP to more fully meet charter goals. Staff examined how fully would the strategy allow for the implementation of Master Plan Strategy ATT.3, and implement the Master, Ag and Grassland Plans.
b) **Spatial Scale**: The degree to which the action is likely to be effective across the project area.
c) **Contribution:** How much the action contributes to addressing the situation. This factor also required staff to examine what other actions would be needed to ensure success.
d) **Duration:** Will the action secure a long-lasting outcome or is it a temporary fix?
e) **Leverage:** Will the action enable OSMP or partners to take other actions to improve the situation? We also consider how widespread and long-lived the action's effect will be

Actions that can make a significant contribution to addressing the issue across the project area, are effective for a long time, and support other actions are evaluated as having a higher benefit.

For **feasibility,** staff examined these factors:

a) **Lead**: The availability of a staff or partner/contractor/consultant to lead implementation.

b) **Ease:** The ease of completion and the complexity of the action.
c) **Appeal:** The ability for the action to motivate stakeholders and decision-makers. Actions for which a capable lead individual is available and that are very straightforward or have been done before, and which are likely to appeal to key stakeholders, are rated as more feasible.

Details of staff's evaluation are available in **Appendix A**. A summary of the overall benefit and feasibility rating for the preliminary actions is included in Table 7.

Cost
Staff began the process of developing cost estimates for actions with medium and high benefit and feasibility ranks and for which there was enough experience. Cost information is included in action evaluations (Appendix A), where available. Costing will be further refined after receiving OSBT and community feedback on the preliminary approach and action evaluation and included in staff's recommendation.

Table 6

Problem Statement

Because of the high levels of production supported by supplemental water, irrigable[1] lands have been identified as OSMP's best opportunity to support successful agricultural operations (Figure 1). The city has made significant investments in the purchase of open space lands and water – and has invested in the development of water delivery infrastructure – to support irrigated agriculture.

Black-tailed prairie dogs have far-reaching effects on the grassland that they inhabit, and their presence provides prey and landscape structure necessary for the presence of many associated species that would not otherwise be present. Because of these far-reaching effects, prairie dogs are often considered a "keystone" species. They are a species that defines a unique animal community. In recognition of the importance of prairie dogs, the city has also made large investments in the conservation of prairie dogs and their associated species as well as direct management of prairie dog populations.

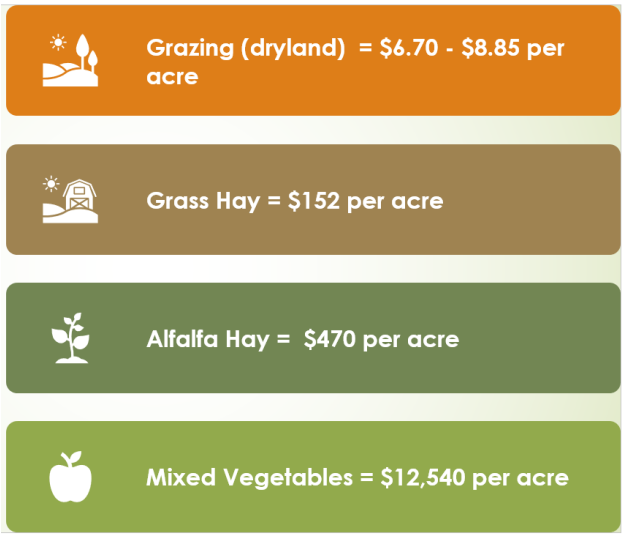

Figure 1: Average return per acre in Colorado (source: Colorado State University Extension, Agriculture and Business Management)

The city has established objectives for the management of both irrigable fields and prairie dogs. The city seeks to ensure that all 6,641 acres of irrigable fields are leased and in agricultural

[1] For this project ***irrigable*** describes OSMP lands that are associated with water rights and water that is typically available at a time, in a place and in amounts such that those OSMP lands are, or are able to be, irrigated for agricultural or other purposes for which the applicable water rights are decreed. This definition does not address historic irrigability, including situations where water rights have been abandoned.

production, and that the water delivery infrastructure that supports irrigated agriculture is in acceptable condition. OSMP also seeks to maintain prairie dog populations in the range of 800 to 3,137 acres and has established management designations over 5,300 acres where prairie dogs can live in protected status. The city has also established policies and a regulatory framework that requires significant time to be allocated to the exploration and use of prairie dog relocation and other non-lethal techniques as alternatives to lethal control.

OSMP policies limit the overlap of irrigable lands and areas where prairie dogs are generally protected. All OSMP prairie dog management designations allow the removal of prairie dogs for the purpose of maintaining irrigated fields and irrigation infrastructure. However, prairie dogs do occupy irrigable fields. Irrigation and associated agricultural practices are almost always incompatible with the burrowing and foraging requirements of prairie dogs. Burrowing and feeding by prairie dogs in irrigated fields are likewise incompatible with agricultural production and water management.

The most widespread impacts from prairie dog occupation on irrigated lands are reduced agricultural productivity and changes to the type of agricultural use. The typical transformation can be described as follows: Initially, irrigated hayfields are switched to irrigated grazing land as prairie dog occupation makes the operation of haying equipment difficult or impossible. As populations increase and the area of prairie dog occupation increases, irrigation becomes too difficult or impossible. If prairie dogs fully occupy an irrigated field, there is typically no benefit to continue agricultural operations, and the property is taken out of agricultural production – and often removed from the agricultural lease program. Damage to the irrigation infrastructure from the direct effects of prairie dogs or from lack of use and maintenance have resulted in degradation of open space assets, reducing the long-term agricultural or ecological sustainability of the land.

In the project area, generally north of Jay Road, approximately 280 acres of irrigable land have been removed from agricultural leases because of incompatibility with prairie dog occupation. Almost 690 acres (over 40 percent) of the irrigable acreage, and most (almost 70%) of the irrigated fields in the project area are occupied by prairie dogs. Five of OSMP's agricultural tenants in the project area have over 10 percent of the irrigable portion of their leasehold occupied by prairie dogs, and prairie dogs occupy over half the irrigable acreage of two tenants with the largest leaseholds in the project area.

OSMP designates management categories for all prairie dog colonies and has objectives for *maintaining or enhancing* prairie dog populations in three designations areas (Prairie Dog Conservation Areas, Multiple Objective Areas and Grassland Preserves), totaling to over 3,000 acres of colonies. The Grassland Plan also identifies two management designations where the activities of prairie dogs are not compatible. There are currently over 1,000 acres occupied by prairie dogs that fall into the two designations (Transition and Removal areas) that anticipate the removal of prairie dogs. Most irrigable land is designated either as a Transition or Removal area. All five prairie dog management designations allow the removal of prairie dogs at any time for maintenance of existing irrigation facilities, such as a headgate, ditch, lateral ditch, reservoir or irrigated field.

OSMP has relied primarily upon relocation to remove prairie dogs from Transition and Removal areas. Relocation relies upon the availability of receiving sites, permitting by the state as well as the availability of contractors and funding. Until very recently, OSMP's relocation needs were not prioritized and relatively few relocation projects could be implemented. As a result, prairie dog populations continued to expand in Removal and Transition areas. Responding to the limitations described above, the city has

allocated additional funding to support relocation. However, even with additional resources, OSMP estimates that a maximum of about 40 acres of prairie dogs (approximately 1,200 prairie dogs) can be relocated each year, a rate that under current conditions is not likely to keep up with the expansion of prairie dog populations in removal and transition areas. That will not make noticeable improvements in the situation facing tenants with prairie dogs on the irrigable lands in their leasehold.

Meeting Charter Purposes

As shown in Table 1, both agriculture and prairie dogs are covered by multiple charter purposes. Over the past 50 years, the city's history of open space acquisition and management practices have demonstrated that there has been on-going support for integrating both agriculture and prairie dogs into open space service delivery.

Table 1: City of Boulder Charter Purposes and relevance for prairie dogs and agriculture.

Charter Purpose	Prairie Dogs	Agriculture
Preservation or restoration of natural areas characterized by or including terrain, geologic formations, flora, or fauna that are unusual, spectacular, historically important, scientifically valuable, or unique, or that represent outstanding or rare examples of native species	✓	
Preservation of water resources in their natural or traditional state, scenic areas or vistas, wildlife habitats, or fragile ecosystems	✓	✓
Preservation of agricultural uses and land suitable for agricultural production		✓
Preservation of land for its aesthetic or passive recreational value and its contribution to the quality of life of the community	✓	✓
Preservation of land for passive recreational use, such as hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding, or fishing		
Utilization of land for shaping the development of the city, limiting urban sprawl, and disciplining growth		
Utilization of non-urban land for spatial definition of urban areas		
Utilization of land to prevent encroachment on floodplains		

Given the breadth of the open space purposes, there are times when some of the multiple purposes can be or are at odds with each other. Although the charter doesn't provide guidance on how to proceed in these situations, the city has several ways to support OSBT and City Council in integrating open space purposes. Working with the community, staff regularly develops and updates plans, operating budgets and work plans, and operates a five-year capital investment program to maintain city open space. Most of the OSBT and City Council approved guidance for the management of agriculture and prairie dogs is contained in the OSMP Master Plan, the Grassland Ecosystem Management Plan (Grassland Plan) or the Agricultural Resources Management Plan (Ag Plan).

The Master Plan identifies a strategy related to the management of prairie dogs in irrigated lands. The Grassland Plan and Ag Plan contain measurable objectives intended to describe what it means to meet

charter purposes and offer a way to better understand the nature of the conflict between prairie dogs and agriculture and to inform decisions about how to respond.

The OSMP Master Plan, accepted by City Council in 2019, guides the projects, programs, and plans of OSMP for the next decade. The Master Plan identifies 46 strategies across five focus areas[2]. The plan's strategies are arranged into three tiers with Tier 1 representing the highest community priorities. Reflecting the importance of the conflicts of irrigable fields and the effects of prairie dogs, the Master Plan identifies one of the ten Tier 1 strategies as follows:

Address Conflicts between Agriculture and Prairie Dogs:

Maintain the viability of agricultural operations by reducing impacts from prairie dogs on irrigated lands, while supporting ecologically sustainable prairie dog populations across the larger landscape.

This strategy reflects the strong desire of community members to see both agriculture and prairie dogs thrive on OSMP.

The Grassland Plan was approved by the OSBT in 2010 and accepted by City Council in 2011. The plan focuses on eight components of OSMP grasslands that, taken together, are intended to represent all the ecological purposes of OSMP grasslands. These components are referred to as *Targets* in the plan (Table 2). The Grassland Plan also develops objectives, identifies indicators and describes integrated strategies to achieve sustainable management of these systems, which include both agricultural operations and prairie dogs and associated species.

Table 2: Grassland Plan Targets.

Target Name
Agricultural Operations
Mesic Bluestem Prairie
Mixed Grass Prairie Mosaic
Black-tailed Prairie Dogs and Associates
Riparian Areas/Creeks
Wetlands/Ponds
White Rocks Cliffs
Xeric Tallgrass Prairie

The Ag Plan was developed in recognition of the need to take a deeper dive into themes identified in the Grassland Plan, expand into areas associated with cultural and scenic resources and community connections, and how OSMP can cultivate relationships with current and future agricultural tenants. The plan, approved by the OSBT and accepted by City Council in 2017, continued several of the indicators and objectives from the Grassland Plan, modified others and introduced some new ones. For the work on this project, staff focused on indicators for which the desired conditions have been defined and for which measured are included. Table 3 shows the most relevant indicators and objectives for this project from the Ag and Grassland Plans.

Table 3: Selected Agriculture and Prairie Dog Indicators and ratings included in the Grassland (GP) and Ag plans (AP).

Indicator	Desired Condition
Acres in agricultural production (GP +AP)	> 12,000
Irrigable land leased for agriculture (GP +AP)	> 80% [3]
Acres of active prairie dog colonies (GP +AP)	800 – 3,137

[2]Ecosystem Health and Resilience, Agriculture Today and Tomorrow, Responsible Recreation, Stewardship and Enjoyment, Community Connection, Education and Inclusion and Financial Sustainability.
[3] The Ag plan modified the acceptable rating to be "all selected sites." However, these sites have not yet been selected.

Indicator	Desired Condition
Percent of [prairie dog] occupied land in protected status (GP +AP)	> 70%
Acres of prairie dog occupation in transition or removal areas (AP)	0
Grassland Preserves w/occupancy between 10 and 26% (GP +AP)	All (3)
Soil organic matter (GP +AP) and soil biological diversity (AP)	Maintain/increase
Proportion of operations implementing soil BMPs[4] (AP)	100%
Tenure of lessees (AP)	Long-term
Number of qualified applicants for properties available to lease (AP)	At least one
Proportion of necessary [irrigation] structures in an acceptable condition (AP)	100%

Geographic Scope

The project is focused on irrigable lands managed by OSMP north of Jay Road, generally west of the Diagonal Highway (CO Hwy 119) and east of Foothills Highway (US 36). A small area immediately east of the Diagonal at Mineral Road (CO Hwy 52) is also included in the project area (Figure 2). This geographic scope encompasses much of the irrigable land on OSMP with high prairie dog occupation.

The project area contains approximately 5,000 acres of OSMP-managed land, of which approximately 2,400 acres is irrigable. Based upon 2019 mapping, prairie dogs occupy about 967 (ca. 40%) acres of these irrigable fields. Of the irrigable fields occupied by prairie dogs, about 690 acres are leased to agricultural producers. OSMP maintains 280 acres of occupied irrigable fields. Figure 2 shows the relative location of OSMP-managed lands, irrigable fields and leased fields.

Outside of the project area, prairie dogs occupy an additional 292 acres of irrigable land on OSMP -managed properties. It is anticipated that the approach and many of the strategies developed through this process could be applied to those areas.

[4] These Best Management Practices (BMPs) have not yet been developed.

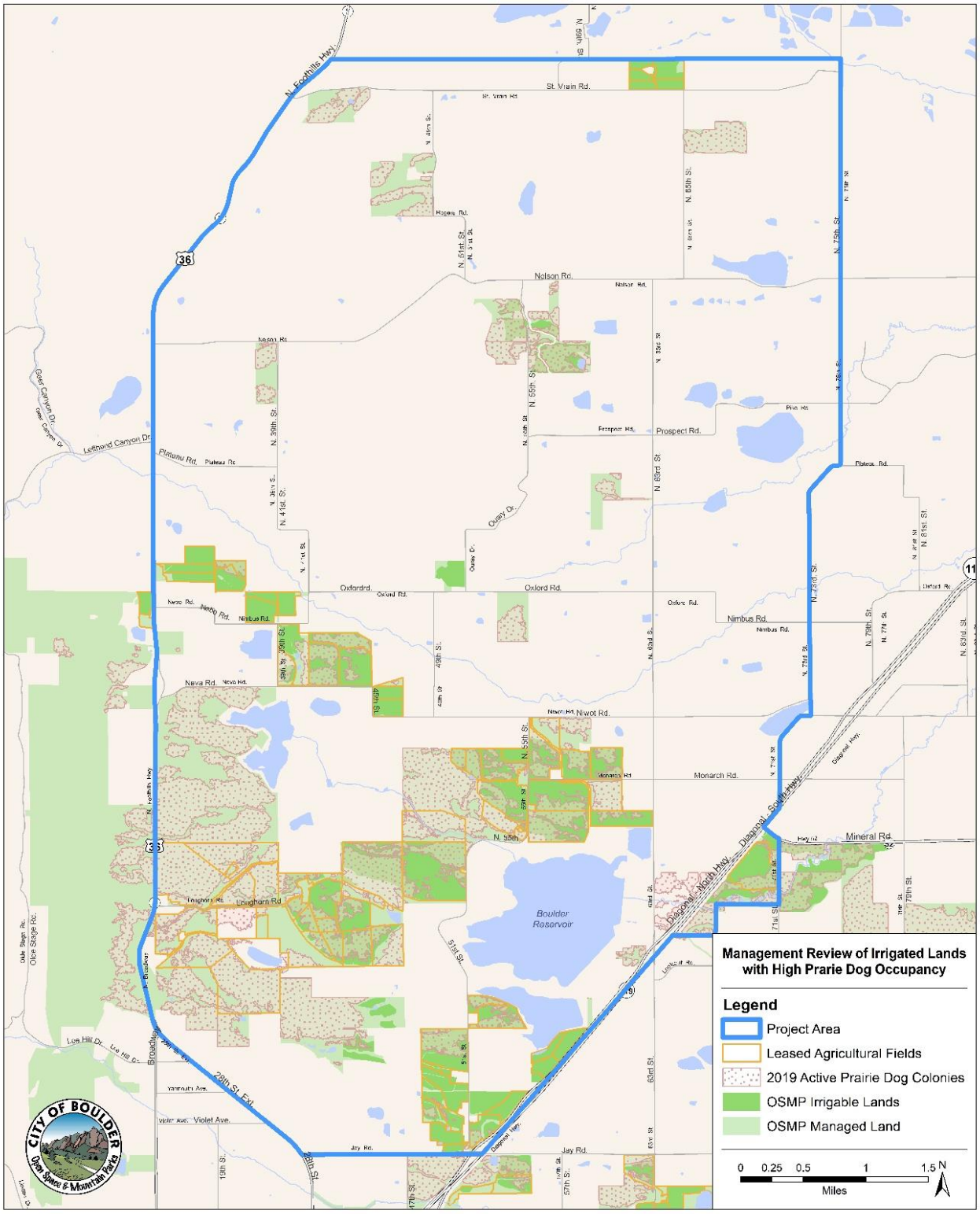

Figure 2:Project Area

Approach

Working with the OSBT, staff developed a three-step community engagement process. The first step – or "engagement window" – focused upon describing the current situation and included dialogue about the project as well as gathering information about values and preliminary ideas about how to improve the current situation. (Figure 3). The engagement window was open from Wednesday, Oct. 23, through Wednesday, Nov. 13, 2019. Information about the current situation was made available through a presentation and posters at a community meeting, which were made available through the City of Boulder's website and its Be Heard Boulder online engagement platform. Online opportunities for engagement included a questionnaire and an invitation to share thoughts through email. Approximately 80 people attended the community meeting, there were 143 responses to the on-line questionnaire and OSMP received about 40 emails. A summary of the first engagement window along with detailed input were provided to the OSBT and are available online.

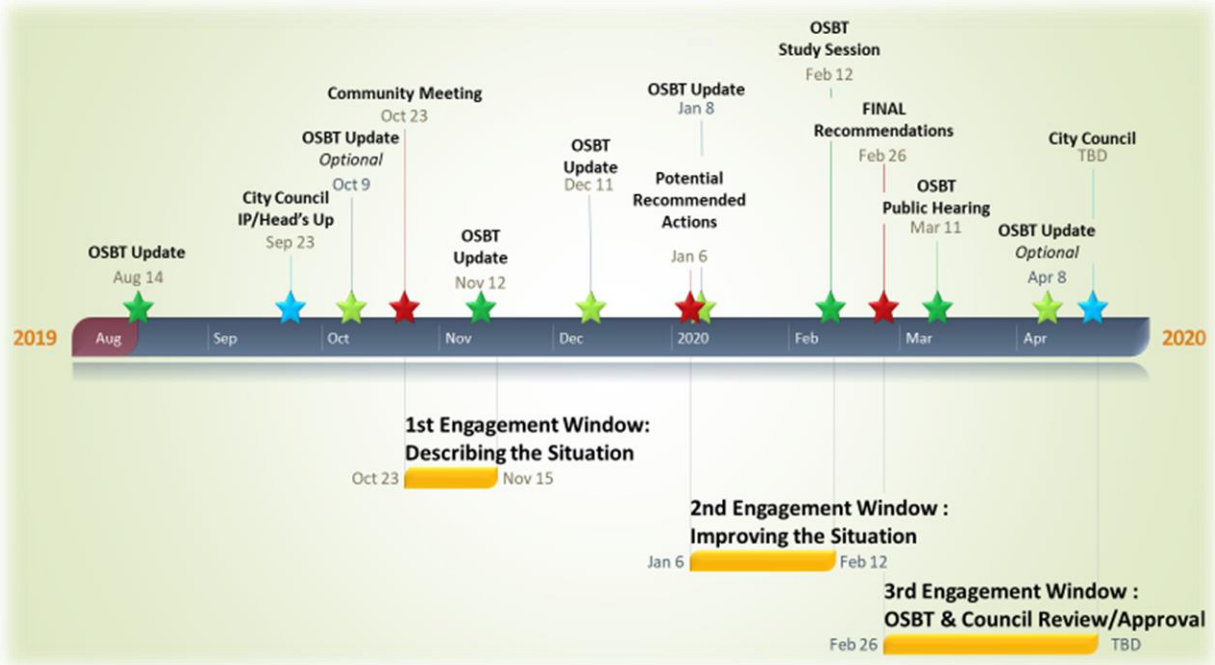

Figure 3: Project Timeline & Engagement Windows

Outcomes of the First Engagement Window

Establishing a Shared Understanding

The opportunity to interact directly with community members at the Monday, Oct. 23, open house provided the best chance to provide information about the situation and hear community values and ideas. In addition to questions asked during the staff presentations, there were also opportunities for community members to "write in" questions that were responded to as part of the meeting report. The open house after the presentations was scheduled for an hour but lasted more than 90 minutes. City staff reported that they had extensive conversations that included learning more about the perspective and experiences of agricultural tenants and neighbors, along with community members interested in

prairie dogs. Staff also reported that they had the opportunity to share information about several topics. Some of the most commonly addressed questions or topics of conversation were:

- Why staff had undertaken the project.
- Whether there were areas on OSMP lands that were being set aside to conserve prairie dogs.
- The difference between livestock (cattle) grazing on unirrigated native grasslands (rangelands) and the types of agricultural activities that take place on Open Space and Mountain Parks irrigated fields.
- The different ways of removing prairie dogs from an area.

Values

In the 2019 OSMP Master Plan Survey, 52 percent of respondents either strongly supported or supported the use of lethal control to remove prairie dog colonies from areas on or near irrigated farmland when other management tools had not been successful. Table 2.2.1 below shows a summary of all responses to this question.

Table 4: Support or opposition for lethal control of prairie dog populations on or near irrigated farmland when other management approaches have been unsuccessful (2019 OSMP Master Plan Survey)

When other management approaches have been unsuccessful at controlling PRAIRIE DOG POPULATIONS ON OR NEAR IRRIGATED FARMLAND, how much would you support or oppose lethal control to remove prairie dog colonies from these areas?	Percent	Number
Strongly support	19%	N=251
Support	33%	N=432
Oppose	19%	N=249
Strongly oppose	17%	N=228
No opinion/Don't know	11%	N=146
Total	100%	N=1306

Both the community meeting and the online engagement in fall 2019 asked participants to answer the question: "*What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?" (see table at right)* The respondents were prompted with the suggested responses in the table to the right and were given the opportunity to provide other entries if the available options did not reflect what was important to them.

Response Options (or "write in" others)
Animals dependent upon prairie dogs
Farming and ranching on OSMP
Grasslands plants and soils to capture carbon
Land management goals of OSMP neighbors
Lives of individual prairie dogs

Although not a statistically valid survey, the responses to this question helped OSMP get an impression about what was important to community-engagement participants. This information was useful to staff in the selection of strategies and strategy packages and to help identify potential future projects based upon areas of community concern that fall outside the scope of this project.

Weighted values provide a useful model to look across ranks to a cumulative value. The ranking used here assumes that an item ranked "1" is three times as important as an item ranked "3", 1.5 times as important as an item ranked "2" and that an item ranked "2" is twice as important as an item ranked "3." The table below provides weighted tallies for the combined responses from the open house and online engagement.

Table 5: Weighted values for combined responses to "What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?".

Subject	Ranked 1 weighted 3x	Ranked 2 weighted 2x	Ranked 3 weighted 1x	TOTAL Weighted Values
Farming and ranching on OSMP	138	20	25	**183**
Lives of individual prairie dogs	78	42	9	**129**
Land management goals of OSMP neighbors	69	1	19	**121**
Grasslands plants and soils to capture carbon	57	18	45	**120**
Animals dependent upon prairie dogs	54	19	27	**104**

Lethal Control

The dominant topic of public comment was around the use of lethal control. There was support for lethal control reflecting concerns for the losses faced by OSMP agricultural tenants when prairie dogs inhabit irrigable lands; a perspective that lethal control is a reliable and effective way of improving the situation; and a belief that sustainable agriculture is not possible with prairie dogs occupying irrigable lands. Other comments linked with support for the use of lethal control were concerns over the loss of the city's investment in lands and waters, the increasing scarcity of farms and ranches around Boulder, and the importance of soil conservation for futures that include both agriculture and grassland restoration. Some comments included reservations about the use of lethal control, such as describing it as "necessary but not preferred" and recommending that lethal control be humane and minimized.

Many people opposed the use of lethal control of prairie dogs because of the reductions in populations of the black-tailed prairie dog throughout its historic range. Several people commented that prairie dogs should not be killed because they were present on the landscape before agriculture and are acting naturally in their native range, whereas agriculture is introduced and artificial. Others alluded to the important role that prairie dogs play in structuring grasslands and the cascading effects on other species from killing prairie dogs. Other comments expressed a belief that killing prairie dogs is fundamentally wrong, disrespectful and does not demonstrate compassion for life or that lethal control takes an emotional toll on the community.

Ways to Improve the situation

Community members were also asked to provide their input about actions that OSMP could take to improve the situation. These were considered to determine if they were within the scope of the project. About 50 ways of acting in response to conflicts arising on irrigable lands occupied by prairie dogs were provided. Staff's review of potential actions revealed that most of the ideas contributed could be grouped into either on-the-ground land and water management actions or recommendations for plan or policy changes. The on-the-ground actions, in turn, could be generally placed into the categories: **Removal, Exclusion or Restoration.**

- **Removal:** Evaluated actions include non-lethal control measures the city currently prioritizes, such as relocations, as well as lethal control options.
    - Non-lethal control measures evaluated include contraceptives to limit population growth, trapping and relocating prairie dogs and conducting passive relocation, which

encourages prairie dogs to leave their burrows at the expanding edge of a colony and directs them away from areas of potential conflict by blocking re-entry to burrows.
  - Lethal control measures examined include using carbon monoxide and/or pressurized exhaust in burrows, trapping prairie dogs and donating them to black-footed ferret facilities, introducing black-footed ferrets on open space lands and limiting the use of anti-plague vaccines.

- **Exclusion:** Evaluated actions include ways to prevent prairie dogs from entering or returning to irrigable OSMP lands once removed. They include fabric, metal and wire mesh barriers or native plantings.

- **Restoration:** Evaluated actions include restoring lands that were occupied by a high abundance of prairie dogs. They include closing vacant burrows, irrigating lands, performing carbon sequestration and soil health techniques to improve land fertility and revegetating disturbed areas.

- **Potential plan and policy changes:** Evaluated actions include considering changing OSMP agricultural agreements with farmers and ranchers, modifying city regulations to allow burrow destruction from normal agricultural activities on irrigable lands and modifying lethal control regulations for irrigable lands.

Evaluation of Potential Actions

Staff then evaluated each of the potential actions regarding their benefit and feasibility. For benefit, staff considered several factors:

f) **Scope:** The degree to which the action would allow OSMP to more fully meet charter goals. Staff examined how fully would the strategy allow for the implementation of Master Plan Strategy ATT.3, and implement the Master, Ag and Grassland Plans.
g) **Spatial Scale**: The degree to which the action is likely to be effective across the project area.
h) **Contribution:** How much the action contributes to addressing the situation. This factor also required staff to examine what other actions would be needed to ensure success.
i) **Duration:** Will the action secure a long-lasting outcome or is it a temporary fix?
j) **Leverage:** Will the action enable OSMP or partners to take other actions to improve the situation? We also consider how widespread and long-lived the action's effect will be

Actions that can make a significant contribution to addressing the issue across the project area, are effective for a long time, and support other actions are evaluated as having a higher benefit.

For **feasibility,** staff examined these factors:

d) **Lead**: The availability of a staff or partner/contractor/consultant to lead implementation.
e) **Ease:** The ease of completion and the complexity of the action.
f) **Appeal:** The ability for the action to motivate stakeholders and decision-makers. Actions for which a capable lead individual is available and that are very straightforward or have been done before, and which are likely to appeal to key stakeholders, are rated as more feasible.

Details of staff's evaluation are available in **Appendix A**. A summary of the overall benefit and feasibility rating for the preliminary actions is included in Table 7.

Cost

Staff began the process of developing cost estimates for actions with medium and high benefit and feasibility ranks and for which there was enough experience. Cost information is included in action evaluations (Appendix A), where available. Costing will be further refined after receiving OSBT and community feedback on the preliminary approach and action evaluation and included in staff's recommendation.

Table 6: Preliminary actions to address irrigable lands occupied by prairie dogs

(a) ON-THE-GROUND LAND AND WATER MANAGEMENT

REMOVAL	EXCLUSION	RESTORATION
Non-lethal • Capture and Relocate • Contraceptives • Passive Relocation Lethal *Types of lethal control evaluated*[5] • Capture and kill (CO_2chamber) • Do not implement plague vaccine • Gas cartridges (CO) • Introduce black-footed ferrets • Pressurized Exhaust (CO) in burrow • Trap/ donate live to ferret facility *Types of lethal control not evaluated*[5] • Anti-coagulants • Phosgene Gas • Sand Slurry (live burial) • Shooting • Underground gas explosives	• Barrier - fabric • Barrier - plants • Barrier- wire mesh • Barriers - metal panel • Dogs • Irrigation	• Close burrows • Irrigation (infrastructure repair + irrigating) • Key lining, and other carbon sequestration actions • Revegetation
Approach for *all* on-the-ground land and water management actions • Consult and share information with experts and agencies • Integrate monitoring, notification and rapid response for plague and (re-) colonization		

[5] Staff deferred evaluation of lethal control techniques considered less humane as there was not significant community input favoring these techniques and because of the availability of comparably effective techniques considered more humane.

(b) POLICY/PLAN CHANGES AND OTHER SUGGESTIONS

LAW/CODE/POLICY CHANGES	OTHER SUGGESTIONS

OSMP
• Adjust stocking rates
• Allow tenants to control prairie dogs
• Change prairie dog management designations
• Reducing/removing agriculture from irrigated lands
  ○ Consider conservation leases
  ○ Don't lease irrigable OSMP when occupied by prairie dogs
  ○ Don't lease land for agriculture
  ○ Modify agriculture goals to allow prairie dogs to coexist with agriculture
• Incentivize tenants to enhance predator populations
• Provide supplemental food for prairie dogs
 	
City Wildlife Protection Ordinances
• Modify "Burrow Destruction Ordinance" to allow agricultural activities on irrigable land.
• Modify lethal control regulations affecting control of prairie dogs occupying irrigable OSMP.
 	
State of Colorado
• Work with Colorado Division of Parks and Wildlife to modify relocation policies and practices
• Change state law to allow landowners in other counties to receive relocated prairie dogs
 	
Covered by Prairie Dog Working Group (PDWG) Recommendations
• Don't use lethal control until all non-lethal options are exhausted
• Economic benefit model
• PDWG Economic Recommendation: Lease cost forgiveness/compensate for lost production.
• Reimburse private owners
• Pilot PDWG economic recommendations
	• Collect and use soil condition data to guide prioritization
	• Dusting for fleas
	• In-depth interviews with and apologies to neighbors

Table 7: Summary of benefit and feasibility ratings for actions to address irrigable fields occupied by prairie dogs. Starred (*) items are actions currently in use by OSMP.

ACTION	BENEFIT	FEASIBILITY
ON-THE-GROUND ACTIONS		
REMOVAL		
Non-Lethal Removal		
Capture and Relocate*	MEDIUM	MEDIUM
Contraceptives	Contraceptives not Available	
Passive Relocation*	MEDIUM	MEDIUM
Lethal Removal		
Capture and kill with CO_2 Chamber	MEDIUM	MEDIUM
Do not implement plague vaccine*	HIGH	HIGH
Gas cartridges (CO and CO_2)	MEDIUM	HIGH
Introduce black-footed ferrets	LOW	LOW
Pressurized Exhaust	MEDIUM	HIGH

Table 7: Summary of benefit and feasibility ratings for actions to address irrigable fields occupied by prairie dogs. Starred (*) items are actions currently in use by OSMP.

ACTION	BENEFIT	FEASIBILITY
Trap and donate live prairie dogs to ferret facility	MEDIUM	MEDIUM
Anti-coagulants	Not evaluated	
Phosgene Gas	Not evaluated	
Sand Slurry	Not evaluated	
Shooting	Not evaluated	
Underground gas explosives	Not evaluated	
EXCLUSION		
Barrier - fabric*	MEDIUM	MEDIUM
Barrier - plants	MEDIUM	MEDIUM
Barrier - wire mesh*	MEDIUM	MEDIUM
Barriers - metal panel*	MEDIUM	MEDIUM
Dogs	LOW	LOW
Irrigation*	LOW	MEDIUM
RESTORATION		
Close vacant burrows*	HIGH	HIGH
Irrigation (infrastructure repair + irrigating) *	HIGH	HIGH
Key lining, and other C-sequestration actions*	HIGH	MEDIUM
Revegetation*	HIGH	HIGH
APPROACH		
Consult and share information with experts and agencies*	MEDIUM	HIGH
Integrate monitoring, notification and rapid response for plague and (re-) colonization	HIGH	HIGH
POLICY/PLAN CHANGES AND OTHER SUGGESTIONS		
OPEN SPACE AND MOUNTAIN PARKS		
Allow tenants to control prairie dogs with BMPs	MEDIUM	LOW
Change prairie dog management designation	LOW	LOW
Consider conservation leases	LOW	MEDIUM
Don't lease irrigable OSMP when occupied by prairie dogs*	LOW	HIGH
Don't lease lands for agriculture	LOW	LOW
Incentivize tenants to enhance predator populations	LOW	LOW
Modify agriculture goals to allow prairie dogs to coexist with agriculture*	LOW	HIGH
Provide supplemental food for prairie dogs	LOW	LOW
CITY WILDLIFE PROTECTION ORDINANCES		
Modify lethal control regulations affecting of prairie dogs occupying irrigable OSMP	HIGH	MEDIUM
Modify “Burrow Destruction Ordinance” to allow agricultural activities on irrigable land	MEDIUM	MEDIUM
STATE OF COLORADO		
Work with Colorado Division of Parks and Wildlife to modify relocation policies and practices	MEDIUM	LOW
Change state law to allow landowners in other counties to receive relocated prairie dogs	MEDIUM	LOW
COVERED BY PRAIRIE DOG WORKING GROUP (PDWG) RECOMMENDATIONS		

Table 7: Summary of benefit and feasibility ratings for actions to address irrigable fields occupied by prairie dogs. Starred (*) items are actions currently in use by OSMP.

ACTION	BENEFIT	FEASIBILITY
Don't use lethal control until all non-lethal options are exhausted*		
Economic benefit model	Beyond scope of this this project, to be implemented through implementation of PDWG recommendations	
Lease cost forgiveness/compensate for lost production.		
Pilot PDWG economic recommendations		
Reimburse private owners		
OTHER SUGGESTIONS		
In depth interviews apologies, with neighbors		
Collect and use soil condition data to guide prioritization	Beyond scope of this project	
Reduce pesticide impact from routine dusting of prairie dog colonies		

Approach

In addition to dividing on-the-ground land and water management actions into Removal, Exclusion and Restoration categories, staff also has developed other elements of a proposed approach to create an integrated package of actions to improve the situation. As part of that approach, staff is developing a simple model to help guide the decision-making process. There are several important assumptions implicit in this model.

Assumptions:

Some prairie dogs will be re-located

City policies plans and ordinances have prioritized non-lethal control measures and have sought to protect prairie dogs and their habitats because they are important in helping to maintain healthy ecosystems. OSMP proposes an on-going commitment to continue relocation in recognition of the importance of this strategy as a part of the city's approach to grassland ecosystem management. Staff estimates that annual capacity for relocation is about 40 acres (approximately 1,200 prairie dogs) per year assuming the availability of relocation sites, contractors and state relocation permits.

Some prairie dogs will be killed

With almost 1,000 acres of irrigable land occupied by prairie dogs in the project areas, in the absence of a plague epizootic, relocation alone will not significantly improve the situation. As EPA-approved contraceptive technology is not available, staff has not identified additional non-lethal alternatives that would be effective at the scale necessary.

Barriers will be installed to prevent re-colonization of fields from which prairie dogs are removed

Without some means of excluding prairie dogs, removal by lethal or non-lethal means is not sustainable. Staff recognizes that the type of barrier best suited to prevent the spread of prairie dogs into irrigable lands is dependent upon site conditions. The model will roughly approximate costs based upon costs for more effective and durable barriers (metal panels and wire-mesh reinforced fabric). Staff also will assume that areas where barriers are to be installed are roughly rectangular.

Soil and vegetative restoration will accompany removal

The model will assume that each acre from which prairie dogs will be relocated and will need some level of restoration. Restoration costs will include the actions included in Table 6 under "Restoration." Indicators, such as desirable plant species cover, will be developed to measure the progress and success of restoration projects.

Prairie dog populations will continue to grow in the Project Area

It appears that between 2018 and 2019, the extent of mapped prairie dog colonies in irrigable lands in the project area increased by 3%. In the presence of available OSMP irrigable lands for colonization, and in the absence of a plague epizootic, populations will be estimated to continue growing at 3% or less.

Management scenarios will be presented in term of level of prairie dog removal

Staff will present a low, a high and three intermediate levels of action. The lowest level is proposed to be 80 acres. This represents OSMP's existing annual capacity for relocation and the same amount of lethal control. The high-end is complete removal of all prairie dogs from irrigable land in the project area. These levels are not intended as specific options for action, but rather to present estimates of the pace of removal, the associated costs and the numbers of prairie dogs moved or killed. The model will allow other outputs to be calculated for other intermediate levels of action. The levels of removal proposed are:

- **Low**: **80 acres 8% removal** of prairie dogs from irrigable fields per 2019 mapping.
- **Quartile (Q)1: 240 acres (25 % removal**)
- **Q2: 386 acres (50 % removal)**
- **Q3: 680 acres (75 % removal)**
- **High (Q4): 967 acres (100% removal)**

Appendices

Appendix A: Evaluation of Potential Actions

APPENDIX A: Description and Evaluation of Potential Actions

This document provides the description, evaluation, and, in some cases, estimates of implementation costs for the actions listed in Table 6 of the main document, reproduced below.

Table 6: Summary of actions in Evaluation (Appendix A). (a): On-the-ground actions. (b): Plan Policy Changes and Other

(a) ON-THE-GROUND ACTIONS

REMOVAL	EXCLUSION	RESTORATION
Non-lethal • Capture and Relocate • Contraceptives • Passive Relocation Lethal *Types of lethal control evaluated*[6] • Capture and kill (CO_2chamber) • Do not implement plague vaccine • Gas cartridges (CO and CO_2) • Introduce black-footed ferrets • Pressurized Exhaust (CO) in burrow • Trap/ donate live to ferret facility *Types of lethal control not evaluated*[5] • Anti-coagulants • Phosgene Gas • Sand Slurry (live burial) • Shooting • Underground gas explosives	• Barrier - fabric • Barrier - plants • Barrier- wire mesh • Barriers - metal panel • Dogs • Irrigation	• Close burrows • Irrigation (infrastructure repair + irrigating) • Key lining, and other carbon sequestration actions • Revegetation
Approach (for all on-the-ground actions) • Consult and share information with experts and agencies • Integrate monitoring, notification and rapid response for plague and (re-) colonization		

[6] Staff deferred evaluation of lethal control techniques considered less humane as there was not significant community input favoring these techniques and because of the availability of comparably effective techniques considered more humane.

(b) POLICY/PLAN CHANGES AND OTHER SUGGESTIONS

LAW/CODE/POLICY CHANGES	OTHER SUGGESTIONS

OSMP
• Allow tenants to control prairie dogs
• Change prairie dog management designations
• Reducing/removing agriculture from irrigated lands
  o Consider conservation leases
  o Don't lease irrigable OSMP when occupied by prairie dogs
  o Don't lease land for agriculture
  o Modify agriculture goals to allow prairie dogs to coexist with agriculture
• Incentivize tenants to enhance predator populations
• Provide supplemental food for prairie dogs
 	
City Wildlife Protection Ordinances
• Modify "Burrow Destruction Ordinance" to allow agricultural activities on irrigable land.
• Modify lethal control regulations affecting of prairie dogs occupying irrigable OSMP.
 	
State of Colorado
• Work with Colorado Division of Parks and Wildlife to modify relocation policies and practices
• Change state law to allow landowners in other counties to receive relocated prairie dogs
 	
Covered by Prairie Dog Working Group (PDWG) Recommendations
• Don't use lethal control until all non-lethal options are exhausted
• Economic benefit model
• PDWG Economic Recommendation: Lease cost forgiveness/compensate for lost production.
• Reimburse private owners
• Pilot PDWG economic recommendations
	• Collect and use soil condition data to guide prioritization
	• Reduce pesticide impact from routine dusting of prairie dog colonies.
	• In depth interviews with and apologies to neighbors

On-the-ground Action | Removal | Non-lethal Control

Capture and Relocate

Description:

Relocation of prairie dogs normally involves capture by using live traps on the ground surface. Burrows in the sending site are typically required to be treated with insecticide before trapping to kill fleas and reduce plague related safety and survival concerns. Traps are typically pre-baited[7] for several days, then set and monitored frequently to avoid in-trap mortality from exposure. Once captured, prairie dogs are treated with an insecticide to kill fleas as a secondary plague abatement measure and then transported and released at sites deemed suitable by OSMP and the Colorado Division of Parks and Wildlife (CPW). If prairie dogs are to be moved across county lines, county officials must also provide appropriate approval. Relocation is currently the primary tool for prairie dog removal by OSMP.

Prairie dogs may also be captured by flushing burrows with a water/soap mixture and grabbing the animals as they emerge from their burrows. Although sometimes used in addition to trapping and to capture "untrappables," this technique was not evaluated for general use because of its more limited application and its potential harmful effects to prairie dogs and non-target animals. Although not used by OSMP, there has been at least one business in Colorado that provided the service of vacuuming prairie dogs from their burrows. Vacuuming as a capture technique was not evaluated because of concerns for the effects on prairie dogs and non-target species and because it is not clear there are any contractors providing this service.

Evaluation:

Relocation provides resolution to conflicts in removal and transition areas, supports other tools to restore ecological and agricultural conditions, and does not conflict with existing city policies. Relocation is often the preferred means of quickly increasing the abundance of prairie dogs and associated species after population crashes like those resulting from plague. Relocation is also generally preferred as a removal tool as it provides an alternative to killing prairie dogs and allows prairie dog populations in conservation areas to be supplemented in times of low population in these areas. OSMP staff have long-term experience overseeing contracts for and conducting relocation projects.

In order to be effective, all prairie dogs must be removed from a site. However, trapping is seldom completely effective and follow up with other removal techniques, such as burrow flushing or lethal control, are typically necessary for a small number of animals.

When considering relocation, the percentage of the estimated population to be removed by trapping is an important factor affecting both the cost and duration of a project. While more prairie dogs can be captured with prolonged effort, there is a steep drop off in trapping success after about 80 percent of the animals have been trapped. Continuing trapping after that point increases costs per animal captured significantly and precludes the relocator moving to another site.

As with other removal techniques, removal by trapping must be accompanied by effective means of exclusion and other techniques to restore soil, vegetation and agricultural/water delivery infrastructure.

[7] Locked in the open position with oats or other bait to acclimate the animals to the presence of the traps.

The scope of relocation is limited by several factors. Limiting factors include the availability of receiving sites, permits, cost and labor.

Relocation requires receiving sites that are both ecologically and socially acceptable. The Grassland Plan establishes ecological standards for Grassland Preserves that must be met before areas are eligible as receiving sites. Colorado Parks and Wildlife (CPW) considers both the ecological condition of receiving sites and community acceptance. Neighbors of receiving sites are often concerned about impacts to their properties. Even with an ecologically suitable receiving site and a plan to mitigate potential impacts to neighbors' properties, requests for permits are not assured. Non-OSMP receiving sites in Boulder County are extremely uncommon as public land management agencies usually have their own relocation needs and most private landowners are not interested in receiving prairie dogs. Outside of Boulder County, state law requires approval by the receiving county commissioners. Commissioner approval outside of Boulder County is considered unlikely.

Despite staff experience with relocation and the oversight of relocation contractors, both are very time-consuming. The feasibility of removal is further complicated by the small number of qualified contractors. When regional demand is high (as it is now), contractor availability is a constraint even with available receiving sites and permitted projects. **At current staffing levels, OSMP estimates that its departmental capacity is a maximum of about 40 acres per year, with an average of 30 prairie dogs/acre.**

Prairie dog relocation is not simple. In addition to the pre-planning necessary to locate appropriate receiving sites, obtain the necessary permits, and find qualified and available contractors, trapping and release activities need to be scheduled for seasons and days when they will be most effective. Trapping success is strongly influenced by temperature, cloud cover and precipitation. Generally, prairie dogs can be moved from about June through December. Relocation tends to be most successful from late summer into the fall to avoid the pup-rearing season and because this is when yearlings are most fit and likely to survive relocation. Although CPW tends to be flexible in terms of when trapping is allowed, it discourages and OSMP practices avoid trapping during March, April, and May, when young are not weaned and still in burrows. If capture of adults takes place during these months, CPW may require in-burrow lethal control to minimize starvation of the remaining pups.

Like dispersing yearlings, prairie dogs relocated to a new area are especially vulnerable to predation until they find or establish a burrow system. OSMP has taken significant measures to reduce relocation-associated mortality. For receiving sites where burrows are absent or have deteriorated, practices recommended by the Prairie Dog Working Group (PDWG) and approved by the City Manager require the establishment of artificial burrows for the relocated animals. In addition to the costs of burrow construction and reclamation of the surrounding areas, these projects can also disturb grassland vegetation and soils, creating the potential for weeds to become established or spread, and result in aesthetic impacts from human-made materials being visible in an otherwise natural setting.

<u>Cost:</u>

Relocation costs vary greatly depending upon site. The average cost to trap and relocate approximately 95 percent of the animals is estimated at $4,400 per acre. The estimated cost of trapping until 80% of animals are caught is about $3,000 per acre.

On-the-ground Action | Removal | Non-lethal Control

Contraceptives

Description:

The black-tailed prairie dog has one litter per year of four to six pups. Post-emergent survivorship is estimated at 40-50%. In the wild, they can live up to 5-8 years. Controlling fertility is a way to limit population growth and reduce population size. In areas where expansion from outside the colony is effectively controlled, reducing fertility and natural mortality could eventually result in the local elimination of a prairie dog population.

Prairie dog contraception as means of population control/reduction and alternative to lethal controls is limited by several factors, including mode of delivery, toxicity and effects upon non-target species and availability.

> *Delivery:* Effectively treating every animal in a colony is logistically challenging. Since it would be costly and there would be a risk of mortality to capture and surgically sterilize each member of each generation of a colony, managers and researchers have identified an oral bait with a chemo-sterilant as the most likely way of controlling prairie dog fertility.
>
> *Non-target species:* Researches have not yet identified an effective chemo-sterilant that is safe for prairie dogs and other non-target species. For example, one substance accumulated in the body tissue and posed a hazard to predators and scavengers. Another had the potential for undesirable side-effects on prairie dogs and could not be targeted to prairie dogs.
>
> *Availability*: Should a chemo-sterilant be identified that is effective and safe in field trials, it must be registered with the Environmental Protection Agency (EPA) before it can become commercially available. The EPA registration process is expensive because demonstrations of safety and effectiveness may require testing, along with experiments that take three to five years to complete.

Although field trials continue in the search for a viable, safe and effective chemo-sterilant for prairie dogs, none have moved beyond the stage of field trials.

Evaluation:

A safe and effective contraceptive to control prairie dog populations is likely to be viewed favorably to most of the community to remove prairie dog populations in areas of conflict. OSMP will continue to monitor advances in its development and commercially availability and could investigate the possibility and appropriateness of hosting field trials.

Cost:

As this technology is not currently unavailable, cost estimates are not available.

On-the-ground Action | Removal | Non-lethal Control

Passive Relocation (aka Reverse Dispersal Translocation)

Description:

Passive relocation is a multistep process to encourage prairie dogs to leave their burrows at the expanding edge of a colony and direct them away from areas of potential conflict by blocking re-entry to burrows. The process works by progressively closing occupied burrows after animals have been encouraged to leave. Greater detail is available here.

Evaluation:

Passive relocation is effective at reducing conflict where colonies are expanding into unoccupied areas unsuitable for prairie dogs (e.g., irrigable fields). Passive relocation works best where there are available unoccupied burrows in more central parts of the origination colony. It is a useful tool for small areas and specific situations. It does not significantly affect the condition or extent of habitat for prairie dogs and associated species and allows agricultural activities to continue or resume. By itself, this tool does not directly restore degraded landscapes, but can remove prairie dogs as a source of stress in areas of conflict and supports ecological/agricultural restoration when used in conjunction with other tools.

Staff members have experience with this and have some in-house ability to complete a limited number of small passive relocation projects. While growing in popularity, there are very few contractors who offer passive relocation as a service. This can make it infeasible to use this strategy at a large scale.

Passive relocation is not well-known in the community, but it is generally seen as an acceptable tool by those familiar with it. Some may not be satisfied with its limited scale of impact and the limits of its applicability.

Cost:

The estimated cost for passive relocation is approximately $1,250 per acre based upon an average of several sites. The costs vary as site characteristics strongly affect the level of effort required.

On-the-ground Action | Removal | Lethal Control

Capture and kill: Carbon dioxide chamber

Description:

A means of killing prairie dogs that involves the capture of animals by live trapping on the ground surface. Burrows in the capture site may be required to be treated with insecticide before trapping to kill fleas and reduce plague-related safety concerns. Traps are typically pre-baited[1] for several days, then set and monitored frequently to avoid in-trap mortality from exposure. Once captured, prairie dogs are placed into a chamber that is then filled with carbon dioxide.

Evaluation:

This form of lethal control can be used over large areas, but as with trapping for relocation, it will require in-burrow lethal control if complete removal is desired. When considering trapping, the percentage of the estimated population to be removed is an important factor affecting both the cost and ability to remove prairie dogs from other sites. While more prairie dogs can be captured with prolonged effort, it is generally agreed that there is a steep drop off in trapping success after about 80 percent of the animals have been trapped. Continuing trapping after that point increases costs per animal captured significantly and precludes the relocator moving to another site.

Trapping and killing resolve conflicts such as those in irrigable lands occupied by prairie dogs and supports the agricultural purposes of open space. By itself, this tool does not directly restore degraded landscapes, but can remove prairie dogs as a source of stress in areas of conflict and supports ecological/agricultural restoration when used in conjunction with other tools. Prairie dogs killed by this technique can be donated to captive and recovering raptors in educational and rehabilitation facilities.

As with other removal techniques, removal by trapping must be accompanied by effective means of excluding re-colonization.

Limited use of this tool may be consistent with the intent of the city's wildlife protection ordinance and Grassland Plan management policies for removal and transition areas. City policies clearly identify lethal control as the last resort and city regulations seek to ensure that non-lethal alternatives are explored. When there is no alternative to lethal control, it is the city's policy to encourage live trapping and individual killing in a manner to minimize suffering and the use of the killed prairie dogs in animal recovery programs. This tool is equivalent to the fifth step in the city's 6-step process. Extensive reliance on trapping and killing could be considered at odds with the intent of that process. In addition, it would be useful to clarify the degree to which lethal control can be used to address conflict with irrigated agriculture in Grassland Plan Transition Areas and other prairie dog management designations.

The effect of this tool upon prairie dog associates depends upon the scale of implementation. Widespread lethal control will remove the prey base for predators and habitat for other associated species and could have large effect on local populations.

Implementation is likely to be increasingly constrained by contractor availability with an increasing level of implementation. Since OSMP has no equipment, staff expertise or capacity to oversee contractors or implement this approach, there would be a lag time for hiring, training and equipment acquisition before staff would be prepared to act.

While the potential to have widespread impact on conflict will appeal to some members of the community, large scale use of lethal control will be a concern for others. In addition, there is no definitive information about whether and how carbon dioxide can be administered as a humane method of lethal control.

Cost:

The estimated cost of trapping and killing prairie dogs using a carbon dioxide chamber is approximately $4,000 per acre based largely on the cost of trapping for relocation without receiving site costs.

On-the-ground Action | Removal | Lethal Control

Do not implement plague vaccine

Description:

Plague is a bacterial disease transmitted by fleas to prairie dogs and other species. Once introduced, plague can quickly kill an entire prairie dog colony. As a tool to aid in the conservation of prairie dogs and their associates, CPW and others developed a plague vaccine for prairie dogs. The vaccine doesn't kill the fleas; however, it has demonstrated success at providing partial plague immunity for prairie dogs in recent tests. CPW and USDA Wildlife Services are currently ramping up production of the vaccine bait, with a goal of being able to treat 10,000 acres per year.

The OSBT has recommended and City Council has approved staff's recommendation from the Prairie Dog Working Group (PDWG) to deploy the plague vaccine in existing colonies at receiving sites in the Southern Grasslands (South Grassland Preserve) and administer the vaccine to prairie dogs being relocated. This was a "Category 3 Recommendation," meaning that it was not consistent with the then-current plans or policies or had substantial trade-offs associated with it but was deemed feasible with current staffing and resources. Plague vaccine was applied in 2018.

Evaluation:

OSMP is not currently proposing to administer the plague vaccine outside of existing colonies at prairie dog receiving sites in the South Grasslands Grassland Preserve or to individual colonies that are planned for relocation.

Under current plans and policy, plague vaccine would not be applied to Transition and Removal Areas under almost any circumstances as this would be at odds with the management objective of having no prairie dogs in those designations. The Prairie Dog Working Group recommended that staff create a plague management plan for city properties. This plan will dictate whether, and in what conditions, plague management would be used anywhere on OSMP or other city property. Given the current high levels of occupancy in the Northern Grassland Preserve (Table A-1) and the abundance of prairie dogs in protected status designations within the project area, it is unlikely that the plague vaccine would be deployed there at this time. If the extent of prairie dogs falls below management thresholds there or in other protected areas, OSMP may deploy the plague vaccine if directed by the to-be-created plague management plan.

Table A-8 Acreage of land occupied by prairie dogs across Grassland Plan management designations in the project area

Management Designation		Occupied Acres
Grassland Preserve	(GP)	1,801
Prairie dog Conservation Area	(PCA)	23
Multiple Objective Area	(MOA)	215
Total Protected Status (GP+ PCA+ MOA)		**2,039**
Transition	(T)	441
Removal	(R)	222
Total in Conflict	**(T + R)**	**663**
Overall Total Acres		**2,709**

Cost:

Not applying the plague vaccine in irrigable lands occupied by prairie dogs, except as part of relocation projects, is the current position of OSMP, consistent with OSBT- and City Council-approved implementation of the PDWG recommendations.

On-the-ground Action | Removal | Lethal Control

Gas cartridges (CO)

Description:

This strategy involves the killing of prairie dogs using cartridges that produce toxic carbon monoxide (CO)gas when lit. After first plugging the entrances of connected burrows with soil to contain the gas, a lit cartridge is placed into the remaining open burrow entrance, which is then filled with soil to complete containment. The carbon monoxide induces unconsciousness then death.

Evaluation:

Gas cartridges can be used over areas of any size. For example, they could be deployed to complete removal after trapping or used over tens or hundreds of acres. The need for repeat applications tends to increase with increasing area.

Trapping and killing resolves conflicts, such as those in irrigable lands occupied by prairie dogs, and supports the agricultural purposes of open space. By itself, this tool does not directly restore degraded landscapes, but can remove prairie dogs as a source of stress in areas of conflict and supports ecological/agricultural restoration when used in conjunction with other tools

As with other removal techniques, burrow fumigation with gas cartridges must be accompanied by effective means of excluding re-colonization.

Limited use of this tool may be consistent with the intent of the city's wildlife protection ordinance and Grassland Plan management policies for transition areas. City policies clearly identify lethal control as the last resort and city regulations seek to ensure that non-lethal alternatives are explored. When there is no alternative to lethal control, it is the city's policy to encourage live trapping and individual killing in a manner to minimize suffering and the use of the killed prairie dogs in animal recovery programs. This tool is equivalent to the sixth step in the city's 6-step process. Extensive reliance on gas cartridges could be considered at odds with the intent of that process. In addition, it would be useful to clarify the degree to which lethal control can be used to address conflict with irrigated agriculture in Grassland Plan Transition Areas and other prairie dog management designations.

In addition to the indirect effects of lethal controls that depend upon trapping individual prairie dogs, gas cartridges have direct effects, killing most inhabitants of burrows. The effect of this tool upon prairie dog associates depends upon the scale of implementation. Widespread lethal control will remove the prey base for predators, kill burrow inhabitants and destroy habitat for associated species, and could have a large effect on local populations of these species. Since prairie dogs are killed underground, they are not available for raptor education or rehabilitation facilities.

Implementation is likely to be increasingly constrained by contractor availability with increasing level of implementation. Since OSMP has no staff expertise or capacity to oversee contractors or implement this approach, there would be a lag time for hiring, training and equipment acquisition before staff would be prepared to act.

While the potential to have widespread impact on conflict will appeal to some members of community, large scale use of lethal control will be a concern for others. In addition, there is no definitive

information about whether and how carbon dioxide can be administered as a humane method of lethal control. While carbon monoxide is considered by many to be more humane than carbon dioxide because it induces unconsciousness prior to death, apparently, gas cartridges produce hot particles that can be inhaled, causing trauma to nasal passages and lungs.

Cost:

Gas cartridges and labor for deployment cost approximately $65/acre based upon a 2011 estimate with a 3-percent annual increase for labor added.

On-the-ground Action | Removal | Lethal Control

Introduce black-footed ferrets

Description:

Black-footed Ferrets remain the most endangered mammal in the United States. Recovery efforts rely on the successful reintroduction of ferrets into the wild on their required habitat-occupied prairie dog colonies. Black-footed Ferrets have been extirpated from Boulder County and, as a result, successful reintroduction would represent returning a native species to a landscape where it has been absent for many decades.

Black-footed ferrets depend upon prairie dogs as reflected by the overlapping ranges and habitats of ferrets and the various species of prairie dogs. Ferrets inhabit prairie dog burrows and raise their young in them. They excavate prairie dogs burrows in search of prey. Prairie dog remains have been found in more than 86 percent of ferret scat examined. Ferrets depend upon large and unfragmented complexes of prairie dog colonies. Because of their reliance on prairie dogs as a food source, a sustainable breeding population of ferrets requires a large number of prairie dogs.

Evaluation:

Following presentations, discussions and public hearings on staff's analysis of the recommendation of the PDWG, the Open Space Board of Trustees and City Council endorsed the following next steps regarding the reintroduction of the black-footed ferret:

"Staff will begin internal discussions in 2020 to determine the feasibility, trade-offs and other issues associated with ferret reintroduction. These conversations will conclude in 2021 with staff recommendations surrounding next steps in potential ferret reintroduction. In late 2021, staff will solicit public input and decision-maker direction in whether to proceed to implementation planning, interagency agreements and other steps necessary for ferret reintroduction."

Timing related to the actual reintroduction of ferrets relies heavily on occupation levels of prairie dog colonies in the southern part of Boulder County and the northern part of Jefferson County. This area of OSMP – in combination with adjacent Boulder County Parks and Open Space and Rocky Flats National Wildlife Refuge – is the only area on City of Boulder land large enough to meet the current minimum requirements of Black-footed Ferret reintroductions.

Therefore, the project areas and the northern portion of OSMP are not likely to be a feasible re-introduction site because of the fragmented nature of habitat and the high degree of conflict between prairie dogs and other land uses, such as irrigated agriculture. The North Grassland Preserve's overlap with hundreds of acres of irrigated agriculture would introduce unnecessary complexities to a ferret reintroduction project. It is also unlikely that a successful black-footed ferret reintroduction would improve the situation as the ferrets need to maintain prairie dog populations at a "steady state." While on-going reductions in prairie dog populations would resolve the conflicts of prairie dog occupation and the conservation of irrigable lands, it would not be a sustainable outcome for the ferret population.

Cost:

Not in scope of this project. To be determined as part of implementation of PDWG recommendations.

On-the-ground Action | Removal | Lethal Control

Pressurized Exhaust

Description:

Pressurized exhaust (sometimes referred to as Pressurized Exhaust Rodent Control or PERC®) is a process by which exhaust from an internal combustion engine is captured, cooled, pressurized and injected into a prairie dog burrow system. The atmosphere of the burrow is displaced by carbon monoxide-laden exhaust, and the animals are rendered unconscious then killed by the carbon monoxide. As with gas cartridges, connected burrow entrances are plugged before the exhaust is introduced to contain the exhaust.

PERC machine https://handmgophercontrol.com/

Evaluation:

Pressurized exhaust can be used over areas of any size. For example, it could be deployed to complete removal after trapping or used over tens or hundreds of acres. Community members submitted several comments recommending that OSMP emulate the prairie dog management of Boulder County Parks and Open Space. Boulder County uses pressurized exhaust as one of their primary tools – in addition to trapping and donating prairie dogs to black-footed ferret recovery programs – for control of prairie dogs where there are conflicts with irrigable lands and other agricultural land uses.

The application of pressurized exhaust resolves conflicts associated with irrigable lands occupied by prairie dogs and supports the agricultural purposes of open space. By itself, this tool does not directly restore degraded landscapes, but can remove prairie dogs as a source of stress in areas of conflict and supports ecological/agricultural restoration when used in conjunction with other tools. There are no secondary effects upon animals that feed on the prairie dogs killed by this technique.

As with other removal techniques, fumigation techniques like pressurized exhaust must be accompanied by effective means of excluding re-colonization.

Limited use of this tool may be consistent with the intent of the city's wildlife protection ordinance and Grassland Plan management policies for transition areas. City policies clearly identify lethal control as the last resort and city regulations seek to ensure that non-lethal alternatives are explored. When there is no alternative to lethal control, it is the city's policy to encourage live trapping and individual killing in a manner to minimize suffering and so that the killed prairie dogs can be used in animal recovery programs. This tool is equivalent to the sixth step in the city's six-step process. Extensive reliance on pressurized exhaust could be considered at odds with the intent of that process. In addition, it would be useful to clarify the degree to which lethal control can be used to address conflict with irrigated agriculture in Grassland Plan Transition Areas and other prairie dog management designations.

In addition to the indirect effects of lethal controls that depend upon trapping individual prairie dogs, pressurized exhaust has direct effects, killing most inhabitants of burrows. The effect of this tool upon prairie dog associates depends upon the scale of implementation. Widespread lethal control will remove the prey base for predators, kill and destroy burrow inhabitants, and destroy habitat for associated species. This could have a large effect on local populations of these species. Since prairie dogs are killed underground, they are not available for raptor education or rehabilitation facilities.

Implementation is likely to be increasingly constrained by contractor availability with increasing level of implementation. Since OSMP has no equipment, staff expertise or capacity to oversee contractors or implement this approach, there would be a lag time for hiring, training and equipment acquisition before staff would be prepared to act.

While the potential to have widespread impact on conflict will appeal to some members of the community, lethal control is a significant concern for others, increasing with more reliance on this as a tool to achieve the project goals. Pressurized exhaust seems to be a comparably humane form of lethal control. Carbon monoxide is generally considered to be more humane than carbon dioxide because it induces unconsciousness prior to death, and, unlike gas cartridges, pressurized exhaust does not produce hot particles that can be inhaled causing trauma to nasal passages and lungs.

Cost:

The estimated cost of contracted application of pressurized exhaust is approximately $221/acre.

On-the-ground Action | Removal | Lethal Control

Trap and donate live prairie dogs to ferret facility

Description:

Removing prairie dogs by the live trapping of individual animals on the ground surface. Burrows in the capture site may be required to be treated with insecticide before trapping to kill fleas and reduce plague-related safety concerns. Traps are typically pre-baited for several days, then set and monitored frequently to avoid in-trap mortality from exposure. Once captured, prairie dogs are caged in a holding facility then delivered to the U.S. Fish and Wildlife Service's National Black-footed Ferret Conservation Center north of Fort Collins. There, the prairie dogs are either used as part of the preconditioning of captive-reared ferrets kits as they learn how to hunt and kill prairie dogs or are killed at the Center, frozen and used to introduce prairie dogs as food for kits that are too young to hunt. Although the prairie dogs are delivered alive to the facility, this is considered a lethal control technique because the outcome is the death of the prairie dogs.

Evaluation:

This form of lethal control could be used over large areas, but as with trapping for relocation, or lethal control in carbon dioxide chambers, it will require in-burrow lethal control if complete removal is desired. When considering trapping, the percentage of the estimated population to be removed is an important factor affecting both the cost and ability to remove prairie dogs from other sites. While more prairie dogs can be captured with prolonged effort, it is generally agreed that there is a steep drop off in trapping success after about 80 percent of the animals have been trapped. Continuing trapping after that point increases costs per animal captured significantly and precludes the relocator moving to another site.

Trapping and removing for the ferret breeding program resolves conflicts, such as those in irrigable lands occupied by prairie dogs, and supports the agricultural purposes of open space. By itself, this tool does not directly restore degraded landscapes, but can remove prairie dogs as a source of stress in areas of conflict and supports ecological/agricultural restoration when used in conjunction with other tools. This technique also contributes to the recovery of the black-footed ferret, the most endangered mammals in North America, and could indirectly support the reintroduction of ferrets to OSMP grasslands someday.

As with other removal techniques, removal by trapping must be accompanied by effective means of excluding re-colonization.

Limited use of this tool may be consistent with the intent of the city's wildlife protection ordinance and Grassland Plan management policies for removal and transition areas. City policies clearly identify lethal control as the last resort and city regulations seek to ensure that non-lethal alternatives are explored. When there is no alternative to lethal control, it is the city's policy to encourage live trapping and individual killing in a manner to minimize suffering and the use of the killed prairie dogs in animal recovery programs. This tool is equivalent to the fifth step in the city's 6-step process. Extensive reliance on trapping and donation to the ferret rearing program could be considered at odds with the intent of that process. In addition, it would be useful to clarify the degree to which this form of lethal control can

be used to address conflict with irrigated agriculture in Grassland Plan Transition Areas and other prairie dog management designations.

The effect of this tool upon prairie dog associates depends upon the scale of implementation. Widespread usage would result in the removal of the prey base and habitat for species that rely on prairie dogs or their burrows and could have a large effect on local populations of prairie dog predators and other associates.

Implementation is likely to be increasingly constrained by contractor availability with increasing level of implementation. OSMP has staff expertise and capacity to oversee contractors. However, this approach requires extensive additional coordination with the staff of the Center and a holding facility where prairie dogs can be tended until enough numbers have been trapped to make a delivery. Because Boulder County has such a facility and staff to maintain it, one possibility would be to consider partnering or contracting with the county.

While the potential to have widespread impact on conflict will appeal to some members of the community, large scale use of lethal control will be a concern for others, even with the prairie dogs supporting another species. While being hunted and killed by a ferret is a natural process, it unlikely to be characterized as humane.

Cost:

The estimated cost of trapping, holding and delivering prairie dogs to the Center is approximately $4,400 per acre. This estimate is based largely on using the cost of trapping for relocation and assumes that the cost of new infrastructure and staffing to hold prairie dogs, or contracting with Boulder County to hold them, is like the costs of relocation receiving site infrastructure development.

On-the-ground Action | Removal | Lethal Control

Other Lethal Control Techniques

Description:

A variety of lethal control techniques have been used to control prairie dogs, including anti-coagulants, phosphine gas (environmental and ingested), underground ignited explosive gasses and filling occupied burrows with a slurry of water and sand/silt (live burial), and shooting.

Evaluation:

There was no strong community input recommending these approaches. The availability of other comparably effective removal techniques that are considered more humane led staff to defer further consideration of these techniques unless such evaluation is requested/directed by the OSBT or City Council.

Cost:

Deferred, see above.

On-the-ground Action | On-the-ground | Approach for Removal, Exclusion and Restoration

Consult and share information with experts and agencies

Description:

Several commenters suggested that OSMP consult with experts in prairie dog behavior biology and grassland ecology – such as Dr. John Hoogland – along with researchers knowledgeable about grassland restoration, carbon sequestration. There were also suggestions for OSMP to consult with agricultural lessees and neighbors and lessees with cumulative centuries of experience to better understand how on-the-ground experience and research can inform OSMP management. Others advised consultation with Boulder County Parks and Open Space as a model for the successful integration of prairie dog conservation and the preservation of irrigable fields and sustainable agriculture operations.

Open Space and Mountain Parks has strong working relationships with ranchers and farmers as well as local land management partners at the city, county, state and federal levels. Staff members attend and present at conferences and meetings related to grasslands, water rights, irrigation, agriculture, prairie dogs and associated species where they have opportunities to meet with and discuss management with experts from academia and government labs. Because of the long-standing challenges associated with the management of prairie dogs in urban/suburban/exurban areas, there is a keen interest and quick communication about promising strategies and learning from management successes and attempts that are not successful. City staff will continue collaboration, consultation and information sharing as an overarching approach to prairie dog management and welcome input about how to improve our work in this regard.

Cost:

No additional costs are anticipated. Consultation and coordination with subject matter experts and community partners is a regular component of OSMP staff work.

On-the-ground Action | On-the-ground | Approach for Removal, Exclusion and Restoration

Integrate monitoring, notification and rapid response for plague and (re-) colonization

Description:

This action calls for OSMP staff members to be assigned individual responsibilities for tracking, reporting and ensuring management responses to prairie dog populations on irrigable OSMP lands. The idea was borne out of the observation that there can be a significant lag time between the start of colonization (or recolonization) of an irrigable field by prairie dogs or a plague outbreak and OSMP's management response. Developing better procedures and accountabilities to alert other OSMP staff and appropriate members of the city staff and the community could build relationships, improve management and reduce the need for costly relocation and undesirable lethal control.

Cost:

Standardized costs for this action are difficult to estimate. Staff would seek to integrate these responsibilities into the work of staff who are routinely in the field and who have regular contact with agricultural tenants and those with the responsibility for prairie dog management. It is possible that community volunteers, including neighbors, could assist with parts of this action. If advanced without additional staffing, there will be opportunity costs. OSMP would identify which lower priority work receives less time.

On-the-ground Action | Exclusion

Barriers- Fabric, Mesh, Metal and Vegetative

Description:

As prairie dogs reproduce, colonies tend to enlarge as yearling males are forced out of burrow complexes where their parents and younger siblings live. One research study found that most surface-area expansion of colonies occurs in the three months following the emergence of juveniles (in Colorado April-June). If there is suitable habitat at the outer margins of the colony, yearling males settle there. Otherwise, they may travel across inhospitable areas to find suitable habitat elsewhere. Either can result in the colonization of irrigable lands. The long-term success of prairie dog removal requires a way to discourage prairie dogs from re-colonizing the area. The most common approach to colony dispersal is the use of barriers.

Prairie dogs depend upon an open environment that allows each animal to have direct visual contact with other members of its family group, trespassers from other groups, and potential predators. Even plants that prairie dogs don't feed upon are cut down if they block views. These behaviors have led managers and researchers to experiment with artificial barriers to stop or slow colony expansion.

In areas where prairie dogs could expand onto or disperse to removal sites, the long-term success of removal relies upon some means to slow or halt recolonization.

Evaluation:

Barriers can reduce conflict by reducing the rate of dispersal of prairie dogs into areas where they are not wanted, such as irrigable fields. They are consistent with the city's preference for non-lethal means to management prairie dogs, and generally, support on-going agricultural activities as well as conservation of areas for prairie dogs and associated species. The successful restoration of soils and vegetation is enhanced by effective barriers.

Visual barriers alone, however, are not likely to offer 100% effective exclusion. If prairie dogs continue to reproduce, colony density will continue to increase. When there is no vacant suitable habitat along the colony margins, there are strong behavioral pressures for dispersing prairie dogs to find a place to live. Experience demonstrates that prairie dogs are very effective at locating where barriers are not continuous (e.g., at vehicle/pedestrian gates, where the barrier failed due to environmental effects or improper construction). Even the most effective barriers will not exclude all prairie dogs, so it is necessary to consider both barriers and removal as on-going tandem actions needed to manage levels of a site susceptible to prairie dog colonization.

The benefit of effective barriers is compromised because they also restrict the movement of other small- and medium-sized animals – such as mice, toads, salamanders, frogs, snakes, and lizards – and can fragment habitat. Concern over the conservation of affected species, especially when considering the cumulative effect of multiple barriers in one area (such as this project area), would mean careful attention to design and require some trade-offs between landscape connectivity and exclusion.

A variety of site conditions on protected and removal areas, as well as adjacent lands, can affect the degree to which barriers are effective. Barriers are most effective in flat areas where the prairie dogs do not have a view of adjacent lands and when they are installed with an adequate buffer between the

barrier and the currently occupied landscape. Barriers are easiest to construct and tend to be most effective if they are installed prior to colonization or after removal is complete. Burrows that are connected beneath the barrier render them ineffective. On the other hand, barriers are not particularly effective in situations where the manager is trying to contain prairie dogs in sparsely vegetated areas surrounded by rich grass cover, such as irrigated fields.

Barriers can be long-lasting if constructed out of durable materials and installed with attention to high winds and exposure to the sun. Longevity is also dependent upon the consistency of monitoring and maintenance.

Fencing contractors are familiar with the construction of prairie dog barriers and construction is not particularly complex. However, the availability of qualified contractors is a limiting factor. OSMP staff does not currently have the capacity to build visual barriers, and as with any infrastructure, must consider the incremental monitoring and maintenance costs of added infrastructure.

Visual barriers are generally appealing to members of the community as they are a non-lethal complement to removal techniques. On the other hand, some people may object to the aesthetic impacts on agricultural and natural landscapes or find the fragmenting effects upon non-target species unacceptable.

Types

Barriers generally fall into two groups: “constructed” and “planted.” Constructed or “physical” barriers are made of materials that block prairie dogs from seeing past them, climbing over them or digging beneath them. Physical barriers can be made of any material, but the most commonly encountered are metal, fabric and wire mesh and attached to an existing fence or built as new “fence.” Because of the effects of wind and sun exposure, fabric barriers need to be repaired and replaced more frequently when compared to metal barriers. On the other hand, fabric barriers like silt fencing can be installed quickly and inexpensively and could be useful for temporary applications, such as during relocation, to ensure that no animals are moving into a field as others are being removed. Barrier effectiveness can be enhanced by placing wire mesh flat on the ground along the fence to discourage burrowing.

Planted or “vegetative” barriers are made up of diverse mixture of native shrubs and taller herbaceous species, often grasses. OSMP best practices would use native species. Vegetative barriers effectiveness is very variable and depends on the local topography, plant height and density. Guidelines suggest barriers be from 10 to 300 feet wide. Proximity to an irrigable field may enhance the success of vegetative barriers since it may be possible to provide supplemental water to establish and encourage growth.

Costs:

Table A-2 gives estimated costs for installing or upgrading barriers.

Table A- 9: Barrier cost estimates

Type	$/foot	Cost to fence a square 40-acre field
Metal Barrier	$ 40.00	$ 211,200.00
Fabric Barrier	$ 30.00	$ 158,400.00
Silt Fence	$ 1.55	$ 8,184.00
Wire mesh (add-in for existing barrier)	$ 7.00	$ 36,960.00
Vegetative	$ 3.22	$ 17,002.00

On-the-ground Action | Exclusion

Dogs

Description:

The use of dogs was suggested as a part of community input. This action has not been used by OSMP in the past, and staff is not aware of it being used by other managers. Initial investigations on-line did not return any information on this topic.

This action could include the constant presence of dogs or frequent visits to an area for extended times by dogs. The details of how this would be accomplished are currently unknown and would require further research and may be experimental if considered.

Evaluation:

This action is novel and would require further conceptual development before it could be piloted or implemented. Recognizing that this could consume significant staff time, staff deferred further consideration of this action until requested/directed by the OSBT or City Council.

On-the-ground Action | Exclusion

Flood Irrigation

Description:

This action describes the effect of strategically irrigating a field to both support agricultural productivity and exclude prairie dogs. It is based upon the recognition that there is may be a significant overlap between the times of maximum colony expansion and the irrigation season (late spring/early summer), and that flood irrigation will create temporary conditions to discourage prairie dogs from establishing burrows. This strategy could also be considered among removal actions if applied to fields occupied by prairie dogs, where it would encourage them to disperse by making occupied habitat inhospitable.

Evaluation:

This action could have widespread application since many irrigable fields occupied by prairie dogs have water and infrastructure available for flood irrigation. Furthermore, diligent irrigation practices can discourage prairie dog colonization when regional prairie dog populations are low to moderate when used along with other exclusion and removal techniques. The duration of the effect is likely to be brief, and prairie dogs will return to irrigated areas soon after irrigation stops.

Effective irrigation practices are well understood and relatively easy to implement – although the active prairie dog colonies often disrupt ditch laterals, create significant challenges and make some areas impossible to irrigate. Irrigation may have a beneficial effect on soil conditions (encouraging plant growth and carbon sequestration) where there are persistent vegetation and topsoil and can slow the rate of site degradation.

Since agricultural tenants would not be motivated to irrigate areas where there is little or no potential for harvestable crops or forage, additional staff or contractor capacity would be needed to implement these efforts. Although consistent with existing regulations, some community members may see flooding burrows as inhumane, even though the likelihood of direct harm from the gradual flooding of burrows to prairie dogs after the emergence of young may be low.

Cost:

OSMP has both overseen contractors to irrigate and had staff run water on fields.

On-the-ground Action | Restoration |

Restoration

Description:

This general category of restoration refers to returning an irrigable field to agricultural use following a period of high occupancy by prairie dogs. It assumes that prairie dogs have been removed from the site and that actions to exclude recolonization have been taken or are underway.

The key steps in the restoration include:

Restoring topography – Prairie dog burrow entrances and the mounds surrounding them alter the topography and can redirect water flows on irrigated fields. An early step in restoration is leveling and contouring the field to allow for the appropriate flow of irrigation water. Burrows in ditches and ditch laterals disrupt the effectiveness of water delivery, and laterals may need to be re-established.

Irrigating – Once conditions allow, the property can be irrigated to improve site conditions and encourage the growth of the plants that remain.

Weed Management – The changes in vegetation resulting from high prairie dog occupancy can result in the establishment of undesirable and invasive plant species and displace pasture grasses or other crops. Depending upon the species that have become established, an integrated management plan is needed to be developed and implemented to control or eradicate weeds. In some cases, irrigation and re-seeding, and the return of mowing and grazing may be all that is needed. In other cases, pesticides or the planting of cover crops may be recommended.

Soil Preparation – With the increasing understanding of the important climate-moderating role of soils in holding carbon, the OSBT and City Council have asked staff to pay special attention to outcomes associated with soil carbon sequestration. This could include key-line plowing – a process in which a plow cuts deep narrow furrows into the soil to improve water infiltration and distribution with little disturbance to the soil structure. OSMP is also experimenting with is the application of compost and other soil amendments as part of restoration projects to provide the nutrients needed by soil organisms like fungi and bacteria, which in turn, support the growth of plants seeded into the restoration site.

Seeding and planting – Depending on the degree of degradation, it may be necessary to reseed previously irrigated agricultural fields with quickly growing annual plants that contribute organic matter and limit weed growth. Other areas that are in better condition may be seeded with a diverse mix of perennial grasses and other plants.

Evaluation:

Benefit

Restoration is the third component of on-the-ground actions intended to restore irrigable fields, allowing them to be available for agricultural use. It is especially important in Removal and Transition areas because it will allow those areas to be used in a manner consistent with the objectives of charter-based plans while also meeting the project goal of restoring soil and vegetation.

OSMP staff and contractors have considerable experience with the ecological and agricultural restoration of grasslands. While some measures like key-line plowing are new to OSMP, they have a history of application and success elsewhere, and staff is partnering with university researchers and experienced practitioners to improve the likelihood of success.

The outcomes of restoration are in line with the expectations of much of the community, representing the ability to both restore lands and soils so they can better support agriculture and carbon sequestration. Successful restoration, coupled with areas with prairie dogs and a diversity of associated species, would demonstrate OSMP's ability to manage lands for two important charter purposes.

As with removal and exclusion techniques, it will not be effective or persist in isolation. The success of restoration depends upon the effectiveness of exclusion actions because these projects are very sensitive to the effects of prairie dog activity.

Costs:

Reclamation costs are likely to be highly variable because the current conditions and management objectives in the project area cover a wide range. A range of costs for the main components of the work are provided in Table A-3

Table A- 3: Reclamation cost estimates

Type	Cost/acre
Restoring Topography + Irrigation Infrastructure	$12 - $44
Seeding / Planting	$76 - $124
Soil Amendment / Enhancement	$16 - $272

Policy or Other | Policy | OSMP

Adjust the stocking rate

Description:

This action describes the practice and policy by which OSMP would evaluate the availability of forage in leased irrigable lands occupied by prairie dogs and reduce the number of livestock, the duration of grazing or the season of grazing as part of the agreement between the city (OSMP) and the agricultural tenant.

Evaluation:

It is the existing policy and practice of the city to reduce stocking rates to match the availability of forage. The practice is broadly applicable across all leased OSMP lands. The practice is intended to recognize that environmental factors, as well as prairie dogs, can affect the availability of forage and to provide a means of maintaining healthy vegetation and soils. It can support the long-term viability of OSMP lands and advance multiple charter purposes – including those associated with agriculture, conservation of grassland biodiversity, and maintaining healthy soils.

In situations where OSMP does not have the tools to change patterns of prairie dog occupancy, adjusting stocking rates represents something that OSMP can do to protect important OSMP assets – healthy soils and vegetation. However, in the case of prolonged and/or high levels of prairie dog occupation, the result can be to compromise the viability of agricultural operations by reducing or eliminating productivity and potential income without necessarily maintaining healthy soils or vegetation. In other words, the stocking rate for agricultural production goes down while the populations and effects of prairie dogs increase. Heavy or persistent grazing from livestock and wildlife have similar impacts on soils and vegetation.

This action may provide a short respite, perhaps up to a growing season, for soils and vegetation, but it may come at a high cost to agricultural tenants if they do not have access to alternative pastures.

While OSMP currently has the ability and does reduce stocking rates, doing so in irrigable fields is at odds with the objectives of the Master, Ag and Grassland plans – as these are the OSMP lands identified as agricultural best opportunity areas.

Cost:

Direct and immediate costs to the city depend on if and how the agricultural tenant is compensated for the stocking rate reductions. If alternative pasture on unleased land (e.g., a grass bank) is available, there may be no immediate financial impact. Otherwise, there may be a reduction in lease revenues from reduced stocking rates. Indirect and long-term costs to OSMP may accrue because of restoration needs from occupation of irrigable lands by prairie dogs.

Policy or Other | Policy | OSMP

Allow tenants to control prairie dogs with BMPs

Description:

Currently, city staff members manage prairie dogs on OSMP, including lands leased for agricultural production. This action describes a change to an existing policy, which would allow agricultural tenants to control prairie dogs on irrigable OSMP lands in a manner consistent with applicable plans and regulations. Tenants would be required to follow a set of yet-to-be-developed Best Management Practices (BMP) that would describe the roles and responsibilities of the tenant and OSMP. This action could be implemented with varying scope and levels of oversight and support by OSMP for tenants. For example, the scope could be limited to sites not occupied by sensitive species or conditioned upon a high, moderate or low level of staff oversight for lethal control.

Evaluation:

While this action would not address any conflicts in existing policy, agricultural tenants could operate as semi-independent agents within OSMP plan requirements and city regulations. This strategy itself would not resolve policy conflicts. However, coupled with other potential actions – such as exemptions or "general permits" that would allow burrow destruction or lethal control for certain normal agricultural activities on irrigable land – it could be part of a package that integrates agricultural and native species conservation purposes of open space. It could also help protect soil health by removing the sources of stress, such as burrowing and vegetation removal. Successfully implemented, this action could have long-term benefits.

The management of prairie dogs on private property in unincorporated Boulder County is relatively straightforward and free of process as most property owners rely upon lethal control. Lethal control or even burrow disturbance on OSMP lands requires consideration and compliance with city regulations and OSMP policy. This requires understanding a more complicated situation, having more information available and a willingness to wait longer before acting. Unless accompanied by policy and regulatory changes that would provide some certainty that the investment of time and effort was likely to result in an improvement to the situation from their perspective, it is unlikely that tenants would be motivated to devote the time. If they had the motivation, staff would still need to provide up-front training, information sharing and ongoing support. Taken together, developing BMPs and providing the desired and needed levels of coordination and communication among multiple tenants would require capacity not currently available and, without additional staffing, would result in the reduction of other services.

Community members interested in a reduction in effects from high levels of prairie dog occupancy in irrigable lands may similarly hesitate to support this action without understanding how it would result in improvements to the current situation. Others in the community may have concerns about tenants taking on prairie dog control and may actively oppose tenants' use of lethal control techniques.

Cost:

Given the number of unknowns about this action and the challenges, staff has deferred developing a cost estimate of cost seeking further community input and feedback from the OSBT.

Policy or Other | Policy | OSMP

Change prairie dog management designations

Description:

This action calls for OSMP to evaluate the agricultural potential of certain irrigable lands to determine if there are some areas that should no longer be irrigated. If such areas exist, changing designations would resolve conflicts between the effects of prairie dogs and irrigated agriculture, reducing the extent of areas where OSMP needs to consider removal, exclusion or restoration to irrigated agriculture.

Evaluation:

This action appears to have the benefit of contributing to the project goal of improving OSMP's ability to fully meet the charter goals by reducing the level of effort and investment in the removal and exclusion of prairie dogs from irrigable lands. It could also appear to contribute to the goal of resolving conflicting policies by reducing the need for prairie dogs to be removed. However, OSMP seeks to integrate charter goals and conserve soil on *all* OSMP lands, including those not suitable for irrigation. While this action would move land out of the "irrigable" category, it would not remove OSMP's responsibility to steward those areas as agriculturally converted as irrigated agricultural lands are the least resilient to persistent prairie dog occupation. Since staff has not yet developed effective ways to restore vegetation and conserve soils on properties with high occupancy by prairie dogs, removal and exclusion, at least temporarily, would be needed to restore these properties, whether they are considered irrigable or not.

Cost:

OSMP did not develop a cost estimate for this strategy as it appears to simply move some areas out of the scope of the project without addressing project goals associated with addressing charter goals or conserving OSMP soils and lands.

Staff agrees that prairie dog management designations should be re-evaluated periodically. There are certainly ways that changes in designations of prairie dog colonies on or adjacent to irrigable lands could support the goals of this project. However, a reconsideration of the prairie dog management designations needs to consider tradeoffs and the cascading implications among several of the Grassland Plan targets. Staff believes that the reconsideration of management area designations is beyond the scope of this expedited project and should be considered as a potential outcome when OSMP undertakes an update of the Grassland Plan.

Policy or Other | Policy | OSMP

Reducing/removing agriculture from irrigated lands

Description:

Staff received suggestions for actions that would reduce or remove agriculture from irrigated or all OSMP lands. These include:

- Don't lease lands for agriculture
- Don't lease irrigable OSMP when occupied by prairie dogs
- Consider conservation leases
- Modify agricultural goals to allow prairie dogs to co-exist with agriculture

Evaluation:

Staff did not fully evaluate these options as they appear to be at odds with the recommendation of the OSBT and direction from City Council.

Don't lease lands for agriculture
The *preservation of agricultural uses and land suitable for agricultural production* [emphasis added] is among the charter purposes of open space and leases (or a comparable arrangement) with agricultural operators have proven to be a winning and effective strategy for OSMP. It is not clear how ending the lease program would allow OSMP to meet this charter purpose of OSMP.

Don't lease irrigable OSMP when occupied by prairie dogs
While OSMP staff is maintaining approximately 300 acres of unleased, irrigable land occupied by prairie dogs in the project area, this is not a sustainable or effective strategy for the department. It is staff's understanding that OSBT has recommended and City Council has directed staff to find an approach to return these lands to agriculture production in a manner consistent with charter-based plan guidance.

Consider conservation leases/ • Modify agricultural goals to allow prairie dogs to co-exist with agriculture
OSMP's position is that all our agricultural leases with tenants are conservation-based leases. They have a strong focus on conservation of soils, ecological systems, water quality and biological diversity. The city retains broad authority and discretion on allowable activities largely to ensure that the city's conservation values are addressed. However, OSMP's partnerships with tenant farmer and ranchers have also provided the city with many lessons of truly effective land management strategies to conserve natural systems.

Sometimes the term "conservation lease" is used to describe a situation where the lessee chooses not to engage in agricultural activities to improve the conservation status of a property. For example, some individuals and organizations have sought conservation leases for riparian areas to lessen the impact of year-round grazing. OSMP does not believe that this type of "conservation lease" would be an effective way to improve the current situation in irrigable lands occupied by prairie dogs. Impacts to soils and vegetation would continue or worsen, there would be no motivation for operators to irrigate, and there would be no contribution toward the charter goal of preserving agricultural land uses.

Policy or Other | Policy | OSMP

Incentivize tenants to enhance predator populations

Description:

Provide monetary or other incentives to tenant ranchers and farmers if they take actions to enhance predator populations.

Evaluation:

This recommended action may be based on the assumption that localized increases in predator populations will exert a strong control on local populations of prairie dogs, resulting in a noticeable reduction in prairie dog occupancy of irrigable fields. Predator populations, locations and diets shift with the availability of prey. Predators in areas of high prairie dog occupancy are likely present at high levels. However, there is little evidence to support the idea that these higher levels of predators noticeably affect the density, extent or rate of spread of prairie dog populations. Prairie dogs have evolved sophisticated ways of evading predators, and predator populations persist best in the presence of abundant prey.

This action also assumes that agricultural lessees can take actions that will result in significant enhancement of predator populations. Ironically, the presence of prairie dogs in large numbers in irrigable lands may contribute more to enhance predator populations than any actions an agricultural tenant might take.

While this action might be feasible to implement, as there may be tenants interested in attracting raptors, the lack of clear benefits suggests that the time and effort of agricultural lessees and OSMP resources may be better deployed on other actions.

Cost:

Staff did not develop cost estimates for this strategy as the evaluation suggested that it would not make an important contribution to addressing the goals of the project.

Policy or Other | Policy | OSMP

Provide food for prairie dogs

Description:

Instead of harvesting hay in irrigable fields, allow prairie dogs to feed upon a portion of forage that would have been harvested, then allow fall/winter grazing to produce a return for the tenant.

Evaluation

While this action supports charter goals relevant to conservation, it does not support the profitable use of irrigated agricultural land. Reducing harvest can result in greater ground cover and conserve soils. On the other hand, providing forage for prairie dogs will support population growth and reduced forage availability for livestock. The action has no persistent benefit.

Many hayfields could be fall or winter grazed instead of harvested for hay, and this strategy has been implemented under current policy. It has required that lease rates be changed and has reduced both income to the tenant and revenue to OSMP. However, there is little motivation for tenants to reduce agricultural production and change to a potentially less profitable land use as it may greatly impact the financial viability of their operation, depending upon the extent of implementation.

Costs:

This action describes a temporary response to a degrading situation. OSMP does not recommend incorporating this as a policy. Consequently, staff did not develop an estimate of costs.

Policy | Policy | City Wildlife Protection Ordinances

Modify "Burrow Destruction Ordinance" to allow agricultural activities on irrigable land.

Description: This action refers to changing a city regulation governing impacts to prairie dog burrows. The Boulder Revised Code (B.R.C.) contains the basic law of the government for the City of Boulder. Parts of the B.R.C. that deal specifically with prairie dogs are referred to as the *Wildlife Protection Ordinance.* Among these is section (6-1-12, B.R.C. 1981), which prohibits damage to or destruction of prairie dog burrows – sometimes known as the "Burrow Protection Ordinance." The regulation includes nine situations where burrow destruction may be allowed. These "affirmative defenses" allow impacts to empty prairie dog burrows or impacts after attempts at relocating prairie dogs for civic services (such as airports, dams, and research), as well as during and after lethal control. Agriculture and restoration are not among the specific affirmative defenses.

However, there are a variety of agricultural and restoration activities that take place on irrigated OSMP lands that result in damage to burrows. These include plowing (including ditch plowing and key-lining), disking, manure/compost spreading, harrowing, seeding, mowing, tedding/fluffing, raking and baling. In most cases, OSMP tenants conduct these activities with tractor-drawn implements, and both the tractors and the implements can damage or destroy prairie dog burrow entrances.

Another section of the city code allows the city to issue "Special Permits" (6-1-39, B.R.C. 1981) for burrow destruction to allow landowners to halt colonization of a parcel or lot that has had no prairie dogs for at least one year. The permit allows damage/destruction of between one and four burrows.

The city has greater flexibility with the process for special permits. Changes to the burrow protection ordinance could include the following:

- Adding an affirmative defense to allow typical agricultural uses of OSMP irrigable lands.
- Removing from the affirmative defense requirement that removal occurred no more than one year prior to attempted relocation in irrigable OSMP.
- Adding burrow destruction on irrigable OSMP lands to the situations for which a special permit may be issued.
- Add to either of the action above, that best management practices (BMP) be developed and used[8].

[8] The affirmative defense for temporary impacts from public and utility projects requires management practices designed to minimize avoidable harm to animals.

Evaluation:

Allowing agricultural activities on irrigable OSMP to damage or destroy prairie dog burrows would have broad application for this project, as it would affect all irrigated lands with prairie dogs. A change to the B.R.C. could also be long-lasting. Allowing agricultural activities to impact burrows could resolve the conflict in city policy by prohibiting damage to burrows that is unavoidable with typical agricultural practices and leasing irrigable lands with prairie dogs for agriculture. The change would also support the charter purposes of open space associated with agriculture and the policy guidance in the Grassland Plan for Removal and Transition Areas and the restoration of OSMP grasslands. Burrow destruction activities could potentially be an effective passive relocation technique when populations are low or prairie dog movement into an irrigable is just beginning. OSMP staff would find key-lining and other restoration techniques much easier in the presence of active prairie dog colonies if damage to burrows were allowed.

Expanding the affirmative defenses to include typical agricultural activities on irrigable OSMP would likely have a negative effect upon prairie dogs and associated species in those areas, especially in Grassland Preserves.

Damage to prairie dog burrow entrances may or may not be accompanied by damage to the underlying burrows depending upon the weight of machinery, the intensity of activity, local soil conditions and other factors. Prior to the burrow protection ordinance, agricultural practices damaged burrows and prairie dogs often re-established burrow entrances within days of the impact.

Should the OSBT and City Council endorse considering this action, the revision to the B.R.C. would be staff-led effort, including OSMP, Planning, and the Office of the City Attorney. Staff have experience and knowledge about ways to amend the code and developing BMPs should they be called for. BMPs could also be developed by a contractor with staff oversight to reduce the need for staff time. Staff has heard support from a variety of community perspectives for this action. It is also consistent with the other affirmative defenses in that it seeks to allow a city purpose that typically results in damage or destruction to prairie dog burrows. However, there is also concern regarding the potential lethal effects upon prairie dogs and other animals in the burrows being destroyed.

Cost: The costs for this would be staff time, primarily from Planning, OSMP and the City Manager's Office. The development of BMPs, if needed, could be conducted through contracted services for an estimated $15,000. The BMP development could be combined with BMPs for lethal control – see below.

Policy or Other | Policy | City Wildlife Protection Ordinances

Modify lethal control regulations affecting of prairie dogs occupying irrigable lands.

Description:

This action refers to changing city regulations governing the use of lethal means of prairie dog control. The Boulder Revised Code (B.R.C.) contains the basic law of the government for the City of Boulder. Parts of the B.R.C. that deal specifically with prairie dogs are referred to as the *Wildlife Protection Ordinance.* Among these are sections 6-1-11 and 6-1-36, B.R.C. 1981, which limit the use of lethal control and describe the process for obtaining a lethal control permit, respectively. Section 6-1-11 describes six situations where lethal control is allowed without a permit. These "affirmative defenses" allow lethal control at airports and dams, as part of research and public and utility-related projects, to address public health issues and after lethal control to prevent recolonization. Agriculture and restoration are not specifically included among the affirmative defenses.

The permit process for obtaining a city lethal control permit (6-1-36, B.R.C. 1981) requires that applicants submit information to demonstrate to the city's satisfaction that reasonable efforts were made to identify and use alternatives to lethal control including:

- Non-lethal measures (e.g., barriers)
- Minimize site conflicts between desired land uses and prairie dogs
- Relocation alternatives

When permission is sought for in-burrow lethal control, the city requires information to document why the following are not being proposed as methods of lethal control:

- Participation in an animal recovery program for the preservation of endangered species (black-footed ferret)
- Trapping and individual euthanization (allows prairie dogs to be donated to raptor rehabilitation programs)

The timeline for the permitting process is shown in Table 10.

Table 10: *Lethal Permit timeline as described in* Procedures for Obtaining Prairie Dog Lethal Control Permits
(6-1-36, B.R.C. 1981)

Process Step	Timeline Standard
City determines that the application is complete and accepts the application	Up to 60 days
City begins the comment period	Not less than 15 days after acceptance of complete application
Comment period	60 days
City determines whether to issue permit	Not less than 15 days after the close of the comment period
Permit delay if city determines relocation opportunities exist	12 months

Assuming an application does not need revision to be considered complete, and the city uses the stated minimum (e.g., not less than 15 days) or maximum (e.g., up to 60 days), the permit timeline would be 150 days (ca. five months). If a permit were received and immediately determined to be complete, the process could be as short as 90 days (ca. three months). Once a permit is issued, it is valid for three years.

Another section of the city code allows the city to issue "Special Permits" (6-1-39, B.R.C. 1981) for killing or capturing/releasing prairie dogs to permit completion of a public improvement project approved by City Council but only after notification of council or to eliminate a health hazard.

The city has greater flexibility with regards to the process for special permits. Applicants are required to demonstrate that reasonable efforts were made to identify and use alternatives to lethal control and explain why those measures are not feasible. Changes to the lethal control regulations could include any of the following:

- Adding an affirmative defense to include typical agricultural uses of OSMP irrigable lands.
- Modifying the affirmative defense regarding re-colonization after removal to allow for lethal control to prevent colonization (rather than just re-colonization) of irrigable OSMP lands.
- Modifying the affirmative defense regarding re-colonization to remove the link to prior removal, allowing lethal control of remaining prairie dogs after plague or other disease events.
- Establishing the availability of a general permit that would allow OSMP to apply for the use of lethal controls across all or a subset of irrigable OSMP lands for a specified time (e.g., five years).
- Clarifying that agricultural uses of irrigable OSMP lands constitute public improvement projects and qualify for special permits.
- Adding agricultural uses of irrigable OSMP lands to the list of situations for which special permits may be issued.
- Adding post-plague lethal control of remaining prairie dogs on irrigable OSMP lands to the list of situations for which special permits may be issued.
- Relaxing the requirements for the extent of relocation effort prior to the use of lethal control.
- Add to any of the changes above a requirement that best management practices (BMP) be developed and used.

<u>Evaluation</u>:

The modifications of the city's prairie dog lethal control regulations, as listed above, would have broad application, potentially allowing for lethal control in all irrigable OSMP lands occupied by prairie dogs in the project area. Implementing these changes would resolve many of the policy conflicts referenced by the OSBT and City Council when recommending and providing direction for this project and would allow OSMP to more fully address charter purposes associated with agriculture and support associated Ag and Grassland Plan objectives.

Changes in regulations could also leverage OSMP's ability to effectively restore grassland soils and vegetation in the irrigable lands it manages and better implement the management of Transition and Removal Areas – also consistent with charter-based plan guidance approved by the OSBT and City Council. An important area for improvement would be to allow a rapid response, including lethal control, should a plague epizootic or other disease significantly reduce prairie dog populations on irrigable fields, reducing the need for removal in the future. Population levels at their lowest come after

plague/disease outbreaks. This presents a once in ten or more-year opportunity to remove prairie dogs before populations rebound. The possibility of relocation or capture and donate option adds expense, uncertainty and time during which populations can recover through colonization and reproduction.

The degree to which OSMP irrigable lands would contribute to the ecological benefits conferred by prairie dogs and associated species would be diminished. In addition, depending on the modifications made and scale of resulting lethal control, these changes would reduce the level to which the policies and ordinances of the City of Boulder minimize lethal control, which was one of the main motivations within the community when the ordinance was initially created.

Staff from the Planning and OSMP departments, along with the Office of the City Attorney, have experience in developing code language regarding the management of prairie dogs and are knowledgeable about the contents of council-approved plans. The community values agricultural land uses and council has recently acted to both emphasize the climate crisis and approve the OSMP Master Plan with a Tier 1 strategy calling for staff to address conflicts between agriculture and prairie dogs.

An increase in the number of situations where lethal control can be used could be controversial and present challenges for implementation. Community members value the lives of prairie dogs and the role that they play in supporting other species. The development and requirement to use best management practices could improve the level of community acceptance.

Cost: The costs for this would be staff time, primarily from Planning, OSMP and the office of the CMO. The development of BMPs, if needed, could be conducted through contracted services for an estimated $15,000. The BMP development could be combined with BMPs for burrow destruction.

Policy or Other | Policy | State of Colorado

Work with Colorado Division of Parks and Wildlife to modify relocation policies and practices

Description:

Prairie dogs are wildlife and the property of the State of Colorado. The state classifies prairie dogs as small game and has established regulations for how prairie dogs can be killed, captured and moved within the state. For example, the Colorado Division of Parks and Wildlife (CPW) has set the hunting season on public lands that allow hunting from June 15 through February (avoiding the period when pups are in the burrows). On private land, the hunting season is yearlong. CPW has no limit to the number of prairie dogs that can be killed or the number of [dead] prairie dogs that an authorized person can possess. CPW does not allow prairie dogs as domestic animals or pets in Colorado.

CPW also regulates the capture, transport holding and relocation of prairie dogs and has defined permitting procedures for three types of relocation:

- Wild to Wild
- Wild to Raptor
- Wild to Black-footed Ferret Reintroduction Program

This action would involve working with CPW to identify ways to adjust permitting policies or practices to provide OSMP with greater certainty and flexibility regarding where and under what circumstances Wild to Wild prairie dogs relocation can occur. OSMP would be interested in working with the state to:

- Extend the state's permit lifespan beyond 120 days.
- Consider a “General Permit,” which would allow OSMP to relocate prairie dogs from all or a subset of irrigable OSMP lands for a specified time (e.g., five years).
- Allow a landowner to move / relocate prairie dogs from one parcel ownership to another
- Reduce the burden on the applicant to fully address all neighbor concerns when those concerns are not realistic or relevant to the situation.

Evaluation:

Changes to state policies could make it easier for OSMP to relocate prairie dogs from irrigable OSMP lands and potentially make more areas available for relocation. Successful implementation of this action would resolve or reduce uncertainty about whether areas determined by the city to be appropriate receiving sites will be available for relocation. Since CPW’s regulations around prairie dog relocation are updated at 10-20-year intervals, beneficial changes – if implemented – would be moderately long-lived.

However, even with greater availability of receiving sites amid current population levels, relocation alone will not address OSMP’s ability to fully meet agricultural charter purposes. Improvements would likely be of marginal scope and only contribute a small amount to removal and would leverage exclusion and reclamation only to a small degree. Following plague, or at low population levels, the impact could be far greater.

OSMP staff is knowledgeable about the ecological setting, potential for dispersal onto neighboring lands, and the effectiveness of mitigation techniques. However, the state has developed its legal and policy positions with state-wide interests that may be strongly held. Despite OSMP’s strong relationships with

CPW staff, it would be very challenging to identify a person at CPW with the authority to negotiate for change and who is motivated because the current situation is likely to be acceptable from the perspective of CPW.

No publicly announced project for revising prairie dog relocation policy has been announced. CPW's review process for updating its administrative processes may not include consultation or community engagement may be relatively limited. There are also likely to be other stakeholders who would oppose options that would reduce the state's oversight of individual relocation decisions. Developing arguments that would appeal to neighbors of potential relocation sites as well as state and county agency staff is likely to be very difficult.

Having a significant influence on the state's relocation procedures would likely require extensive and complicated negotiations. OSMP has not done this before, and it is unclear if there is staff with a proven track record of accomplishing work like this. There is little certainty of a successful outcome, and large investments of time may not result in a change to the current situation.

Cost:

The costs for taking this action would be time for one or more staff members. Because of the estimated low benefit and feasibility of this action, staff deferred developing a more thorough cost estimate until receiving recommendation/direction from OSBT or City Council.

Policy or Other | Policy | State of Colorado

Change state law to allow landowners in other counties to receive relocated prairie dogs

Description:

Section 35-7-203 of the Colorado Revised Statutes, "Release of Destructive Rodent Pests," describes prairie dogs as destructive rodent pests. It prohibits the release of destructive rodent pests into a county other than which they were captured without the approval of the Parks and Wildlife Commission (via a permit from CPW), and a resolution adopted by the board of county commissioners of the receiving county. The law also enables the county commissioners to require a person in violation to eradicate or remove the animals from the county or impose a fine on the person in violation large enough to compensate the county to eradicate or remove the animals.

Evaluation:

If this law could be changed to allow willing landowners to accept relocated prairie dogs without the approval of county commissioners, it is anticipated that the availability of relocation sites would increase. This, in turn, could increase the reliability of trapping and relocation as a removal tool as currently there is considerable uncertainty about the availability of relocation sites. More certainty and availability would also increase the likelihood that receiving sites on city lands managed as OSMP will remain available for relocation of prairie dogs from other OSMP areas, including irrigable lands. If successfully implemented, this would resolve a significant policy conflict between city plans and policies and state law. Depending upon the actual availability of receiving sites, this action could improve OSMP's ability to fully meet its charter goals and leverage exclusion and restoration of grassland soils and vegetation.

However, as a very sensitive issue, such a change would likely face challenges and could be reversed – making its benefit short-lived. Even with greater availability of receiving sites, relocation alone will not address OSMP's ability to fully meet the agricultural charter purposes, given current high population levels. Improvements would be likely be of marginal scope and only contribute a small amount to removal and would leverage exclusion and reclamation only to small degree.

This strategy has been part of city policy for over a decade. Prairie dogs are unpopular over most of the eastern rural counties with the greatest ecological suitability as receiving sites. Not surprisingly, a champion from this area has not arisen to lead this an effort to change this law. It is more likely that many members of these communities would actively oppose a change in state laws that would make it easier to relocate urban prairie dogs to where they live/farm/ranch. For this and other reasons, this strategy has not been prioritized for the city's limited lobbying capacity.

Cost:

The costs for taking this action would be time for one or more staff members. Because of the estimated low feasibility of this action, staff deferred developing a more thorough cost estimate until receiving recommendation/direction from OSBT or City Council.

Policy or Other | Policy | PDWG

Prairie Dog Working Group Related Actions

Description:

During the first window of community engagement, staff received several recommendations that had already been considered by the OSBT and City Council as part of the recommendations of the Prairie Dog Working Group (PDWG).

- Don't use lethal control until all non-lethal options are exhausted.
- Develop an economic benefit model so the economic value of prairie dogs can be better compared to the benefits of agriculture.
- Consider least-cost forgiveness to compensate tenant farmers and ranchers for lost production.
- Reimburse private landowners for impacts resulting from prairie dogs.
- Pilot the PDWG economic recommendations.

Evaluation:

The OSBT and City Council considered city staff's evaluation of the recommendations from the PDWG in the spring of 2019. The board made its recommendations and Council accepted the results of staff's analysis. Expressing a desire to address the effects of prairie dogs upon irrigated agriculture, soil sustainability and grassland health, the board recommended and council directed staff to conduct this expedited management review of irrigable fields occupied by prairie dogs. The staff who developed the analysis of the PDWG recommendations and who are responsible for implementation are part of the expedited management review team are aware of the need to integrate the two projects.

Cost:

City staff developed cost estimates for the recommendations from the PDWG for OSBT and City Council last spring. That effort is considered as a separate track from this project.

Policy or Other | Other

Suggestions Beyond the Scope of this Project

Description:

During the first window of community engagement, staff received several recommendations determined to be beyond the scope of this expedited project:

- Collect and use soil condition data to guide prioritization
- Reduce pesticide impact from routine dusting of prairie dog colonies.[9]
- In depth interviews with and apologies to neighbors

Staff did not complete an analysis or cost estimate for these actions.

[9] There was a concern expressed that OSMP routinely dusted prairie dog colonies for fleas. OSMP does not do this. We communicated our practices with this person who made this comment and included our response in the details of online engagement.

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ATTACHMENT D: Engagement Window 2 Public Feedback through February 4

Component	Page
Questionnaire Text	D-2
Input from Online Questionnaire	D-15
Emails Received*	D-116
NextDoor Comments	D-235
Social Media Comments	D-238

*Includes emails sent to:

- OSMP Input: OSMPInput@bouldercolorado
- Open Space Board of Trustees: OSBT-Web@bouldercolorado.gov
- City Council: council@bouldercolorado.gov
- Field Notes: osmpnews@bouldercolorado.gov

Some community members provided the same email to one or more of the above.
In these cases, the email is only included once in this package.

The pages that follow may include places where email addresses, physical addresses and telephone numbers have been redacted. Redactions appear as black boxes and look likethis:

From: Geogre Washington <[redacted]>
Sent: Wednesday, November 6, 2019 5:39 PM

Questionnaire Text

Thank you to everyone who provided input during the last engagement window on how City of Boulder Open Space and Mountain Parks (OSMP) can manage irrigable agricultural fields north of Jay Road currently occupied by prairie dogs. View a map of the project area.

OSMP has used community feedback from an open house, along with input it received online, to develop a **draft approach and an evaluation of potential actions** to address this management topic. ***If you would like to consult this document as you fill out the questionnaire, please open the document in a separate window as you may not be able to return to the questionnaire.*** We encourage community members to use the Chrome browser while completing this questionnaire.

The questions that follow are intended to help improve OSMP's proposed approach and potential actions to address the conflict resulting from populations of prairie dogs in irrigable agricultural areas. This online questionnaire is intended to gauge the level of support for the various ideas the department heard from community members this fall. It is not a statistically valid survey.

General Approach

Staff's review of community input revealed that most ideas could be grouped into four categories that include on-the ground actions or recommendations for policy changes.

- **Removal:** This category includes both actions for non-lethal control measures the city currently prioritizes, such as relocations, as well as lethal control options.
- **Exclusion:** This category includes actions to prevent prairie dogs from entering or returning to irrigable OSMP lands.
- **Restoration:** This category includes actions to restore lands that were occupied by a high abundance of prairie dogs.
- **Potential plan and policy changes:** This category includes changes to plans and policies to address large populations of prairie dogs on irrigable OSMP lands.

1. How much do you agree or disagree that this general approach would help reduce the conflict between irrigable agricultural fields and prairie dogs?

- ○ Strongly Agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly Disagree
- ○ No opinion

2. Do you have any comments on this general approach?

Actions to REMOVE prairie dogs from irrigable fields.

3. OSMP has evaluated a series of actions to remove prairie dogs from irrigable lands. These include non-lethal and lethal control actions. Would you like to provide feedback on these actions? *

- Yes
- No

Non-lethal removal methods
These include:

- Trapping and relocating prairie dogs.
- Conducting passive relocation, which encourages prairie dogs to leave their burrows at the expanding edge of a colony and directs them away from areas of potential conflict by blocking re-entry to burrows.

The full set of non-lethal removal methods, along with staff's evaluation of these methods, is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 19.

4. How much do you agree or disagree that these non-lethal actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

5. Do you have any comments on whether these non-lethal actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Lethal control methods
These may include:

- Using carbon monoxide and/or pressurized exhaust in burrows.
- Trapping and use of carbon dioxide for captured prairie dogs outside of their burrows.
- Trapping prairie dogs and donating them to black-footed ferret or raptor-recovery facilities.

The full set of lethal removal methods, along with staff's evaluation of these methods, is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 23.

6. How much do you agree or disagree that these lethal actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

7. Do you have any comments on whether these lethal actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Actions to EXCLUDE prairie dogs from irrigable fields

8. OSMP has evaluated actions to exclude prairie dogs from irrigable lands. Would you like to provide feedback on these actions? *

- Yes
- No

Methods to prevent colonization or recolonization of irrigable fields
These include fabric, metal and wire mesh barriers or native plantings. The full set of exclusion methods, along with staff's evaluation of these methods, is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 37.

9. How much do you agree or disagree that these *exclusion* actions most effectively help reduce the conflict between irrigable agricultural fields and prairie dogs?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

10. Do you have any comments on whether these *exclusion* actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Actions to RESTORE irrigable lands previously occupied by prairie dogs

11. OSMP has evaluated actions to restore irrigable lands previously occupied by prairie dogs. Would you like to provide feedback on these actions? *

- Yes
- No

Methods to restore irrigable lands previously occupied by prairie dogs
These include:

- Closing vacant burrows.
- Irrigating lands.
- Performing carbon sequestration and soil health techniques to improve land fertility.
- Revegetating disturbed areas.

The full set of restoration methods, along with staff's evaluation of these methods, is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 42.

12. How much do you agree or disagree that these *restoration* actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

13. Do you have any comments on whether these *restoration* actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Plan and policy changes

14. The city could address the high occupancy of prairie dogs on irrigable lands by seeking plan and policy changes. Do you want to provide feedback on potential plan and policy changes? *

- Yes
- No

Plan and policy changes
These include:

- Changing OSMP agricultural agreements with farmers and ranchers.
- Modifying city regulations to allow burrow destruction from normal agricultural activities on irrigable lands.
- Modifying city lethal control regulations for irrigable lands.
- Working with the State of Colorado on relocation policies and practices.

The full set of plan and policy changes, along with staff's evaluation of these methods, is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 44.

15. How much do you agree or disagree that these plan and policy changes would most effectively help reduce the conflict between irrigable agricultural fields and prairie dogs?

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

16. Do you have any comments on whether these potential changes to plans and policies would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Assumptions for Decision-Making

17. Staff plans to develop a model to help guide the decision-making process and it will include several assumptions. Would you like to provide input on assumptions that may be included in this planned decision-making model? *

- Yes
- No

Assumptions that could guide the decision-making model
They are:

- Some prairie dogs will be relocated.
- It's infeasible to address large prairie dog populations on agricultural lands by current non-lethal practices alone.
- Some prairie dogs will be killed.
- Barriers will be installed to prevent recolonization.
- Soil and vegetative restoration will accompany removal.
- Prairie dog populations will continue to grow in the absence of plague.
- Management scenarios will be presented in terms of level of prairie dog removal based on acres and the number of animals.

The full set of potential management actions and staff's evaluation of those actions is available in APPENDIX A: Description and Evaluation of Potential Actions. See page 15.

18. How much do you agree or disagree that these assumptions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?

- ○ Strongly Agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly disagree

19. Do you have any comments on whether these assumptions to guide decision making would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

Any other comments?

20. Do you have any other comments?

Please tell us a little more about yourself.

21. Where do you live? *

- City of Boulder
- Boulder County
- Outside of Boulder County

22. Which gender do you identify with?

- Female
- Male
- I do not identify with either gender OR I do not identify with one gender more than the other

23. Which race or ethnicity do you most identify with?

- White
- Hispanic or Latino
- Asian
- Black or African-American
- Native Hawaiian or Other Pacific Islander
- Two or more races
- Other
- Prefer not to say

24. Age Range?

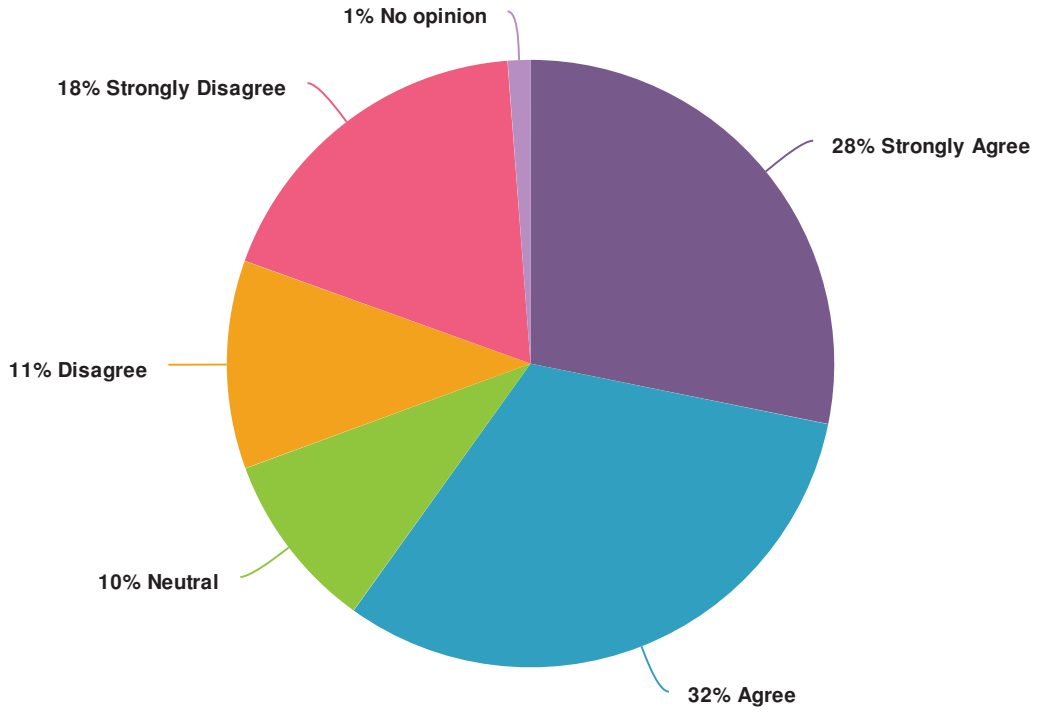
- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

Thank You!

Thank you for sharing your input with Open Space and Mountain Parks! Comments received through Tuesday, Feb. 4, will be provided to the Open Space Board of Trustees (OSBT) in advance of a study session on Wednesday, Feb. 12, when board members will discuss staff's potential strategies and actions.

Community members are welcome to provide comments to the OSBT during a public comment period before the Wednesday, Feb. 12, study session. Staff will then use community input and OSBT feedback to develop final strategies and actions, which the department expects to present to the OSBT during a public hearing in March.

1. How much do you agree or disagree that this general approach would help reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly Agree	28.2%	71
Agree	31.7%	80
Neutral	9.5%	24
Disagree	11.1%	28
Strongly Disagree	18.3%	46
No opinion	1.2%	3

Totals: 252

2. Do you have any comments on this general approach?

ResponseID	Response
22	There are too many of them for a healthy landscape, and for themselves.
24	The city should be putting the money spent on prairie dog mitigation and pro-natalist policies into volunteer human population reduction initiatives.
27	Policy needs to change to allow for the other 3 options. The ecosystem does not work to keep the populations in check and the land is being damaged to where it will not be farmable and the top soil will blow away.
35	Why relocate? Just feed them to raptors and other animals for food. Prairie dog gestation is only 30 days. Use them as a food source for other animals.
42	Quit talking and start doing!
43	Immediate removal/lethal before another breeding cycle begins.
48	You must consider changing the land use in these areas. You must recognize the connection between agricultural and climate change. Over 60% of wildlife has been lost-stop doing the same thing over and over. Offer wildlife leases and take these irrigated lands out of the cycle!!
51	I agree with the logic, but still have doubts that the General Approach is sustainable, unless lessee's have decision making power and autonomy to use whatever method's necessary to keep land completely free of prairie dogs.
56	Keep the prairie dogs alive
66	I disagree that lethal methods to control PD populations should be an option.

ResponseID	Response
67	I suggest approaching population management with the objective of restoring ecological health and function rather than just facilitating agricultural use.
68	Leave the dogs alone. They are great food for wildlife.
69	have no idea what your general approach is even though you have a bolded title saying, "General Approach".
70	I am in favor of eliminating the rodents from the environment.
73	Restoration is the best general approach
74	Please do restoration. That last question was dumb because I only agree with some of the "general approach," because the "general approach" has mutually exclusive aspects.
75	Prairie dogs have destroyed so many areas and should be removed as described above.
77	Removal should be done with lethal methods.
79	Remove.
80	If we want agriculture on open space, and of course we do, right?, then we need to give those farmers immediate successful help so they can do their jobs.
86	This is a very general approach - not sure what there is to agree or disagree on.
87	Let them be. You even frame the question with a bias. You say "the conflict between..agriculturaland prairie dogs." Irrigable lands is a concept prairie dogs aren't in conflict with that. The conflict is that your policy is favoring humans and destroying nature and ecosystems.
90	Elimination is necessary and relocating seems like a waste of time and money. Diseases spread by these animals are significant enough to illicit action to kill them, not relocate.
91	There are way too many prairie RODENTS dogs around Boulder. They are ruining perfectly good land creating economic losses and eye sores. Most should be eliminated as in expensively as possible.
92	I agree with three elements of the plan. I DO NOT support restoration.
94	The City should not be reluctant to remove/exterminate prairie dogs from places where they are not appropriate due to other management priorities.
110	I don't agree with any lethal removal of prairie dogs. They are an important part of the ecosystem and we need to find ways to keep them around.

ResponseID	Response
111	Please keep lethal measures as an option. There will be those who strongly disagree with any lethal actions, but they are in the loud minority. Realistically, practically, and economically, lethal needs to be an option.
112	NO lethal removal!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! Prairie dogs have earned the right to be here far more than humans have!!!!!
113	I think lethal control should be considered as long as it is non-polluting.
119	leave the p-dogs alone. they provide food for predators. On open space lands, farmers are a low priority.
121	Nobody seems to have considered changing plans and policies to allow more of the farmland to be left as regular open space and let the prairie dogs keep living there.
122	My only comment is to try to minimize the taxpayer cost of non-lethal methods. I'm fine with humane lethal methods. We are in a climate crisis and need to make the most of carbon sequestration efforts.
124	I am afraid that the reproduction rate of prairie dogs is so high that removal won't work, and most exclusion won't work.
128	As Prairie dogs are part of the food chain of bigger species of animals that exist in the Open Space it would be helpful to note where high concentrations of eagles, hawks, foxes, coyotes, snakes are located so as not to endanger their ability to thrive on the OS land.
130	They are am important part of wild life, and environment. You poison and kill one spices and you kill everything else. I always enjoy watching them communicate to each other. Human should learn from them.
133	I most strongly feel the expense to physically relocate all prairie dogs to distant grasslands is well worthwhile.
135	prairie dogs should not be killed on these lands. The ranchers should be removed, not our native wildlife. These prairies need wildlife, not destruction for the profit of a few ranchers.
136	Prairie dogs need to be allowed on all agricultural and OSMP lands. They are a keystone species for our local ecosystems and are far more important than a few more cattle.
139	Please work on relocation of the prairie dogs instead of extermination
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.

ResponseID	Response
147	The land that is occupied by prairie dogs should be protected and not used for agriculture at all.
151	Prairie dogs are down to less than 1% of their population they deserve land to live. These animals are important to our ecosystem and we need to protect them
152	The approach should be written with the prairie dogs as priority.
155	The existence of prime agricultural land in Boulder County will improve climate resiliency. Prairie dogs are spreading into these areas, and I am aware that recovering land after the fact is difficult and expensive.
158	Prairie dogs occupy less than 1% of the land that they once occupied. They are a keystone species and my family and I oppose any further eradication of this animal.
160	It's very vaguely written and I don't think prairie dogs would benefit in the long run.
163	There is NOT a "high abundance" nor "large populations" of prairie dogs anywhere. I am strongly against killing this important, native species simply for ranchers. I do not want my public land filled with livestock, and I certainly don't want my wildlife killed because of it.
169	Prairie dogs should be protected and not killed. There are less than 1 percent of them remaining on their historic territories. They are an important and vital part of the community
171	Please always use non lethal methods and a prairie dog sanctuary needs to be set aside with the land restored
172	As a resident of Boulder, I vote only to restore the prairie to the way humans found it. As it is an Open Space Mountain Park, there is little reason to lease the Open Space to ranchers. Removing or killing prairie dogs would destroy the point of the Open Space.
176	We need to stop seeing humans & their greed as the apex point in every situation.
178	Anything that will protect our prairie dogs will be worthwhile.
180	There are very few areas left where prairie dogs can live. Public lands should not be leased to ranchers for their own personal gain. Prairie dogs and other natural wildlife should have free and safe access to these open spaces.
182	No lethal option. Plus you have serious water issues and irrigation should not be an option. Prairie dogs would help bring the prairie to a naturalized state.
183	I believe that this general approach will only further disturb prairie dog colonies.
185	Lethal means should NOT be considered under any circumstances. Killing these innocent creatures is a deplorable & unethical consideration.

ResponseID	Response
186	Leave them alone, they make grate raptor food
187	Prairie dogs are cute but food production is more important and we have lots of land that is a more appropriate habitat than ag land.
188	Prairie dogs are an important part of the ecosystem and should be left unmolested. They have been removed from the vast majority of their historic range and should be allowed to recover into previous territories.
189	When the prairie dog population has dwindled to 1% of what it has historically been, we humans have obviously taken enough of their land and environment away from them. Lethal measures of managing native species on public land is absolutely abhorrent.
191	Stop this madness of killing a Keystone species!
193	Prairie dogs are down to 1% of their historic population. Their lives are far more important than agriculture. Open space should be for wildlife when we're witnessing the current mass extinction.
195	Using lethal methods for removal of a native specie has a negative impact on the other species, domestic animals and leaves poisons in the ground. There are humane removal methods where the prairie dogs could be caught, relocated and this is by far safer for all.
196	Yes, I think it's wrong to kill the prairie dogs and think the land they inhabit should be protected and restored.
202	I agree to this plan in so much as the only option is relocation and not lethal means. Prairie dogs are a keystone species and should not be killed just to satisfy development, or wrong-headed notions about their importance to a wide variety of other species that depend on them.
206	This question is incredibly difficult to understand. However, I strongly disagree with any lethal methods.
208	Prairie dog seem to be he most natural use of OS, and I value grazing lands over irrigated agriculture as a more suitable agricultural practice for this region. Bison grazing? But at the same time do have some sympathy for the cultural heritage of irrigated agriculature.
223	They are costing private land owners money where uncontrolled populations have to be defended in order not to private land owners property value. At what point is the city financially responsible for this cost?
229	Please leave the prairie dogs ALONE. It is THEIR land, they are highly intelligent creatures that live as a community and have a highly developed language. Not only this, you would be putting birds of prey and other predators at risk by continuing to destroy their food.

ResponseID	Response
230	Wildlife have a right to be on public lands, not livestock or ranchers.
233	Bear in mind that there are many other counties that have relocated these prairie dogs. They are not a vanishing species and are not precious.
237	Prairie dogs are a native species and when removed from the eco system that depends on them creates extreme risk for the system to fail.
238	Stop looking for excuses to murder innocent prairie dogs. They have as much -- if not MORE -- right to exist at the humans who want to murder them.
239	I couldn't open the draft documents on either Chrome or Safari so I can't respond to specifics but I am all for elimination-lethal or otherwise-of as many prairie dogs as possible! Their destruction of valuable land is appalling and they are a dangerous nuisance along bike paths.
240	I am happy that OSMP is considering agricultural lands and our food production to be a high priority.
242	leave the animals alone get ranchers, and farmers off public land and if you have them on your land work around them...Let natural predators do the job STOP killing natural predators...HUMANS are the problem not animals...
246	Yes. Allow us to shoot prairie dogs.
247	You are pussy footing around the major issues of lethal control and the need to change the ordinances. You hide them in the weeds of barriers and relocation which do not work. Restoration is useless unless you entirely remove PD's from site, and lethal is essential for that.
252	You are NOT considering the negative impacts on neighbors by your methods. Your methods are NOT working! You are impacting neighbors next to city land and you are allowing prairie dogs to De-nude the landscape and devalue our land! You must consider lethal control!
259	I think the city should put the highest priority on lethal control, because removal is expensive and exclusion does not work.
261	Only that the prairie dog population is totally out of control and needs to be controlled, definitely requiring lethal management as the most effective way.
265	All of the above needs to happen.
266	The prairie dogs are a keystone species that are vital to our ecosystem and should be given priority over human activities.
267	I would love to see the city not infiltrate land that belongs to individuals living in the wild. Further colonizing their space is unethical to every degree.

ResponseID	Response
269	These misnamed rodents are a problem. Natural predators are not enough to control their destruction to our open space lands...If the use of poisons is deemed too much try a semi-annual bow hunt...then the raptor could enjoy the spoils.
271	I have heard that the city uses carbon Dloxide as a killing agent. I hope the notice meant carbon MONoxide. If human physiology is any guide, the former creates agitation and panic before suffocation and so is not humane, whereas the latter does not
275	ONLY consider relocation and exclusion
276	This is no different than the costly policy that has been followed for decades.
279	It simply makes sense to us lethal control of a non-endangered species that is a nuisance pest on agricultural land.
280	I don't think the prairie dogs should be harmed...perhaps moved but not harmed.
281	It's time to have an aggressive approach to the problem.
282	Do prairie dogs survive relocation?
285	I suggest that the City issue a bounty on prairie dogs. Poison them, shoot them, trap them, catch them as you can, then bring the little varmints in for a $10 reward, which will be much less expensive and fussy than anything else that our local "government" can come up with.
289	Control development and neuter and castrate as a potential way to control the population.
290	Destroy them and restore the land
295	Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.
298	i agree that a one-size-fits-all approach isn't feasible.
299	No lethal control. Restore lands? Removing subsidized, unsustainable agriculture to enable natural ecosystems would be restoration. Lake Isabelle and Lefthand Reservoir in the high country are bone dry sand pits to support crops mostly for cows or wealthy peoples' horses.
300	Irrigated Ag lands can't be considered in isolation to other OSMP managed lands and adjacent muni. lands that once were rural. As rural areas are developed, we do not have a buffer zone to OSMP lands(IRRIGATED or NOT) and retaining native ecosysts. and species becomes a BIG issue
303	Prairie Dogs are a keystone species that should be encouraged in any suitable Open Space.

ResponseID	Response
304	The prairie dogs are unfortunately pests and compassionate as possible euthanasia makes sense.
305	I question whether this will be enough, given the decimation of farmlands. But I support the approach, with a clear timeline to re-evaluate whether this combination controls the population of the prairie dogs sufficiently to protect farmlands
309	It sounds like prioritizing non-lethal approach is the primary course of action, which I agree with, but it is clear more needs to be done to support the agriculture section of our land management plan where there is conflict with prairie dogs.
310	Consider the impacts of OSMP's management policies on neighbors of OSMP -- not just on OSMP lands -- and mitigate PD's when necessary!
314	There are just too many prairie dogs on the irrigated areas under Boulder control.
316	Missing from all these plans is how to control the predator population (especially coyotes) when the prairie dogs are removed. They may change their food source to chickens, pets, and lambs.
317	How much removal will be done?
318	I do not agree with any policy that harms these creatures. Mixing the lethal and non-lethal approach in one question is misleading. Relocating these creatures to a preserve is preferred IF the "irrigable" actions are critical (Insufficient information about "irrigable" needs).
322	Lethal control should not be considered
324	it doesn't seem enough resources are focused on humane and non-lethal alternatives
327	How are the prairie dogs monitored for flees that can transmit diseases to humans that walk on paths near prairie dogs or their burrows. I think it dangerous to humans to not monitor fleas and treat fleas from prairie dogs until a human contracts a disease from the fleas.
328	Yes: the prairie dogs may be detrimental, but if so, they pale in comparison to the threat of encroaching fracking. Resisting oil and gas should be our first priority.
331	Prairie dogs are a keystone species that offer food to such native predators as owls, coyotes, eagles ... Their dens provide shelter for native snakes, rabbits and others. In Australia, during the fires, burrowing animal dens became havens for many fleeing animals.
332	Removal has to be lethal, or the problem will persist. Restoration should only happen after removal is complete.

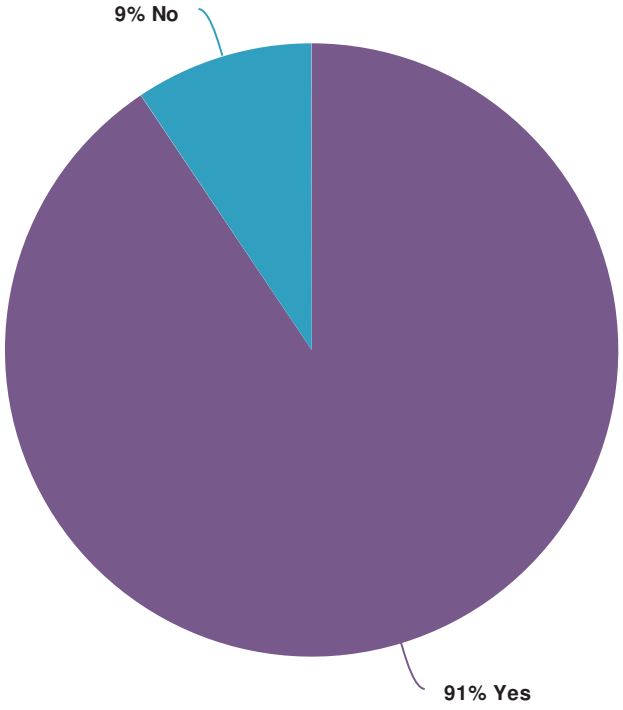
ResponseID	Response
333	We are dancing around the issue. Prairie dogs are not allowed on irrigable agricultural land. The first two bullet points are spot on. Why then are we developing actions and recommendations to support having them? They need to be controlled where they don't belong.
335	Leave the prairie dogs, they were here first!
337	How about stronger regulations for developers who keep invading lands occupied by wildlife, not only prairie dogs but other species? Now you are in a bind and it is time to find a way to eliminate these" pests".
341	Just addressing Irrig. fields misses bigger Pic; doesn't hit core of conflict. Overall, grave concern of severe loss of pr. dog habitat due to urban dev.,as Ex. adjacent 960ac bordered by 75th, Airport Rd, Nelson Rd, Plateau Rd, heavily developed.Acreage same as OS rev. plan p.3
343	Policy change to allow lethal control first, without special permits. Then removal. Then restoration, and if you need barriers construct them on the OSMP protected grasslands to keep the prairie dogs there and prevent them from moving back to irr. Ag as much as possible.
345	Our existing plans provide for lethal control of prairie dogs on agricultural lands, hence we don't really need plan changes, only clearing up our policy to be consistent with our plan.
346	I oppose any type of lethal control measures against prairie dogs.
347	I oppose the lethal options
349	I oppose any lethal means to remove prairie dogs.
352	I oppose lethal control options.
353	Lethal options are unacceptable.
354	I strongly oppose any kind of lethal action taken against prairie dogs. Prairie dogs should only be humanely relocated.
355	I oppose any type of lethal control to manage prairie dog populations
356	Strongly agree with making ordinance changes that allow removal using humane lethal control & burrow destruction policy change followed by restoration. Only actions that will make difference. Costly barriers have minimal impact. Relocation not working now & that will not improve
359	We need to allow agricultural users of OSMP land to use lethal control of prairie dogs - we can't expect farmers and ranchers to be stewards of ag lands without being able to keep prairie dogs off agricultural lands.

ResponseID	Response
360	I do not agree with any option that includes lethal action. I am supportive of relocation.
363	Strong action must be taken to get a handle on the overpopulation and damage from the non-existent prior land policy.
365	i love prairie dogs; get rid of so many people and you wont have a problem; but keep the dogs; they are part of the environment; people only destroy it
366	Land management - what research exists on methods of land management that will discourage prairie dogs moving back in to land. This might include intensive/mob grazing, planting hedgerows, plowing perimeters....
367	I have walked my dogs in the open space daily for over five years and have witnessed incredible destruction and exploding populations of prairie dogs. These rodents carry disease and are a danger to my dogs and to me as their burrows are now over the walking paths.
368	While I am glad to see you are leaving open a variety of options, I disapprove of lethal control. Prairie dogs are a keystone species, and play an integral role in what makes this area so special.
369	This should also include the non-irrigated land!
371	Major Policy change to allow OSMP to use lethal control followed by restoration will have biggest impact. No six steps, no permits. OSMP should be able to use lethal control without involved processes to fulfill charter & OSMP master plan.
373	I do not agree with killing the prairie dogs. The reason why they r there is because that's THEIR HOME. Humans have ruined evrything for animals by taking away their home by building on their home. You humans oughta be ashamed for not caring abt the animals and wanting to kill th
378	It is important that action be taken quickly. The longer the City of boulder takes to address the PD problem, the more PDogs there will be to deal with. New babies will be born in the Spring.
380	Lethal means are the most humane and effective approach.
381	It needs to be expedited immediately to avoid more dogs included in the lethal process as the pupping season is upon us.
385	As we all know, PDs are out of balance and ruining our open space. As a horse boarder at Boulder Valley Ranch for almost 7 years, the devastation caused by these rodents is unbelievable.
386	there are so many, esp in some areas around us near boulder valley ranch, seems difficult and $$ to relocate. I'm fine with at least partial lethal means.

ResponseID	Response
388	In addition to approving the policies necessary to rehabilitate irrigable OSMP lands, it's also important to approve funding for the policies.
389	Removal needs to include lethal control on all irrigated pastures. Plan and policy change needs to include lethal control by right in order to meet the objectives of the Agricultural Plan and the Boulder City Charter purposes. Barriers not great. Restoration after removal.
392	The devastation at Boulder Valley Ranch has been catastrophic. I have witnessed it first hand because I have been going there just about every day for 25 years. Unfortunately the ideal solution is the plague which will spread fast because the overpopulation is so extreme.
396	We must be stewards of the land!
397	I strongly agree with with the general approach.
398	Like the mixture of things.
400	Lethal control options are essential. There are far too many prairie dogs for the available land. Removal has not been successful. Lovely prairie has in places been decimated and farmers shouldn't have to put up with holes and burrows and destruction by prairie dogs.
401	The City of Boulder has permitted their 3517 Nebo Road OSMP lands to become denuded of vegetation resulting in major erosion during windstorms similar to the 1930's Dust Bowl and has increased the risk of losing valuable livestock due to OSMP lands hosting prairie dog colonies.
402	Lethal control will be required to deal with population explosions on irrigated agricultural properties. We need to get rid of restrictions on normal agricultural practices on agricultural leases when they will destroy burrows. We need to be better neighbors.
406	Lethal control seems unwarranted here. Since this is Boulder open space, another open space area needs to be opened for them. Boulder, and Boulder County, can certainly afford to release more open space for relocated prairie dogs.
414	I am pro lethal removal in addition to relocations. The prairie dogs have decertified our lands to dangerous points. We need to be system thinkers here. Currently, there is not a scalable way to remove them aside from lethal actions.
417	In regards to "large populations": what is the optimal population size and habitat required for balance of natural and Ag systems? There are natural fluctuations (cycles) of growth and decline. I am assuming they are referenced for long-term policy and cost-effective solutions.
418	this approach looks like it is watering down removal in favor of long term dithering.

ResponseID	Response
421	I believe that due to the severity of land degradation by PDs, that a multi-faceted approach is necessary. No tool ought to be left out of our toolbox. Listen to the farmers, listen to the land...we need healthy ecosystems and healthy agriculture.
422	I feel that the prairie dogs should be removed by quickly killing them in a humane manner and not trapping and stressing them. Also please do not load the land with Delta Dust. This results in unintended consequences for bees and the ecosystem recovery.
424	as opposed to what? and is this really something you have to ask us? I don't quite understand the question perhaps.
425	It is very sad to me that CBOP would ignore the damages to our open space lands, that has been continuing to get worse over years now, and now that its become a crisis due to agricultural leases abondended and lands needing expensive and lengthy restoration
426	If the prairie dogs aren't removed from adjacent non-irrigable lands, any effort to remove them from just irrigable lands will be a waste of time and money.
428	Conflicts arise because current policy will not allow lethal control of prairie dogs which have taken over open space. It's the fastest and most effective way to begin to restore decimated ag land, and needs to be used in combination with restoration and exclusion.
431	Is there evidence that this approach has worked in other areas?
434	Lethal should be taken off the table. Prairie Dogs are highly intelligent creatures and should be respected
435	I don't feel I understand the range of approaches nor when they'd be implimented.
436	plz don't use lethal methods on irrigable lands that include chemicals and don't cruelly drown the dogs! PLz try to remember that they do feel pain.
439	When this was farm land the farmers took care of the problem. When Open Space bought it that is when this became a problem.
446	We have invaded their home area, not the other way around
448	Do not relocate the prairie dogs, that's just making them someone else's problem. Be responsible and use lethal methods.

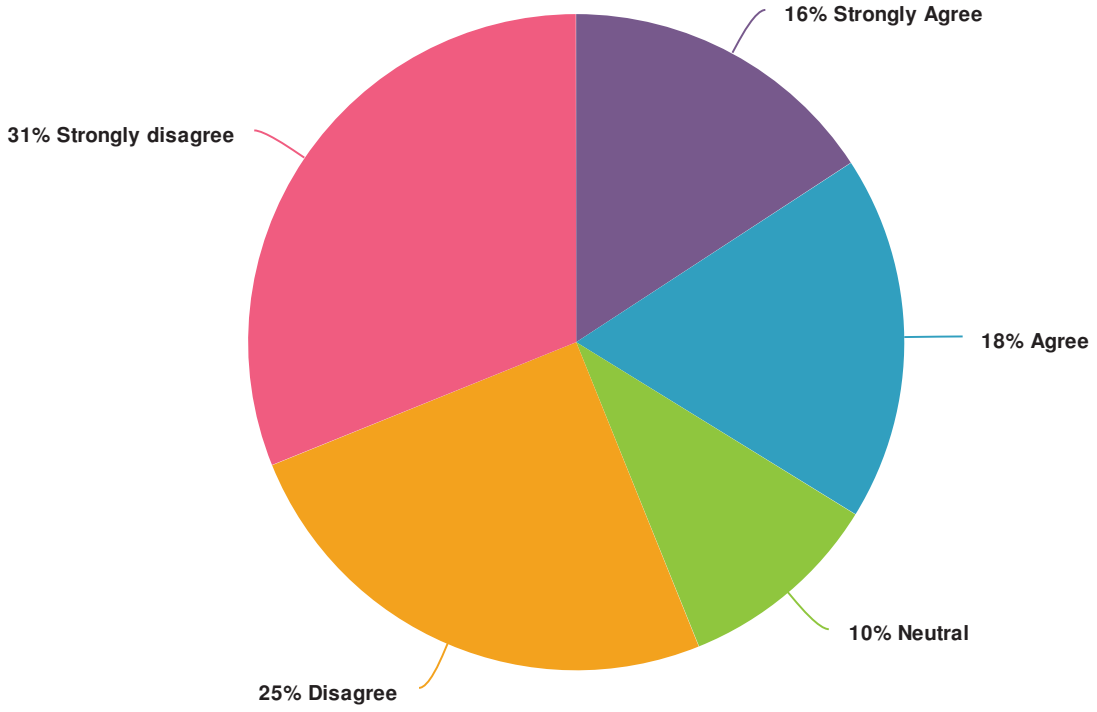
3. OSMP has evaluated a series of actions to remove prairie dogs from irrigable lands. These include non-lethal and lethal control actions. Would you like to provide feedback on these actions?



Value	Percent	Responses
Yes	90.6%	232
No	9.4%	24

Totals: 256

4. How much do you agree or disagree that these non-lethal actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly Agree	15.8%	36
Agree	18.0%	41
Neutral	10.1%	23
Disagree	25.0%	57
Strongly disagree	31.1%	71

Totals: 228

5. Do you have any comments on whether these non-lethal actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
24	What exactly are the welfare farmers growing on this land? Does it contribute to the health of the human community, or is it just more feed for the earth killing cattle industry? It's so much more complex that you're letting on.
27	There are too many prairie dogs to control them with non-lethal methods. At first remove as many as possible and then go to lethal control.
35	It is a waste of resources and man-hours to trap and relocate prairie dogs that have a 30-day gestation.
41	Prioritize non lethal
42	Start killing them, all you are doing when relocating is speading the problem out and destroying more land! Quit kicking the can down the road! Get to work!
43	Lethal control immediately before another breeding cycle, what a waste of time and $ to capture and relocate. Only a limited numbers of colonies/rodents should be allowed and only on contiguous lands, and lands that do not affect private land owners that border OSMP land.
48	If you refuse to make REAL change in land use then yes, you must continue to use non-lethal prairie dog management techniques.
51	Won't be 100% effective or sustainable, so overall it doesn't work.

ResponseID	Response
67	This doesn't improve the condition of overpopulation and is expensive, time consuming, and moves the problem elsewhere.
69	Great for the man bun crowd
70	I don't agree with relocation. I am in favor of lethal removal; not trapping and relocation. I favor exterminating them.
73	Prairie dogs should not be relocated from native habitats to preserve grassland sanctity
75	It is hard for me to know how difficult, expensive and truly effective non lethal removal would be. The prairie dogs have destroyed so many areas and should be removed ASAP.
76	With prairie dogs not thriving in the southern grasslands, perhaps relocating to this area would be the best alternative. Otherwise passive relocation is preferred over contraceptives.
77	Trapping and reolcating prairie dogs is a waste of money. The prairie dogs move and no one wants them in their neighborhood. The prairie dogs just come back, so it's waste of time, energy, and money.
80	If non-lethal methods worked, you wouldn't have the prairie dog problems you have now.
86	They never have worked - non-lethal is a way of not dealing with the issue.
87	you should pursue non lethal method of leaving them alone! The conflict that exists is between your made up policy and nature. Shift your priority. There are natural analogs with high density populations so what you are seeing via population densities isn't abnormal.
91	Don't waste money on non lethal methods that are expensive and ineffective.
92	Non lethal methods are outrageously expensive and do not solve the problem. You're making the infestation someone else's problem.
94	While non-lethal methods are preferable, there are not enough locations to receive prairie dogs and trapping and relocating is very expensive and not always successful..
97	The non-lethal approaches sound good, but they are very expensive, result in PD mortality, and do not seem effective.
105	I've heard that relocating prairie dogs doesn't always work.
110	If you have to remove them, passive relocation is the best option.
114	I'm just not convinced these methods will work, and they don't seem cost-effective.

ResponseID	Response
123	Introduction o]f black-footed ferrets should be tried on a trial basis to determine if it could be a viable long-term solution
124	I'd suspect that you'd be spending many tens or hundreds of dollars per prairie dog on this sort of action
130	I do not know why you must remove them, but if you must, relocate them safely or "passive relocation" only.
133	Passive relocation only sends prairie dogs to similar areas within city limits that will become overcrowded. I feel they all need to be trapped and transported to distant grasslands. This is well worth the taxpayer expense.
135	I think you should let them live in these areas but if you have to do something you should relocate onto public land where your rhetoric continually says that you envision Black Footed Ferrets in Boulder. Of course you need FAR more prairie dogs to reach this goal so relocate.
136	Prairie dogs will naturally avoid areas of conflict. If people stay on trails there is no risk to them.
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	Although I believe you should leave prairie dogs alone, it seems best to discourage them from expanding as the best approach since that would be the least disruption.
151	Instead of relocating them out of their homes, leave them alone. We keep encroaching in animals land and we need to stop. There will be nothing left
152	Step two would be to set aside relocation land so that when the population spreads as they naturally do, the city will have another place to put them.
158	Leave the prairie dogs in place. There removal would be even no lethal would stress the colony.
160	As long as the prairie dogs are not lethally removed anyway, this would be a better approach.
162	install raptor polls thin the populations
163	I would approve of non-lethal actions if done humanely and by a group that cares about the lives of the prairie dogs.
169	I think the land should be set aside for the wildlife.
171	This is 100% better than poisoning a keystone species that we may lose forever

ResponseID	Response
172	It is very difficult to relocate prairie dogs. This is coming from personal experience. I enjoy seeing prairie dogs when I take walks north of Boulder at the OSMP. It would be a shame to see them be removed or killed for the cattle industry and financial interests.
176	Removal can disrupt natural cycles of life in a population and can expose them to new and harmful bacteria, competitors, predators etc that they have not learned or developed to deal with.
178	Yes, and with the reintroduction of wolves, the colony would be kept to a manageable number.
180	Prairie dogs belong there. Ranching is what is causing the conflict. No non-letal action should be taken against the wildlife. NONE of our public lands should be set aside to profit welfare ranchers.
182	Definitely remove before murdering them. How much money can you make leasing these marginal lands to "welfare farmers". Really. Use the land for field trips so students can learn why a keystone species is important. " Pay to view " telescopes" would yield more money!
183	It is obviously a very one sided approach in favor of destruction of prairie dog habitat. Their existence and survival should be more greatly taken into consideration.
185	Non-lethal means would be acceptable
186	Again, leave them alone
187	I agree that non lethal methods should be used when feasible, and as part of the solution, but the report indicates that these are far from adequate to achieve the protection of irrigated ag lands.
188	Non-lethal means of removal are vastly more acceptable when compared to lethal means, which are entirely unacceptable.
191	Stop taking all the habitat from animals and a keystone species like prairie dogs! This is madness just to serve some personal need of some rancher farmer. Deal w what you have farmer rancher! We need prairie dogs
192	Only if you relocate them. I don't agree that they should be killed. Trap and relocate!
193	Good luck finding a place to relocate anymore. Feeding them to rehabilitating raptors doesn't count. Passive would keep more of them alive.
195	I think the use of nonlethal removal is a safer approach, doesn't eradicate a native species and it is able to be repeated without harm to anything in the area.

ResponseID	Response
196	The prairie dogs should be allowed to stay on public lands that they already inhabit. Relocation attempts aren't always successful. Again, the land they inhabit should be restored and protected.
199	These management techniques are extremely expensive and unfeasible to made any sort of difference in populations. They also create more conflict on neighboring properties or elsewhere in the OSMP system.
204	I do not have a problem with lethal means so long as it is not torture, and it doesn't harm raptors. In fact, as a resident right across from a field of prairie dogs that are overpopulated,
206	There is no reason to take lethal action. Non-lethal is best for everyone--our ecosystem as a whole.
207	Yes! Enough with poisoning these animals. They need to be relocated. It's 2020 — use your brains and do not resort to what's easy - killing. Relocate these animals. These lands are just much theirs as they are ours. Colorado can't go the way of over development.
208	I'd prefer relocation programs because prairie dog habitat is vastly reduced throughout the West.
210	it is counterproductive to land biomass and productivity
215	Relocating prairie dogs would reduce the conflict with agriculture and with those who oppose lethal methods. Partner with Badlands National Park and other entities who need prairie dogs in order to increase the population of the black-footed ferret.
223	They are destroying bordering private property and should be removed ASAP to limit further Damage lethally.
229	If they are to be removed from their HOMES, please use NON LETHAL action. There is plenty of land in Colorado for the relocation of these amazing animals.
230	Prairie dogs' habitat is the grasslands, and that's where they should remain.
231	Relocation is the best way to solve the problem. Using poisons or other mentioned ways of killing the prairie dogs will negatively affect the land and other area wildlife..
233	They move around, reproduce, spread out, cross roads and boundaries
238	Non-lethal actions are certainly better than lethal actions. But the prairie dogs who are relocated are unnecessarily stressed, injured, and do not always survive.
239	No! Ineffective, expensive, time consuming and cumbersome. Lethal the only way. I think I've personally killed a few that ran into my bike wheels...

ResponseID	Response
240	i think it is very important to try humane methods of relocating prairie dogs first, before lethal control.
242	quite killing natural predators and the problem is solved...does not take a genius to figure this out...
245	it depends on PD densities and immediate context.
246	Relocation of plague infested varmints to make them a problem elsewhere is truly ridiculous.
247	You have been doing these things ineffectively for years at huge wasted expense. Pay attention to what the County has learned and done. Follow their example. Trapping and relocating don't work to clear land. Passive relocation is a thumb in the dike.
252	I live in the county adjacent to city property. I have watched the prairie dogs grow exponentially in the last 13 years. Lethal control is the only means to control your problem.
255	irrigated properties are in huge conflict with PD occupation because the non-lethal approach does not work.
259	won't work.
260	Too expensive and unreliable. Lethal control is the only realistic option.
261	That approach is just relocating the same problem elsewhere.
265	Too much money and they will not all be removed. They reproduce like rodents.
266	This is preferable to murder of course but lets just leave them be...
267	This isn't a balanced approach. Removing prairie dogs from their native spaces is again unethical and irresponsible.
269	They seem worth a shot, but the past has proved them not to be too effective. folks were upset with the possible harming of them, when staff was trying to be humane. Some people will be upset no matter what you do... they need to be controlled by a variety of methods
272	No place to relocate them unless you use OSMP lands as relocation sites. After years of watching this not work I strongly disagree with even considering it as an option any more. Waste of time
275	Do not use lethal removal
276	This is not a cost-effective or timely answer to the problem of the prairie dog infestation.

ResponseID	Response
279	We have been using non-lethal control for years. Look at the result--an ongoing, ever-worsening problem.
280	If you have to do something...then they should be NON LETHAL..best to respect the animals and their habitat.
282	I assume you've already done research on the effectiveness of relocation, active or passive.
283	These are far to expensive and still result in considerable suffering and death to the prairie dogs.
285	Does Boulder have access to a capable Prairie Dog Whisperer who can lure these varmints over to Lafayette or Longmont? Not likely, so instead, encourage citizens to blast the little devils to Kingdom Come.
287	I'm guessing this is mostly ineffective
290	Not as cost effective. Balanced? Maybe those voters would like them to come live in their backyards! They're disease-carrying rodents-where does 'balance' come into play when they occupy land that has a function needed for humans?
295	Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.
300	Current Ag charter purposes need redefinition due to rapid urban developm. bordering OSMP land.We need aggressive 6yr plan of passive relocation, cropping, & rapid response. Ex. Bennett farm 10% occupied by PD in 2007; no bold non-lethal action taken PD spread 5ac./yr to 70ac now
302	I think this will be a band-aid approach that puts us in the same position a few years down the road. This means ultimately more resources.
303	We aren't talking about agriculture but irrigable public Open Space, the highest and best use of which may be prairie dog habitat.
304	Non lethal is sadly a waste of time
309	These would be my first choices to remove and reduce populations, but clearly these methods alone will not keep up with the need.
310	"Most effectively reduce conflicts" ?? Nope, non-lethal methods don't work and relocating them is just displacing the headache (and heartache) on someone or someplace else, or being done to placate emotional and ill-informed folks however well-intentioned they may be.
314	Relocate them to where? There are so many PD's in eastern Colorado that I feel they are at the point of overcoming the natural environment.

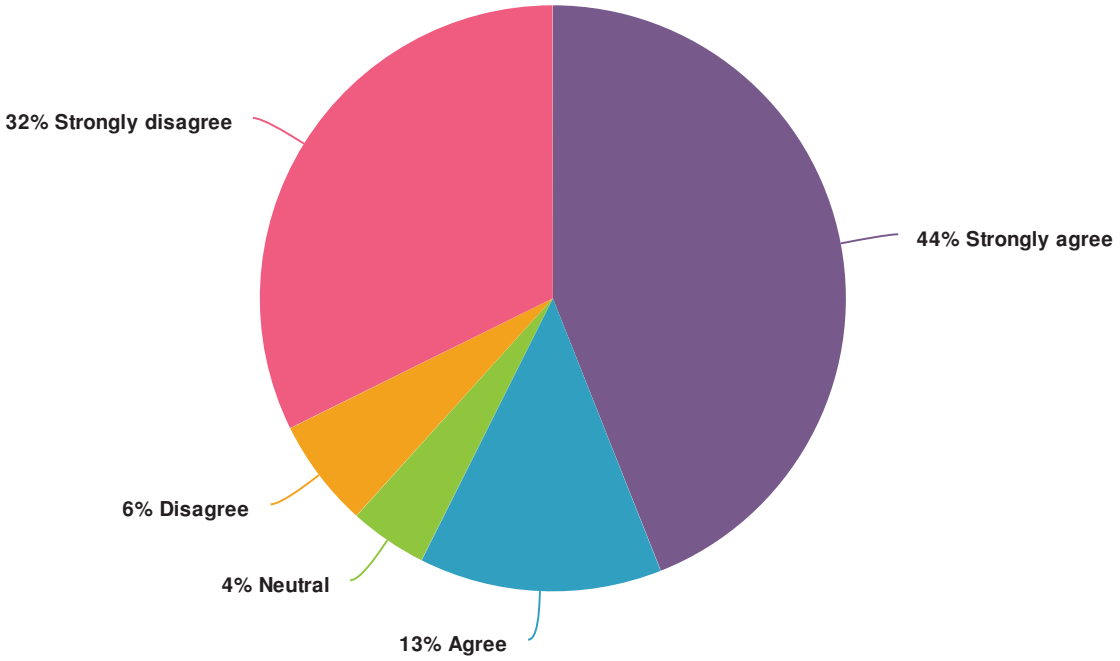
ResponseID	Response
315	I didn't see any mention of the cost of trapping and relocation in the document. If it was there I apologize for missing it, but It's hard to have an opinion without a cost benefit analysis. Intuitively, relocation seems like it would be extremely expensive.
318	Why do we need more agriculture? If you can articulate to the public why this is truly needed, then I do prefer non-lethal removal. BUT, I haven't seen a strong case for increasing agriculture sites.
324	there are very likely non-lethal or more natural options that just have not yet been found. in the 'biggest little farm' film, the approach demonstrates there is much not yet known - but with patience, observation, intent - there are always more options than we can conceive of.
327	There are too many, there numbers are better reduced by humane lethal methods. Carbon monoxide etc methods.
331	There are less and less places to "re-locate" prairie dogs. Instead, people should design around natural colonies...not artificially designating spaces on 2-D maps. But... private property owners should be able to get tax breaks, similar to ag tax breaks for hosting Prairie Dogs.
332	Non-lethal control is an oxymoron. It simply does not solve any problems, except vert temporarily.
333	What leads you to believe passive relocation will keep the prairie dogs from returning?
335	Lease don't kill the prairie dogs. They are so important to the ecosystem. Don't fuck up our natural areas any more than they already have been.
337	Better than exterminating using inhumane methods. These animals are not objects, they are living creatures, who have the same rights as humans to be on this earth. Not that you care.
341	Executed in a rapid manner, non-lethal means can be effective.7/1/19 Daily Camera article: ".. purchased by the city as prized OS, praire dog burrows covered about 10 of the 103ac (Bennett farm).." If non-lethal actions taken immediately 70ac not occupied, 12 years later!!!
342	Definitely try these methods at first, and then bring out lethal measures if the non-lethal is not doing the trick.
343	You have been doing this for the last 10 years. It doesn't work. It takes me a year to figure out this isn't working, how long does it take City of Boulder to figure it out?
345	I think it is clear that non-lethal actions will NOT effectively resolve the PD issues on agricultural lands. Any further discussion of these futile and expensive efforts exacerbates the problem in the face of pup season.

ResponseID	Response
346	I am opposed to an type of lethal control. I am also opposed to leasing public lands to farmers for grazing animals such at cows. Animal agriculture is one of the leading causes of climate change and we should not be supporting farmers who raise animals for food.
349	It is always better to use non-lethal actions to control animal populations (except where natural predators may be involved). This could include birth control methods and other ways to control population without causing horrible suffering.
354	I support non-lethal actions
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Non lethal actions are what has created the destruction of irrigated fields. They do not work, cannot address the PD numbers, are expensive and only cause the problem to get worse. It probably makes Boulder feel good to relocate some PDs but not answer to huge scale of conflict.
359	We just don't have enough OSMP land to move prairie dogs to - and we've seen how quickly prairie dogs destroy the land to which they're relocated.
360	Wildlife should not suffer due to human expansion. Doing the right thing is never the wrong way
362	Trapping may work if they do not return. Lethal removal may be the only resort in determined cases.
363	It seems evident that "catching and releasing" has done nothing. They are overtaking the paths on Degge and Hidden Valley OS. Strong and lethal action will hopefully help eliminate some of the rodents.
365	keep the dogs and get rid of the people and their intrusiveness
366	Based on my experience, prairie dog trapping is difficult (and thus expensive) to do completely, leaving a population of prairie dogs to repopulate the land. Passive relocation is not enough to allow restoration of heavily populated land.
367	My fear is they will be back in no time.
371	Relocation is not realistic for what needs to be accomplished. OSMP can continue relocation but numbers are too small and so often unsuccessful. Passive relocation absolutely needs the correct setting, not realistic to solve conflicts. Won't provide balance.
373	Again I do not agree with anyone's decision to remove the prairie dog from where they are at. The reason why they are where they are at is because that is THEIR home. It's a shame that we have too many humans in the world that do not care not one bit about these innocent animals.

ResponseID	Response
378	Unless all the prairie dogs are removed from IA lands, the remaining prairie dogs will breed and re-populate there area.
380	Not an effective long term approach.
381	The relocation of prairie dogs is a huge disaster for the OSMP budget, It is unfeasible and ridiculous approach to the tens of thousands of dogs that need to be dealt with.
384	PDs will move back into any area that has been previously tunneled even if plaque has decimated the population. Vigorous poisoning and deep harrowing must follow.
385	Too expensive; there are thousands of PDs to deal with.
386	i prefer mix of lethal and non lethal
388	I used to believe that non-lethal methods would work, but the ecosystem is currently unbalanced and needs to be restored to a balance of grasses and wildlife.
389	City has been using non lethal methods for years, it is not enough and does not work for the number of prairie dogs. Non lethal methods and the six step process is why irrigated lands are in this crisis. Not balanced.
392	The problem is so extreme because there are now so many prairie dogs that there is no way there are enough places to relocate them. and they will just come back. Please pay attention to what Boulder County Open space management has realized - half measures do not work.
397	The research I have conducted reveals that non-lethal methods are best used for continuing maintenance. For the current City/County prairie-dog overpopulation issue, lethal methods may be appropriate in the near term with a later transition to non-lethal methods.
400	The non-lethal methods have not at all been successful and are expensive.
401	Non-Lethal control of prairie dog colonies on City of Boulder OSMP lands will not eliminate prairie dog migration into adjacent private irrigated agricultural lands until all of the OSMP prairie dogs are completely and permanently removed.
402	Relocation is preferable, but it can only make a small dent in the current problem.
403	This is very ineffective, expensive, and extremely stressful to the PD.
406	Boulder should live up to its self-ideal as a kind, nature loving place and refuse lethal control altogether.
407	From my understanding these methods are expensive, and mostly ineffective. It also does not allow for restoration.

ResponseID	Response
414	It simply will not work to the scale necessary. Our soils are the most important: we need to use water wisely to restore these soils, sink carbon, and grow a healthy habitat.
418	non-lethal methods are too limited in scope to address the magnitude of the problem.
421	These non-lethal actions have proven to be ineffective. They are a way to assuage misplaced human guilt. We have a responsibility to care for the land in the best way we can in our current land-degraded context. To heal the land, we need regenerative ag, which means no PDs.
422	See previous.
424	Do you have any idea how many there really are out there? and why would you spend all this money on a rodent. You allow "culling the heard" with elk.....why are you spending SO much time and money on this issue....there are WAYYYYYY to many PD to do non lethal
425	no non- lethal control. 20 yrs experience doing lethal my land, still loosing. Trapping waste of money, poor success. Block burrows not effective. These are "feel good" methods appease folk feel bad w/ lethal but NOT science based. REMOVE ALL next to neighbors or CoB Ag property.
428	Trapping and relocating is neither humane nor practical. It's stressful on the animals and nobody wants them. Passive relocation would be time-consuming and ultimately not effective.
431	Is there evidence that this prevents their spread or is it a temporary fix?
435	the way I've seen the animals spread, I don't think just excluding them from burrows would work. And removing them-- where to? High cost?
439	By relocating them you move to the problem and it still is a problem.
451	The question was about efficacy, and non lethal methods certainly aren't the most effective way to remove prairie dogs.
454	I am aware that trapping and relocating prairie dogs is very expensive, and it is difficult to find relocation sites. The problem is too big to consider relocation a reasonable solution. I have attempted to use passive relocation on my private property and have failed.

6. How much do you agree or disagree that these lethal actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly agree	44.0%	102
Agree	13.4%	31
Neutral	4.3%	10
Disagree	6.0%	14
Strongly disagree	32.3%	75
		Totals: 232

7. Do you have any comments on whether these lethal actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
24	There will never be a balance as long as humans keep reproducing. Why does the city reward breeders with pro-natalist (paid parental leave, etc.) policies and then claim to be concerned about the environment? Its laughable.
27	Lethal control is needed especially on land where there are not already large populations of prairie dogs. On fields without them lethal control is critical when new ones move in.
35	Cheapest method possible.
41	I am uncomfortable with lethal measures because the prairie dogs are not intentionally pests.
42	Do your job and start taking care of the ground! You spent 8 million on the Shanahan ranch (you already owned the water and conservation rights) but you cant take care of what you already have!
43	All of these are better solutions then allowing them to reproduce and destroy our lands. 75% Kill by lethal control, 25% capture donate as needed. Perhaps the Large animal sanctuary can use a few thousand.

ResponseID	Response
48	There is no balance between prairie dogs and agriculture now-agriculture prevails on most of your lands. The agriculture industry is responsible for the near extinction of the wolf and the constant attack on other wildlife. Stop supporting these attacks on our wildlife! Offer wildlife leases, or bare minimum offer competitive bidding on these lands. They are being held by the same lease holder for some many years these people believe the land belongs to them and it does not! Let the water return to the ocean-stop irrigating lands
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.
51	I agree with lethal control, but these methods listed are weak and still costly when capturing and transporting.
52	There are too many prairie dogs, and I see it negatively effect the surrounding wildlife. Another option could be the release of rehabilitated hawks and other hunters of prairie dogs in areas of necessity.
66	I oppose killing PD's.
67	This is effective, but should be undertaken by natural processes if possible.
69	Jesus Christ, just shoot them, kids have been doing so for a bazillion years, it's part of growing up in the west. Those little 17mm shoot tiny fast bullets that disintigrate instead of ricochet and can reach out to 200 yards. Sponsor it via CPW and the local primary schools.
70	I feel prairie dogs should be exterminated.
73	Boulder should avoid inhumane treatment of any animal
75	If not too difficult, expensive trapping and feeding them to rehabbing raptors seems like an efficient, worthwhile course.
76	Preference is for natural predictor lethal control "introducing black-footed ferrets on open space lands and limiting the use of anti-plague vaccines." Any human directly imposed extinction methods are deplorable.
86	"Killing prairie dogs" sounds terrible, and it sort of is. However, it must be done. It is completely normal, natural, and necessary to sometimes remove pests from human areas.
87	Let them be. You created a false reason to kill our fellow inhabitants of planet earth.
91	Do it. Do it soon. Do it effectively!

ResponseID	Response
92	This rodents make a desert of any landscape they inhabit. Unsightly, soil erosion and dusty expanses where once natural or agricultural vegetation existed.
94	Prairie dogs and irrigated agriculture are incompatible uses. Lethal control is the best method in many circumstances. It is good to not use poisons that can end up affecting other species.
97	These methods work. Yes, they are sad, but in the long run may result in healthier lands, less soil loss, and more resources for overall management of the land.
98	I don't doubt that it would help, but I don't want to see lethal actions taken.
105	I hate that we would have to do any of this! But I also understand that this is a difficult issue. UGH!
106	Lethal methods should be on the table. Decisions about which method(s) to use in any given situation should be based on the science and data as to which method(s) are most feasible, effective, and lasting in that situation, without regard for political or activist opinions.
110	Absolutely not. This is not a balanced approach and killing wildlife only disrupts the entire ecosystem.
111	Per previous comment, lethal needs to be included as an option.
112	NO lethal removal!!!!!!!!! The residual consequences are not worth the risk. Other animals die as a result of your POS poisoning.
113	The lethal control should remain non-polluting and targeting specifically at prairie dogs.
114	We do need to accept that lethal control is necessary to address prairie dog overpopulation.
121	You know, you could also reclassify those lands and let the prairie dogs stay, too.
122	As long as the land itself isn't harmed by lethal (chemical) methods, I think this approach is warranted and effective.
123	While these would obviously work, it still would only be a short-term solution in the end, as the population would rebound and then lethal methods would need to be used again, etc.
128	Certainly the feeding of them to their predators would reduce the population sizably. Can any predators be introduced to prairie dog areas to aid in reducing the populations? Like more ferrets?
130	Horrible! Reminds me of the dark time in history.

ResponseID	Response
132	Trapping and donating them to those facilities seems better than the pressurized exhaust even though that might be easier to deal with them less. It just seems like a better use of the prairie dogs if you are going to use lethal means.
133	Are there enough ferrets and raptors for this many prairie dogs?
135	There should be no lethal options.
136	There is no reason to kill prairie dogs on OSMP lands. They are a vital part of the local ecosystem. If people stay on trails they are not a problem to us. Hoofed animals have coexisted with prairie dogs for millennia.
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	What is wrong with you to even consider lethal methods? Agriculture IS NOT worth that. There are too few areas for prairie dogs as it is. They are harming no one. You don't even need agriculture there. What about the animals and raptors that depend on these colonies for food? Do you even care about that?
151	The balance would be to stop taking these animals land. Humans are a parasite
152	Although I do understand that ferrets need to practice eating real, live food that they would eat in nature, I do think of the above choices, that would be the only one I would approve of.
158	I'm vehemently opposed to this option. The use of these lethal methods not only kill the intended prairie dogs but other spices as well, some of which are endangered. Colorado is known for its natural beauty and many tourists travel to Colorado to visit national parks and observe nature. I think most visitors an Coloradans oppose this measure. I think it would hurt tourism.
159	Don't you dare kill them!!!
160	This approach would only benefit agricultural interests at the expense of prairie dog lives.
163	The listed lethal actions are nothing short of barbaric and uncivilized - completely unacceptable!
169	No balance whatsoever. This would be the wrong approach
171	We must do whatever we can to preserve these important little lives

ResponseID	Response
172	It is very difficult to relocate prairie dogs. This is coming from my experience in a relocation effort. It would be a shame to lose the prairie dogs that are home in this space. To relocate or kill prairie dogs for the sake of the cattle industry and financial interests would be a shame. I enjoy taking hikes in north Boulder at the OSMP and seeing the prairie dogs.
176	Pretty sick mentality to just kill whatever is in our way.
178	No lethal methods should be used other than to provide food for other animals of prey.
180	Never, ever should there be lethal actions taken to eliminate the wildlife that belong in their natural habitate. The problem isn't the PD. NONE of our public lands should be set aside to profit welfare ranchers
182	No and the devastation poisons Raptors and pets and the entire food chain!
183	It is obviously a very one sided approach in favor of destruction of prairie dog habitat. This is an inhumane and cruel proposal and should be avoided at all costs.
185	Lethal actions are completely unacceptable. These creatures are community & family oriented animals who can experience pain, sadness and fear. It is horrific that anyone would even consider lethal action against them
187	Lethal actions are required to achieve the goal of preserving agricultural use. Also, the need for use of lethal methods is enormously reduced if prairie dogs are removed immediately when they occupy ag lands (or developed park land). It's easy to remove 3-5 prairie dogs and much harder to remove a large colony.
188	Prairie dogs should not be killed on these irrigated agricultural lands.
189	This is not a balanced approach to reducing the conflict! Humans v prairie dogs with humans taking control via lethal measures is another appalling disdain for life
191	Is unacceptable to kill a sentient being just for some ranchers need or developers greed. Leave the habitat alone and let the prairie dog thrive
192	Trap and relocate.
193	No. Like I said before. 1% of historic population left. They are a keystone species. Boulder, you should be educated enough to know this would destroy entire ecosystems/biotic communities. Grasslands need prairie dogs. The climate needs prairie dogs. Raptors, burrowing owls, foxes, 200 other species depend on prairie dogs. Don't you dare commit ecocide.
195	Lethal methods add to disease, disrupt the ecosystem and there is no justification for killing when nonlethal methods are available.

ResponseID	Response
196	The only conflict I see here is the desire of some people to unnecessarily kill a species that is vital to the balance of our natural ecosystem! That being the Prarie dogs! There population numbers are already low, the land they inhabit should be restored and they should be left alone.
199	The option to use these management techniques would be beneficial in certain scenarios and be a beneficial tool to have in the toolbox. An example of this would be use in newly established colonies in areas where prairie dogs did not exist on agricultural lands or where there are small populations where further growth of the colony is undesirable. These actions should be conjoined with restoration for vegetive growth and regenerative agricultural management strategies.
202	This is totally wrong!
206	This is cruel and unnecessary.
207	These actions are wrong for so so many reasons. They are also gravely inhumane. The animals suffer greatly. And the toxins destroy the other animals and the lands. Come on, it's 2020 for god sake's use your brains. Relocate these animals.
208	I strongly support the ferret reintroduction program as a possible option. I have some support for capturing prairie dogs an using them a feed at the ferret rehabilitation center.
210	cruelty on many levels eg would you do this to kittens?
215	I do not see donating prairie dogs as lethal means. Again, I suggest you partner with Badlands National Park and other facilities who can share in the cost of relocation.
223	Prairie dogs are costing bordering private land owners money because of populations are out of control. They need to be removed ASAP or the city should be liable for private Property costs and damage.
230	Prairie dogs are essential in grasslands, not livestock or ranchers. Please live and let live!
233	It is the only assurance that colonies don't crop up
237	Lethal action is dead wrong. Humans beings bring special talent to messing up what mother nature has built and ruining the eco system for other birds and animals.
238	I have personally witnessed what happens to prairie dogs when they are murdered with carbon dioxide. The die a slow, agonizing death from internal bleeding. Donating them to ferrets and raptor-recovery facilities is just a way for the murdering humans to pretend that they're doing the right thing, rather than just using another method to murder them.

ResponseID	Response
239	I have read opinions by farmers who have bemoaned the loss of valuable farm land with their hands tied at implementing their own approaches. I sympathize with them completely and other than noxious invasive weeds there is nothing more destructive of open space and farmland than prairie dogs.
240	I strongly support the most humane methods of lethal control, which I think means that you do not remove and scare prairie dogs from their holes, but rather kill them quickly inside their burrow, with pressurized CO.
242	END ALL KILLING OF WILDLIFE BY HUMANS LET NATURAL PREDATORS LIVE AND DO YOUR JOB WAKE UP
245	again, it depends on PD densities and immediate context. I trust staff to evaluate and determine the best action for a given parcel.
246	Prairie dogs are pests. They are NOT pets. Please fully eradicate them before someone gets plague. If your studies can conclusively prove no bubonic plague is present in their population then it will be a new revelation. Treating prairie dogs as furry pets is just incomprehensible.
247	The County has learned from 20 years of experience that these are the only things that really work to clear land of PD's.
252	Lethal control is the only way to manage your prairie dog problem on irrigated farmland. You are impacting neighbors adjacent to the city property because you don't control your prairie dog problem. Get in line with the county and use lethal control! Be a good neighbor and use lethal control!
255	lethal control is the only realistic tool to deal with the scope and scale of this conflict. Relocation and barriers do not work.
259	there are several 'humane' types of lethal controls that are effective, albeit labor-intensive.
261	Having lived next to City of Boulder open space that is over run with a prairie dog population that is over taking nearby private property for 12 years I believe that lethal control is the only means of control. The cost to private neighbors to maintain the integrity of their private property is exorbitant and unfair!!
265	Lethal is the best action to remove the most prairie dogs.
266	This is just so obviously immoral and evil...
267	This violent and coercive form of action upon prairie dogs is incomprehensible. Please do not permit this to take place
269	Still, using hunters with traditional and cross bows may be a great alternative.

ResponseID	Response
271	See above
276	Irradicating the prairie dog to a manageable level is the most likely answer to the problem.
279	Lethal control, killing the prairie dogs in their burrows most simply, is simply necessary if we want to keep our agricultural lands for agriculture. And I certainly want to keep agriculture thriving in Boulder County. Increasingly ag lands have gone from private owner ship to leaseholds from City or County. Lease rules need to support ag functions, including prairie dog elimination in ag lands.
280	This is a a terrible solution..wildllife and their habitat should be respected.
282	Install hunting supports for predators: hiding places for coyotes (debris piles, hedges, etc.), perches for raptors, etc.
283	Carbon monoxide is a humane form of euthanasia
285	Since prairie dogs love to sit up and look around outside their burrows, guns would be even more effective.
287	This seems like a more effective way to control the prairie dogs
290	Cost should be considered
295	It is never okay to kill others for someone else's benefit. Regardless of whether the others are prairie dogs and the someone else are human. Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.
299	Lethal control methods are unethical and unsustainable
300	Lethal Actions will split the community. Manipulating nature through systematic killing sets a dangerous precedent. We have seen this with wolves and ranchers. As with climate change, Boulder MUST set an example of non-lethal wildlife mgmt. On p.25, PCA only 23ac too small
302	I love the third option and it feels appropriate for the situation. The second method sounds like a waste of resources and ultimately without the desired goal. I am fine with the first option, even though I feel badly about it.
303	Destroying the prairie/prairie dog ecosystem probably isn't appropriate.
304	It just needs to be done - stop wasting resources on pests when we have elder homeless HUMANS
309	I would prefer these to be secondary approaches, but I think they would significantly improve the conflict between agricultural tenants and prairie dogs.

ResponseID	Response
310	Your list of three methods is incomplete. There are many other methods of lethal control and ALL of them should be "in OSMP's toolbox" for managing PD's
315	You should evaluate shooting, especially with PCP-style airguns. You could probably make money off of hunts.
318	Do NOT kill these creatures!!!!
324	see above comments!
331	I am sorry, but this is all inhumane Bullshit! A bunch of sadists sat around in a room and came up with this? You guys would have been better off designing gas chambers for the Jews during WW2, than coming up with "Solutions" to the Prairie dog issue!
332	Given the reproduction rate of pd's, lethal control is the only viable solution. Trapping is expensive and time consuming.
333	The prairie dogs need to be eradicated from the area they do not belong and then continual management and follow up practices need to be developed to insure they do not return
337	Animal cruelty at best. Carbon dioxide and burying the remaining prairie dogs who survided this?
341	If we can not integrate sustainable Ag with a native prairie ecosyst. then we are in violation of OSMP Master Plan (MP) p.17 #3 ATT. 7 Killing by definition is not sustainable practice, especially when OSMP managed land borders irrigated fields. MP seems to favor Ag over wildlife
342	Trapping and donating is the coolest idea, but the carbon monoxide techniques would be much more convenient and surely economic. Not the best for ol' gia either but hey, gotta get the vermin out of cropland.
343	Lethal control with CO with pressurized exhaust is by far the most economical and effective lethal control. Do you want sustainable agriculture and carbon sequestration? Trapping is very expensive and time consuming, how many millions of dollars do you have to spend?
345	Anything less than lethal control does not constitute proper management of our agricultural lands.
346	I am vehemently opposed to using lethal control against prairie dogs, especially since the driving force behind their removal is so that cattle ranchers can more easily use the land to graze their cattle. Killing wildlife so that consumers can eat beef is unconscionable to me.
352	It's inhumane - find better options.

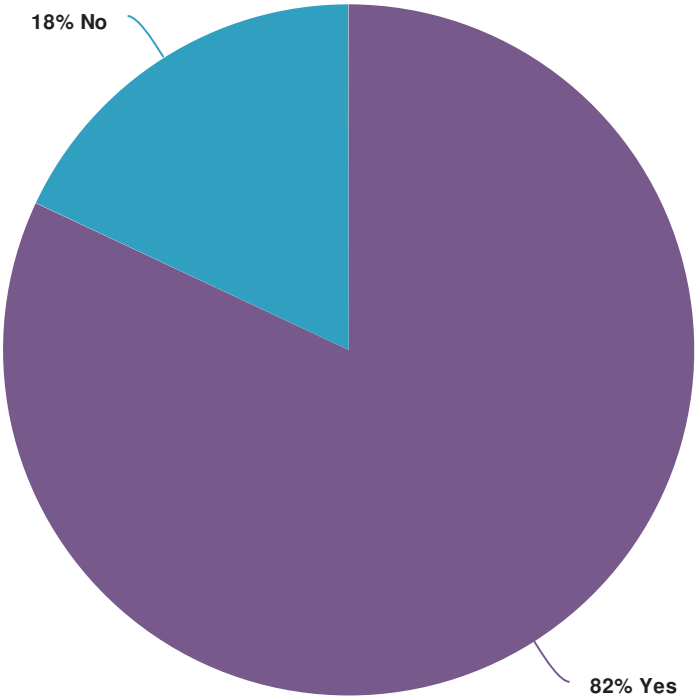
ResponseID	Response
353	Lethal options are unacceptable.
354	I strongly disagree against lethal actions taken against prairie dogs
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Pressurized CO exhaust is humane efficient and economical, especially if Boulder buys machines, has supervisor & gets seasonal staff- but Boulder will probably hire contractor because it is more expensive. Trapping & donating probably makes Boulder feel good but expensive, less efficient and more stressful to PDs. Trapping & donate should be very limited numbers, if at all.
359	I strongly agree that these lethal actions are necessary in order to preserve ecological balance on OSMP lands.
360	Lethal action is irresponsible and cruel.
363	The non-lethal approach has done nothing to help the open space areas where we walk with our dog. We have watched the irrigated lands overcome with the rodents.
365	NO THEY WILL ONLY DESTROY AND HURT EVERYONE AND EVERHING ON THE LAND
366	I greatly appreciate prairie dogs, and would rather not be part of killing any of them. However, I also care greatly about the health of our land, and current prairie dog populations on many areas of land is creating desertification- something must be done. Smart separation of pd habitat and irrigated agricultural land might be a crucial part of the solution
367	Seems like it will be the most effective approach.
371	PERC machines are the answer to provide balance to this conflict. Need sweeping changes on how OSMP manages to preserve Ag lands. Start managing according to objectives in Ag Plan and Charter so there will be agriculture for future generations. PDogs are not compatible with irrigated land.
373	What irrigated field? The ones YOU SELFISH HUMANS BUILT ON THESE INOCENT CREATURES TERRITORY?!? NO! I say give the home back to the prairie dogs? It's why animals are better than humans. They do not go around kicking humans out of their home so they can take over it.
378	These methods seem like the least damaging to other species that live in the same environment as the prairie dogs.
380	Humane and effective
381	At this point the overpopulation is at a critical mass. There are no other approaches that could make sense here.

ResponseID	Response
383	Interfering with their ability to reproduce would keep populations down without actively killing any animals.
387	Lethal actions have been the only successful way to remove these rodents for years. It was the only successful way we eliminated the encroachment of PD's on Gallagher Farm land when our family still owned the property. In fact, we never had PD's on our property until the city began transferring the rodents from other properties into our area.
388	Carbon monoxide and carbon dioxide are humane ways to bring help bring the ecosystem back into balance.
389	Lethal control would be the most effective and efficient tool on irrigated pastures in providing balance to the conflict on irrigated pastures. Desired condition on irrigated land = zero acres degraded by prairie dogs. Lethal control of prairie dogs on irrigable fields is the only way to meet this objective. Prairie dogs not essential or compatible with irrigated ag.
392	The only solution is to clear them out completely. I am unhappy about using carbon monoxide because it kills everything in the burrow, but there does not seem to be a better way.
396	Reclaim the land and monitor for healthy plant growth. Prairie dogs are very destructive to agricultural land.
397	Lethal methods may be necessary in the near term to bring the current, exponential prairie-dog population growth under control.
400	Lethal methods are absolutely necessary.
401	Lethal control of prairie dogs on privately-owned Boulder County Nebo Road land since 2015 has resulted in an approximately 45-percent reduction of prairie dog burrows on these irrigated agricultural lands.
406	Do NOT use carbon dioxide. DO NOT. Carbon dioxide causes pain and suffering and is incredibly cruel. Do NOT use it.
407	Even this to me is just a start. It needs to be combined with rejuvenating the land and restoring it in a way that does not invite Prairie Dogs back.
414	At this point, it is simply what is necessary. It is not ideal or easy, but we need to. We also must work hard to prevent this from being necessary in the future due to desertification, carbon loss, and irresponsible leasing.

ResponseID	Response
421	This is the most effective method. PDs in CO have developed resistance to their natural population control check, the plague. They are not meant to live like this, overpopulated on degraded land. We humans have changed the landscape to such an extent that PD context has changed. Conscious shame around the effects of human action on the land in BoCo should drive us, not to guiltily trying to "save PDs, but to look for solutions that will heal the land, let nature correct the ecosystems we have interrupted and harmed, and empower farmers to assist nature in regenerating this land. 1000 acres of OSMP land is unusable, degrading, turning to weeds and dust, sloughing water, and falling to neglect because of PDs. We humans have modified this environment to such an extent that it cannot be left on its own without our facilitation. We have seen what happens when PDs overpopulate. It is an indication of the imbalance of the ecosystem, an ecosystem so damaged that it cannot right itself without human input and management. By managing PD populations with lethal actions, we can most effectively decrease the degrading stress on the land so that farmers can access the land to do their ecosystem balancing, regenerative agriculture work to restore the health of the land. PDs have to go in order for that to happen. And we have to shift our lens to see their overpopulation as a symptom of diseased and distressed land that we are responsible for fixing.
422	While I don't like the idea of killing anything this approach is more humane and necessary to help the ecosystem get back into balance. Think of how to encourage natural predators to keep things in balance for the future so we don't have to keep going around in this circle.
424	Do it with as LITTLE cost to us (taxpayers)
425	Lethal is best. We are losing control and effects of ag land is drastically worsening. Lands and soils destroyed. Farms leaving. Farmers leaving. Neighbors suing due to loss of crops and land value due to it being destroyed. Take aggressive action now!
428	CO is the most humane, cost-effective, and likely to be most successful. Trapping and donating is is not humane, the animals would need to remain in quarantine for weeks before feeding to ferrets (to rule out transmission of plague)
434	No lethal
435	Ideally, the lethal methods would be delivered by wild native animals-- hawks, coyotes, ferrets, etc. I don't think prairie dogs need to eliminated but brought back into balance.
436	The trap and donate would be okay if they are being used for food. Stay away from the chemicals plz
439	The Eagles took care of them also.
446	They have a right to live too
451	I think they would contribute to a balanced approach, but probably should be the second line of defense after other methods prove untenable.

ResponseID	Response
454	After some years of trying to manage prairie dogs with holistic management and flooding, I have had to reluctantly resort to lethal control on my own land in North Boulder County to save it from desertification and collapse. I am committed to restoring highly degraded pasture and preventing catastrophic soil loss, as is happening on Open Space lands, and see that the situation is urgent. We've broken these lands and ecosystems, and they won't be healed by do-nothing preservation. We must take responsibility for this situation and play a conscious healing role, even if it means making difficult decisions. We have altered these prairie ecologies so much that they are out of balance. The natural predators of the prairie dogs can't keep their numbers down, and the prairie dogs can't move off their land due to fencing, etc. We must be willing to serve as these functions for the ecologies since we broke these functions. If we truly love the land, then we need to do what is necessary and what is right.

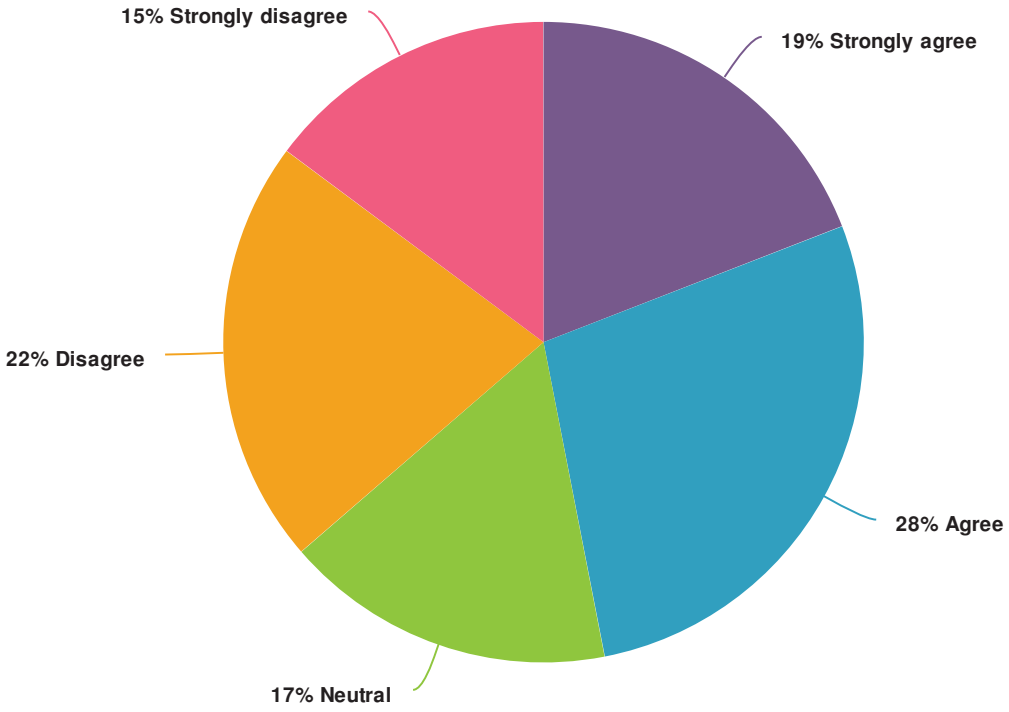
8. OSMP has evaluated actions to exclude prairie dogs from irrigable lands. Would you like to provide feedback on these actions?



Value	Percent	Responses
Yes	82.0%	210
No	18.0%	46

Totals: 256

9. How much do you agree or disagree that these exclusion actions most effectively help reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly agree	19.1%	40
Agree	27.8%	58
Neutral	16.7%	35
Disagree	21.5%	45
Strongly disagree	14.8%	31

Totals: 209

10. Do you have any comments on whether these exclusion actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
24	The idea that "irrigable land" is somehow benefiting the community has yet to be proved. What will be grown there? Feed for cattle? Sugar beets? Alfalfa?
35	target shooting or whatever is least costly
42	Your stupid prariedog fences don't work! Who's telling you they work? The guy selling you the material?
43	ot
48	You first need to make sure your approach is balanced and I do not believe it is. Agriculture prevails on most lands and the notion that just because it is irrigated that we can NEVER let it not be irrigated is antiquated and damaging to the environment.
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.
51	Costly and not sustainable.
66	These methods should be tried and assessed.
67	This is expensive, temporary, and has the potential to impact burrowing owls.
70	I agree with keeping them out completely.

ResponseID	Response
73	Prairie dogs should have access to native habitats
77	I still think it's better to just kill them. Adding fabric, metal and wire mesh are a lot of work and money and there's no guarantee the prairie dogs won't get around the barriers.
78	Far too expensive, and a waste of resources.
86	Doesn't work.
87	let them be. population densities will rise and fall let that happen. you may see some boulder county populations increase but on a regional and national scale humans have devastated this species.
91	Expensive and ineffective. Kill and remove 3/4s in the prairie Rodents dogs as cheaply and as effectively as possible.
94	PD fencing is expensive, ugly, and ineffective.
97	PDs are excellent burrowers under all kinds of barriers. Effective barriers, such as metal walls, make for an ugly landscape and restrict the movement of other animals.
110	This is the best option to keep prairie dogs alive (along with other species that depend on them).
114	I'm concerned that these methods aren't effective and are not cost effective.
121	You know, the way you keep wording the questions is really not optimal. I'm not a scientist. I can't tell you what's going to help reduce conflict, only whether or not I agree with the planned actions. Makes this whole thing a waste of time for all of us because you're fundamentally asking the wrong questions.
122	These methods sound expensive; I would wonder how effective they really are.
130	As long as you do not kill them and set aside areas for them to live.
132	If it is pretty likely that these barriers work then that's good. Invest in something that will work the first time.
135	Prairie dogs should be given priority on these lands, not irrigated crops for the profit of a few.
136	Private land owners can engage in such methods if they choose. OSMP needs to prioritize preserving the ecosystem of our city, of which prairie dogs are a keystone species.
139	Please do relocation of the prairie dogs instead of extermination

ResponseID	Response
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	Please use this method if you insist on doing this.
152	Although temporary, these methods would at least buy time until the city could find open space to move the prairie dogs to.
155	Though barriers are more humane than lethal controls, they require significant funds to install and more importantly, to maintain. Unless there is a solid budget to maintain fencing, this option is next to worthless.
160	By excluding prairie dogs, where would they be able to colonize?
163	I approved of this if the prairie dogs' lives are spared and they are treated humanely and with respect.
169	They need to be protected and the land set aside for them
176	Barricading animals in unnatural seclusion can doom a colony to destruction in case of emergency, disaster, population growth etc. And preventing animals from interacting with other colonies endangers the entire species.
180	You keep insisting this is irrigatable land. It's natural prairie land-- something we all must work together to protect and keep in it's natural habitat. There is a severe water shortage, drought conditions in CO. Why are we even considering allowing irrigation to benefit a few ranchers, over protecting natural resources?
182	Once again if possibly used in limited areas but once you start who knows how far and ridiculous this potential becomes. It would work 4 margins and only if it small prescribed quantities.
183	These existing prairie dog habitats should be preserved, not eliminated.
186	Fencing might work, but prairie dogs are part of our ego system too
187	I'm not sure how effective these methods are but we should try them.
188	These actions are preferable to lethal means of removal.
191	Seriously flawed. Really ?
193	Better in the short run, but native grasslands with prairie dogs, bison, migration corridors are needed in the long run to restore the great carbon sink that is a biodiverse grassland. Prairie dogs also increase the transpiration cycle. Creating rain & recharging underground aquifers.

ResponseID	Response
195	Once again you slip in lethal methods. History shows a check and balance with native wildlife and their relationship with land. The burrows provide a natural aeration and the prairies of yesteryear show it.
196	The Prarie dogs shouldn't be excluded from PUBLIC lands!
199	Barrier implementation is very expensive and will require resources to monitor and maintain this infrastructure in the long term. This infrastructure also inhibits other wildlife movement, may change the "grassland" habitat dynamic (via use of trees and shrubs), and cause significant disturbance to the lands during installation and maintenance.
204	we have too many of them concentrated in small areas I think. Unless the raptors are in need of that many? I think removal is best.
206	This is better than lethal action.
208	Vegetative barriers are accceptable to me in my own evaluation of OS management and visitors enjoyment - but I o not see these would be effective (from seeing the expansion of several prairie dog colonies.
210	it works and does not include killing
223	These do not address the problem well enough and they need to be lethally removed.
230	Again, prairie dogs are essential in grasslands, not livestock or ranchers.
233	Barriers, and certainly native plantings, do not prevent prairie dogs from migrating. It can readily be seen as you drive by the areas already populated with prairie dogs.
238	Stop catering to farmers and ranchers who think they deserve to use all 'irrigable agricultural fields'. Prairie dogs are intelligent, innocent, sentient beings.
239	Irrigated agriculture comes first. We are losing huge tracts of irrigated farmland to development as it is-we can't afford to tip toe around the noxious prairie dogs. They don't appear to be controlable as far as I've observed.
242	DO NOT KILL OR REMOVE WILDLIFE LET NATURE TAKE IT'S COURSE LET THEIR NATURAL PREDATORS DO THEIR JOBS STOP KILLING WILDLIFE
247	These methods can slow recolonization down, but they are not effective. Prairie dogs will return and recolonize in spite of the fence. You have learned this over and over on OSMP properties, and I don't get why you don't have the courage to say so.

ResponseID	Response
252	We have wat hed your exclusion methods FAIL for years. They are NOT working! Legal control is the only way to address this horrible problem you've created by letting the prairie dogs breed and get out of control. The soil is being denuded and you are letting irrigated properties become moonscapes. The City Of Boulder is a horrible neighbor. We homeowners in the county abhor your policies. You must enforce lethal control. That is the only way to get this problem under control. You have allowed this to Escalate over the last decade. You should be ashamed of yourselves. We will control is the only way we are going to get our irrigated fields back.
255	Barriers are ineffective. Right now, many of your barriers are keeping prairie dogs on irrigated parcels producing more damage, others are easily circumvented by pdogs and they migrate to private property and cause damage to neighbors.
259	I have personally observed how ineffective these barriers are to animal movement and recolonization.
260	They are a helpful supplement to lethal control.
261	Doubt that it would work with any real long term control/effect
265	My neighbor was forced to put up mesh barrier to keep the prairie dogs from coming in from City owned property onto her hay fields and it does not work!
266	Is there evidence that this can actually work? I feel like it might be a lot of effort and there's a good chance it would fail.
267	Avoid areas with prairie dogs at all costs. Please stop infiltrating on their space.
269	Please use materials that will not breakdown, such as the cloths used on the past.
276	too little and too late to be effective
279	There's a place for these, but they are not a substitute for lethal control of prairie dogs that successfully breach the barriers.
280	Methods should be non lethal...best to respect the wildlife...and their habitat.
283	This is the logical approach once the prairie dogs are removed from the irrigated land.
285	Send homeless folks out and give them a bounty.
287	Probably this works sometimes, but it seems expensive
295	Prairie dogs are a keystone species to Colorado and should be able to live wherever they naturally resides and wish to reside, under any circumstance. The prairie dog population should be controlled naturally, by predators like coyotes and wolves. Economic values should not trump Environmental and ethical values.

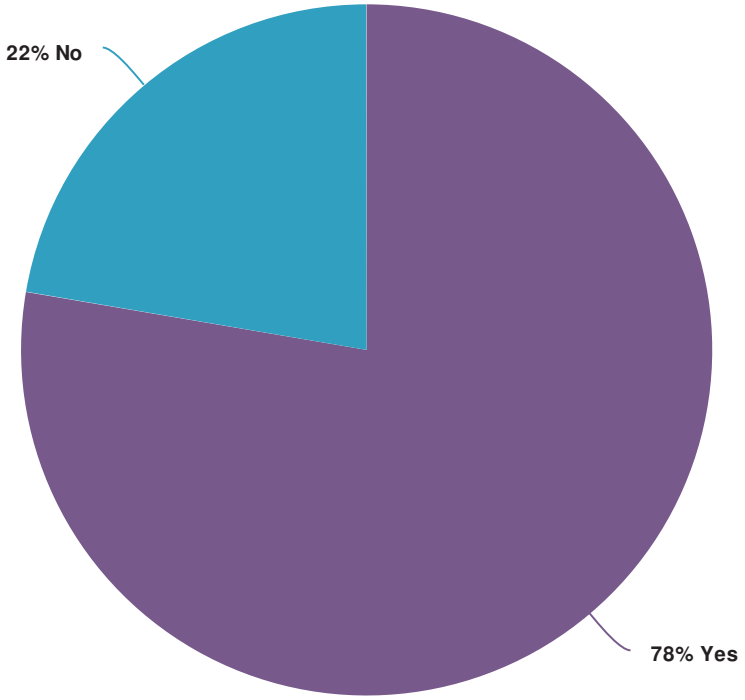
ResponseID	Response
298	i love this idea but see implementation almost impossible
299	Prevention is good. I don't have any experience with effectiveness.
300	Agree with quote on p.37," long-term success of removal relies upon some means to slow or halt recolonization." Barriers are important as is the approach of balancing landscape connectivity/wildlife corridors and Prairie Dog (PD) exclusion
303	Their is no conflict. Prairie dogs love and need irrigable lands and we need prairie dogs.
304	No. Extermination is most effective. Spend money on HUMANS
305	I fear fabric, metal and wire barriers will be insufficient protection
309	Prevention of prairie dog conflict is key, either before colonization or after removal, to avoid the cost of removal efforts.
310	Ain't no method of physical barriers that have ever or will ever work.
314	I have seen very little positive effect of the barriers.
324	still more options we have not yet discovered - lets keep trying
331	Let the critters be! Don't try and enforce Border Control methods a la Trump!
332	Exclusion is not a good solution. How much money have we already spent on exclusion and non-lethal control only to see the problem reappear, over and over again. Exclusion might be a temporary, short-term tool to keep adjacent colonies from from migrating to recently eradicated colonies until the adjacent colonies can be eliminated too.
333	Whatever it takes to first, get rid of them on the lands they are not suppose to be on, irrigated, and then insure they are not coming back. Ongoing management will need to be in place to insure the program is working.
335	Use only non-plastic materials, if necessary
337	It would provide "balance" between wildlife and their habitat and agricultural activities
341	Exclusion ok, but must balance lost habitats due to urban development in other parts of Boulder with agriculture needs. Living in a different Boulder landscape today than in 2000. This is why irrigated fields and urban development need to be tied up together in prairie dog management draft
342	Something vegetation based would be really neat. Definitely the most economic option, and if plants with deep and dense enough roots were used it would decrease the likelihood of burrowing beneath.

ResponseID	Response
343	This cannot be a primary defense. Barriers help but will not fix the conflict without lethal control.
345	They have been costly and ineffective. The sooner that our staff can be transparent about these failures, the sooner we can support staff in making the difficult but only effective choice of lethal control on agricultural lands.
346	I am in favor of this proposal as long as lethal methods are not used. However, I an not generally in favor of using irrigable lands to allow farmers to graze their cattle. Animal agriculture is one the leading causes of global warming. As a forward-thinking city, Boulder should not be supporting this.
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Barriers are not a solution to the conflict of PDs on irrigated field. Removal is the solution. Barriers can be used with or after removal. Has Boulder ever considered putting barriers on protected Pd areas to keep them from migrating?
359	I think we just don't have enough OSMP land to accommodate uncontrolled populations of prairie dogs, when females have litters of 6 pups each year. We can try to keep them on limited parcels, but the population grows too fast to be sustainable - either plague will come, the prairie dogs will starve, or they will break through the barriers.
362	not sure if all would work. I would not like to see a bajillion fences across OSMP land. might be harmful to other roaming animals & their ability to move about.
363	It is a great idea but how effective have fences been? It is time to reduce the population and get some balance back to the open space. Get rid of the rodents. Where are the predators that might eat them?
366	Developing effective exclusion methods is crucial for a long-term solution to the problem of prairie dogs moving into irrigated agricultural land. It is quite possible that creating wide hedgerows (including native and non-native plants, creating pollinator and bird habitat....) is the only long term solution. Fences/barriers will be needed until these hedgerows grow tall, wide and dense enough. Locating these hedgerows along irrigation ditches would create a double barrier, as well as provide some indirect soil moisture to support the hedgerow plants.
371	Barriers are rather ineffective and expensive. Can be used after pDogs have been removed by lethal control to try help prevent recolonization but OSMP will always need to monitor and continually remove pdogs. Use barriers to keep pdogs ON suitable habitat like HCAs & protected areas.
373	Yes I DO! STOP BUILDING ON THESE INNOCENT CREATURES TERRITORY FOR GOD SAKE!!! YOU PEOPLE ARE THE ONES THAT NEED TO BE REMOVED OUT OF THEIR TERRITORY!!!!!

ResponseID	Response
378	These methods seem to work, sometimes... not as affective as lethal control. If used, the people leasing land from the City, should not have to pay for these methods.
381	Keeping some areas in tact for prairie dogs makes sense, but there needs to be an overall process for complete removal in irrigated fields.
383	Sounds expensive to implement in relation to actual on-the-ground success rate
385	Again, too many PDs to do this economically.
389	Barriers can be used in conjunction with lethal removal but do not work as the only tool to reduce the conflict.
392	I have heard neighbors od Open Space properties say that the barriers do not work very well.
397	I agree that exclusion methods will keep the majority of prairie dogs away from irrigable lands. However, I have two concerns: 1) the goal here is to limit conflict between prairie-dogs and human activities. Limiting access to to irrigable lands is only a first step to achieving that goal. 2) will the exclusion actions prevent colonization of only city and county lands?; or will private farmers benefit from this process also?
401	The City of Boulder would need to install metal and wire mesh barriers along entire property line boundaries shared with private property irrigated agricultural lands. In addition, metal/wire mesh barriers would need to be installed between OSMP lands that have already been destroyed by prairie dog colonies and adjacent OSMP leased lands that are still economically sustainable irrigated agricultural land.
402	Barriers can be useful in some situations, but those situations are limited, and barriers are expensive. We should provide them where our prairie dogs are invading neighboring properties. They are also helpful in preventing recolonization.
406	If the prairie dogs must be moved -- and that is probably debatable -- exclusionary actions are effective and humane.
407	To me the most important is restoration to the native landscapes. Bringing back tall grasses will provide an ecological, and agricultural positive impact that should help keep PDs away.
410	The most important way to reduce pd is to remove pd's from an area of both private and public lands to remove the sources from which they can repopulate. Exclusion suggests private and public lands will have to deal with displaced pds.
411	Waste of resources
414	It seems balanced, yes.

ResponseID	Response
417	I am really not competent to answer the question. It will depend on cost and effectiveness, still needs control the pop. size. I would love to see an appropriate size parcel designed to serve as a pilot for this method.
420	I worry that OSMP has more financial resources than the average farmer/landowner and that this well end up pushing prairie dog colonies into the laps of neighboring properties without the resources to implement similar methods.
421	These actions stem from a misplaced belief that humans can mitigate our harm if only we are well-intended enough. We cannot out-innovate nature. PDs will invariably get around our attempts to exclude. Instead of continuing to treat the symptom, we ought to holistically treat the disease. Instead of trying to manage and control PDs, we should treat the ecological imbalance, which means lethally removing PDs from the land so it can heal.
424	These may work for a year or so....but you can see barriers all over that have just become an eyesore and a reminder of wasted money. You have let them become such a HUGE overpopulation problem that large scale lethal will have to be implemented and maintained. Just like the elk.
425	Balance is not attainable. Ask those who have used barriers. Poor effectiveness. Expensive. Maintenance.
426	The prairie dogs will still migrate from the non-irrigable lands - the breeding grounds- to the irrigable lands. The barriers will help but they will still migrate. We get a lot coming down the irrigation ditches as the water flows through their colonies.
428	Prairie dogs are adept at getting around barriers. Native plantings may help, but the fabric, metal, and wire mesh barriers are ugly and adversely affect other wildlife.
435	I'd hope native plantings would work, but don't know about this. A network of exclusion fences all over sounds awful-- and I doubt it'd work. As I ride my horse around, I've seen how PDs can expand into areas where they're not wanted.
451	Exclusion should be the first priority in a defense against prairie dogs.
454	I have seen prairie dogs cross many types of exclusion barriers. Anyone who pays attention can see it. It is a very temporary "fix."

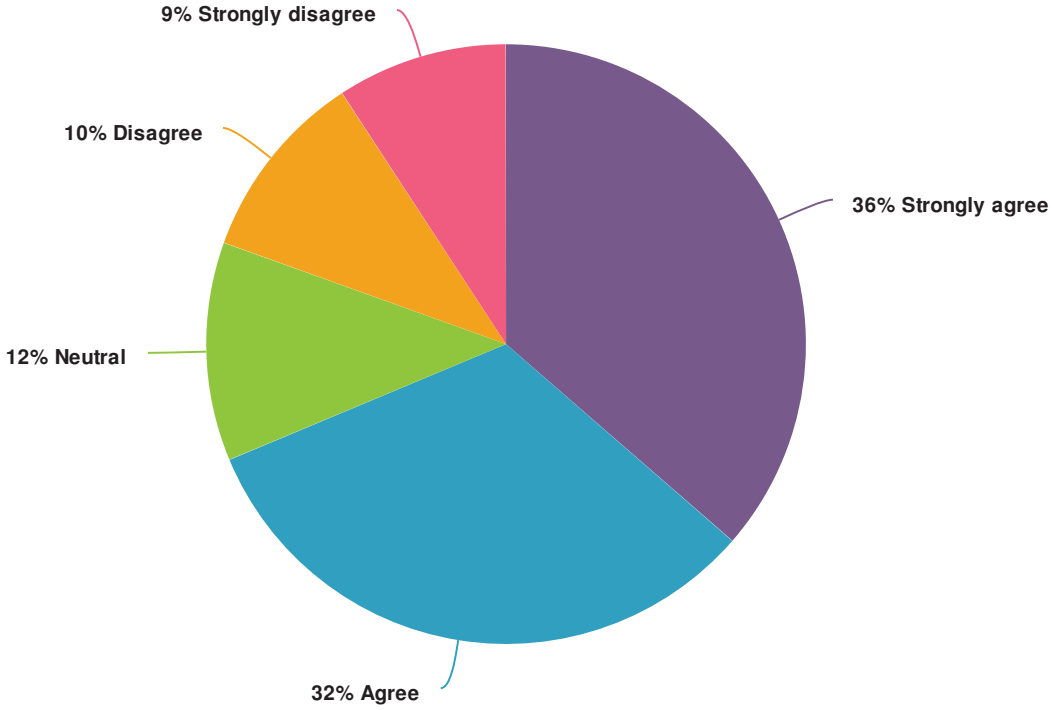
11. OSMP has evaluated actions to restore irrigable lands previously occupied by prairie dogs. Would you like to provide feedback on these actions?



Value	Percent	Responses
Yes	77.7%	199
No	22.3%	57

Totals: 256

12. How much do you agree or disagree that these restoration actions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly agree	36.4%	71
Agree	32.3%	63
Neutral	11.8%	23
Disagree	10.3%	20
Strongly disagree	9.2%	18
		Totals: 195

13. Do you have any comments on whether these restoration actions would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
27	Carbon sequestration probably does not do much. I farm vegetables and have had land with prairie dogs on it. They died from plague and by closing burrows and irrigating healthy crops they did not come back.
35	Keep the prairie dogs off as the waste of spending tax money on protecting them at our expense was futile and illogical Grow food for humans.
41	Prioritize carbon sequestration
42	You should lease the ground and pay the lessee to fix it. I've seen how open space does stuff, it'll never get done! All you do is talk about doing it. But first you'll have to do a study to see if you need a study to talk about doing something.
43	t is imperative we restore our lands for production and grazing along with soil conservation and weed management
47	Strongly favor soil health measures such as cover crops, reduced tillage, etc.
48	Again, you are fighting against nature to irrigate lands that should never have been irrigated! Get out of the wheel and make real change by taking these lands out of the irrigated rotation. The world is burning folks! Stop doing the same old thing and stop excluding and killing
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.

ResponseID	Response
51	Agree, but only if lethal control methods are made much more aggressive, such as gas pills or something similar.
70	Restore the land and rid it permanently of prairie dogs
75	Restore irrigable lands previously occupied by prairie dogs.
77	I think it would help, but it's expensive and should be the cost of the people who own the agriculture fields. I think spending money on just closing up the burrows on OSMP land where there is no agriculture is a waste of money.
86	Unless you are willing to kill prairie dogs they will be back - "closing vacant burrows" has no meaning - they will dig it out in minutes. Prairie dogs destroy ecosystems.
87	revegetation of the land with native genetically appropriate plant species would be valuable to pollinators birds and wildlife and should be pursued.
91	Sounds good.
94	Restoration is important, but it doesn't reduce conflict.
97	PLEASE make the restoration and conservation of soil health and overall land the priority rather than preserving one cute species.
121	The way you've worded the questions is not optimal. I'm not a scientist. I can't tell you what's going to help reduce conflict, only whether or not I agree with the planned actions. Makes this whole thing a waste of time for all of us because you're asking the wrong questions.
122	Extremely important to make the most of carbon sequestration and healthy soil techniques for the long term.
130	So how would you vacate burrows to begin with? It a;; depends on if prairie dogs are executed. I have seen Coot Lake - Boulder Reserver area. I see only a portion of the land was destroyed, and the prairie dog posts are bag on. That I can accept.
135	If you really want to "restore" these lands, the prairie dogs must be there. Start reseeding the land and weeding it. If you are converting this land to agriculture it is dishonest to call it restoration.
136	Abandoned burrows provide vital homes for species like burrowing owls and black-footed ferrets. This is part of the normal ecosystem and should be preserved by OSMP.
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	Prairie dogs are the natural occupants, so restoration is not what you are doing.

ResponseID	Response
152	Prairie dogs and how they clip the vegetation and dig burrows and add droppings to the soil is the natural state of the land. By "restoring" it, you are altering the topography and vegetation to human needs, not wildlife needs.
155	It will take a long time and concerted effort to restore land. I've seen prairie dogs turn once-beautiful fields into rubble.
159	The prairie dogs are my first concern!
160	I'm not sure how this would work as the prairie dogs wouldn't know to not use the land.
163	I am okay with this providing the property is already vacant of prairie dogs.
169	These are public lands and they should be shared with wildlife
172	Let the prairie dogs be and let nature do it's this. I thought that was the point of the OSMP.
176	Even if they left of their own accord, which is unlikely to say the least, nature knows best how to revitalize an area. Our attempts can bring unintended disastrous consequences.
178	Anything to save them.
180	This has nothing to do with "balance". Getting rid of one side to benefit another isn't balanced. It's natural prairie land-- something we all must work together to protect and keep in it's natural habitat. Our water resources need protecting.
182	You might want to irrigate/groom portions of this and help the restoration of natural species and then provide elevated nature trails from recycled materials so that people can go and view the prairie dogs with appropriate explanatory signage.
183	The existing prairie dog habitats should be preserved.
187	Yes, all efforts contribute to a balanced effort.
188	The prairie dogs are native to the area and should be allowed to remain. Efforts to revegetate and increase carbon sequestration would be beneficial.
191	This is ridiculous to do. Leave the habitat alone! We need keystone species like prairie dogs for the health of all the land!
193	If cows are on the land, let them cohabitate with PDs, do extreme managed grazing. Cows are not healthy for this climate, this soil, these native grasses. Gerardo Ceballos has run studies showing that cows do not break legs. Soil restoration here must include PDs.

ResponseID	Response
196	I'm not sure what the right answer to this issue is but, I do know that killing a an animal that was on these public lands, already, is wrong! Stop killing the Prarie dogs! They should be protected!
199	Restorative and regenerative agricultural practices need to be explored and implemented to better manage these fragile agricultural ecosystems in the semi-arid west. Increasing the health of these lands and systems will discourage recolonization and increase ecosystems services
206	The term "restore" in this context is the opposite of the word's actual meaning. Prepping land for agriculture is not restoration. Prairie dogs are native species. The land they occupy is not in need of restoration.
210	should be implemented in some areas
223	The lands are destroyed and in safe because of the amount of holes in the ground.
230	Prairie dogs are essential in grasslands and have a right to public lands, not livestock or ranchers.
238	See my previous comment
239	I would like to see restoration to more land than just irrigated farmland. Prairie dog infested land is ruined land. Their only value in my opinion is food for raptors or other predators.
245	Prioritize use of native seed/plant materials and local sources (for genetic similarity to local native flora).
247	This is putting the cart before the horse. You must clear the land of PD's, guarantee that you can keep it clear, before you should even consider restoration. You have proved that already on the Bennett property. Restoration without removal is a huge waste of money and time.
252	You must enforce lethal control if you were to restore the irrigated land. Irrigating alone is not going to remedy the situation. They just leave the field while the field is being irrigated, and then they move right back in. Get in line with the county's policy!! Lethal Control!
255	need to get started on this program as soon as possible, remove the pdogs from irrigated parcels
259	to the extent feasible, restoration is important to make property more appropriate for other uses, including agricultural production.
260	This is essential to restoring healthy lands given the unnatural infestation of prairie dogs that was allowed to occur.

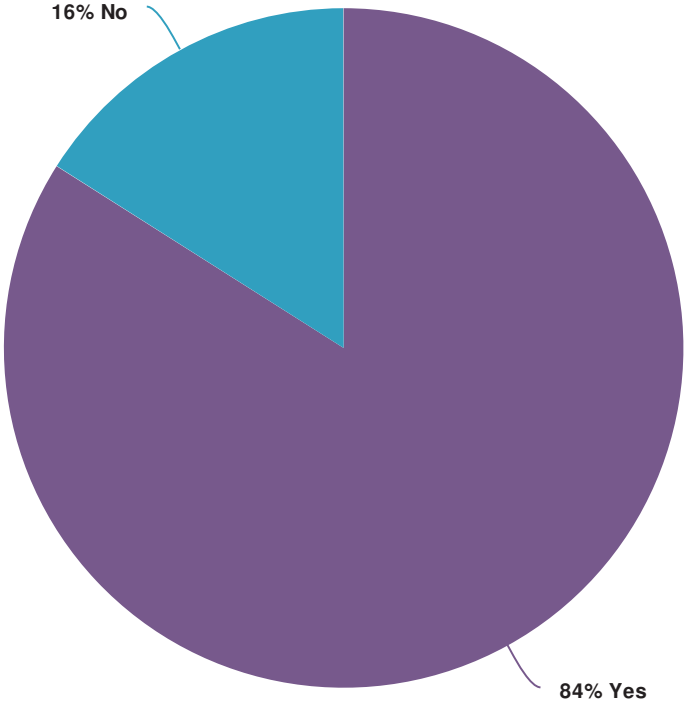
ResponseID	Response
261	I would like to believe that these actions would be effective!!
265	The prairie dogs still need to be eliminated by lethal methods.
269	As much as we would like the land to be as it was before humans set foot here, we are here, we depend on agriculture for our food. More grown locally means less shipping, and lowers are carbon footprint.
271	Add biochar in addition to other methods. It helps the soil and takes carbon out of circulation permanently (for all practical purposes)
272	I agree with re-establishing farming on irrigable land that has been taken over by prairie dogs (i.e. Hartenagle farm on Valmont). It will make the land no longer appealing to colonies. So, start working the land again and irrigation. Cheap and very effective.
276	Still very costly and takes a lot of time but in addition, the prairie dogs need to continue to be denied access by lethal means most likely.
279	All this makes good sense only if the prairie dogs have been successfully eliminated first and provision is made for prompt and effective control, including lethal, of any new prairie dog arrivals.
280	Agree if the animals are not harmed.
283	This is good in principle but probably very expensive to get back to good agriculture land. Weeds such as cheat grass and bindweed will be very hard to control. There is potential herbicide control of bindweed now.
285	If irrigating would help move them out, do so. Like the 2013 flood!
287	Land rehab is worth doing
295	Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.
299	I don't consider this restoration. You're misusing the word and concept.
300	HOWEVER it depends on 1)Ag potential of land and 2) What Ag? Cattle are #1 Ag source of greenhouse gases. Per yr. 1 cow belches 220lbs of methane, 28x more potent in warming atmosphere than CO2. Not in line with Boulder Climate Change policy. Plant crops
302	All excellent interventions.
303	Any public lands that can be "restored" to suitable prairie dog habitat should be.
309	The cost to bring affected land back to being able to cultivate should not fall to the agricultural tenants.

ResponseID	Response
310	Restoring land "previously occupied by PDs" will need to use methods far more aggressive than the nice little list you have offered. If you don't clear the PD's out 100% and keep on top of it -- a multi-year commitment -- your restoration efforts will be wasted.
314	It's going to take a lot of work and money to rebuild the lands that have been overrun by prairie dogs, but if something is not done soon, the damage and expense will grow exponentially
318	I don't see the need to add more agriculture.
331	Conflict...is this real conflict or made up conflict? We are talking about animals that have occupied WAY more land throughout history than they do now. Do humans have to take over Everything?
332	All of these options are essential to restoring soil health, and then agricultural suitability.
333	All lands that have prairie dogs on them, irrigated lands, need to be prioritized and re vegetation programs need to start asap.
335	Use lands for carbon farming
337	I agree only if these areas were not vacated by exterminating prairie dogs
341	Restoration has nothing to do directly with prairie dog management since by default they longer occupy the land and thus there is no conflict!
343	Bad question. Restoration will not reduce the conflict btwn irr Ag & PDs. REMOVAL by lethal control will reduce the conflict, restoration is the step that MUST be taken after the PDs are removed.
345	If staff would be willing to share the true cost and efficacy of these restoration actions, we as a community could deal with the reality of this terrible problem, desertifying our public agricultural lands.
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Removal by lethal control followed by restoration will reduce the conflict. Real management and true stewardship will contribute to a balanced approach, something Boulder has been ignoring for well over a decade.
359	It is impossible to irrigate lands that have prairie dog burrow, since the water just runs down the holes. Revegetating areas will just provide an invitation for the prairie dogs to move back in. Closing old burrows won't stop prairie dogs from building new ones.
360	I would need more time to read and understand

ResponseID	Response
366	Restoration actions will not keep them out of inviting habitat. Barriers are needed. Restoration is a vital once pds are out, discouraging those prairie dogs which get through barriers. Tall forbs and grasses (even weeds) are effective in reducing prairie dog traffic.
368	I agree that this would reduce conflicts, but we should not have so much agricultural lands in the first place. All this agricultural land was native grassland. What about the grassland species.
371	Looking at OSMP irrigated properties with pdogs, restoration will absolutely need to take place across the project area. CofB Climate Commitment talks specifically about healthy ecosystems. PD infested irrig. parcels are not healthy, they are denuded, must restore after removal.
373	BUILD YOUR STUPID SELFISH AGRICULTURE IN YOUR OWN TERRITORY NOT INNOCENT ANIMALS TERRITORY!!!!!!
378	These methods sound like they would be affective in helping to restore the land.
381	The closing of vacant burrows is critical to areas where livestock will be replaced.
386	if we can do it without any new taxes, yes.
389	Restoration can only logically occur AFTER prairie dogs have been removed from irrigated land. Trying to restore a property while prairie dogs still occupy it is a waste of time and money. Not balanced approach by itself. Remove prairie dogs, then restore = balanced.
392	The lands should be restored. A very costly mistake was made allowing this situation to develop as it has. we must have the grasses back to save the top soil. we have a very thin layer of top soil to begin with and it is blowing away quickly.
397	I agree that restoration would be an appropriate actions. However, this seems to be a later action only after we have removed an existing overpopulation of prairie dogs.
400	it's only fair to help the farmers restore the land to make irrigated agriculture successful.
401	Best preventative and restoration technique that has been used historically by Boulder County ranchers is for OSMP lands to be frequently flood-irrigated in order to drown the prairie dog colonies.
407	I hope these would work. I feel that using the tools of management and agricultural techniques will be most effective.
410	Lands with healthy grass cover reduces the likely hood of dog recolonization. Tall grasses reduce the dogs ability to observe predators, and I have found they remain dog free or are easily managed if present.

ResponseID	Response
414	Keyline design, revegetation, contracting local farmers to help do the work, and wisely irrigating the restored habitat seems to be the wisest way forward. Closely testing soils and growing native species is key!
417	how strongly "closing of vacant burrows" will deter P.D. from re-inhabiting this field?
420	Anytime you can restore native lands and improve land fertility is a plus, but what's to stop the prairie dogs from moving back in when development is pushing out their natural predators?
421	YES! After we remove the pressure on the degraded land, we MUST yield it back to the regenerative farmers who work with nature to restore soil health and bring balance back to the natural ecosystem. In this healthy context, PDs will be able again to be naturally managed.
422	I agree but only if we have not contaminated the land with chemicals that are lethal to bees and other insects. Delta dust will linger and thus revegetation programs will become death traps for ground nesting bees for example.
424	You have "kicked this can down the road" for so long, and now you are asking us to pay HUGE for restoration of our precious lands that you have let the PD destroy. ...because you are not leaders enough to do the hard thing...shame on you.
425	Cost to taxpayers? What do scientists say about effectiveness. Where is science based input, rather than simply ideas? Where has been done, did it work, cost to do it? Need data
426	This process is going on south of me. I'll wait and see how it works
428	In combination with lethal control, this will certainly help restore irrigated land and ensure that it remains productive and healthy.
431	These are acceptable options (there could be more) to restore land destroyed by PD.
435	Do you work with Wildlands Restoration Volunteers? They do great work!
439	Put back the buffalo's
451	This sounds awesome if there's budget to do it.
454	As someone who has been on the front lines of these efforts on Open Space, I can say that any efforts to restore and revegetate that do not also use lethal control or extensive relocation (and possibly exclusion) will fail or experience only temporary success.

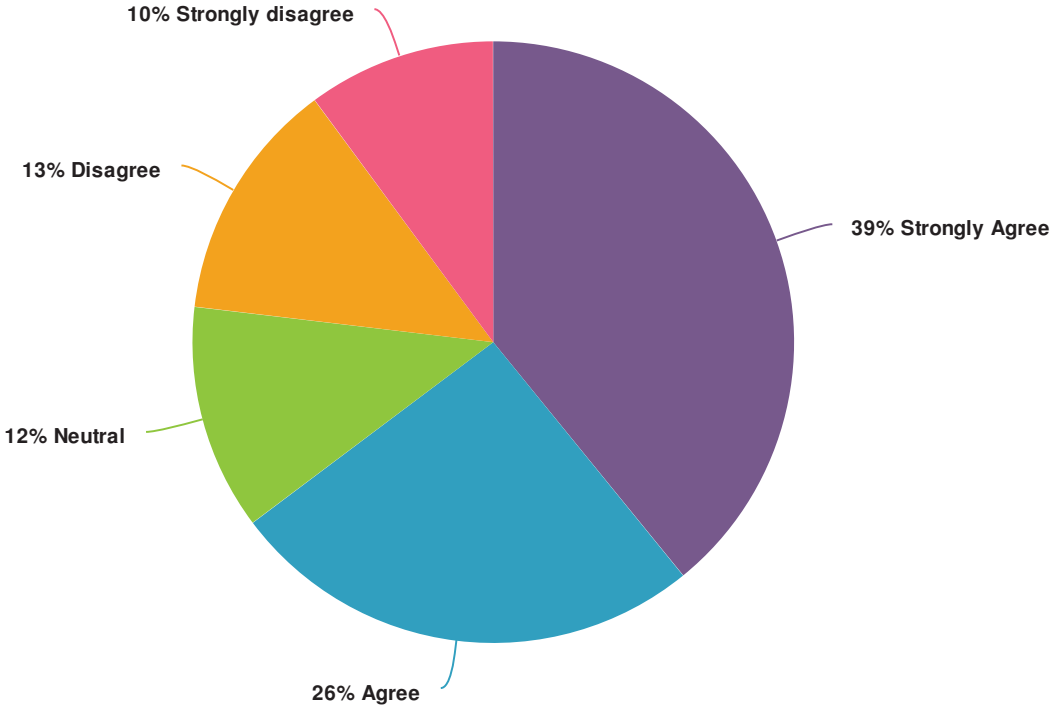
14. The city could address the high occupancy of prairie dogs on irrigable lands by seeking plan and policy changes. Do you want to provide feedback on potential plan and policy changes?



Value	Percent	Responses
Yes	84.0%	215
No	16.0%	41

Totals: 256

15. How much do you agree or disagree that these plan and policy changes would most effectively help reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly Agree	39.1%	81
Agree	25.6%	53
Neutral	12.1%	25
Disagree	13.0%	27
Strongly disagree	10.1%	21
	Totals:	207

16. Do you have any comments on whether these potential changes to plans and policies would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
27	When looking at leasing farm land City owned land is not desirable due to the inflexible policies on prairie dog control. Changing policy to be closer to County Open Space would be a huge improvement.
35	Grow food for humans not prairie dogs. Prairie dogs gestate every 30 days. They are expendable.
42	Jesus christ just do it. The city council passed the new plans, as well as the board of trustees!
48	POLICY CHANGE! We are in dire straits and we must make radical change now. Yes there is a need for agriculture but we must change the way it is handled. Irrigating lands for cattle to graze is particularly offensive. Open bidding on these lands is needed and different leases
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.
51	Agree only if lethal control methods are changed to much more aggressive methods.
52	I believe caution should be taken to not over-cull the population, and imbalance the ecosystem in the opposite manner.

ResponseID	Response
67	Update policy and management objectives to prioritize ecological function (where feasible) with agriculture as a secondary objective. They do not need to be mutually exclusive, but accepting lower productivity in exchange for ecological health may be desirable on public lands.
68	Not sure if you are saying they are invading previously irrigable lands or you want to kick them off all land.
70	I favor extermination not relocation
73	Preservation of native grassland habitats outweigh the benefits of reclaiming land for agricultural use
76	Allowing tenants to control prairie dogs is like a death sentence to prairie dogs. Prefer Reducing/removing agriculture from irrigated lands.
86	Existing policies have no basis in science and need to be updated to reflect reality.
87	every action you list will result in the removal death and degradation of prairie dog habitat...while you should be improving that habitat. farmers can deal or leave.
92	I'm not knowledgeable about pros and cons but do whatever it takes to get rid of prairie rodent infestations.
94	These seem like reasonable policy changes to consider as part of a multi-pronged approach to an issue that has many variables.
97	Boulder should have agricultural activity. That means giving tenants the ability to farm and remove PDs. The Wildlife Protection Ordinance was a poorly-thought-out measure that should be revised.
110	I do not believe in lethal control.
111	The option to use lethal measures needs to be baked into plans and policies. Without doing so leaves the door open to losing the option.
121	The way you've worded the questions is not optimal. I'm not a scientist. I can't tell you what's going to help reduce conflict, only whether or not I agree with the planned actions. Makes this whole thing a waste of time for all of us because you're asking the wrong questions.
122	I think modifying city regulations to prioritize people, agriculture, and climate change mitigation over prairie dogs is critical.
130	You are asking completely different questions and asking us to answer one. I am for changing policy to protect the keystone spices, and increase $ lease fees to raise more taxes and limit development of the grassland. No poison should be used and we should not play GOD.

ResponseID	Response
133	If these changes are in favor of a higher lethal removal rate, I strongly disagree. It is worth the expense to relocate colonies to distant grass lands.
135	Leases should be changed on irrigated lands to allow for prairie dog habitation. If people lease those lands, they need to lease them understanding that pd's live there and they can't kill them.
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	Don't allow the destruction of prairie dogs burrows. No lethal methods. If you continue with the contracts, always use non-lethal methods. This land should be preserved for wildlife and if the farmers can't use it without destruction of wildlife, they shouldn't be allowed on it.
151	We are destroying this species. Please allow them to live and thrive. We have destroyed over 99% of this species. Enough is enough! I moved to Colorado partly because I believed it's citizens respected nature and all it is to offer. I was terribly wrong.
152	I am pro working with the state on relocation policies and practices. We are at the end of the line for this species and the prairie dogs need protection, not poison. Farmers and ranchers need to evolve to a new way of doing business and working with wildlife, not eliminating it.
159	I am strongly AGAINST lethal control, no matter what!
160	It seems like this approach is vague and would end up only benefitting the agricultural interests.
163	Again, I do not want even one prairie dog killed to pacify ranchers. I do not want prairie dogs killed for agricultural or any purposes.
169	I'm fed up with lethal actions on these creatures
171	It would always be better to everyone to work together
172	I vote for anything it takes to keep the ranches off the land if it means hurting the population of prairie dogs.
176	I agree we need plan and policy changes but NOT human centric ones. We can NOT survive in a wasteland. And where there is no humans or humans are grasping at subsistence living, there is no economy so then what? Taking care of our ecosystem is the only way to go.
180	The only item I agree with is Changing OSMP agricultural agreements with farmers and ranchers.

ResponseID	Response
182	How much money does the city actually gets from those leases because it cannot possibly be worth the addition of irrigation which if it is not underground which is very expensive the land will become salted in a matter of a few years and useless for anybody. Zero Sum game.
183	These existing prairie dog colonies should be preserved and protected.
185	Lethal action against prairie dogs should not ever be considered
187	Farming tenants should be free to remove prairie dogs by any method on ag lands.
188	Killing the prairie dogs is an unacceptable alternative.
191	Stop the sprawl and destruction of natural habitat to satisfy whims of a few
195	Just humanely remove the animals, value the lands and incorporate nonlethal relocation into contracts when wanting to take away what land is left for wildlife. Allow other states to accept what your state doesn't value.
196	It's ridiculous to think that the city is going to kill an animal that already inhabits public land in order to make it easier for ranchers and farmers to make a buck! Leave the Prarie dogs alone!
199	The complexities of this issue are overwhelming in this region. Changing policies to allow "more tools in the toolbox" will allow managers to diversify actions based on site and system specific challenges and ultimately create a more sustainable managment plan.
202	Any method that includes lethal means is wrong and should not be allowed.
210	regenerate them as they originally were . for use BY the prairie dogs.
215	I'm most interested in a test case for the implementation of relocation and burrow destruction. The results of that test case will answer your question above.
230	Again, prairie dogs are essential in grasslands and have a right to public lands, not livestock or ranchers.
238	The 'conflict' is because humans refuse to acknowledge that prairie dogs have the right to exist and be left alone.
239	Can't comment because I couldn't open the draft documents. I will defer to the conclusions arrived at by smarter minds in wildlife management and farmer representatives.
242	STOP KILLING AND REMOVING LET NATURAL PREDATORS DO THEIR JOB...
246	Please get rid of the prairie dog overpopulation. Really sick of them.

ResponseID	Response
247	The County provides an effective model here to follow. City lethal control regulations must be modified to allow lethal control on irrigated lands and tenants and neighbors are key partners in success on those lands. Tenants need a full set of tools to care for land, ie lethal.
252	You must adopt lethal control into your scope of how to remedy the prairie dog epidemic. You created this problem, you must change your policies in order to fix it. Lethal control is the only means to fix your problem with the prairie dogs.
255	Get rid of the six step process for irrigable lands. Need a different protocol for agriculture. City of Boulder needs to modify the legal control regulations for irrigated lands, no 6 steps. Allow lethal control on irrigated parcels. Allow burrow destruction.
259	I especially support changing the city ordinances to allow burrow destruction from normal ag activities and allowing lethal control.
261	I want to agree as this problem needs attention ASAP to control this very out of control situation
265	The prairie dogs still need to be eliminated by lethal measures. City of Boulder already has policies on the books saying they are responsible to maintain there open space lands. We do not need new policies. City of Boulder just needs to do what its supposed to do.
266	This is their land they should be allowed to stay. If anything the regulations should be changed to give them land rights and protection as they're so vital to our ecosystems.
271	I wish someone would do research on the LONG TERM post occupation fate of pdog inhabited land! Surely, deep water infiltration into typically clay-rich soils has a long term benefit.
272	The old way of doing things only considered prairie dog colonization. Farming was literally not allowed to continue if a prairie dog showed up. Not a balanced approach. We need food. Things can be worked with as it has before when farmers were allowed to do what they know works.
276	Definitely need to lethally harvest the prairie dogs and feed to raptors and other animals. Otherwise, the topsoil for farming and ranching is fruitless.
279	Tenants should be allowed to control invasive prairie dogs including burrow destruction and restoration of the land to agricultural use.
280	Methods should be NON LETHAL
285	Move colonies to the lawns around city hall.
295	Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.

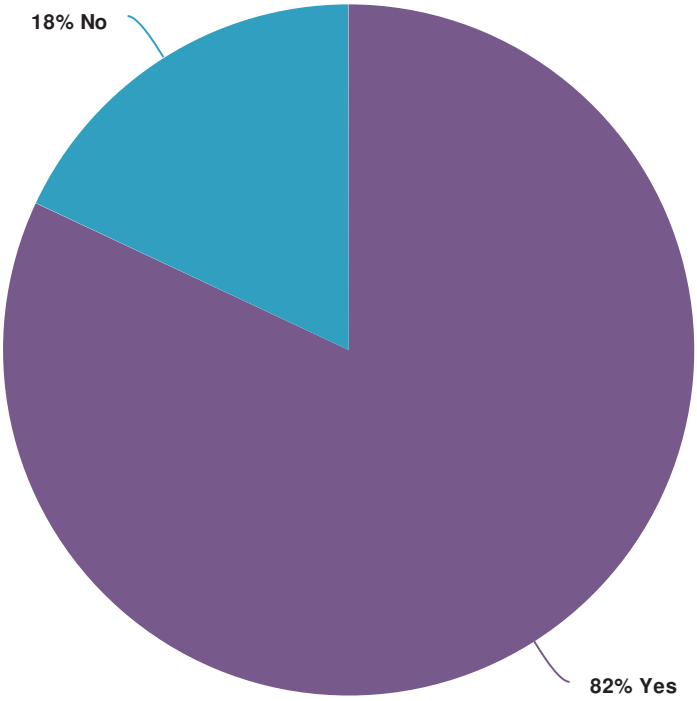
ResponseID	Response
298	it's effective but not the most effective
299	I think agriculture may be proving itself to be unsustainable and not the highest and best use of public lands on the Front Range: water, soils,wildlife and the public good. We should reevaluate and set new goals.
300	Decrease stocking rates and change prairie dog (PD) management designations. especially adjacent to irrigable lands or on its borders to allow for prairie dog colonies. Adjacent muni. lands to project area were once rural & hosted many colonies, much of this land is now developed
303	Reducing leased agriculture on public land creates a path back to ecosystem health and sustainability. Let's fight for and restore native prairie ASAP!
304	Just euthanize them already. Stop wasting money on this plan. Do it and move on as quickly as possible to address HUMAN needs please.
309	Changing the policy should help sustain any improvements the proposed actions effect.
310	Well, it's a start. All but working with the State of Colorado -- don't bother. Changing your agreements with farmers and ranchers must include letting them "manage" the PDs on their leased lands as well as letting them destroy the burrows and use lethal control.
314	It is a step in the right direction in allowing those who are trying to be good stewards of the land to have more control and input in what happens on the land they are working and paying rent on.
318	Leave these creatures alone. I feel we have enough agriculture sites and prefer wild life sanctuaries.
322	What happened to Boulder? what is wrong with you all
324	this is a sad turn of priorities. please continue to attempt to find other options
327	Humane lethal methods are most permanent methods of problem solution and most cost effective.
328	As above: prairie dogs, though probably detrimental, don't hold a candle to fracking, which releases radon, formaldehyde, benzene and other toxins in large amounts--and in perpetuity.
331	Change lease agreements with farmers so that they understand this land belongs to nature as much as it belongs to them.
332	Yes if changing OSMP agricultural agreements are changed to allow farmers to also use lethal control. Changes should make it easier for adjacent properties across county and state lines to also engage in lethal conrtrol when adjacent properties have no pd's or have eliminated them

ResponseID	Response
333	This is frustrating. You continue to use the political machine as a way to move forward. All the while, the prairie dogs continue to expand in epidemic proportions and destroy open space and private property. Its time for action. You continue to stall! Our lands are dieing
335	Don't allow cows on OSMP lands. We don't need more meat, cows with calves are scary (I've been aggressively chased while running on south boulder East Creek trail). Leave the prairie dogs!
337	I am not in favor of burrow destruction or lethal control
341	1) do not put law in hands of individuals 2) putting anything into law that outright allows killing of wildlife on public lands sets a dangerous model that does not bring balance to the approach
342	Whatever it takes to keep the fields healthy and producing adequate food.
343	Must change city ordinance/policy to allow lethal control on Ag lands without permits or jumping through hoops. Must change city ordinance/policy to allow burrow destruction. Change agreements to allow farmers/ranchers to manage PDs. Ok work with state but not solution
345	Anything less than these actions is NON-Management and irresponsible.
346	I am strongly opposed to any type of lethal control against prairie dogs. I am opposed to allowing farmers to use this land to graze cattle and other animals. The commercial interest of those farmers should not outweigh the rights of wildlife to exist on these lands.
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Changes ordinances to allow lethal control and burrow destruction. Allow ranchers and farmers to manage PDs as they see fit. Start managing to preserve land suitable for ag production and start managing for healthy soil & sustainable ag.
359	We do need to allow ag users to use lethal control. Fair and balanced proposals for prairie dog mitigation should not be outweighed by the emotional appeal of how "cute" prairie dogs - eg Boulder County's allowing for culling elk on Rabbit Mountain has been successful.
363	The damage from no policy now forces more severe action. The city was trusted with taking care of the open space for both farmers and citizens. They have done a poor job at best.
369	Need to also include NON-IRRIGATED LAND!

ResponseID	Response
371	Change ordinances and "urban" wildlife policy to include lethal control for Ag parcels. Get rid of six steps for Ag. Properties. Lethal control, without permits, needs to be a regular tool that OSMP uses to manage Ag lands to fulfill charter & written objectives of irr. Ag.
373	REDUCE CONFLICT BY BUILDING IN YOUR OWN TERRITORY NOT AT THE INNOCENT ANIMALS TERRITORY. YOU PEOPLE ARE A CANCER AND MONSTERS TO ALL ANIMALS 😫😫😫😫😫😫😫😫😫😫😫😫😫😫😫
378	These changes would certainly in dealing with the over population of the prairie dogs on the IA lands.
380	Lethal control is humane and effective
381	We are at a point where lethal control is the best approach for control. We must also work forward to changing the city and state ordinances about pdog control
383	Agree with except for lethal methods.
389	OSMP must have the ability to lethally control prairie dogs to meet the City of Boulder Charter and the objectives of the Ag Plan and Grassland Plan(removal areas!). Ordinance/Policy needs to allow OSMP to use these tools by right, Charter dictates it. No special permits.
392	The city needs to honor its commitment to agriculture and recognize that soil sequestration is an important aspect of its commitment to climate change.
397	At the current levels of overpopulation, the ecosystem seems entirely out-of-balance. Policy change must occur to help both the local governments and farmers/ranchers achieve the goal of removing prairie dogs from human-occupied lands.
398	Like the balanced approach.
400	More lethal controls must be utilized.
401	Better OSMP land use management of prairie dog colonies will hopefully reduce the economic impacts to adjacent private landowners as well as enhance sustainability of OSMP-leased irrigated agricultural lands for future ranching operations and agricultural crop production.
406	Balance? Is this a joke?
407	Without modifying policy there is no reason to discuss the previous actions.
410	The dog problem has escalated beyond nonlethal solutions and the current predator base. Only through area control with cooperation with private land owners can the costs of maintenance and ag be reduced to something acceptable.

ResponseID	Response
421	We know this is effective because the County uses these methods to great success. Human hubris, guilt, and shame in how we have affected the natural world ought to drive us to seek effective methods of rebalancing and healing. Policy change can drive that. PDs cause harm.
424	Leasees need to be able to maintain their land.....they are the experts....let them take care of the land and do what is needed. The fact that they have not been able to is absurd. (Like saying...yes you can rent my home but you have to let the rats live and take over)....Crazy!
425	Is time to change policies, and change aggressively. Problem is way out of control a shame that wasn't addressed while in progress getting worse years ago as now costs more and lost farmers & agriculture already, and neighbors suing to to property damage caused by city pd's
428	Change policy to allow lethal control. It's the most humane (because it's fast) and effective way to control prairie dog populations. Allowing farmers and ranchers to use lethal control in addition to restorative measures will restore land for growing food.
436	why can't you stay away from lethal???? Really, This is Boulder. But again, it took the city way longer to finally get up to speed with recycle so I guess I shouldn't be surprised that you can't figure out how to control prairie dogs without cruelty :(((((((
439	I have noticed that the Buffalo ranch on Nelson road doesn't have problem. They step on them if they enter the land.
446	There should relocated not killed
451	The current policies are far too protective of prairie dogs, and policy changes would allow a more balanced approach.
454	This needs to be paired with the other methods already discussed. Regeneration efforts are impossible if we don't allow for prairie dog burrow destruction and lethal control. Under current regulations, I have tried and failed to regenerate degraded Open Space.

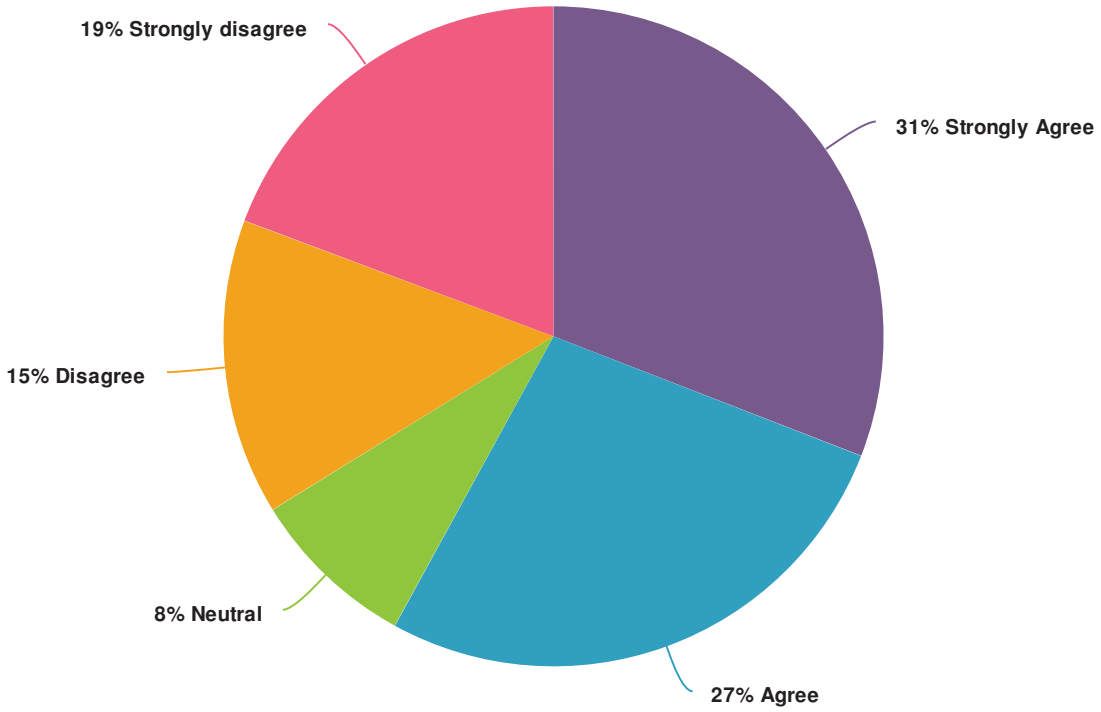
17. Staff plans to develop a model to help guide the decision-making process and it will include several assumptions. Would you like to provide input on assumptions that may be included in this planned decision-making model?



Value	Percent	Responses
Yes	82.0%	210
No	18.0%	46

Totals: 256

18. How much do you agree or disagree that these assumptions would most effectively reduce the conflict between irrigable agricultural fields and prairie dogs?



Value	Percent	Responses
Strongly Agree	30.9%	64
Agree	27.1%	56
Neutral	8.2%	17
Disagree	14.5%	30
Strongly disagree	19.3%	40

Totals: 207

19. Do you have any comments on whether these assumptions to guide decision making would best contribute to a balanced approach for reducing conflict between prairie dogs and irrigated agriculture?

ResponseID	Response
27	This looks good. Barriers are expensive and I don't think effective unless kept in perfect repair. Finding ways to avoid barriers is probably best but the rest looks like it is moving in the right direction.
41	Sure some prairie dogs will be killed but non-lethal measures should be the priority. Assuming a vague statement that non-lethal alone is not enough does not communicate to me WHY that is the case nor HOW MANY will be killed. Why did you make that assumption?
42	I know you work for the government so none of you like to work or do your job but you better start caring, the public is getting pissed. Quit catering to the 5 people who want prariedogs and start making a balanced ecosystem again!
43	Do not dust any relocation removal or receiving sites with pesticides.
48	Any industry that cannot function without being in a welfare state is not a viable industry. These lands are leased for pennies on the dollar and we are propping up the agriculture industry and it is killing the planet. Please make real policy change and change these leases!
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.
51	Agree with aggressive lethal control, but not relocation or barriers.

ResponseID	Response
67	An important assumption that is missed: Natural predation is an effective form of control that meets OSMP's values and management objectives.
68	If you are reclaiming previously usable irrigable land to feed Boulder then I can be persuaded. To sequester carbon not so much. If it was part of a worldwide effort and it was deemed essential then yes.
69	STop talking about it and just do something, you all sound like folks who have never done anything but sit around playing at your computers.
70	I'm not convinced we need to relocate prairie dogs as a species. Why not eliminate permanently?
73	Is it a necessary assumption that some prairie dogs will be killed? Or are there alternative methods to preserve life
76	Agree with: •Some prairie dogs will be relocated. •Barriers will be installed to prevent recolonization. •Soil and vegetative restoration will accompany removal. •Management scenarios will be presented in terms of level of prairie dog removal based on acres and the number of animals.
87	all these assumptions are based on the bias that prairie dogs are bad and farmers are good. this is a flawed bias.
90	Remove and destroy.
91	The biggest problem is in the name. They are not dogs, they are rodents. If the name was prairie RATS, then we would effectively control them. Reduce their numbers by at least 75% and eliminate many colonies.
94	These assumptions are a recognition of reality. It's always healthy when public policy is based on a pragmatic recognition of reality.
97	ADD to assumptions: Prairie dog management is expensive in terms of staff time and costs. Extensive time and resources spent on PDs means less time and resources for the overall ecosystem and other animals needing conservation.
110	I do not ever agree with lethal methods.
112	NO lethal removal!!!!!!!!!!!!!!!!!!
121	I think you should reintroduce ferrets. I also think you should start with the assumption that no prairie dogs need to die.
124	I think adding a cost benefit model i.e. how much does it cost per prairie for the various options would be useful

ResponseID	Response
130	Poison will poison our land and our health regardless what experts or killing agents would say. Look at Australia, look at Amazon. Making money is not as important as having the healthy environment.
132	Make sure the prairie dogs are gone if the conflict is to be "reduced." Hopefully most if not all prairie dogs are donated to the ferret/raptor facilities so they don't "go to waste."
133	Humans are the overpopulaters, not the prairie dogs.
135	Prairie dogs should be allowed to stay in place. They should not be killed. If they have to move, they should be relocated to where the county foresees the reintroduction of black-footed ferrets.
139	Work to assure more relocation of the prairie dogs needs to be done
143	The public should NOT be using rapidly dwindling water sources and prairie land to help a few ranchers profit and ship their products out of state.
147	No lethal methods should be used ever. This is totally against everything Boulder used to be to be managing the land for agriculture rather than preserving it for wildlife. Irrigated agriculture should have zero rights.
152	I don't agree with # 2. The reasons why prairie dog populations spread onto irrigable land are: Prairie dogs don't distinguish borders. They naturally spread. Populations should be controlled by predatory wildlife but when we remove land and food sources, predators die or move on
159	Leave them alone!!!
160	I have a feeling that the lethal methods will be used way more than the non lethal methods.
162	homeowners input should be collected at neighborhood meetings or use social media such as Next Door
163	There is not valid excuse to kill these animals, and I am strongly opposed to it. They are an important, native species, helping to keep our prairies healthy. Ranchers will ruin the prairies with their operations, and that is not okay.
169	Get off the prairie dog land. Find another place to do agricultural
176	The only "assumption" that is beneficial to our survival in the one that dictates we need both diversity and abundance in order to flourish.
180	OSMP lands are public lands, protected space. It's not farming and ranching land. If we are truly protecting this wild space, we must leave the wildlife and habitat in peace on this land. NO farming and ranching wishes should out weigh the protection of wildlife habitat

ResponseID	Response
181	Do not kill prairie dogs at all.
182	We just don't trust your lethal applications which are not necessary and will get way out of hand and this is just a way to slide in the welfare farmers and grazing animals add kill as many animals as they want.
183	The prairie dog colonies should be preserved and protected.
185	Limiting options to NON lethal means IS a reasonable option There is a false assumption here that killing prairie dogs is not unethical There needs to be an added assumption that prairie dogs' lives are valuable, respected & need to be protected
187	More weight should be given to preserving and restoring ag land to production.
188	I disagree that prairie dogs should be removed from the irrigated agricultural lands.
191	How about a new vision? No more habitats destroyed ! Then this bs assumption aka justification for killing sentient keystone species are not needed
193	Restore wildlands. Agriculture needs to be the one to change & adapt before it causes ecosystem collapse.
199	This is a good list of assumptions. This is a complex issue and there needs to be more tools available to managers. It should also be considered to not create "so much red tape" when trying to implement management actions as this will cause negative effects to creating change.
202	Only agree if most if not all prairie dogs are relocated and not killed.
206	Any lethal methods are inexcusable.
208	I do not consider irrigated agriculture threatened in CO. I would like to be 100% assured that remaining prairie dog colonies in OS are deemed sustainable and robust, so that with a collapse of the 'allocated' prairie dog terrain we do not revert to agricultural land and no PDs.
210	maybe consult biological studies instead of agricultural plans
215	Excellent plan. I agree with all your assumptions.
230	Prairie dogs are essential in grasslands and have a right to public lands, not livestock or ranchers.
233	As long as you're relocating, you will have prairie dogs on lands not intended for their colonization

ResponseID	Response
237	What happened to the black footed ferret? Made extinct by human interference hence the rise in the prairie dog population. Ferrets are a key indicator of a healthy eco system and provide a food source for larger predators such as owls and coyotes.
238	Once again, these 'assumptions' are just the same excuses to murder prairie dogs.
239	Yes to lethal removal and restoration. No to wasting time and resources on pampering the noxious vermin. I realize they occupy a link in the ecosystem but their rapid destruction of valuable land cannot be allowed to continue. They had their chance.
242	GET HUMANS OUT OF THE PICTURE...THE PRAIRIE DOGS HAVE NATURAL PREDATORS QUIT KILLING THEM AND THEY WILL TAKE CARE OF THE PROBLEM.,..
246	If people love prairie dogs so much let them relocate the vermin to their gardens. This is the same situation California has with hogs and lions. Feel-good policies without fundamental understanding of the consequences.
247	If you stick to these it might work. Your many plans say you remove PD's from irrigated ag. Stick to them. You have already designated N0PDZones. Stick to them. You have 20 years of facts about ineffective actions. Be forthright about them. Acknowledge failures publicly.
252	Your barrier methods don't work. I watch them fail yearly. Diesel control is the only way to remedy the problem you created in the county. Get in line with county policy! Lethal control is the way to remedy the fiasco you've created!
255	All prairie dogs should be removed from all irrigated parcels. City Charter, Master Plan, Ag Plan, Grassland Plan & BVCP & Boulder's Climate Commitment dictate that. Sustainable agriculture depends on it.
261	Relocation is the "approach " that concerns me most (although I'm guessing that it's ncluded to pacify those who think prairie dogs are cute, need protection and becoming extinct!! That is just moving the problem elsewhere! One of my biggest concerns is not having more near me!
265	If the City of Boulder would maintain its open spaces all of this would be a non issue. Its costing farmers thousands to try and save their properties.
266	Murder is unethical... what's so hard to understand about that... Just imagine if you were in their position...
269	Action must be taken now before the farmland becomes denuded by these little pests.
275	DO NOT USE LETAL MEASURES FOR PRAIRIE DOG REMOVAL!!!!!!!!
276	Take the most cost-effective route as the prairie dog protection for decades has wasted way too much of the taxpayers' monies already.

ResponseID	Response
279	The devil is in the details. Tenants and OSMP should be able to respond to prairie dog problems promptly to prevent further expansion of problem areas. Months of application processing is unacceptable.
280	This shows a total lack of respect for the animals...methods should be non lethal.
285	OK, now that you mention it, plague is not a bad idea.
295	Do not kill anyone. Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values.
297	The owners of the agricultural land should have an input into what happens with the prairie dogs
299	Old school assumptions that are not what the times (extinction crisis, drought of climate crisis) demand.
300	This mess didn't occur overnight. If OSMP allows time to get out of this mess, then it is feasible to use non-lethal means. Bottom of p.3, "OSMP's relocation needs were not prioritized," Bennett farm is prime ex.,10ac to 70ac occupied in 12 yrs, only 5ac/yr, where was OSMP mgmt?
302	Relocation sounds best executed (no pun intended) by the earlier suggestion of providing live, trapped prairie dogs for raptors in rehab situations and black-footed marmot breeding programs.
303	Obviously prairie dog populations are declining. We don't need to kill or relocate any prairie dogs from public lands. We must recognize and promote the value of prairie dogs to us, the soil, and their ecosystem.
304	Stop wasting time on ASSUMPTIONS. Get rid of the pests and move on as efficiently as possible. In boulder.
309	These assumptions all sound realistic and reasonable.
310	Soil and vegetative restoration should follow all forms of PD reduction, not only "removal."
314	Again, relocation to where? Irrigation can help control recolonization but as soon as the water is off, they will be back.
318	Never allow inhumane actions to guide your decisions.
323	Broomfield went through a similar exercise several years ago. You might want to consult with Kristan Pritz at CCOB open space.
324	'some' is a subjective term regarding number of prairie dogs killed. more out of the box thinking is needed here....

ResponseID	Response
327	Relocation is not solving a problem, it only gives the problem to someone else, who will accept all these prairie dogs? Lethal means eliminates the above problem.
331	This series of "solutions" to a concocted problem reminds me of Hitler's Final Solution to a made-up problem.
332	Relocation should be used very sparingly, and only when it results in reduction of population. Barriers only for small, short-term use. See comment above. Other than these I agree w/ your assumptions.
333	Again, how long will it take to create this model which supersedes the prior model. You are not addressing and not doing anything on the ground. Spring is two months away, and another 4-6 babies per hole so another 400, 600, 1000 prairie dogs on land already stressed. Ridiculous
335	Leave the prairie dogs, get rid of the cows!
337	These assumptions subtly include the destruction of these animals' habitats or the animals themselves. Again, these are desperate measures AFTER YOU allowed developers to destroy their habitats. Now you have run out of room for these colonies! find a humane way to deal with this
341	These do not read as assumptions, but true or false statements that the city either wants approval or disapproval. Why isn't lower stocking rates and changing prairie management designations in the assumptions to agree or disagree
343	Lethal control needs to be allowed on all OSMP irrigated Ag parcels with Pd occupation. That is the most effective tool. You broke it, you need to fix it, for your land and your neighbors. Then you need to restore parcels to the way they were when you purchased them.
345	I do not believe that re-location from agricultural lands, nor barriers, are effective! We must address the costs and results of these failed attempts!
346	I am strongly opposed to any lethal methods used to control prairie dogs.
353	Killing prairie dogs is unacceptable.
354	Every non-lethal action should be taken. No prairie dogs should be killed.
355	This is prairie dog habitat. You should never kill or inflict suffering to any animal because you want to take over their habitat land.
356	Need to develop a plan to make a real difference. Desired condition = zero irrigated acres occupied or degraded by PDs. Need to show that Boulder does value healthy soil and commitment to climate change. Should be all about healthy soil & land on irrigated parcels not about PDs.

ResponseID	Response
363	Yes strong action is required. Stop listening to the new comers who want to "save" the rodents and take care of our open space. Do your job for a change. Doing nothing is not land management.
367	My concern is that this will not fully take care of the problem. I'd like to see ongoing removal of these rodents annually and/or when the populations rise again which they likely will.
368	I really wish the City wasn't such a sellout. Please protect the grasslands.
371	OSMP needs to develop assumptions that will get to the desired condition of ZERO acres of irr. Ag degraded by pdogs. Actions should have the goal of trying to get ALL irrigable parcels back to healthy sustainable parcels and back into production. All pdogs need to be removed.
373	DO NOT MOVE OR RELOCATE THESE INNOCENT ANIMALS!!!! THIS IS THEIR TERRITORY THEIR TERRITORY NOT YOURS!!!!!!! I HATE YOU TYPE OF POEOPLE ALWAYS TAKING LANDS AWAY THAT DOESNT BELONG TO YOU!!!!!. These animals here for a reason wether you can see the reason or not THEY R HERE FOR a
380	Lethal means are the most humane and effective.
381	In addition to these assumptions, the numbers that we base our areas of 30 dog per acre is are way under what it should be. That is probably way under what is in much of the population in the northern properties.
383	Sterilization of prairie dogs is preferred to killing them.
388	Government bodies must also provide funding for these policies!
389	At this point, Lethal control is the only realistic tool that will reduce the conflict & provide balance on irrigated properties. Relocation can continue but the numbers are so limited it can only be used in very small areas. Barriers and restoration after removal, absolutely.
392	I do not think that it is wise to present scenarios. That gives the city council a way out of committing to action based on the facts. The problem needs an immediate and strong response.
400	Barriers do not always work. Treatment of plague should not be used. Plague is nature's way to help control prairie dog populations.
401	City of Boulder OSMP and the Prairie Dog Working Group need to collaborate with the USFWS to re-introduce the endangered black-footed ferret as a natural predator to better manage the overpopulation of prairie dog colonies on their 3517 Nebo Road OSMP land.

ResponseID	Response
406	The idea of overpopulated prairie dog colonies is a human construct without basis in science. Populations will manage themselves. If the prairie dogs feel that there are too many in a colony, they will reduce their numbers themselves.
407	The effort to relocate at this point seems to be a waste. I would strategically kill PDs and restore lands to ensure practices are functional. Or even begin process of restoration without worrying about removal.
410	We need areas of no dog habit on both public and private lands to be inclusive with boundaries we can all agree on. Any dog areas included will only back seed to areas we want dog free.
411	There are more prairie dogs in Colorado than people. You have the wrong priorities
414	We must focus on restoration, as well as prevention on other OSMP lands! Desertification will only get worse with climate change. We need to allow the farmers and ranchers who are carbon farming experts to step in and help OSMP (for $ compensation, of course!)
421	In trying to please everyone, OSMP risks missing an opportunity to affect positive, long term change and jeopardizes its mission to steward this land. No amount of empathy for living creatures can replace the fact that the land is being harmed. No PDs = chance for land to heal
422	Again, think of whole systems regeneration and balance.
424	STOP with the relocation!! You are just opening up otherwise beautiful land to the destruction of these animals. There are SO SO SO many in BC there is NO WAY you are going to get even close to eradicating them or risking their survival in the area. It is a waste of money!
425	needs to be much more aggressive if we want to gain control of ag lands and make progress in crisis. Too many options and choices and efforts in different directions will only dilute efforts and slow progress
426	These management actions cannot be limited to just the irrigable land.
428	"It's infeasible to address large prairie dog populations on agricultural lands by current non-lethal practices alone." YES
431	I think that controlling population of PD colonies is important for long term success, including birth control options (non lethal).
435	I would add the encouragement of natural predators to control the PD population. Some of that might be public education; we have to know how to live with some rattle snakes and coyotes!

ResponseID	Response
436	barriers work well. I've seen it. if they aren't plague carrying or rabid, think harder on how to control and stop NOT thinking out of the old box.
439	Let the farmers and ranchers manage the land.
451	Seems like a common sense approach.

20. Do you have any other comments?

ResponseID	Response
22	I feel the City should consider lethal methods on all of their land. I feel there are too many prarie dogs in this region. Some end up in colonies between a highway and a ditch for example. Its in humane to let them live in an area where everything is limited.
27	I am relived that the City is reviewing the prairie dog situation and considering needed changes to the policies. The current policies demonstrate the disconnect by the people in charge of policies and the realities of trying farm infested land. There are places to preserve prairie dog habitat but it can not be on productive farm land.
42	Get out of your office and go look at what's happening to our open space lands! Start doing your jobs!!! Get of the solitaire game and start making stuff happen instead of just talking about it!
43	The conditions at Boulder Valley Ranch have deteriorated rapidly in the past two months, more holes, more digging, destruction of grasses at the root. We need to get the rodents off these lands before another breeding cycle. I am also very concerned about the gunbarrel hills grasslands and the growing colonies there.
48	You must acknowledge the link between animal agriculture and climate change-it is undeniable. We are diverting water to maintain an irrigated parcel and leasing it for pennies on the notion that we need to "preserve our agricultural heritage". This is antiquated and we need people on staff that recognize this and are willing to speak out against it. It is a topic no one will discuss for fear of offending farmers and ranchers. We must make change now and PRESERVE our wildlife!!!!!!!!
49	Prairie Dogs are destructive and a plague to urban areas. The destruction of the grasslands in agricultural or other open space areas is catastrophic. The amount of resources spent on managing prairie dog populations is irresponsible.

ResponseID	Response
51	No
67	Begin restoring black-footed ferrets to OSMP properties and choose agricultural uses that would be the least harmful to ferrets. Ferrets are highly effective at controlling prairie dog populations in a way that is consistent with OSMP's mission and values. This also produces LOTS of good PR and gets OSMP out of the bad PR that comes with human-managed population reduction.
68	No
75	I hope you get started soon.
76	Death by unassisted natural causes or by unassisted predatory activity on open space is the only lethal method that should be considered, and only as a last resort. Relocation to the southern grasslands as well as introduction of the black footed ferret onto the grasslands are excellent alternatives, outside of fencing off territories.
77	I feel like the city has been protecting prairie dogs way too much. They need to go. They are taking over so much land, and if we leave them unchecked they will be in our backyards before we know it. Then we will have a huge problem because it will affect property values and everyone will get upset. The prairie dogs just need to be killed.
78	Far too much of in-city land is denuded by prairie dog occupation. This wasteland is not natural habitat. It's an eyesore and a waste of valuable public recreational lands within the city where they are most needed and most used.
87	When people, cities, organizations take bold actions that is when meaningful interesting things happen. Strangely the bold action here is to do nothing. This species has been greatly impacted by humans and although a few populations in your county may be large across the range they have been severely impacted. The right thing here is to leave this species alone and when possible enhance it's habitat.
91	Again, the problem is the name. A type to rodent is named a dog. That engenders warm and fuzzy feelings in the ignorant. If they were called what they TrueType are, rats, then they would be effectively managed.
97	The city should track the amount of staff time and budget spent on prairie dogs versus the overall ecosystem and other species. How much was spent on this draft approach?
105	It's just sad that we have to do anything, but I get it. Please just find the least destructive and lethal ways possible and keep as many of those "dogs" as we can. Thanks.
110	Lethal control is not the solution and it only creates more problems, including killing other species. Look into options such as holistic grazing and regenerative agriculture.
111	I am sure large numbers of PETA and other sympathizers will campaign vociferously against lethal measures. Please know that there are larger numbers of tax paying citizens of Boulder County that approve of lethal measures when necessary.

ResponseID	Response
112	Money should NOT be your only motivator. Sustainability of and for all living beings should be your goal.
119	So disappointed with Boulder pandering to the farmers. Reminds of US gov't renting public lands and killing predators - then wondering why pest animals (rabbits, etc) proliferate.
121	The way you've worded the questions is not optimal. I'm not a scientist. I can't tell you what's going to help reduce conflict, only whether or not I agree with the planned actions. Makes this whole thing a waste of time for all of us because you're asking the wrong questions. But in general I believe you should still consider that no prairie dogs need to die by gas or poison. Encourage more natural predation, and give the prairie dogs more land. It was theirs first anyway.
128	We could have Nucla Days where any healthy gun-toting American could go out and shoot the sacred rats! Only kidding!! Just kidding!
130	I appreciate your asking the residents opinion on prairie dogs, your reason to execute them is solely for money. Look at Australia and Brazil now. Don't make the same mistake.
133	Please reconsider lethal actions that permanently imbalance natural habitat.
142	This species plays a vital role in OUR ecosystem. When will our public servants start acknowledging that and act in the best interest of ecology instead of special interests?
143	We do not want our wildlife sacrificed for industrial profits. Prairie dog populations have dwindled to less than 1% of their historic numbers and that is still too much? Please do the right thing and preserve our wildlife and environment for future generations to come!
152	Wildlife first. People second. Figure out a way to co-exist, not make extinct. Part of the reason why people move to Colorado is for the wildlife. Perhaps there needs to be developer and rancher/agriculture fees to help purchase relocation land.
155	I live just off Neva Road. There are many prairie dogs in this region, and the plus side is that we also have many hawks and eagles (and coyotes) which prey on them. But I also know that their population is growing. Boulder County needs to keep the prairie dogs away from agricultural lands. We will need that land - if not now, definitely in the future. I agree that an accelerated plan is needed by the County. Perhaps tours of over-populated colonies can be given to those who object to control.
159	At a time when prairie dogs are down to less than 1% of their historic numbers, NONE of our public lands should be set aside to profit welfare ranchers. The public lands in Boulder where these prairie dogs reside should be set aside for restoration which requires this keystone species to live in their prairie habitats. Our species has taken FAR more than enough!

ResponseID	Response
160	When it comes down to it, it seems like agricultural interests always win out over the native prairie dogs. They already have less than 1 percent of their original land. The public doesn't want animals killed so private agricultural interests can profit off of public lands.
162	We own property adjacent to Wood Bros tract for over 20 years. We used to be able to walk our dogs and hike in the area now over-run with praire dogs in such a hugely bloated over-populated area The land is now a wasteland of burrows flea and snake infested and wholey unsuitable for any recreational purpose. Shame on City of Boulder for allowing this once green belt area become a wasted eyesore!
171	We are too quick to dismiss our wild little neighbors as pests, prairie dogs are very important for our ecosystem here in Colorado, their health depends on the health of our prairie lands and visa versa, let's not as a community sit back and watch another species quietly go extinct because there was no education, no ultimate understanding of the bigger picture, because of fear, we should be working around our tiny little neighbors and encourage their growth and survival. Renee Huskey Renee Huskey
176	Humans suck.
177	Prairie dogs are intelligent, loving creatures. They form tight bonds with their families. Although it is important to have usable farm land, it should not be at the cost of the prairie dogs' lives. It seems disturbing to kill animals and destroy their homes to make room for people. The proposed non-lethal methods of relocating the prairie dogs is the most humane approach if they must leave this area. Please consider these options in order to save the lives of these animals.
180	Please put our wildlife, natural habitat, and natural resources over a few ranchers and farmers personal profits. If we kill the PD to favor the few, we have lost sight of protecting the few remaining places where wildlife have to survive.
181	Turn the space into a wildlife refuge put recycled elevated walkways in with photos and explanatory nature signage. You can't possibly make enough money from rentals to justify this killing and irrigating and for whose welfare.
182	It is good that you are sincerely trying to make a plan to address the situation and include public opinion. But I would guess you already have your decision made and that is seriously wrong. You can't make enough money on the leases to justify killing those animals but you could make it into a naturalized area for all to enjoy with some signage and some walkways.
185	Do not kill prairie dogs. You are better than that.
186	Focus on our eco system not agriculture

ResponseID	Response
187	I wonder if there is a public relations campaign that could be undertaken to discourage introduction of prairie dogs to new areas. Burrowing animals are not permitted on earthen dams. I am aware of several reservoir companies which have had to kill prairie dogs on dams. In one case, no further prairie dog issues have been encountered after an article was published in the local HOA newsletter about the need to kill prairie dogs on the dam.
188	Prairie dogs are a native species that have been removed from large part of their historic range, and they should be allowed to remain on the agricultural sites.
191	It's time for a new way of seeing habitats and the natural world. It's time to coexist
193	Restore wildlands, native biotic communities, & migration corridors before it's too late.
199	Thank you for working through and expediting this process. There is significant land degradation occurring on the OSMP system and action needs to be taken to prevent it from getting worse.
202	As stated before, prairie dogs are a keystone species and should not just be killed for someone's profit. We need to protect wildlife into a future that looks bleaker for all creatures. Killing should not even be considered.
206	There are more ecologically sound methods than killing when it comes to managing prairie dog populations. Please allow this keystone species to live in its native habitat, and don't eradicate them!
208	Thank you for the detailed information, was wondering what the traps along 51st to Boulder Res were about. Now I feel I know the management choices better.
210	I really cannot believe this discussion is taking place 40 years after I studied the ecology of pd towns and the same outdated, archaic reasoning is still as embedded as cancer
215	I would like to see your assumptions tested as a pilot program before full implementation.
223	At what point is the city liable for the destruction of private due to the lack of management of a animals on Public grounds that destroy neighboring private property? Kill them. Remove them. They hurt land values and cost private land owners money to mitigate.
230	Prairie dogs are essential in grasslands and have a right to public lands, not livestock or ranchers.
233	I think there has been too much consideration for these creatures. Acres and acres of land not usable for any other purpose than to house them. And they destroy the habitat. Weeds and bare earth replace grassland. It's unnecessary.

ResponseID	Response
237	Maybe you should re-think cattle grazing on these lands instead of killing more wild life. Beef is bad for the human diet and a source of methane pollution that is suffocating the planet. Prairie dogs aren't the problem.
238	It's the invasion of humans, the exponentially huge number of humans moving to Boulder County, that are the problem. Not the prairie dogs. This is their natural environment, their home. They are not the invasive species, the humans are the invasive species.
239	It's about time we moved forward in this plan to recover destroyed farmland. The wavering has gone on for years. Boulder is rife with bleeding heart PETA-esque protesters who would protect any pest including rats and destructive raccoons! Don't listen and move on!
242	I AM TOTALLY SICK AND TIRED OF HUMANS KILLING OUR WILDLIFE FOR THE "GREATER GOOD" WHICH IS TOTAL BULLSHIT. HUMANS KILLED THE PREDATORS THAT PREY ON PRAIRIE DOGS AND NOW THEY WANT TO MURDER THEM HUMANS ARE THE PROBLEM ...
245	I am satisfied that staff continue to work hard at resolving this vexing problem. I would have to review details of the ag. plan, but trust that decisions regarding PDs are made in context of efficient ag. vs. natural grassland use allocations; i.e., small ag land fragments might be sacrificed/restored to native grassland where the larger context would suggest that. I also encourage close communication and collaboration with the county and private landowning neighbors.
246	Please allow us to shoot them with suppressed 22's.
247	The cowardice and obfuscation by OSMP staff when dealing with the PD issue has been very disturbing for many years now. Staff hides behind rude consultants, changes maps and numbers willy-nilly, refuses to deal with years of valid complaints, and pretends that there is no problem with the land when they know better. County staff on the other hand puts the land first, and has the courage to stand in a packed room for hours answering questions and complaints. You could learn a lot from them.
249	There are way to many prarie dogs for a healthy eco system in Boulder County.
252	Not once have you considered the neighbors that live adjacent to the city property out in the county. You affect our property value and don't give consideration to our plight with the prairie dogs. You must enforce lethal control if you want to get your land back in balance. There's no topsoil left on the Brubaker city property. Get tenants that will take better care of the property. Enforce lethal control. Allow your tenants to use lethal control.
255	All C of B management plans and the City Charter say that agriculture should be preserved. City of Boulder has only preserved prairie dogs and destroyed many irrigated parcels in the process. It's time to value the land, healthy soil and sustainable agriculture and permanently remove the prairie dogs from irrigated parcels. The only realistic way to do this is with lethal control.

ResponseID	Response
259	I was surprised to read the assumption that osmp tenants would not be willing to be trained in lethal control methods as a justification for only city staff to provide such control. It may be that some lessees are willing to be trained (or already are trained) to do so and, if so, that could save the city staff time. Lethal control measures likely will need to be used over time during a growing season, which will impose constraints on city staff, so that additional personnel may be needed.
260	Controlling prairie dogs by any means necessary is a pro-environment policy, enabling restoration of natural grasslands and regenerative agriculture that sequesters carbon, builds soil health and provides nutritious food to local people. I hope the City will responsibly manage its lands in the future to prevent overrun of prairie dogs and resulting environmental degradation.
261	Just glad to hear that this problem is finally being addressed, as it's long overdue! This is a private property (if located near City of Boulder open space) management expense that NO private property owners should have to incur!!
265	I have lived at my residence for almost 30 years. The prairie dogs in the City owned open space were mostly non-existent I'm guessing because of a plague. Now they have taken over this property and the surrounding neighbors properties costing all my neighbors ten's of thousands in lost hay production and destruction of their hay fields. One they migrate across the road more of us are going to loose our hay fields. All because the city of Boulder has chosen not to maintain their property.
266	Prairie dogs deserve the right to live and occupy their lands that we have already taken so much of.
269	Thanks for listening...I know the pro-rodent lobby is loud and organized...I prefer farmland, locally grown food/and or pasture, and am tired of the increasing holes, dirt and dust these rodents cause. No matter what is done 100% success will not be reached, but the effort should start ASAP. Good luck.
272	Glad to see that things are becoming more balanced and that farmer's knowledge is again being respected. Thank you.
276	Reduce the size of government and reduce taxes. Be more efficient in your jobs working for us taxpayers.
279	We are years overdue to update our prairie dog rules to include lethal control. The problem has gotten out of hand despite the availability of proven measures that are taken for granted almost everywhere outside of Boulder.
280	It is best not to disturb animals and their habitat....
285	Instead of sending out surveys like this to typical Boulder do-gooders who know nothing about prairie dogs, quit screwing around and look at historical methods of getting rid of these varmints.

ResponseID	Response
288	not opposed to lethal methods of removal
295	Prairie dogs are a keystone species and should not be killed under any circumstance. Economic values should not trump Environmental and ethical values. We are going to lose this planet and the ability to grow ANYTHING on our soul if we do not respect and allow our natural ecosystems to thrive, whether that be an inconvenience to human economy and finance or not. Money is not more important than having a place for our grandchildren to live that isn't desert or wildlife-less.
299	To me prairie dogs are like the bison of our time. I value their role as the keystone species of the plains more than I value propped up agriculture.
300	This project CAN NOT BE EXPEDIATED! 1.Develop a 6 yr plan to slowly recede PD burrow borderlines. 2.Accept 20-25% PD occupancy level on irrigable/irrigated land. 3.Lower Stocking rate 4.If land has low Ag pot., redesignate! Convert grazing land to prairie grassland 5.Focus on the 2-3 Ag tenants who are the worse off 6.Keep continuous swaths of PD land intact, ex. SW ¼ of map. p.7, S. of Neva Rd., W. of Farmer's Ditch 7. No removal close (350ft to 650ft) to raptors nests that depend on the PDs
302	Thank you for addressing this problem that impacts so many individuals who access these multi-use areas.
303	Maybe, we love prairie dog days. Prairie dog viewing areas and trips. Clear-sided prairie dog tunnel / burrow viewing area. Prairie dog cam. Eagle and ferruginous hawk days. Interpretive signs re Value of prairie dogs to snakes, coyotes, burrowing owls, etc. Public advertisement of how much we must subsidize agriculture on Open Space and how it damages our native plant and animal communities.
304	How much taxpayer money is being spent and wasted on all of this conversation about prairie dogs!!??? Please reply to artmajor5@yahoo.com.
308	I strongly urge the use of lethal methods to remove prairie digs from Agricultural lands.
310	Ideally you'd subsidize your lessees PD management practices because they are very expensive. But you must also incentivize neighbors to manage their PDs or no matter what you do on OSMP lands the PDs will be back in an astonishingly short amount of time. And if you make it inexpensive for OSMP lessees but expensive for your neighbors, that. is. not. fair!!! Summary: Please proceed quickly to get lethal control going before more soil is lost, more weeds come in, and more farmers give up!
314	Please consider what is best for the land, not just for one destructive animal!
318	I prefer a wild life sanctuary for these creatures over the measures suggested for the profit of farmers.
322	Take the time to remove the animals and not just kill them. Our city has been a positive influence on colorado by displaying compassion towards all creatures, this will only encourage other communities to use lethal control.

ResponseID	Response
327	Very concerned about how prairie dogs are being monitored for diseases, plague etc., that can be transmitted to humans. Our population areas have close contact with the colonies and many of the trails are within a few feet of active prairie dogs. The East Boulder Trail, Gunbarrel trail course within a few feet of prairie dogs and it appears no monitoring of disease is being done. Agricultural lands are the same. Waiting for a human to contract a flea born disease needs to be prevented.
331	There has got to be an understanding that nature, climate change, etc. all go hand ind hand. Eliminating nature and its creatures is no solution. It is only a vendetta against nature, And is a haste towards destruction of the natural world.
332	Short of a perfect world, which is a fantasy, we need to look at the overall and long-term good health of our ecosystems. We have really messed up Earth's systems in the West, and now we just have to bite the bullet to get things in as healthy a balance as we know how to do. It is hard to kill anything. Prairie Dogs are rodents, but we don't seem to have a problem killing rats and mice, voles, ground squirrels and rabbits which also destroy our food supplies. It's tough. Be brave.
337	How much longer do you plan to use the same old methods to destroy animals whose fault is that they don't have a voice, and keep allowing urban sprawl going completely out of control, running out of options when relocating is no longer an option? How much longer? There are humane ways to create a balance between wildlife and humans: find them. Don't just listen to developers allowing for their money to do the talk. Your consultants get paid good money to come up with nothing new.
341	I can't understand that Boulder offered XCEL energy $94 million for acquiring its infrastructure in our City's action against climate change BUT at the same time reduces the budget of OSMP by $10 million in 2020!! Before climate change gets us, habitat loss to every burping cow and asphalted street/parking lot will!! On a last note, using lethal means is short-sighted, since the root of conflict is habitat fragmentation, inhibiting natural wildlife movement patterns and vegetation regeneration.
343	If Boulder is truly committed to climate change then must remove the PDs from irrigated Ag parcels. Revegetate and restore these parcels. Put water back on ALL your irritable parcels. Many are bare ground/heat islands from PD occupation. Water, healthy soil & crop cover equals life. It's critical OSMP restart carbon sequestration on all OSMP irrigable properties. Goal = restore to condition that each parcel was in when City purchase or better. That's stewardship.
345	Please allow our community to support staff in this very difficult choice. We have a unique responsibility to address carbon sequestration on our agricultural lands. This must begin with healthy soil. Preferencing one species among the millions of organisms required for healthy soil is simply irresponsible, no matter how difficult lethal control is. We have an urgent responsibility to address this now before the population increases or plague breaks out.

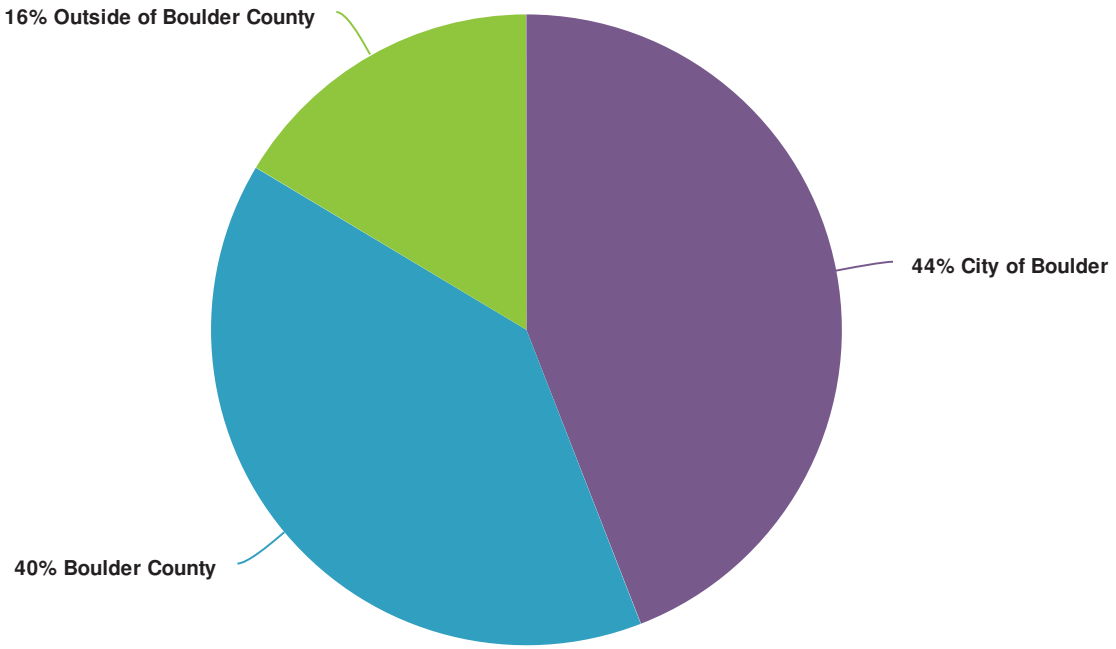
ResponseID	Response
346	I think it's an abomination that a city like Boulder allows farmers to use public lands to graze cattle. Animal agriculture is one of the top three contributors to climate change. We should not allow the financial interest of ranchers to outweigh the rights of wildlife to exist on these lands.
355	I haven't seen a proposal to increase the populations of prairie dog eaters (except for ferrets) but others like eagles, coyotes, etc would also help. Prairie dogs deserve to be left alone, because their presence in the natural environment is important to many other native plants and animals, and recent research suggests that they are far less detrimental to ranching and agricultural interests than once thought.
356	Boulder talks the talk about the value of sustainable ag, healthy soil & carbon sequestration in the Charter, Master Plan, BV Comp Plan, Ag Plan & Grassland Plan but they don't walk the walk. Now is the time to stop talking about it over & over & over and take real action. It will be difficult but lethal control is the answer. Don't change land management designations, that is total cop out & wrong. Start truly managing and steward the irrigated land as your charter & management plans dictate,
359	Lethal control must be an option for OSMP agricultural users.
362	Thank you for your work on this difficult topic. I support the decision making of the staff who have spent so much time and energy researching the best interventions and impacts for the land, humans, and prairie dogs.
363	As a citizen we are required to vaccinate, license and take classes for the protection of the open space. Yet prairie dogs can be diseased, overpopulate and create dangerous eroision of the path and land and nothing gets done. They are rodents and need to be treated as such. There is no balance with them now. We hike Degge, Hidden Valley Trail, Boulder Valley Ranch and those areas have been decimated with the rodents. We as citizens are more responsible than the city. Fix it!
367	I love our open spaces in Boulder County. We pay taxes for these wonderful lands. I also pay annual fees for my dog's licenses and open space tags which goes in part to allow these trails to be maintained. The prairie dog situation poses a great threat to my animal's health as well as to me. Their burrow holes are everywhere and pose a threat to humans walking in the area. The vegetation has been destroyed and the land has become nearly barren. Other animals get culled, so should PD's.
368	Please protect the grasslands. We don't need all this agriculture, but we do need places where nature and unique wildlife can flourish. Respect life.
371	Boulder has an Ag crisis because they have only been concerned about protecting pdogs. Balance = Protect Land. OSMP must uphold charter and all management plans. Pdogs are not compatible with irrigated parcels. Ample protected areas for pdogs. Remove all the prairie dogs from irrigated parcels. Need healthy soil and land for sustainable Ag. CofB climate commitment, "need to change the system, not just light bulbs". Carbon sequestration doesn't happen on PD denuded ground. Take BIG action now.

ResponseID	Response
373	Yes this world is ruined for animals because of you people that think you are better than the animals and have no respect whatsoever for animals. I'm sick and tire of you types of people stealing animals home away BECAUSE OF YOUR SELFISH WANTS of stealing THEIR LAND so you can build on it for YOUR SELFISH GREEDY WANTS. For once have compassion for animals and build in your own territory or somewhere where there isn't any animals! Watch out karma is real n wil get u For every animal u kill or take
378	I believe action needs to be taken before the next breeding season.
381	We need to immediately respond to this crisis, as we will lose valuable tenants with this inconsequential approach.
383	Sterilize colonies and wait for them to die out.
387	Lethal action and restoration need to happen ASAP.
388	Thank you so much for considering ways to bring the ecosystem back into balance!
389	Follow Boulder County Pdog practices, they are very successful. Remove the pdogs from irrigable properties; lethal control is the only realistic option at this point. Don't change land management designations or remove water from any irrigable properties. Get the water flowing, even if there are prairie dogs there right now. Need healthy soil & carbon sequestration for sustainable Ag. Water = Life. Ag should thrive on irrigated land w/out pdogs, pdogs can thrive on protected grasslands.
392	Please act on saving our soil!
396	Excessive numbers of prairie dogs are very destructive to the land. The holes are dangerous for livestock grazing as well.
397	I have examined the "Irrigable Lands Map" that is part of the "Expedited Management Review". My land is not shown as irrigable and neither is the open space next to it. The tactics you describe seem to focus on improving prairie-dog management on YOUR irrigable lands. But, they will not help my wife and me on our irrigable land. We will still be paying about $5,000 per year to monitor and control the problem. Even so, this is a good start. Daniel Moorer 5050 Niwot Road Longmont
400	I would like to see more prairie dog lethal control on other land, too, including open space, where too many prairie dogs have denuded areas of native grasses.
401	Being successful in practicing agriculture as a landowner is dependent on a multitude of economic, environmental, land use management and regulatory factors. Sustaining private agricultural land has become even more challenging as both Boulder County and the City of Boulder have acquired adjacent Open Space land. Maintaining private irrigated agricultural land is challenging enough without Boulder OSMP making agricultural land use economically unsustainable due to hosting prairie dog colonies.

ResponseID	Response
403	I am hopeful that OSBT will modify how PD colonies are managed on irrigable lands that they control, so that they meet the stewardship goals that they are committed to.
406	Lethal control is obscene and belongs to dark-ages assumptions and values.
410	Dogs are live stock encouraged to graze on an open range by OSMP. This puts land owners in direct conflict. OSMP would not tolerate my cows moving onto OSMP managed land, crossing roadways or destroying farm land. OSMP needs to be a good neighbor and work with existing land owners and ag. We have another endangered keystone species, the Boulder County Farmer, once they drop below a certain critical number you will have to import and pay for the services of restoration which they use to provide.
414	It's past time to take action. Everything starts with the soil. It's the key to life.
417	it is painful to see desolated urban patches of open space/ vacant lots. Cost is not clarified: It is important to explain categories of ongoing cost of management and maintenance against the goals of protecting ecosystem(s). Do we need to comply with State policies?
420	You need to allow farmers to protect their lands from prairie dogs through lethal control.
421	I appreciate that OSMP and OSBT have a responsibility to consider all sides. Please side with the science, with observable fact, with those who seek to heal the land and restore it using regenerative agriculture. Please use your authority and expertise to make the right call, and allow the lethal removal of PDs from OSMP land so that farmers can do their work in stewarding the land and restoring it. PDs need us to facilitate their ability to rebalance. The land needs us to steward it responsibly
424	I cannot believe this is still going on. We have been saying the same thing for YEARS and you are not listening...is it that you need SO much proof to go against the uneducated prairie dog proponents? ...do you think they have any idea the severity of the problem? Do you??? I was on some of the "tours" last year...they were not even at the severe locations...and no one was even looking at the destruction...you had "speakers" at the locations....when the whole point was to look at the problem!
425	I am very disappointed in City of Boulder and allowing past policies stay is place to protect prairie dogs, way beyond when should have been changed. Damage done, soils destroyed (expensive to restore), farmers / ranchers leaving lawsuits from adjacent neighbors City of Boulder property w/ over-populated colonies. Waste of taxpayers money now crisis to deal with. More PD's must be killed as out of control. And private landowners exasperated have to foot bill for lethal control own property.
428	The value of irrigated agricultural land can not be overstated, especially in light of current climate trends. Prairie dogs are destroying OSMP agricultural land and must be mitigated. Lethal control, along with restoration efforts, is the fastest, most humane, most effective method to control their population. Sacrificing ag land for one species is not good policy. Prairie dog populations must be managed on any land to keep a good balance of animals to resources.Current policy isn't working

ResponseID	Response
431	PD colonies are quickly ruining the open space we all share (and encroaching into neighboring private property as a result), a solution needs to be agreed upon soon.
435	Judging by the comments in the Camera, this is a tough job to mollify the animal-rights side while helping out the farmers (and horse owners, such as myself). I appreciate that! A few PDs might be cute, but they've turned into a plague themselves, which I've seen take over in the 10 years I've been riding many of these lands.
454	You must consider empowering farmers to manage prairie dog impact. We have to be able to flood irrigate, destroy burrows with ditchers, keyline plows, and equipment so that we can get plants growing again and start to rebuild the soil, so much of which has already been lost. Also, perhaps longer leases would help incentivize leasees to take better care of the land.

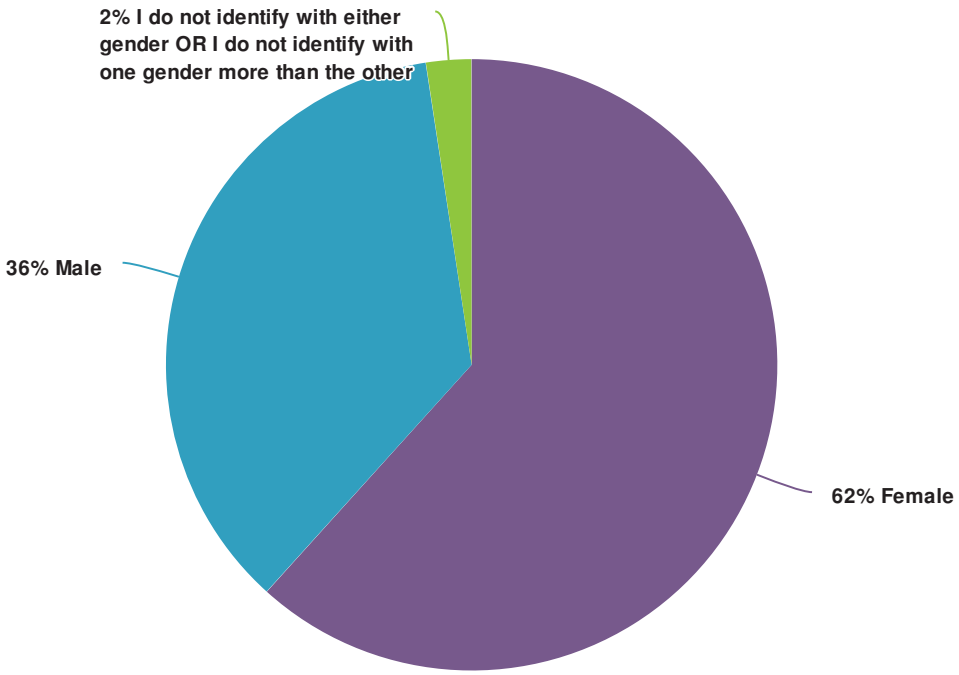
21. Where do you live?



Value	Percent	Responses
City of Boulder	44.1%	113
Boulder County	39.5%	101
Outside of Boulder County	16.4%	42

Totals: 256

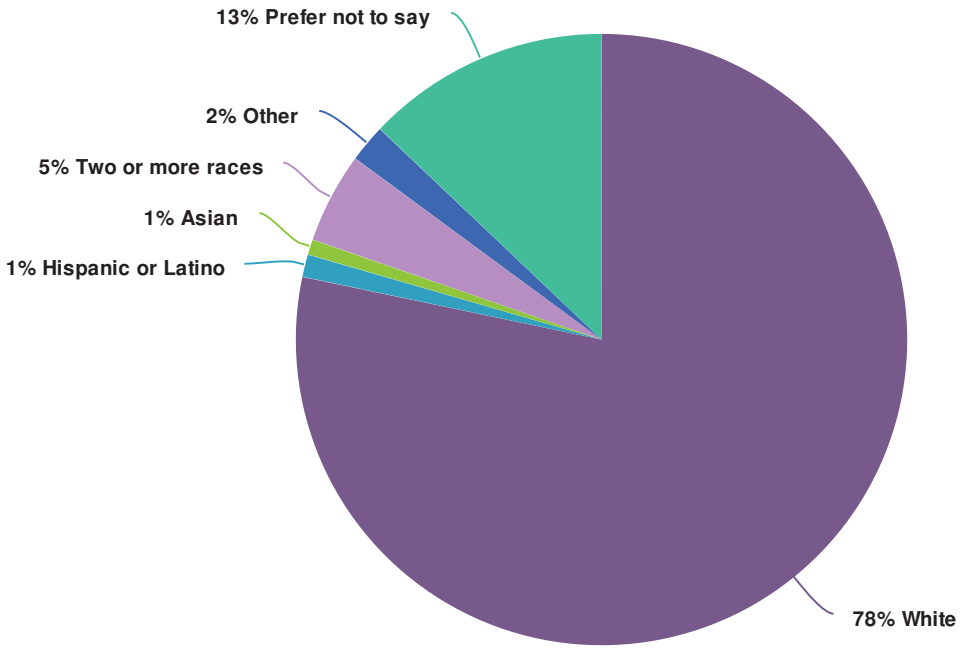
22. Which gender do you identify with?



Value	Percent	Responses
Female	61.7%	153
Male	35.9%	89
I do not identify with either gender OR I do not identify with one gender more than the other	2.4%	6

Totals: 248

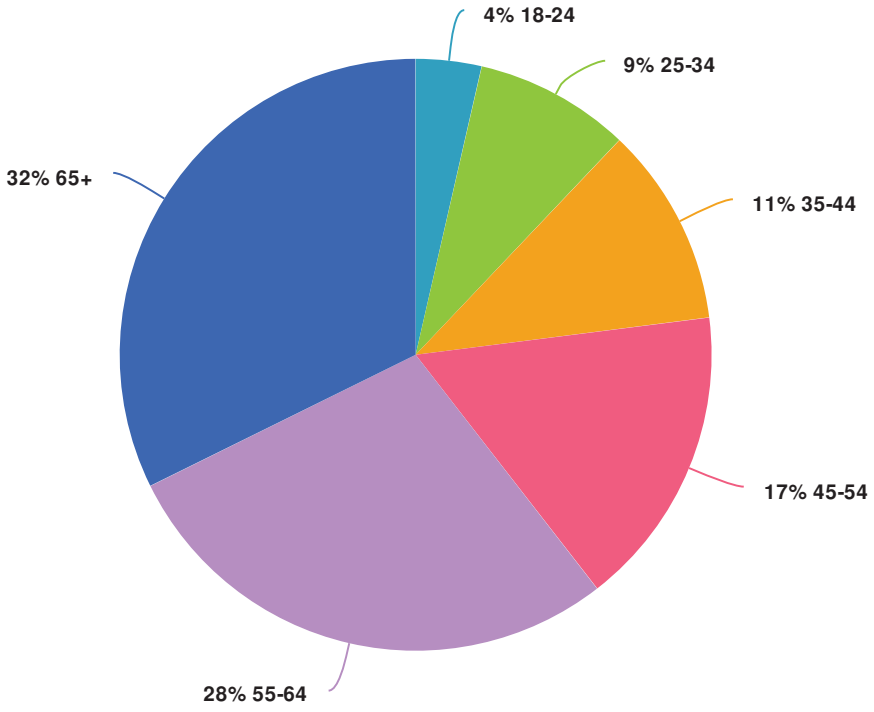
23. Which race or ethnicity do you most identify with?



Value	Percent	Responses
White	78.3%	195
Hispanic or Latino	1.2%	3
Asian	0.8%	2
Two or more races	4.8%	12
Other	2.0%	5
Prefer not to say	12.9%	32

Totals: 249

24. Age Range?



Value	Percent	Responses
18-24	3.6%	9
25-34	8.5%	21
35-44	10.9%	27
45-54	16.5%	41
55-64	28.2%	70
65+	32.3%	80

Totals: 248

From: Marianne Martin
To: OSMP Input
Subject: Prairie dog ...oSMP...
Date: Monday, January 6, 2020 9:18:03 PM

External Sender

It is hard to not be totally frustrated by the situation… It is clear that you don't want to make a decision… The hard decision… To kill the prairie dogs that are on our lands

This issue has been going on for years and years and years and yet you still approach it as though… "We need citizen input"

Most citizens know nothing about the severity of this issue… Why are you not taking the lead as the keepers of the land

most pedestrians come out enjoy the land and enjoy the cute little prairie dogs and think nothing more of it

Those of us that I have seen it be destroyed over the years and watch it ruin our grasslands, our agricultural lands, and the agricultural opportunity to exist...
The people that should be having input on this are the people that are both seeing the destruction and are affected by the destruction… The people that are in the city that only see the prairie dogs when they do their little walks and see how cute they are have no idea what's happening.... It is so irresponsible to take their word over the word of the people whose livelihoods are dependant on the lands.

How can you approve hunting elk on rabbit mountain because they are destroying the land and ignore the destruction created by the prairie dogs???

Is so clear that you are only reacting in a way to say favor with your constituents… You're not taking care of the land… You are taking care of your votes
… Add If the Lovers at Boulder Valley Ranch… have to leave because they can't make a subsistence living due to a prairie dogs… Who could ever make anything work At Boulder Valley Ranch???… The Lands will just die.... The topsoil blown away and the grasses eaten down past the roots by the prairie dogs

To you this might just feel like being dramatic… But how much have you yourselves been out there in the heart of it where it's utter destruction of the lands… If you had really seen it you would not even be questioning the decision that we have to kill the prairie dogs and take back our lands

Stop kicking the can down the road and make a decision Stop kicking the can down the road and make a decision the hard decision and save our land...the hard decision ...and save our lands

Marianne Martin
[redacted]

Sent from my iPhone

From: Elizabeth Black
To: Council
Subject: The next exciting installment.....delayed.
Date: Monday, January 6, 2020 9:15:08 AM
Attachments: image002.jpg

External Sender

Hi Council, I had hoped to present the next exciting installment of the Citizen Science Soil Health Project's findings tomorrow during public participation. However, the County is giving an update about their prairie dog management policies tomorrow at the same time as public participation, so unfortunately I must ask for a rain check and present more CSSHP findings later in January. The County's prairie dog management is much more progressive, nuanced and effective than the City's, and so I feel it is incumbent upon me to learn as much as I can about their policies. If you want a preview of our CSSHP findings, Shay Castle has written a very nice, quite accurate article about it in the Boulder Beat at this link: https://boulderbeat.news/2020/01/05/study-snapshot-boulder-county-ranches-open-space-have-healthiest-soil/ Thanks very much for all your attention over the last few months. Elizabeth Black

Elizabeth Black

The Citizen Science Soil Health Project

Helping you PROVE you are IMPROVING your soil.

[redacted]

Please thank our sponsors:

SpnsorsCSSHP

From: Paula Shuler
To: OSBT-Web
Subject: Presentation from 1/8/20
Date: Thursday, January 9, 2020 12:20:38 AM
Attachments: Stratton & Brewbaker PD Occupancy.jpg
Brewbaker-Dec.2019.jpeg
Brewbaker-summer.jpeg
Irrigated-Ag-Summer-&-WInter.jpg

External Sender

OSBT,

I am sorry that I was off my game tonight during my presentation but I am a little under the weather. This is what I wanted to say but unfortunately I did not get through all of my points tonight, although this email still rambles - as I did this evening. I believe you all know how I feel, but Hal hasn't had the pleasure of getting to know me yet…Hal, I hope you read my email from last week about land ethic, that really sums up a lot for me. (BTW Hal, I have been speaking to OSMP about their lack of appropriate PD management for nearly 5 years). So…what I had planned to say tonight:

Couple of things I would like to talk about tonight –

I've read through the draft approach and evaluation of potential actions for management of prairie dogs on irrigated properties –

I feel like I was at a different Open House on October 23 than what was described in the draft.

OSMP cites that the most commonly addressed questions or topics of conversation were:

-Why staff had undertaken the project.

-Whether there were areas on OSMP lands that were being set aside to conserve prairie dogs.

-The difference between livestock (cattle) grazing on unirrigated native grasslands (rangelands) and the types of agricultural activities that take place on Open Space and Mountain Parks irrigated fields.

-The different ways of removing prairie dogs from an area. (...but don't explain lethal control!!, ps)

So different from what I remember. I heard countless neighbors of Open Space and tenants talk about the damage and problems they experience because of the City's unmanaged PD populations on irrigated parcels. OSMP really didn't talk about lethal control, which is an integral part of this review. To me, it was the same presentation that I have seen many times. Of the 80 people in attendance, at least 77 were all about sustainable agriculture, soil health and getting the prairie dogs off irrigated ag parcels. PD advocates were few and far between this evening. I also found it so rude and disrespectful that the moderator announced during the meeting that we would not be discussing neighbor issues at the Open House. I invited a whole bunch of neighbors of OSMP and they showed up, only to hear that we would not be discussing neighbor issues. Additionally, nowhere in the 58 pages of the draft evaluation does it mention damage to private property from overpopulation of and migration from OSMP irrigated properties. This new document cites 3% prairie dog growth. That's laughable in itself. John Potter quoted 8% growth at a meeting several months ago and I thought that was low. Regardless, the only reason OSMP is not at 15% or 20% is because your neighbors to a large extent are taking care of the growth problem for you. We mitigated over 1000 prairie dogs in 2019 that migrated onto our farm directly from Stratton & Brewbaker. If Stratton & Brewbaker have 4000 prairie dogs, that's 25%. Worst prairie dog year ever.

I'll ask again, is it your intention to ignore the damage that prairie dogs migrating from Open Space irrigated parcels cause to private property or does the City of Boulder just not care? Have you been advised by counsel not to speak of it???

Private property damage is part of the PD conflict equation - a BIG part. I know it, you know it. When you present the prairie dog conflict to the public, private property conflict must be part of the conversation, they need to be informed of what is going on and how much damage, money and time neighbors are experiencing directly from the City of Boulder's lack of prairie dog management. We weren't allowed to talk about it on October 23 and now this latest draft ignores the issue also. I have heard OSBT members, Council members and the past Mayor acknowledge the private property conflicts in their meetings yet it is nowhere in your information to the public. The conflict with and damage to private properties is very real and must be acknowledged. I want the public to know the true, full story. As Council Member Young stated "we are simply outsourcing our lethal control to our neighbors and we need to own that".

As requested, I will follow up with some numbers from neighbors as soon as I can gather information. Just so you know, in the last several years, we have:

Constructed 2320' of prairie dog fence at $7.00 linear foot = $25,340.

2017 + 2018 + 2019 mitigation costs = $8500.00

In the last three years we have spent over $33,000 attempting to keep prairie dogs that migrate from OSMP irrigated ag parcels from ruining our land and our livelihood. Our land objectives have never and will never include prairie dogs. We do not want our farm to look like or experience the damage that exists on Stratton & Brewbaker.

If the 'end game', as John Potter eluded to includes lethal control and clearing all the prairie dogs off irrigated agricultural properties, it will be beneficial to both OSMP agricultural goals and neighbors. If OSMP can manage their irrigated ag parcels appropriately, desired condition = zero prairie dogs, I will have a lot less stress and sleepless nights. I do not like killing prairie dogs. Please know that Brewbaker has been categorized as a 'removal' property for many years. Nothing has been removed. I was told a couple years ago by OSMP that there are way too many prairie dogs to remove them. That's because OSMP does not have the correct management tools. It also explains the lack of food for them on Brewbaker and the need for them to migrate to our farm. Stratton is experiencing the same demise and should be a removal property as well, but I'm having trouble getting that info from OSMP. Stratton cost OSMP $3.2 million dollars in 2007 and 12 years later because of the absence of realistic prairie dog management, the City of Boulder has ruined it. Relocation does not work for the scope and scale of this conflict. 1,200 prairie dogs a year doesn't even keep up with the reproduction rate on Brewbaker & Stratton. Barriers do not work. There is a "pilot" barrier on Brewbaker, a straight line of chicken wire with no sides, which I refer to as an obstacle, and it is fairly useless. Believe I've told you that I returned from out of town this summer to see that OSMP had constructed this obstacle on Brewbaker. First day back, on my bike headed west to US 36 and I see not one, not two, but three prairie dogs all together run around the new obstacle, down the side lane and onto our farm. If they really wanted to make a difference, OSMP should have put barriers on the south side of Neva Road & 39th heading west to keep the PDs on the grasslands. I have attached a map below that hopefully clarifies why we have such a conflict. I've made it very clear how I feel about the PDWG and also their recommendations, this barrier/obstacle is one of them, Heather Swanson cited it at the Open House. It doesn't work.

I want to see both agriculture and prairie dogs thrive on Open Space but in appropriate, separate, locations. Sustainable agriculture on irrigated ag parcels without prairie dogs and prairie dogs on the native grasslands. Even if lethal control goes through and all the prairie dogs are removed from irrigated parcels, there will still be abundant prairie dogs on the grasslands. Beech Open Space, grassland which is at 60% prairie dog occupancy, is literally one flap of an eagles wings from Brewbaker and Stratton and it's about 5 or 6 flaps from their nest. They will find the prairie dogs. There are ample native grasslands with prairie

dogs scattered throughout the OSMP system available for predators to feed. If all the prairie dogs are removed from irrigated ag, there will still be abundant prairie dogs. Someone needs to make that point loud and clear. Perhaps you should consult the County on this and see if they have noticed a decline in predators because of their ramped up removal efforts. Additionally, prairie dogs are not the first, second or probably third choice of food for Birds of Prey. Prairie dogs are not essential to irrigated agriculture.

Lastly, I wanted to touch on a couple of take aways from the County meeting on Tuesday night:

-In-burrow lethal control with PERC machines is a very effective, efficient, humane way to mitigate prairie dogs. 4-6% on irrigated ag is a whole lot better than 40 – 95%. For the scope and the scale of this conflict, it is the most reasonable option.

-Clearing an entire irrigated parcel of prairie dogs is essential.

-County said they would never pull water off an irrigable parcel, no matter what the prairie dog occupation.

-Changing land designations is not the answer.

I will read the draft in detail and provide my input in a separate email. I just want you to know that I really appreciate OSBT. I applaud how much time you have put into educating yourselves regarding this conflict and how much effort is being expended to value the irrigated parcels and sustainable agriculture for generations to come - for your properties and ours.

Thank You,
Paula Shuler

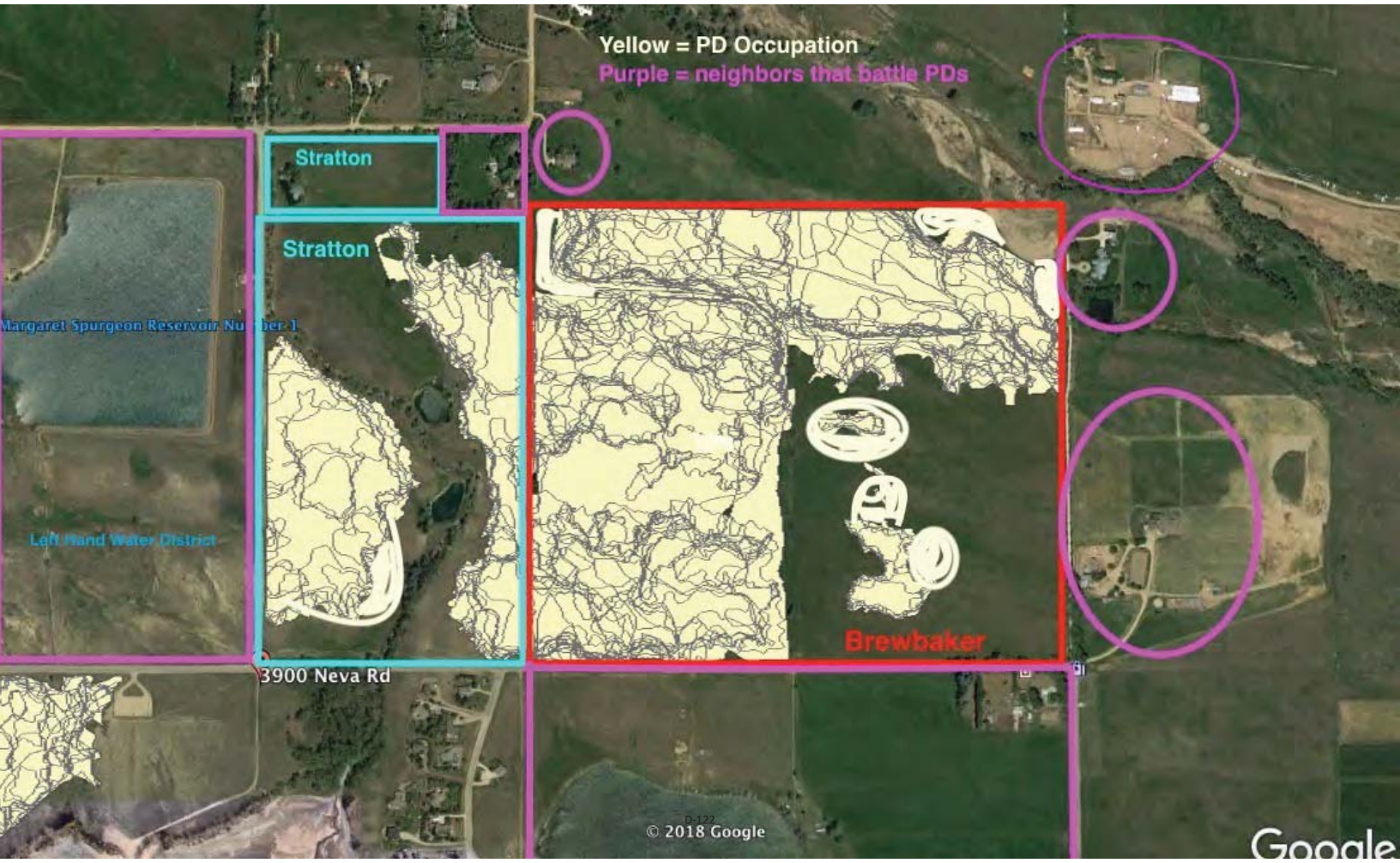
This is a map from of prairie dog occupancy on Brewbaker & Stratton. It is from the OSMP website last year (2018). You can see where I drew in yellow extensions of the colonies because I disagree with the mapping. Neighbors negatively affected, spending time and money are in purple. Brewbaker is red, Stratton turquoise. The neighbor on the top right has told me that he has witnessed PDs swim across Left Hand Creek and go onto his property. He mitigates any and all prairie dogs, as do other neighbors. You received a correspondence from Left Hand Water Company (neighbor to left of Stratton) last year, before the PD tour, about the importance of being a good neighbor - they mitigate several times a year. These are just two of your irrigated parcels. This condition exists throughout Boulder County on OSMP irrigated ag parcels and this does negatively affect neighbors. I don't really want to belabor the point but I've told you many times - our farm has been in the same family for well over 100 years, way before the City of Boulder felt that it needed to come into the County, spend lots of money to buy irrigated parcels and not manage them properly. The City of Boulder is literally ruining our neighborhood. This is not what the irrigated ag was purchased for - these are valuable assets. This has been going on way too long and the situation is only getting worse.

This is what Brewbaker looked like last week. I am very glad the 65 / 70 mile an hour winds came at night so I did not have to watch the dirt (soil is long gone) on Brewbaker blow away. I did ride my bike on Tuesday by both Brewbaker and Stratton and they did experience damage from those big winds. More rocks are exposed and both properties are looking very

worn from PD overpopulation. I believe this is an agricultural heat island.

Brewbaker, summer - since certain people think it is biased to only show winter pictures. If I had an August picture it would look like the winter picture. Desired condition = zero acres degraded by prairie dogs.

What OSMP Irrigated Ag parcels should look like...but unfortunately don't


Yellow = PD Occupation
Purple = neighbors that battle PDs
Stratton
Stratton
Margaret Spurgeon Reservoir Number 1
Left Hand Water District
Brewbaker
3900 Neva Rd
© 2018 Google
Google

What an Irrigated Ag parcel can look like…
in summer & winter

D-125

From: Elizabeth Black
To: OSBT-Web; tglowacki@bouldercounty.org; ralexander@bouldercounty.org; Potter, John; Burke, Dan; Gershman, Mark; Kolb, Lauren; Pelster, Andy
Cc: pshuler[redacted]; Molly Davis; Pomerance, Stephen; Council
Subject: BCPOS: Prairie Dog Control Lessons Learned
Date: Thursday, January 16, 2020 8:28:28 AM
Attachments: image003.jpg

External Sender

Hello OSBT and all,

Just wanted to report on the things I learned from my meeting with County staff Rob Alexander, Amy Schwartz and Therese Glowacki about Boulder County's PD control program. It was just me with them at the meeting, no one else from COB. I'm cc'ing this to Rob and Therese as well so that if I have mischaracterized anything they can correct it for you.

1. The entire BCPOS PD policy is all on line at this link: https://assets.bouldercounty.org/wp-content/uploads/2017/04/prairie-dog-habitat-element-grassland-policy.pdf
2. BCPOS started PD removals slowly 20 years ago. There have been 5 updates to the policy and it has changed significantly over the years. 20 years ago they started out by stopping the use of fumitoxin. Staff thinks this was very good, since fumitoxin was not good for people or the environment. Originally, the public thought trapping was more humane, so to keep the confidence of the public, for the first 6-8 years, BCPOS only used trapping, and sent PD's to Birds of Prey and Ferret Recovery, where the PD's were killed. But that didn't work. Over the years, BCPOS found that they were trapping the same properties year after year and not getting them clear. (Please note that almost all BCPOS trapped PD's end up killed sooner or later. Most are killed fairly soon after they are trapped. A few are kept alive and fed live to young ferrets so ferrets can learn how to hunt.)
3. Next BCPOS switched to using trapping to get numbers down to around 50 PD's per property, and then using lethal control. That didn't work well either. They were still not getting properties clear, and had to go back to the same properties year after year.
4. Now they have removed the 50 PD threshold from lethal control. They still trap first: 2157 PD's trapped in 2019 with 1400 coming from one property. But now they switch sooner to using lethal control for remaining PD's. They feel that their current strategy of totally clearing a sector of adjoining properties before moving on is going to work.
5. BCPOS originally began their Open Space program with 13 properties. They now have 147 properties. So the scope and scale of their PD problem and control efforts has changed a lot over the years as their number of properties has changed. In 2019, PD's have been completely removed from 24 properties. Another 24 properties had PD's completely removed but PD's came back in very small numbers. BCPOS says their No PD Zones (NPD's) are 3-5% occupied and they are very pleased with their progress in 2019.
6. BCPOS has 13-14 properties that border COB OSMP properties with PD's, including Brubaker Sorensen, Alexander Dawson, Autry, 95th and Lookout, Imil, Loukonen, IBM, Twin corners and Canino. Those 13-14 properties have been cleared multiple times to no avail, since PD's constantly recolonize the BCPOS properties from uncontrolled PD's on OSMP properties.
7. BCPOS sends trapped PD's to both Birds of Prey (BOP) and Ferret Recovery. They make one delivery a week to each program during the summer, about a 1 hour long drive each way to each program.
8. BCPOS owns 400 traps total. At the height of the trapping season they might have 370 traps

deployed every day. First traps are put out baited but permanently open, to get the PD's used to going inside. Then traps are set to catch PD's. Trapping is labor intensive, because every trap has to be opened in the AM and closed usually by noon or 3PM. That is so nocturnal animals such as skunks are not caught in the traps, and so that trapped PD's do not bake in the sun for too long mid-day. There is lots of paperwork with PD trapping and removals: delivery memo's, permits, etc.

9. BCPOS PD removal team is 4 seasonals plus Amy- a ¾ time seasonal supervisor. Many seasonals have been back year after year. They can only work 9 months due to current County regulations based on now defunct federal regulations. The moratorium (no removals during pupping season) also limits staff to 9 months of work.
10. Costs for BCPOS PD control include Labor, 5 PERC machines (CO - carbon monoxide) each with their own ATV @$16K, 2 trucks, maintenance of $1K/PERC machine/year, and CO cartridges. Last year the County spent $40K on CO cartridges, with many going for tenants' use.
11. BCPOS has training classes for their ag tenants who want to control PD's on leased land. First BCPOS does a removal and gets numbers of PD's down or gone. Then tenants can do mopping up or take care of new arrivals. Tenants can use CO cartridges or borrow the PERC machines. Tenants have to go through a training at BCPOS. They receive a 9 month permit to control in a specific area with a set bunch of rules. At first BCPOS required that tenants take the class every year, but after a few years it was the same old guys over and over so they haven't required the class for them recently. 4-7 tenants are currently getting permits and controlling.
12. Staff says that their lessons learned over the last 20 years include:
    a. Carbon Monoxide (CO) and Carbon Dioxide (CO2) are acceptable to the public. Relocation is not acceptable to much of the public, and relocation is not a good tool for PD control. Trapping alone without lethal control is not a good tool for PD control. Lethal control, when done right, is more humane than trapping. The animals are way more stressed for a longer time with trapping than with lethal control. All trapped PD's (except those being relocated) end up killed in the end.
    b. It's better to throw all your resources at the PD problem early on so you don't have a growing problem. Half-measures don't work.
    c. Skilled staff are important, because you have to have an effective strategy when you clear a property. You have to know where and how to clear across a property so that you can defend the areas you have already cleared as you are clearing adjacent colonies.
    d. Staff has experimented with CO2 and found that it does not work well and is way more expensive than CO. In their experiments, it took far more gas volume to kill with CO2, and it was only 30% effective in killing PD's. To be effective, CO2 has to displace much more air volume in the burrow than does CO. The tanks of CO2 require special handling and must stay vertical, making them very difficult to position in the field.
    e. It takes a surprisingly long time (10 minutes per round of 4-6 holes) for the PERC machines (CO gas) to effectively kill PD's. This **time** pumps up labor costs for lethal control.
    f. The County's current moratorium on trapping and lethal control in the 3 months of spring while PD's are pupping is a bad idea, counterproductive and causes far more PD's to be killed. It means staff effectively lose 6 months of control every year,

because December to February are very difficult months for PD control. Weather, short days, frozen soil which makes it impossible to back-fill holes for the PERC machine to work effectively, soil moisture conditions, air temperatures below 32 degrees causing condensation inside gas hoses ruining the machines, all make winter control very difficult and spotty. Staff would really like to get rid of the moratorium, because with it they feel like they are spinning their wheels, and because the moratorium causes more PD's to be killed.

g. It is imperative to have good partnerships to make this all work. BCPOS works closely with neighbors to time removals of adjacent private properties with their own removals. Tenants, Colorado Dept. of Wildlife, Birds of Prey, Ferret Recovery are all key partners as well. Working with neighbors and tenants has been VERY effective. Cost sharing with barrier fencing, coordinating removals, making PERC machine available to tenants to use all work well. BCPOS does cost sharing of removal teams with tenants, where the tenant hires labor and BCPOS pays 75%, tenant pays 25% of the salaries of the removal team.

h. The literature says that PD's have 2-4 or 3-5 pups a year, but staff has observed up to 12 pups per nest at times.

13. In regards to the COB subcontracting some of their PD control to the County, staff does not want to touch it with a 10 foot pole. A big reason is politics and the different constituencies in the City and the County. But even in regards to sharing holding facilities for PD's going to ferret recovery or Birds of Prey, they don't want to share resources. The issue there is they don't know if COB has dusted burrows correctly before trapping. And once populations are intermixed, it is impossible to know where fleas and disease vectors are coming from. They can't separate out different PD groups because their holding facility is only one small room. This is especially important for the ferret recovery program, since ferrets are very susceptible to the plague.

Hope this helps. It would be really nice if the City could try to learn from the County here, and not embark on ineffective strategies of PD control. If the City decides to use policies that have already been proven not to work in Boulder County, it simply means that MORE prairie dogs will be killed in the long run, an outcome that no one wants.
Thanks for your consideration, Elizabeth Black

Elizabeth Black

The Citizen Science Soil Health Project

Helping you PROVE you are IMPROVING your soil.

[redacted]

To Unsubcribe, click on Elizabeth@ElizabethBlackArt.com and tell me to remove you.

Please thank our sponsors:

SpnsorsCSSHP

From: Gary Flauaus
To: OSMP Input
Subject: Prairie Dog Control
Date: Saturday, January 18, 2020 4:34:43 PM

External Sender

Hello all, Gary Flauaus here. I've lived in Boulder County now for 37 years. Very fortunate to call this place home. I live in the Lake Valley subdivision north of the city of Boulder and also own a 56+/- acre farm just south of Longmont off of Oxford road. As with many other folks who own private agricultural properties adjacent to either Boulder county or Boulder city Open Space lands my biggest problem these days seems to be the management of both weeds and prairie dogs. There just seems to be an ever increasing abundance of both.

As some of you may know the Lake Valley subdivision is surrounded by City Open Space land in three directions and by the Fentress farm property to the North. The crew at the Fentress farm are very good neighbors in that that they constantly, year after year, do their best to manage the continuous influx of prairie dogs from the City Open Space to the North of them across Neva road. Unfortunately due to the ever increasing number of prairie dogs crossing Neva road onto the Fentress farm property the owners of this farm seem to be losing the battle. The time and money it's costing them to keep the prairie dog population in check continues to increase and they have been unable to receive any help from the City of Boulder in order to remedy this situation.

Of course each year when it comes time for the previous year's generation of roaming prairie dogs to disperse they do NOT relocate back North to the City owned AG properties. Yep, you guessed it, they choose instead to move into the Lake Valley subdivision and use the golf course fairways located throughout the subdivision as their favored access points into the backyards of us homeowners here.

Regarding my own farm property about a mile south of the Longmont city limit, we also see our share of dispersing prairie dogs show up each Spring as well although not in the quantities seen on the Fentress property. The prairie dogs arriving on my and adjacent properties appear to be using the irrigation ditches as their access points into this area.

So given the background information above I would like to suggest that the recent OSBT recommendation to the City Council of using the lethal control option as one more tool in order to help manage the ever expanding size of prairie dog colonies on Boulder City Ag properties be adopted. I realize that the pushback for this plan from certain groups within the Boulder area will be considerable. However at some point this problem needs to be addressed and I can only hope that this is an idea whose time has arrived.

Thank you all and good luck.

regards, Gary Flauaus

From: Bill Howland
To: OSMP Input; OSBT-Web; Council
Subject: Upcoming Feb 12th Prairie Dog Meeting
Date: Saturday, January 18, 2020 10:17:51 PM

External Sender

As a farmer in the East County in the vicinity of the Tebo Property at Hwy 287 and Arapahoe, one can see first hand what a lack of control of prairie dogs leads to – a loss of nearly all native ground cover, the former nearly completely replaced by Russian Olive and Curly Dock, both noxious species; the latter prodigious producers of seeds which remain viable for over 80 years.

Just like noxious weeds, there has to be a point where out of control proliferation of any animal species should also be managed if possible. Although we have several Golden Eagles and numerous Rattle Snakes working the Tebo property, this form of lethal control is insufficient to return balance back to our neighborhood. The snakes have killed at least one dog on a nearby property; fortunately, to my knowledge no children have yet been bitten.

Carbon monoxide or Carbon dioxide, when used appropriately, works well, and is humane.

I have yet to meet a Prairie Dog fancier who allows these cute little creatures to completely overrun their own yard; however, we have watched at least one person transport these destructive critters onto neighboring lands in the hopes of establishing new colonies.

B>

From: Dan Yechout
To: OSMP Input; OSBT-Web; Council
Subject: In support of prairie dog control
Date: Monday, January 20, 2020 2:03:56 PM

External Sender

I live [redacted] My property is adjacent to 3505 Nebo Rd, which is adjacent to the city-managed Hester open space. Prairie dogs live on the city-managed open space and 3505 Nebo Rd.

We currently raise grass-fed beef on our 30 acres and are planning to increase our number of cattle as regenerative practices will support. Our goal is to turn our property into a model regenerative farm which will sequester carbon, improve soil health and provide nutritious food for local people. Prairie dogs destroy grasslands that are vital to our farming, which produces nutritious and environmentally superior grass fed beef to the local people. We've had to install prairie dog fences at our own expense to restrain prairie dog infestation of our healthy native pasture grass.

I strongly support removing the prairie dogs on the Hester open space and 3505 Nebo Rd by any means.

Thank you,
Dan Yechout
[redacted]

From: Cari Cook
To: OSMP Input; OSBT-Web; Council
Subject: Prairie dog managment
Date: Thursday, January 23, 2020 12:18:31 PM

External Sender

I live across the street from a piece of property owned by the City of Boulder. The prairie dog population used to be almost non-existent. I assume they had a plague at one time. Now the population has grown out of control and migrated to the surrounding farms taking over peoples hay fields and costing everyone tens of thousands of dollars in lost hay production and in trying to mitigate the prairie dogs. Instead of the City of Boulder controlling their problem (according to the open space policies already in the books it should be done. We don't need new studies or policies.) they are telling the farmers its their job to put up mesh fencing (which does not work) and take care of the problem themselves. If the prairie dogs succeed in migrating across the road there will be even more farms ruined by this problem.
We need City of Boulder to maintain its open spaces now.
I appreciate your attention to this.
Best
Cari Cook

From: Paula Shuler
To: OSBT-Web
Cc: Potter, John
Subject: Follow up on neighbor mitigation expenses
Date: Friday, January 24, 2020 4:19:12 PM
Attachments: O"Donnell PD Mitigation Expenses.pdf

External Sender

OSBT,

At last month's meeting I relayed to you the expense to mitigate unwanted prairie dogs that are migrating from OSMP irrigated Brewbaker and Stratton to our farm ($33K in last three years). Trustee Hallstein inquired if I knew what other neighbors were spending on mitigation. This email is a summary of what I was able to quickly gather from some other neighbors. Many of us have put a lot of time and effort putting up fences but we still have to mitigate because the migration continues. Examples that fences and barriers do not work to solve the prairie dog problem.

- MB, East of Brewbaker: "we spent $10K on the fence along the west side, and it helps keep the prairie dogs out, but they still come through the culvert under the road. We have killed over 400 pds in the last 8 years. A lot of equipment time was spent collapsing their burrows, as well."

- RJ, East of Brewbaker: 'Minimal expense, just box of ammo, typically mitigate several prairie dogs a week. It's non-stop. In the springtime that number increases dramatically. They even try to take up residence next to the house in my mowed lawn'.

- LHWD: West of Stratton: Hires contractor to mitigate prairie dogs at Spurgeon Reservoir & Spurgeon Plant Site. $742.50 on 10/4/2019. They have contractor out 2X per year and it is about the same each time, = $1500.00 per year at this site. LHWD also has to mitigate PDs on their property on Oxford Road & Ogallala, across from OSMP Dodd parcel. LHWD indicated the expenses are about the same on Oxford parcel. Total LHWD = $3,000 per year total.

- RO, North of Brewbaker & Stratton: *See pdf document attached*

- W/M, South & East of Oasis: $500/month = $6,000/year to mitigate PDs.

- SS, Ditzel parcel: $16,000 PD fence

- BS, Cowles & Johnson/Monarch: $15,000 PD fence

January 24, 2020

Cost associated with the ongoing management of prairie dogs in North Boulder County area irrigated grasslands: Brewbaker-Soreson/Stratton Properties

Specific [redacted] Street Longmont CO 80503 O'Donnell Residence approx. 2.8 acres. (Surrounded by 106 acres of unmanaged prairie dog habitat owned by City of Boulder and Boulder County Open Space)

History of area:

Current homeowners [redacted], Robert and Lynn O'Donnell, have resided in the area since late 1980. Robert has been the grounds caretaker for the Brewbaker property, located just north, [redacted] since the late 1980 and still assumes that responsibility. 12 years ago we bought the lot, 7634 North 41st, set aside when the Brewbakers sold to Open Space. As stated, [redacted] is currently our residence.

Until such time the Brewbaker/Soreson sold off their property to the various Open Space entities and broke the properties into 3 lots, the largest now owned by City of Boulder/Boulder County Open Space, all the land was irrigated and hayed. Different lessees have managed the Brewbaker/Sorenson property with the current lessees Dwayne Cushman. Before selling to open space, as mentioned, the properties were irrigated and hayed. At no time were there any prairie dogs located on any of the properties. Over the course of time, and due to lack of true agricultural management practices and on sight over sight, the properties have succumb to the devastation of the prairie dog and the lands are no more than moon scape with thistle the predominant plant. Green grass only exists where water is intermittently run over open space over the course of the summer.

Over the course of years, even with constant communications with the Open Space managers, and asking for help to manage the prairie dog, requests have fallen upon deaf ears, especially with City Open Space, which owns the majority of the open space to the south and east of my location. They have had so many excuses for reasons why they could not help me and have wasted tax payers money with annual management plans that go nowhere. The only intention of these management plans and ongoing workshops, is to protect the prairie dog, not maintain the land to where it should be managed (without prairie dogs) and provide no assistance to homeowners like myself, who are experiencing the devastation of the collateral damage the prairie dog has brought.

To their credit, and I am very grateful to ***Boulder County Open Space*** for providing some help by trapping and fumigating the prairie dog hole, and also the mid-summer cutting of thistle before their flowers bud and go to seed. They have been visible the last 2 years.

Unfortunately, too little too late and we are now suffering from the lack of controlling the prairie dog and their epidemic populations which surround my house. (NOTE: The Brewbakers, north of my residence, have 7 acres set aside. Their eastern most property has succumbed to the prairie dog. I have

hayed the 2 acre triangle for the last 10 years, the last 2 years I have stopped as the prairie dogs have destroyed my hay crop. I went from 50-70 bales to 0!!!!!)

With that said, below is the current state of affairs at my residence, where the prairie dog is managing to destroy my property, one hole at a time: [redacted], Longmont CO 80503 approx. 2.8 acres

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3) Holes in back yard and front yard are also my hay fields
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6) 700 feet of four strand barbed wire fencing destroyed from cows pushing fence from open space. This is the fence that runs on the east and south side of my property
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    a) 700 feet of 4 strand barbed wire fence surrounding my property on the east and south needing complete replacing: $4000.00
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    f) Current bi monthly fumigation/mitigation cost per treatment (doing myself) materials and time: $400.00 Kill good for 1-2 weeks and then reinfested by Open Space prairie dog!!!!!!!
    g) Annual cost of loss of hay in front and backyard, 30 bales: $300.00
    h) Annual cost of loss of hay at Brewbaker property: 60 bales: $600.00

- Neighbor of irrigated OSMP, who asked not to be identified and I honor that: $1,890 per year on supplies and labor and this does not include lost forage income with lowered yield due to PD occupancy. They estimate nearly $25,000 for the last 13 years of PD management.

This is just a sampling of expenses but it shows that neighbors of OSMP irrigated ag parcels all through the county are spending substantial time and money on PD barriers and mitigation. The Stratton & Brewbaker parcels, both labeled "removal" properties for many years have never had prairie dogs removed, instead the neighbors are forced to battle the migration and negative affects of the ever growing populations. The OSMP parcels are in such bad shape that PDs migrate constantly throughout the year. 3% growth is not an accurate number. The neighbors are taking care of a lot of the growth for OSMP because none of us want prairie dogs on our private property and we all mitigate OSMP prairie dogs. I hope this gives you a sense of what it costs to have the City of Boulder as a neighbor. Damage to neighboring private property must be included as part of the big picture. If you require additional information, please let me know.

Best Regards,
Paula Shuler

From: Rissa Cloud
To: OSMP News
Subject: Re: Field Notes: REMINDER: City seeks input on managing prairie dogs in irrigated fields
Date: Friday, January 24, 2020 9:05:44 PM

External Sender

Black Footed Ferrets is the answer to PDogs.
You can set up a colony- tribes have been doing it, etc.
High Country News in Paonia, Colorada ran stories I believe.
That's the way.
Best of luck... I haven't followed so who knows what's been discussed- do it right!

On Friday, January 24, 2020, 05:30:21 PM MST, City of Boulder Open Space & Mountain Parks <osmpnews@bouldercolorado.gov> wrote:

If you're having trouble viewing this email, you may see it online.

Share this:

City of Boulder Open Space & Mountain Parks

REMINDER: City seeks input on draft approach and potential actions to manage areas with a high abundance of prairie dogs

The City of Boulder's Open Space and Mountain Parks (OSMP) Department is seeking public feedback on **a draft approach and an evaluation of potential actions** to manage irrigable agricultural land with large populations of prairie dogs. A brief summary of the potential approach and actions is available at the beginning of the document.

The **city welcomes public feedback** on the draft approach and the evaluation of potential actions online until **5 p.m., Sunday, Feb. 16**. Community members are invited to the OSMP Hub at 2520 55th St. from 5 to 7 p.m. on **Monday, Jan. 27**, and 2 to 4 p.m., **Tuesday, Feb. 4**, if they need assistance in using the city's online input tool. **Share your input**.

OSMP's identification of a draft approach and its evaluation of potential actions is a response to direction from the Boulder City Council, following a recommendation from the Open Space Board of Trustees (OSBT) last spring, to **undertake an expedited public process** to look at agricultural uses on the city's northern grasslands. Potential management actions evaluated include ways to help foster soil health and carbon sequestration and options for both non-lethal and lethal control measures.

SHARE YOUR INPUT

2520 55th St., Boulder, CO • 303-441-3440 • www.osmp.org

Facebook

From: Tamara Sneddon
To: OSMP Input; OSBT-Web; Council; OSMP Input
Subject: FW: Major Concerns regarding open space
Date: Friday, January 24, 2020 4:30:30 PM

External Sender

Please forgive my mistake in the first sentence, it should read Boulder City, not Longmont..
I will send a correction below.

Hello,

We currently reside on 10 acres next door to 70 acres of Boulder City open space. The City acquired this parcel, (Parcel 131702000032), in 2001 and has done little to nothing since then towards taking care of it. We want to take this opportunity to share with you how living next door to an uncontrolled population of prairie dogs has affected us.
When we purchased the property a few years ago, there were around 85 prairie dog holes on our property, and we estimated approximately 500 holes in the open space, given it's size.
We tried several methods of control ourselves at a cost of around $400.00 per year and the population of them only increased due to the unchecked population growth in the City open space. After paying an additional $500.00 to a licensed prairie dog control company to treat the burrows last year, the number of holes once again increased to 120 on our property.
The areas they have infested are so decimated now that they are devoid of vegetation, which is what has happened next door on the open space also.
As long as the City open space land allows prairie dog numbers to go unchecked, we are fighting a losing battle on our property. Our yearly crop has dwindled to nothing in the infested areas.
We urge you to look at Google maps at the 70 acres of property owned by the City on 65th Street in Longmont. From the satellite view of the land it is clearly evident that the prairie dogs have invaded the entire parcel and are spilling

across into neighboring lots. The bare, arid earth is devoid of vegetation and will get worse with each passing week, month and year.
Each burrow has up to four females who will give birth to 3 to 8 pups per year with roughly half surviving for a full year. That takes the population of the Boulder City open space from somewhere around 2000 animals last year, to up to 8000 this year and up to 30,000 in subsequent years! Research has proven that land that has been colonized and allowed to become overpopulated risks the chance of NEVER recovering. This is a horrific and catastrophic situation for the open space lands and for anyone located near them.
We urge the City to be responsible and take control of this situation. By doing yearly control of the prairie dog population and leasing this parcel to someone who will farm it, they will incur very little costs each year and the land will be saved from complete decimation. It would keep the numbers of prairie dogs to a more manageable number and keep the noxious weeds down also.
The City of Boulder has a responsibility to maintain it's public areas. The City prairie dog management goal should be to protect and control viable prairie dog populations on suitable grassland habitat, aiming to maintain wildlife habitat protection goals while also preserving land and agriculture and maintaining good neighbor relations.
Please take steps toward remediating this unchecked situation before it is truly too late.

Chad & Tamara Sneddon
[redacted]

From: cara_stiles@comcast.net
To: OSBT-Web
Subject: RE: Public opinion regarding Prairie Dogs
Date: Saturday, January 25, 2020 4:37:10 PM

External Sender

A SYSTEM OF BARRIERS FOR PRAIRIE DOG CONTAINMENT

It is with alarm that I have watched prairie dogs infiltrating nearly every piece of agricultural land and pasture, and just generally, THE PRAIRIE of Boulder County. Acres and acres. But I get it. This is where they belong. However, over the last 5-7 years, nearly every OSMP land that I walk or hike in the lowlands has become overrun with PD's. As a long-ago biologist, I understand the difficult job of determining how to manage this situation. On the cheerleading side for prairie dogs, the holes and burrows house small mammals and other life, including rattlesnakes. Burrowing owls hang out with prairie dogs. The dogs are a food source for birds of prey and coyotes and black-footed ferrets (if we ever see them again). They provide different insect species that a wide range of bird species feed on. They are important in many ways. This said, we are at a very difficult choice point in terms of management. So many arguments and differing points of view. I don't envy you.

Boulder County is a unique multi-use area. Every resident has paid taxes to help expand and support open space. We hike, walk, run, take our dogs out, cycle. Simultaneously, we espouse support and love of wildlife and are concerned about the well-being of living creatures. With prairie dogs impacting heavily traveled trails, it becomes very difficult to determine land use.

I understand that Boulder County has already mapped areas that should be protected for prairie dog communities. This solution is expensive, but my vote is about permitting prairie dog towns in pre-determined areas. The requirement is creating barriers that are impassable for the PD's. I've seen the heavy plastic two foot barriers, but I have no idea how deeply buried they are. I don't know about the required depth, but someone does I'm quite sure. Concrete is another option, but again, expensive. I realize that with these land restrictions for PD's and thus stress because of over-population, bubonic plague is destined to wipe out communities, but they will rebound. As for the areas not set aside for prairie dogs, I support extermination.

Thank you,
Cara Stiles

From: Ellen Gager
To: OSBT-Web
Subject: Prairie Dogs
Date: Sunday, January 26, 2020 4:10:24 PM

External Sender

To Whom it May Concern,

As an animal lover, I have taken my dogs to Boulder Valley Ranch for years. While it is still a favorite destination, I have watched with concern the degradation of the property by prairie dogs. As part of OSMP, the land must be managed for the benefit of multiple stakeholders: plants, people, and animals. But the ecosystem is unbalanced by the take over of the prairie dogs in not only this area but in many other parts of Boulder's open space. It is especially problematic in agricultural areas where soil health is both crucial and fragile. We can not afford to sacrifice our soil and local food production for the benefit of a single species like the prairie dog. Uncontrolled prairie dog colonies have already rendered over 1000 acres of agricultural land unfit for farming. Let's govern our Open Space to best protect animals and valuable Ag lands.

After reading your very thorough 'Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs,' the most cost effective solution would seem to be to use lethal removal of prairie dogs. While none of us likes to advocate for the deaths of any "wildlife," the management of open space land is complicated and involves tough, well thought out decisions within a responsible financial framework. I strongly urge you to increase the use of lethal removal of prairie dogs from open space agricultural lands.

With Best Regards,

Ellen Gager
[redacted]

From: Robert O"Donnell
To: Council; Robert O"Donnell
Subject: Prairie Dogs
Date: Monday, January 27, 2020 12:07:30 PM
Attachments: Costs of managing praire dogs on my private property 1.docx

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External Sender

To Whom It May Concern,

Can someone please help us? We have battled and battled for years and are losing. We are losing the land we love and our property is starting to look like the open space which surrounds us. Barren and void of life with hundreds of prairie dogs and hole. They are attacking and overtaking our property!

The City Open Space has rules and regulations and your website states "violations could result in summons/and or fines". Rightfully so. You use words such as sustainability, stewardship and management in regards to our open space. Within the rules and regulations of open space, it states prairie dogs will be managed and not allowed on irrigated open space land. But they are allowed, and you continue to support studies which take time and waste taxpayers money, and unfortunately time has allowed an epidemic explosion of prairie surrounding my house, and as stated, they are now attacking and now destroying my property. Why is it you can not be held accountable for this? Why can't my wife and I fine you or send you our bills or summons you? For years I have asked for help, now we are pushing into another decade.

Your double standards are killing my property and the land that surrounds it which I dearly love and have managed for years with my horses and haying the beautiful natural grass. I have lived here and raised my children here. It's sad you don't live up to the standards and values you state you do.

For years we have asked for help, now those years have reached into another decade. Why will no one help or listen to us?

Rob and Lynn O'Donnell
[redacted]

January 24, 2020

Cost associated with the ongoing management of prairie dogs in North Boulder County area irrigated grasslands: Brewbaker-Soreson/Stratton Properties

Specific Private Property: [redacted] O'Donnell Residence approx. 2.8 acres. (Surrounded by 106 acres of unmanaged prairie dog habitat owned by City of Boulder and Boulder County Open Space)

History of area:

Current homeowners at [redacted] Robert and Lynn O'Donnell, have resided in the area since late 1980. Robert has been the grounds caretaker for the Brewbaker property, located just north, [redacted] since the late 1980 and still assumes that responsibility. 12 years ago we bought the lot, [redacted] set aside when the Brewbakers sold to Open Space. As stated, [redacted] is currently our residence.

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From: April Story
To: OSMP Input
Cc: Council
Subject: Lethal control of prairie dogs on OSMP
Date: Wednesday, January 29, 2020 4:59:41 PM

External Sender

To Open Space Board of Trustees,

I am writing today to voice my opinion about the overwhelming population of prairie dogs on Boulder Valley Ranch (BVR) open space land and the call for immediate action. Due to lack of land management, this once lush grassland with all it's native species of birds and animals that relied upon it, has become a lifeless desert of inert clay and noxious weeds.

I am a Boulder resident of 50 years who recently moved my two horses to BVR and was utterly astounded at the degradation of the land over these past years. My horses boarded for 20 years nearby on a 160 acre ranch that also had the beginning of a prairie dog invasion and successfully dealt with it before it did significant land damage. In those years I used to hike the perimeter trails at BVR dozens of times a year appreciating the opportunity to be on such a wonderful piece of land. I made the assumption then when the prairie dogs were primarily on the perimeter of the ranch that they were being managed by Open Space. When I moved my horses there recently, I almost wept when I saw the neglect of oversight and management.

I am intimately familiar with land degradation. My land in Sunshine Canyon went through the incinerating Fourmile Fire in September of 2010. The soil was literally vaporized in the extreme heat, leaving only a charcoaled granite surface. Because I am a gardener and a permaculture practitioner, I took action as quickly as possible to prevent further erosion & save my remaining traumatized trees. Those days I walked everywhere in a cloud of ash as I worked cutting and positioning dead trees on slopes, practicing theories that I prayed would work in these extreme conditions. I purchased many, many tons of compost, seeds, straw cloth. I applied all I knew from permaculture, and it worked ---because Permaculture acknowledges that if we are going to own land, we have to manage it. That requires understanding of how all the elements work together so that all thrive and no waste is created.

I support the Open Space Program and believe it could be a model of good land management and sustainability. We need to act swiftly as climate scientists project Colorado will be more affected with extreme heat than other areas of the country. Being high desert, we already lose most of our sparse precipitation to evaporation. Healthy soils hold water and sequester carbon. Dead soil releases carbon into the air and wash away. There is no better place to store water here than in the soil itself.

Not taking action to manage and remove the prairie dog colonies from BVR these past years has resulted in the devastation of a once healthy ecosystem that supported a variety of species, held carbon and water in the soil which, among other benefits, made it more fire resistant.

Boulder's "Greenbelt" used to be something other cities wanted to model. But, our lack of holistically managing these precious resources has now contributed to the climate crisis and diminished this valued resource for not just Boulder residents, but all the species that once thrived here.

Let us be the vanguards of sustainability practices and land stewardship that we are poised to be and our residents support through our tax dollars and our votes. I urge you to consult with Permaculture & soil specialists and remedy this situation as soon as possible. I will happily volunteer in any capacity to help accomplish this.

Thank you for this opportunity to share my views,

April Story
Boulder resident since 1973

From: Steven Meyrich
To: OSMP Input
Subject: prairie dog management
Date: Wednesday, January 29, 2020 5:00:37 PM

External Sender

I want to urge you to consider the terrible implications of your policies on neighboring landowners. I understand the role that prairie dogs play in an ecosystem but we are dealing with unusual conditions that are not natural. Therefore, a management plan must include lethal methods to control and redirect prairie dog populations. I know this from having been drastically impacted by unmanaged prairie dogs and the damage that they do to all the lands around us and and we can find the proper balance if lethal control is used tactically.

Steven Meyrich
[redacted]

From: Shirley Schaller
To: OSMP Input
Subject: Prairie Dog Disaster area
Date: Thursday, January 30, 2020 5:04:42 PM

External Sender

My family have been landowners [redacted] Boulder, Co since 1872. We have been able to control the Prairie Dog population quite well, until my Father sold land to the City of Boulder Opens Space. The acreage, which the City of Boulder promised to maintain is an absolute disgrace, and had we known that it would be handed over to Prairie (RATS) Dogs, we never would have made that deal. To see so many acres turned into ugly wasted land, which actually brings tears to my eyes when looking out the windows of my home. So much love for four generations has been given to this piece of property, and to see it in such HORRIBLE CONDITION is a NIGHTMARE…caused by The Cityof Boulders Negligence! The RODENTS, which carry the Plague, and devastate every blade of grass, need to be euthanized. I'm sure they are a major cost factor to the City of Boulder's revenue, due to land that can no longer be used for irragated hay fields and grazing of animals due to the hazard of livestock breaking legs. I have seen with my own eyes animals limp for a few steps then falling to the ground because they cannot walk any further because of PAIN!!! This land can be saved, by taking care of the Prairie Population, Then doing a major Harrowing of the fields. They have come so close to our remaining Five acres, that we had to have a Prairie Dog barrier fence built at a cost to my Husband and myself exceeding $13,00.00 dollars. All because of the City of Boulders NEGLIGENCE!! Pease take RESPONSIBILITY OF THIS PROBLEM!! Especially before we have to deal with the nightmare of Bubonic Plague!!

Thank you for taking the time to read this email

Earl and Shirley Schaller
[redacted]

From: Elizabeth Black
To: khollweg@stanfordalumni.org; Brown, Curt; Isaacson, Tom; Dave Kuntz; Hallstein, Hal; Potter, John; Burke, Dan; OSBT-Web; tglowacki@bouldercounty.org; ralexander@bouldercounty.org; Kolb, Lauren; Pelster, Andy
Cc: pshuler[redacted] Molly Davis; Pomerance, Stephen; Council
Subject: FW: BCPOS: Prairie Dog Control Lessons Learned
Date: Friday, January 31, 2020 6:25:57 PM
Attachments: image002.jpg
image003.jpg

External Sender

Hi Curt, Karen, Tom, Dave, Hal, John, Dan, Therese, Rob, Lauren, Andy, Council and all,
Below please find the corrections which Rob Alexander made to the notes I took at the meeting I had with him and Therese Glowacki at Boulder County Parks and Open Space a couple weeks ago, about the County's prairie dog policies and lessons learned. My original text (in black, which I sent you previously) and his corrections (in red) are a couple emails down this thread. Hope this helps clarify things for everyone. Thanks very much, Elizabeth Black

[redacted]
Elizabeth@ElizabethBlackArt.com
To Unsubcribe, click on Elizabeth@ElizabethBlackArt.com
and tell me to remove you.

HEAL_Logosmalljpg

From: Alexander, Robert [mailto:ralexander@bouldercounty.org]
Sent: Friday, January 31, 2020 5:39 PM
To: Elizabeth Black
Cc: Schwartz, Amy; Cooper, Blake; Glowacki, Therese
Subject: RE: BCPOS: Prairie Dog Control Lessons Learned

Elizabeth,

I have not forgotten about you. Just very busy. Therese has been away on vacation. I have inserted some corrections/comments in the body of your email below. Please let me now if you have any additional questions. Thanks very much for your interest and your time.

Rob

Rob Alexander

Boulder County Parks & Open Space
Agricultural Resources Division
5201 St. Vrain Road

Longmont, Colorado 80503
303-818-6398 cell
303-678-6239 off
Ralexander@bouldercounty.org

From: Elizabeth Black [redacted] >
Sent: Thursday, January 16, 2020 8:28 AM
To: OSBT-Web@bouldercolorado.gov; Glowacki, Therese <tglowacki@bouldercounty.org>; Alexander, Robert <ralexander@bouldercounty.org>; PotterJ@bouldercolorado.gov; BurkeD@bouldercolorado.gov; GershmanM@bouldercolorado.gov; 'Lauren Kolb - Boulder OSMP ()' <kolbl@bouldercolorado.gov>; pelstera@bouldercolorado.gov
Cc: [redacted] council@bouldercolorado.gov
Subject: BCPOS: Prairie Dog Control Lessons Learned

Hello OSBT and all,
Just wanted to report on the things I learned from my meeting with County staff Rob Alexander, Amy Schwartz and Therese Glowacki about Boulder County's PD control program. It was just me with them at the meeting, no one else from COB. I'm cc'ing this to Rob and Therese as well so that if I have mischaracterized anything they can correct it for you.

1. The entire BCPOS PD policy is all on line at this link: https://assets.bouldercounty.org/wp-content/uploads/2017/04/prairie-dog-habitat-element-grassland-policy.pdf
2. BCPOS started PD removals slowly 20 years ago. There have been 5 updates to the policy and it has changed significantly over the years. 20 years ago they started out by stopping the use of fumitoxin. **When we updated our PD policy, we did have the use of fumitoxin. It was always a last resort option and was only used after we reached a certain threshold or where not enough burrows/pds for trapping to make sense. We actually had the use of fumitoxin up until we removed it fromour options of our own accord….I'm going to say 5 or 6 years ago, as part of one of our updates.** Staff thinks this was very good, since fumitoxin was not good for people or the environment. Originally, the public thought trapping was more humane, so to keep the confidence of the public, for the first 6-8 years, (more like 18 years) BCPOS only used trapping, (with fumitoxin as a last resort and CO cartridges) and sent PD's to Birds of Prey and Ferret Recovery, where the PD's were killed. (Most pds were euthanized. A few were transported live….. but very few) But that didn't work. Over the years, BCPOS found that they were trapping the same properties year after year and not getting them clear. (Please note that almost all BCPOS trapped PD's end up killed sooner or later. Most are killed fairly soon after they are trapped. A few are kept alive and fed live to young ferrets so ferrets can learn how to hunt.)
3. Next BCPOS switched to using trapping to get numbers down to around 50 PD's per property, and then using lethal control. That didn't work well either. They were still not getting properties clear, and had to go back to the same properties year after year. There was really no switch. The preceding statement is what we were doing from the beginning
4. Now they have removed the 50 PD threshold from lethal control. They still trap first: 2157

PD's trapped in 2019 with 1400 coming from one property. But now they switch sooner to using lethal control for remaining PD's. Trapping is still a productive/effective method in some situations. Once we see that trapping efforts are not yielding adequate results we will initiate the compressed CO. They feel that their current strategy of totally clearing a sector of adjoining properties before moving on is going to work…… exposing many, many fewer pds to lethal control (much more humane), clearing properties sooner and being less costly

5. BCPOS originally began their Open Space program with 13 properties They now have 147 properties. I'm not sure these numbers are accurate. The point is that years ago we had significantly fewer properties. As our aquisitions have grown, so too has the properties designated s NPD but came with pds on them. So the scope and scale of their PD problem and control efforts has changed a lot over the years as their number of properties has changed. In 2019, PD's have been completely removed from 24 properties. Another 24 properties had PD's completely removed but PD's came back in very small numbers. BCPOS says their No PD Zones (NPD's) are 3-5% occupied and they are very pleased with their progress in 2019.
6. BCPOS has 13-14 properties that border COB OSMP properties with PD's, including Brubaker Sorensen, Alexander Dawson, Autry, 95th and Lookout, Imil, Loukonen, IBM, Twin corners and Canino. Those 13-14 properties have been cleared multiple times to no avail, since PD's constantly recolonize the BCPOS properties from uncontrolled PD's on OSMP properties.
7. BCPOS sends trapped PD's to both Birds of Prey (BOP) and Ferret Recovery. They make one delivery a week to each program during the summer, about a 1 hour long drive each way to each program.
8. BCPOS owns 400 traps total. At the height of the trapping season they might have 370 traps deployed every day. First traps are put out baited but ~~permanently~~ left open, to get the PD's used to going inside and having access to the bait. Then traps are set to catch PD's. Trapping is labor intensive, because every trap has to be opened in the AM and closed usually by noon or 3PM. That is so nocturnal animals such as skunks are not caught in the traps, and so that trapped PD's do not bake in the sun for too long mid-day. There is lots of paperwork with PD trapping and removals: delivery memo's, permits, etc.
9. BCPOS PD removal team is 4 seasonals plus Amy- a ¾ time ~~seasonal~~ permanent employeewho is the crew leader. ~~supervisor~~. ~~Many~~ One of our seasonals has returned for 8 years. Another has returned for several years.~~seasonals have been back year after year. They can only work 9 months due to current County regulations based on now defunct federal regulations. The moratorium (no removals during pupping season) also limits staff to 9 months of work.~~ Removal efforts are limited by a county regulation that caps annual hours a seasonal can work, budget and moratorium. The seasonal crew works about 9 months of the year.
10. Costs for BCPOS PD control include Labor, 5 PERC machines (CO - carbon monoxide) each with their own ATV @$16K, 2 trucks, maintenance of $1K/PERC machine/year, and CO cartridges. Last year the County spent $40K on CO cartridges, ~~with many going for tenants' use.~~ That number includes cartridges used by tenants.
11. BCPOS implements a permitting system for tenants to control pds on their leased land. The system provides for a requirement that tenants attend training classes ~~for their ag tenants who want to control PD's on leased land~~. ~~First~~ BCPOS does initial removal and gets numbers of PD's down or gone. Then tenants can do mopping up or take care of new arrivals. Tenants can use CO cartridges or borrow the PERC machines. In the last year, in a few instances we have reimbursed tenants for labor where the work is more than a maintenance activiy.

Tenants have to go through a training at BCPOS. They receive a 9 month permit to control in a specific area with a set bunch of rules. At first BCPOS required that tenants take the class every year, but after a few years it was the same old guys over and over so they haven't required the class for them recently. 4-7 tenants are currently getting permits and controlling.

12. Staff says that their lessons learned over the last 20 years include:
    a. Carbon Monoxide (CO) and Carbon Dioxide (CO2) are acceptable to the public. Relocation is not acceptable to much of the public, and relocation is not a good tool for PD control. Trapping alone without lethal control is not a good tool for PD control. Lethal control, when done right, is more humane than trapping. The animals are way more stressed for a longer time with trapping than with lethal control. All trapped PD's (except those being relocated) end up killed in the end. We have rarely been able to achieve anywhere near complete removal with trapping alone. By discontinuing trapping as soon as it is no longer productive/effective/efficient, and using lethal control, we expose many, many fewer animals to lethal control.
    b. It's better to throw all your resources at the PD problem early on so you don't have a growing problem. Half-measures don't work.
    c. Skilled staff are important, because you have to have an effective strategy when you clear a property. You have to know where and how to clear across a property so that you can defend the areas you have already cleared as you are clearing adjacent colonies.
    d. Staff has experimented with CO2 and found that it does not work well and is way more expensive than CO. In their experiments, it took far more gas volume to kill with CO2, and it was only 30% effective in killing PD's. To be effective, CO2 has to displace much more air volume in the burrow than does CO. The tanks of CO2 require special handling and must stay vertical, making them very difficult to position in the field.
    e. It takes a surprisingly long time (10 minutes per round of 4-6 holes) for the PERC machines (CO gas) to effectively kill PD's. This **time** pumps up labor costs for lethal control.
    f. The County's current moratorium on trapping and lethal control in the 3 months of spring while PD's are pupping is limiting, ~~a bad idea~~, counterproductive and causes far more PD's to be killed~~. It means staff effectively lose 6 months of control every year, because~~ Removal from March through May is an ideal time for effective control. The moratorium forces lethal control activities in December to February. These are very difficult months for PD control. Weather, short days, frozen soil which makes it impossible to back-fill holes for the PERC machine to work effectively, soil moisture conditions, air temperatures below 32 degrees causing condensation inside gas hoses ruining the machines, all make winter control very difficult and spotty. Staff would really like to eliminate the ~~get rid of the~~ moratorium, ~~because with it they feel like they are spinning their wheels~~, ~~and~~ because it is such an effective time to perform control and they do not lose ground to migrating, expanding populations during the moratorium. The moratorium results in more PD's to being killed.
    g. It is imperative to have good partnerships to make this all work. BCPOS works closely with neighbors to time removals of adjacent private properties with their own removals. Tenants, Colorado Dept. of Wildlife, Birds of Prey, Ferret Recovery are all key

partners as well. Working with neighbors and tenants has been VERY effective. Cost sharing with barrier fencing, coordinating removals, making PERC machine available to tenants to use all work well. BCPOS does cost sharing of removal teams with tenants, where the tenant hires labor and BCPOS pays 75%, tenant pays 25% of the ~~salaries~~ labor costs for the removal.

h. The literature says that PD's have 2-4 or 3-5 pups a year, but staff has observed up to 12 pups per nest at times.

13. In regards to the COB subcontracting some of their PD control to the County, staff does not want to touch it with a 10 foot pole. A big reason is politics and the different constituencies in the City and the County. But even in regards to sharing holding facilities for PD's going to ferret recovery or Birds of Prey, they don't want to share resources. The issue there is they don't know if COB has dusted burrows correctly before trapping. And once populations are intermixed, it is impossible to know where fleas and disease vectors are coming from. They can't separate out different PD groups because their holding facility is only one small room. This is especially important for the ferret recovery program, since ferrets are very susceptible to the plague.

Hope this helps. It would be really nice if the City could try to learn from the County here, and not embark on ineffective strategies of PD control. If the City decides to use policies that have already been proven not to work in Boulder County, it simply means that MORE prairie dogs will be killed in the long run, an outcome that no one wants.

Thanks for your consideration, Elizabeth Black

[redacted]

To Unsubcribe, click on [redacted]
and tell me to remove you.

HEAL_Logosmalljpg

From: Paula Shuler
To: OSBT-Web
Cc: Potter, John
Subject: One more - follow up on neighbor mitigation expenses
Date: Friday, January 31, 2020 10:41:27 AM
Attachments: Hester_North_Overflow.jpeg
OSMP Hester PD Occupation.pdf

External Sender

OSBT,

Last bit of neighbor expense input for now, it was just sent to me so I feel an obligation to forward the info. I can certainly ask more neighbors for their expenses but to me it is clear that neighbors of OSMP irrigated ag parcels with prairie dog occupation throughout Boulder County are spending time and money to keep PDs off their private property…prairie dogs that should not even be on irrigated agricultural parcels per OSMP's own management objectives. As I have said many times, prairie dogs migrating from OSMP parcels are negatively affecting neighbors and that must be part of the conversation/information to the public. Attached picture is of Hester property prior to OSMP purchase, it is a lush hay pasture. Pasture beyond the fence is the OSMP Hester portion, which I believe looks very different today due to PD occupancy. Map of PD occupancy from 2019 OSMP website is also attached.

Regards, Paula Shuler

From DH-
My Mother; Adrienne Hester who is 85, does not recall how long the Hester's have been using Rocky Mountain Wildlife Services for prairie dog mitigation on our [redacted]

What she does know is that my Father; James Hester (deceased), sold our 40-acre hay meadow and the adjacent northern parcel to the City of Boulder OSMP in 2002. Ever since 2002 we have had problems with the invasion and expansion of prairie dogs from OSMP lands once they became adjacent property owners.

Due to the catastrophic 2013 Front Range flooding, a significant portion of my Father's files/records in his basement Office were destroyed in the floodwaters.

As the Financial POA for Adrienne Hester, I have RM Wildlife Services' prairie dog mitigation Invoices from 2015 through 2019. During that timeframe, the Hester's have spent $5467 with RM Wildlife on prairie dog mitigation in our western, southern, and eastern pastures which share a property line/fence line with City of Boulder OSMP lands leased by Nebo Angus Ranch (Fred & Jan Stengel).

The Hester's also have an annual Grazing Lease Agreement with the Stengel's for our [redacted] property; that is approximately 12-acres.

Documented below are the number of prairie dog burrows that Rocky Mountain Wildlife Services has treated since 2015.

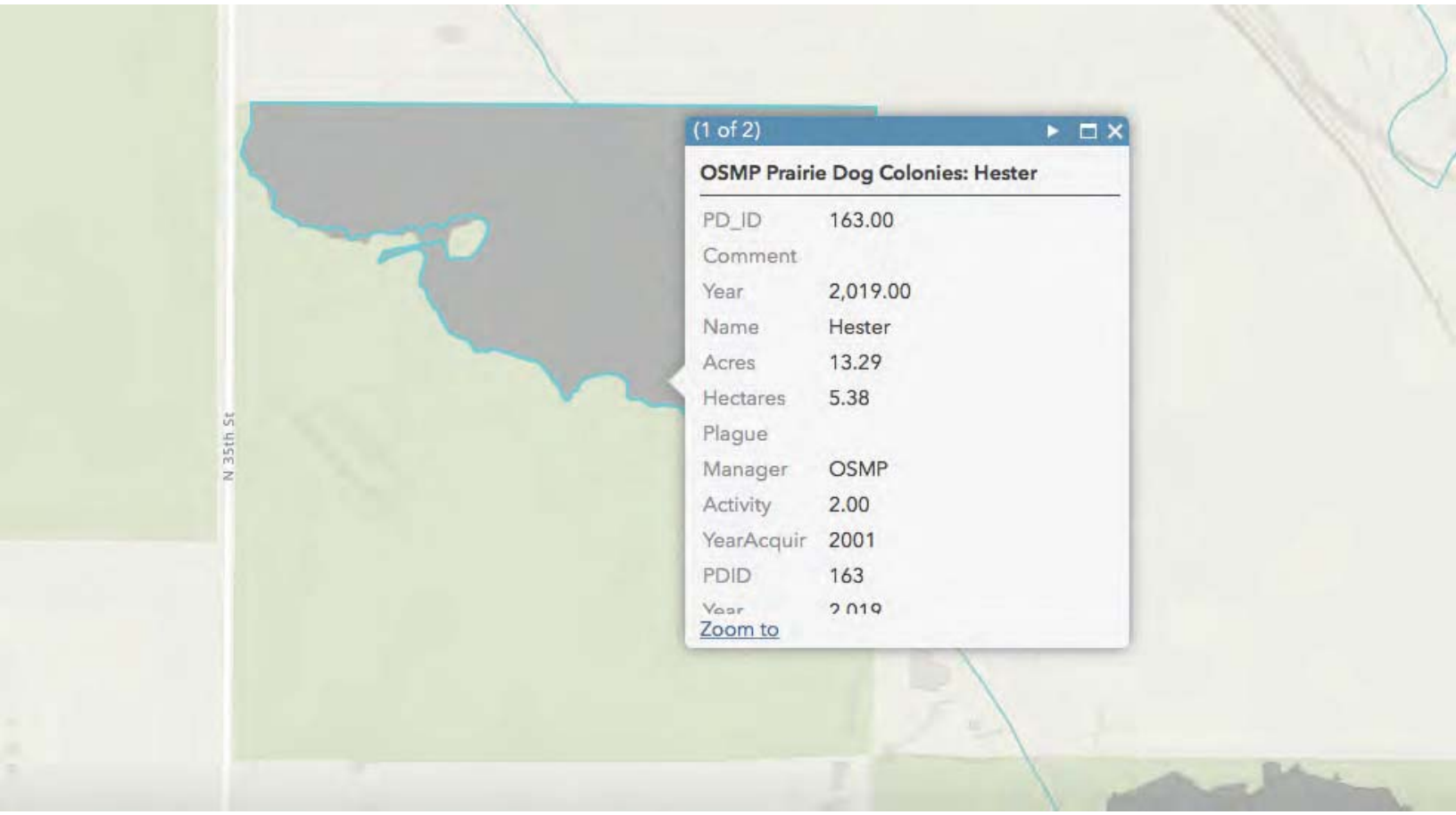
August 2015 = 447
July 2016 = 251
March 2017 = 235
July 2017 = 227
March 2018 = 290
July 2018 = 260
January 2019 = 255
(Note: the parcel they are treating is 12 acres and last year they treated over 250 burrows! PS)

The greatest reduction; that is 196 burrows or 44-percent, occurred between August 2015 and July 2016. However, since July 2016 the prairie dog population/number of burrows has remained about the same.

As I previously mentioned, we are fighting a losing financial battle to keep the existing prairie dog population in check that consistently migrates into our treated property from the adjacent City of Boulder OSMP lands.

Subsequently, since 2015 we have been consistently losing money overall in order to keep the [redacted] property in agricultural operations.

Dave
Financial POA for Adrienne Hester


N 35th St
(1 of 2)
OSMP Prairie Dog Colonies: Hester
PD_ID 163.00
Comment
Year 2,019.00
Name Hester
Acres 13.29
Hectares 5.38
Plague
Manager OSMP
Activity 2.00
YearAcquir 2001
PDID 163
Zoom to

From: Maria Wasson
To: Council
Subject: prairie dog mitigation on city open space land
Date: Saturday, February 1, 2020 10:06:58 AM

External Sender

January 30, 2020
To the readers of this letter,

My husband and I have lived and farmed in Boulder County since 1993.
We have an equestrian facility and grow and sell grass hay on our farm.

In 2001 (or 2002), the adjacent property to our north was purchased by the city of Boulder open space.
The property was a beautiful and bountiful grassland.

When the city purchased the property, they foolishly tilled up the grasslands and massive weeds grew heartily.
Also, the prairie dog population skyrocketed.

The property is now a wasteland full of weeds and prairie dogs that migrate into our beautiful pastures destroying them.

We spend countless hours and many thousands of dollars yearly mitigating the weeds and prairie dogs that come on to our farmland from the unkept open space property.

We have lost livestock to broken legs from accidents because of the prairie dog holes.

We used to be big proponents of purchasing open space properties. Now we do not support the purchase of open space because we feel that it is important to be good neighbors and to be good stewards of the land.

It is clear the city of Boulder does not care about neighbors or the land they purchase by reviewing their actions over the last 17 years.

It seems the prairie dog lovers win out on policy instead of the farmers who live and improve their properties in the county.

We believe you need to listen to the farmers regarding the prairie dog policies. You seem to listen more to the activists who do not even live on the land or frequently not in the county and yet direct your policy.

We do not advocate the of killing anything yet, there must come a time when culling the herd is actually better for the land and the surrounding wildlife.

We urge you to become responsible neighbors and land owners by mitigating the prairie dogs and weeds as soon as possible on all of your properties.
If you do not have the knowledge or resources to manage the land in a healthy fashion, do not purchase it.

Thank you for your consideration,
Maria Wasson
Stephen Miller M.D.

From: ffisher@[redacted]
To: OSBT-Web; OSMP Input
Subject: Fwd: Prairie dog control
Date: Sunday, February 2, 2020 12:59:33 PM

External Sender

From: Barb <[redacted]
Date: February 2, 2020 at 8:49:43 AM MST
To: "OSBTWeb@bouldercolirado.gov" <OSBTWeb@bouldercolirado.gov>
Subject: Prairie dog control

It has been my good fortune to have lived for twenty years key-holed into open space, an ideal spot for equestrian activities were it not for the proliferation of prairie dogs. The active enjoyment of the open space is now limited to a view of denuded, moonscaped acreage once designated as protected ag land. Our efforts of keeping the prairie dogs out of our land is a necessary daily event as the pressure is relentless. It is a horrid start to the day to have to keep the rodents out of our acreage but holes in our pastures are not an option.
As we drive to and from our home the evidence of destroyed land due to unchecked prairie dog populations is a sad testament to the ongoing problem.
Without a vigorous effort to eradicate the cause of vegetation loss we can look forward to airborne dirt whenever it is windy, another constant reminder of poor wildlife management.
We join other land owners whose acreage borders open space in hoping for relief other than plague as a control.

Barb Fisher

Sent from my iPhone

From: Cody Oreck
To: OSMP Input; OSBT-Web; Council
Subject: For your deliberation over the Prairie Dog issue
Date: Sunday, February 2, 2020 1:34:25 PM

External Sender

Dear Open Space Board of Trustees and City Council,

Thank you for your thoughtful service and leadership. I want to support you in making some very tough decisions about the management of our public lands that are zoned agricultural. Please consider the following:

1. The foundation of all ecological health is SOIL HEALTH. This is not only true for our own community but the IPCC (International Panel on Climate Change) has stated that we cannot stabilize climate without restoring healthy soil communities, involving a diverse ecology of millions of microorganisms, as well as multicellular life forms. Soil health has now been linked to human health as well.

2. As a community, we need to recognize that taxing ourselves to own thousands of acres of Open Space, both 45,000 acres (17,000 zoned agricultural) in the City of Boulder and 65,767 acres (19,828 zoned agricultural) in Boulder County, created a unique public responsibility and requires careful and holistically informed MANAGEMENT which is broader than CONSERVATION. Key definitions:

A. Simply conserving land in the arid West and in a changing climate post buffalo extinction is quite distinct from managing our grasslands to restore and maintain soil health. The future is not going to be like the past. We cannot assume that landscapes will recover (or not recover) in the way that they have. We are seeing soil degradation and soil desertification at a scale previously unimaginable.

B. Holistic management is a value-based decision-making framework that integrates all aspects of planning for social, economic, and environmental considerations. We can no longer afford to allow thousands of acres of publicly owned land to become desertified due to our inability to act as a responsible community willing to make tough decisions.

C. Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture. Human mismanagement can also be a factor.

3. We hope to unite in the concept of holistic management of our public lands, specifically those zoned for agricultural purposes, for the sake of carbon drawdown and a resilient local food system. Boulder is now officially at the forefront of the "Carbon Drawdown Initiative" with the world's eyes upon us. If

we cannot do this, who can?

4. The grasslands without the action of hordes of bison to excrete upon and trod the soil have become subject to desertification. The steps to restore the top soil and health of these lands are numerous but none are possible where prairie dogs have overrun the other plant, insect and animal species in the ecosystem. Prairie dog crowding is partly due to their lack of access to the vast uninterrupted biodiverse grasslands of the past. Trying to accommodate prairie dogs on the disparate areas of acreage that are zoned agricultural, divided by highways and development, has eaten away at the larger plan of a healthy local food system, as well as a healthy habitat for prairie dogs in the balance of public land not zoned for agricultural use.

5. We are proposing consideration of the use of lethal control of prairie dogs on public lands designated to be agricultural.

6. As taxpayers and responsible citizens, we need to have access to information such as the following:

A. the amount of agricultural public land degraded or desertified, especially by prairie dogs, said to be more than 2000 acres in the City and some six to 7000 acres in Boulder County.

B. the amount of taxpayer dollars spent on re-locating prairie dogs and whether those re-locations were successful or unsuccessful, said to be more than $100,000.

C. the amount of taxpayer dollars spent spreading toxins on public lands (particularly those deemed agricultural) to protect prairie dogs from plague.

D. an objective analysis of the consequences of the current policies on residents and agriculturists, their health and security, both inside and outside of the City of Boulder. We must normalize the legitimacy of challenging the status quo at this point in our human trajectory.

E. an acknowledgment of the fact that barriers do not work to shield land from prairie dog invasion and that continuation of that myth should be dissuaded.

7. We want to consider how to most effectively draw carbon down with our publicly owned agricultural land management as well as how to work toward a resilient local food system in the face of a carbon-constrained future. Regenerative agriculture and holistic management of farming/ranching acreage hold the best possibilities to draw carbon down on a large scale.

8. No one species should be preferenced over the millions of species required for healthy soil and the action needed to address climate change.

9. Limiting our sad and regrettable, however expedient, choice to use lethal control of prairie dogs on approximately 37,000 acres of open space designated agricultural, still leaves nearly 80,000 acres of open space to accommodate and

welcome prairie dogs into a healthy larger ecosystem. The longer we delay lethal control, the more the entire ecosystem stands to lose.
10. As a community, we would like to choose civil policy discourse and not condone threats and personal condemnation against those with diverse opinions. Reactionary backlash against people on either side of any argument should be relegated to the past. We are all responsible for climate change and doing what we can to mitigate climate change on our public agricultural lands can be an agenda we can all agree upon!

A few final points for your process:

1. Please understand that prairie dogs are being killed in large numbers, just not be the City and not by humane methods. We cannot continue to foist our problem off on our neighbors.
2. Controlling PDs today means fewer to kill tomorrow and pup season is upon us. This was already declared a crisis last year.
3. Staff's estimates of PD population and their costs are being manipulated to be egregiously low.
4. Irrigated ag lands sequester far more carbon that dryland so do not change designation of lands and move water to other land. Don't forget 'use it or lose it' on our millions of dollars of water rights.
5. Please consider adopting the County's BMP's for PDs until the City can figure out their own pathway.
6. Please change the County's spring moratorium in the City-adopted version so that it bans live trapping in spring but includes in-burrow lethal control.

Thank you again for your tough but terribly important leadership on this complicated issue. We stand ready to support you however we can!

Sincerely,

Cody Douglas Oreck
[redacted]

From: Elizabeth Potter
To: OSMP Input
Subject: Prairie dog study area related to City of Boulder OSMP lands!
Date: Sunday, February 2, 2020 12:01:32 PM

External Sender

To the Boulder Open Space Board of Trustees!

First off, you may remember that I came to one of your meetings a couple of months ago to talk to you about water issues. I appreciate that you listened to me at your meeting. I also appreciate the hard work that city staffers have put into the water issue. The city has hired great staff people, and their work and time is much appreciated.

I'm writing today as part of the comment period about lethal control of prairie dogs on City of Boulder OSMP lands.
1. I SUPPORT the lethal control discussion, and I want to tell you why, below. In addition, my husband and I support everything Elizabeth Black and Paula Shuler and our other neighbors are doing through the Healthy Ecosystems and Agricultural Lands group, and we hope to be able to come to your Feb. 12 meeting to speak. We're very happy to be part of a positive community working together to protect and conserve agricultural lands and help the environment.

You may or may not remember from when I spoke at your meeting that my husband and I bought the property at [redacted] about two years ago. This property is directly north of (City of Boulder Open Space and Mountain Parks) Axelson Open Space.
While we certainly love being a neighbor to City of Boulder open space, we do not love being close to all of those prairie dogs. We first put in more than a quarter mile of black fencing to try to keep them off of our land (about two feet high and one foot "under" in a trench, which was what was recommended to us by Sharon Bokan at the Boulder County CSU Extension office as the minimum amount needed to keep new prairie dogs from coming onto our land.) It worked very slightly.

We also used the preferred carbon monoxide gas canister method to clear at least 500 holes. That didn't appear to make a dent at all on the overall population.

Prairie dogs destroyed the native grasses on most of the 34 acres of our land before we bought it, and musk thistle, teasel and other noxious weeds abound. (Sharon Bokan and various county department folks have been out to our land, and everyone says the same thing - that this destruction has come from the prairie dogs.) **The prairie dogs and weeds are extremely unhealthy for the land and contribute negatively to climate change. We want to create an area of carbon sequestration with native grasses, other plants and trees. This will support more area wildlife as well as our plans to keep horses.**

We have spent countless hours hand-hoeing and shoveling the roots of the weeds for the last two years. We also decided not to till the land to date because we want to be as environmentally friendly as possible. (We were told that tilling and irrigation also would help solve the prairie dog problem, but are still negotiating with your city staffers about the irrigation. We own 17 shares of water but have not been able to get it onto our land to date because of threats from water lawyers). We have bought wheat seed and put it down several

times - Sharon Bokan at CSU Extension tells us that one of these growing seasons the wheat will finally take over the weeds in the currently barren area.

2. It is safe to say that we have spent more than $10,000 for fencing, our own efforts with the canisters, a removal service and the wheat seed, time, etc. to get rid of more than 2,500 prairie dogs over the course of the last two years.
We would appreciate if your board and the city council could make the lethal control policy decision and find FUNDING for it, as it would make Open Space and Mountain Parks be a better public neighbor. As I said, we are dealing with the continuous problem of prairie dogs coming north from Axelson Open Space, even with our fence up along the boundary.

3. Just to restate because of its importance - **we feel that the ecosystem on our land and the surrounding area is extremely fragile and out of balance because of the continued rapid population growth of the prairie dogs on Axelson Open Space**. We ask that you vote to approve lethal control and funding to carry it out so that we can restore the vibrant ecosystem we know existed in the past on our land.

Thank you so much for listening.

Sincerely,
Beth Potter
(a Boulder homeowner for 20 years, currently paying property tax on three dwellings)
[redacted]

From: ffisher mcallisterinvestments.com
To: Council
Subject: Fwd: Prairie Dog Control
Date: Sunday, February 2, 2020 8:48:26 AM

External Sender

To whom it may concern,
>
> I am writing to express my ongoing concern of the loss of valuable irrigated farmland in Boulder County due to Prairie Dog infestation. I live at 8800 Valmont Road and my property is key holed into Open Space. We are surrounded by a large PD colony. What once was beautiful grass land is now approaching a dust bowl. I would hope that from an environmental standpoint there would be a sense of urgency to restore the land that once gone may not be recoverable. I often feel like I am trying to convince deniers of global warming when it comes to the issue of saving the irrigated land from the PD challenge. Please consider lethal means as the most humane and effective way to get this problem under control. It is a crises that requires immediate attention to maintain the taxpayer investment in Boulder City open space. Please call with any question, suggestions, or recommendations at 303.912.4140.
>
> Sincerely,
>
> George Fisher
> [redacted]
>
>
> Sent from my iPhone

From: Mark Fitch
To: OSBT-Web
Subject: Fwd: prairie dog management
Date: Sunday, February 2, 2020 7:28:57 AM

External Sender

---------- Forwarded message ---------
From: **Mark Fitch** <[redacted]>
Date: Sun, Feb 2, 2020 at 7:15 AM
Subject: prairie dog management
To: <OSMPInput@bouldercolorado.gov>

I am asking you to use lethal means in order to control the numbers of prairie dogs on city open space land. Your current practices have been unsuccessful. Please stop the destruction of the land. Destruction of the land plays a significant role in the carbon foot print and climate change issues.

From: Elizabeth Black
To: OSMP Input; OSBT-Web; Council
Subject: Comments on Draft of Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs
Date: Monday, February 3, 2020 1:21:53 PM
Attachments: image003.jpg

External Sender

To OSBT, OSMP Staff, and City Council,

I appreciate all the hard work that went into OSMP's 59 page draft "Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs". However, I believe it has some problems which must be addressed, to make it a clearer, more informative and more useful document. That being said, I am very concerned that revisions to the draft not delay the expedited review any further. I am happy to assist in any way I can to keep you to your timeline dealing with the emergency of prairie dogs destroying our irrigated agricultural lands.

Please make the following changes to the draft:

Many people mistakenly believe that lethal control of PD's on irrigated agricultural lands means that OSMP will kill ALL OSMP PD's. In its opening paragraph, this draft needs to make clear that no matter what happens on OSMP's irrigated agricultural lands, there will still be "X" thousands of acres of OSMP protected prairie dog habitat with an estimated "Y" thousands of PD's, and that lethal control is not being considered for any PD's in OSMP's Habitat Conservation Areas.

The public wants to know how many PD's are currently in all of Boulder County, on OSMP, BCPOS and private lands. While I recognize how hard it is to get an accurate count, an estimate or range of numbers will be helpful. In the past, OSMP staff estimates for numbers of PD's per acre have been low, and do not correlate well with the rapid expansion of PD colonized acreage, the increasing densities of burrows in a field, or the numbers of PD's neighbors are killing each year. Please provide more accurate estimates for numbers of PD's county-wide in the revised draft.

Boulder residents and Council are very concerned about climate change and have identified soil carbon sequestration as a promising strategy to deal with it. Our irrigated agricultural lands are some of our best places to sequester carbon, as the Citizen Science Soil Health Project has shown. Water is life, and irrigation water positively correlates with better soil health and more soil carbon sequestration. Yet on various maps, OSMP staff has changed the designation of some highly-infested historically irrigated properties with valuable water rights. OSMP has changed their designation from "irrigable lands" to "managed lands". OSMP now speaks of moving water off these properties to other areas. Without water, the carbon sequestration, soil health and remediation potential of these "managed lands" will degrade even further. Please change the designation of these "managed lands" back to "irrigable lands", and keep the water on these lands, so that they may be restored in the future and sequester atmospheric carbon.

The public needs to know in clear non-legal language how the current City Code can be revised so that OSMP can effectively, efficiently and humanely use lethal control to protect their irrigated agricultural lands. OSMP must be able to quickly respond to PD incursions onto irrigated lands, so that only small numbers of PD's will be killed. OSMP must not be required to go through a lengthy permitting process, which means invading PD's will multiply

and many more PD's will be killed. A Code revision for an "affirmative defense" allowing lethal control on irrigated agricultural lands with NO six-step-process must be front and center on any list of actions. Please prioritize "Allow burrow destruction on irrigated agricultural lands" and "Allow Lethal Control on irrigated agricultural lands". All other actions are dependant on it, and the current draft does not make that clear.

The public wants PD's removed from irrigated agricultural lands in the most effective, efficient and humane way feasible. "Effective" means methods that will totally clear the land of PD's so that there are 0% PD's left on irrigated agricultural lands. "Efficient" means methods that will clear the lands the fastest at the least cost. "Humane" means lethal control methods that will cause the least pain and suffering to the PD's. Evaluate current and proposed removal methods on these criteria, rather than on "staff availability", "straightforwardness", or "appeal" (the current evaluation criteria.)

As Albert Einstein said, "The definition of insanity is doing the same thing over and over again, but expecting different results." So it is important in the draft to call out the ineffective methods OSMP is currently using to control PD's on its irrigated agricultural lands. Please outline each method currently used by OSMP, and state why it is ineffective and insufficient to deal with the current emergency.

Everyone wants **humane** lethal control, but there are many misconceptions about the relative pain and suffering of different methods. For instance, many people don't understand that all live trapped PD's, except for the very few that are relocated, will either be gassed or eaten alive after a high-stress period in a cage. Include an evaluation of the relative pain/suffering to PD's of various lethal control methods. Please be sure to include pain and suffering of death by plague in this comparison.

Many residents care deeply about the use of pesticides on public property and pesticides' effects on both domestic honey bees and wild native bees. PD protocols for live-trapping require pre- and post-live-trapping dusting of burrows with pyrethroid-based Delta-Dust, a pesticide highly toxic to bees. This hidden cost to the environment of live-trapping protocols must be clarified. Include an evaluation of the environmental risks of Delta-Dust in live-trapping, in consultation with Rella Abernathy, Integrated Pest Management Coordinator COB.

The public wants to know what has worked in other places to control PD's. Outline what has worked to control PD's on other agengies' agricultural lands, such as Boulder County's.

. Cost estimates must be transparent and state all assumptions used to make the estimate (i.e. # PD's/acre, itemized costs included in the estimate, reliability of contractors, etc.). Numbers reported by staff have varied wildly in past hearings and memo's. For example, a relocation cost of $350/PD was quoted by staff at a May 2019 Council meeting, but this draft quotes a relocation cost of $147/PD. If this new cost is to remain in the draft, it must be substantiated.

. I applaud staff's addition of lands east of the Diagonal into the project area. However, I ask that you also add the Belgrove and McKenzie properties. Belgrove is on the south side of Jay, bounded by the Diagonal to the southeast and 47th to the west. It borders the project area, and PD's from Belgrove will continue to invade land within the project area to the north, since highways and development preclude their migration to the south, east and west. McKenzie is just east of the Diagonal, bordering Jay Rd and the project area. OSMP is in danger of losing the McKenzie tenant due to uncontrolled PD's.

. As OSMP has learned at the failed Bennett property carbon sequestration experiment and on other properties, "Restoration" is useless unless PD's are first completely removed from irrigated lands. To date, OSMP has never successfully restored a single property occupied by PD's. "Restoration" must be separated out from the draft list of ON-THE-GROUND ACTIONS in Tables 6 and 7, and evaluated as a separate addenda at the end of the report. To include it with other ON-THE-GROUND ACTIONS leads to the false impression that it can be compared with them, which OSMP's years of failed experiments has shown is not the case.

. Finally, the public wants to know what actions OSMP staff recommend for this controversial, emotionally-charged emergency. I suggest that staff recommend that the City adopt Boulder County's Best Management Practices for lethal control of PD's on irrigated agricultural lands. Boulder County's 20 years of experience controlling their PD populations has taught them the hard way what works and doesn't work. Their program is acceptable to the majority of County residents. However, there is one key policy which the City should change in Boulder County's BMP's: their moratorium on trapping and lethal control during the spring pupping season. County staff says the spring moratorium severely hampers their ability to conduct effective clearing of their NPD's. This moratorium is a hold-over from the days when the County conducted ONLY live-trapping, and the public did not want females trapped while their young remained dependant. I suggest revising this BMP to allow lethal control but no live-trapping during the spring pupping season. In the long run, this change will mean that fewer PD's will be killed.

I believe these changes to the Draft will make it a much clearer, more informative and useful document. Thank you for your consideration and patience,

Elizabeth Black

[redacted]

To Unsubcribe, click on [redacted]
and tell me to remove you.

HEAL_Logosmalljpg

From: Frank Pacocha
To: OSMP Input; OSBT-Web; Council
Subject: Prairie Dog problem on City of Boulder property in Boulder County OUTSIDE of Boulder City limits
Date: Monday, February 3, 2020 12:33:58 PM

External Sender

To Whom It May Concern,
We have lived in Longmont, Colorado next to City of Boulder Open Space, for over twelve years and love everything about this location, except for the Open Space prairie dogs that are migrating from this decimated City property onto the neighboring private properties. It has been years of costly maintenance trying to keep our property from becoming like so much of the City Open Space barren, weed infested prairie dog lands. The prairie dog population is totally out of control. We are animal loving people, and have horses and dogs, and care about wildlife but feel that lethal control of prairie dogs is long overdue to subdue these rodents. It costs us hundreds of dollars a year for prairie dog mitigation on our property, so that we can grow enough hay to feed two horses, thousands of dollars the year we put in as much prairie dog fencing that we could afford. Not to mention the hours and hours of physical work and time to fill burrows so that our horses can graze without our fearing that they'll get injured. On a good hay year we can get 275+ bales of hay which feeds our two horses, recently we have gotten 40-50 bales! This of course, incurs another $1200 expense, which we would not have if the City of Boulder did any control on the property they own.
The City needs to act fast on prairie dog mitigation and improving the quality of their properties which are turning into barren dirt/weed parcels!! This is not fair to all the private neighboring properties and not fair to the generations to come to leave them with this current out of control rodent issue. Regarding those who are vocal prairie dog supporters, I would guess most of them are not directly impacted by them as City of Boulder Open Space neighbors are. We are animal/pet lovers just trying to keep our animals (and also our grandchildren) safe on our property.
Thank you for listening and acting in the best interest of us and generations to come.

Sincerely,
Frank and Christine Pacocha

From: Linda Parks
To: OSMP Input; OSBT-Web; Council
Subject: Boulder"s Agricultural and Open Space Lands: What is Our Legacy?
Date: Monday, February 3, 2020 5:32:43 PM

When I moved here in 1991, our grasslands were bountiful and ecologically diverse. Our City and County Open Space grasslands would ebb and flow in the wind—reminding me of the ocean waves of my childhood growing up on Long Island. On Jan. 18, 2000, the City of Boulder adopted an ordinance prohibiting the poisoning of prairie dogs (PDs). The ordinance was amended on July 3, 2001 to prohibit destruction of active prairie dog burrows.

What has this caused?

The severe degradation of agricultural properties and native grassland habitat. Today, with climate change and land fragmentation, this species-specific protection has led to exploding populations that have stripped the land, destroyed grasslands and habitat for other native species, damaged soils, and the loss of our historic agricultural practices. Not only that, the current heavily populated fragmented living conditions of PDs is inhumane. The farmers and ranchers who lease and manage these open space lands are struggling, and the ordinances currently in place need to be revised so they can effectively manage the lands. OSMP simply does not have the staff, money, nor the time to take this over if these farmers and ranchers leave.

What does our current and future open space lands look like:

- loss of revenue
- abandoned lands left to deteriorate
- loss of valuable water rights
- unproductive agricultural lands for crops and grazing
- loss of top soil: native grasses and flowers replaced by invasive weed species
- bad air quality, there are no longer grasses to hold the soils in place (just last week the high winds create da dust storm at Boulder Valley Ranch Open Space and I had to put on mask while I walked)
- loss of grassland habitat for ground nesting birds

County vs City: might as well build a wall!

I had the opportunity to attend the recent Boulder County Open Space Open House, in Longmont this past January. Participants included County Open Space managers, wildlife biologists and other interested citizens. The presentation, with Q & A time, reviewed the 2019 progress of their prairie dog (PD) mitigation efforts on northern agricultural lands in the County, the results in 2019, and the future of 2020. County land managers are working hard to preserve agricultural lands, and appear to be doing a much better job of it. They are more proactive than the our City land managers—and getting things done! City land managers and Council are doing a lot of talking, have a lot of management plans, but getting little done, and these lands are

in crisis. They are not being good environmental stewards, they are listening to a very unbalanced group of individuals—the Prairie Dog Working Group—and they are not being good neighbors!

Why can't City and County work together? Apparently, *"Policies do not cross borders*", as one official stated that evening. What happens to the co-owned properties, and properties that border each other? What happens to private property if you border County or City land? Well the cost to mitigate is on them. So many private land owners are living a nightmare.

During the presentation I was able to ask two questions of a Wildlife Biologist:
1. How many prairie dogs can one raptor eat? She answered: "*If they are lucky, one raptor can eat one PD per day."* (from my observation, for more than 20 years, they actually prefer rabbit, mice and snakes—as do coyotes).

2. If introduced, how many prairie dogs can one ferret eat per week?

She answered: *"One ferret can eat up to three PD's per week."* (please note that this would only occur on HCA land not agricultural land, and we might be looking out as far as 2022 before a reintroduction occurs).

Now, I am not a mathematician, but if we have 20,000 plus PD's on City of Boulder Agricultural Open Space alone, exactly how is this going to work? Even more disturbing to some is that OSMP dusts burrows with pyrethrin (Delta dust), pre- and post-trapping for relocation, to prevent the possibility of plague. Many of us care deeply about the use of pesticides on public property and its effect on humans, bees, amphibians and other beneficial insects—needless to say how that is effecting the soils. It is also preventing the plague which currently appears to be the only tool open space managers have been using to control populations.

City of Boulder Open Space—so what can we change?

The lethal control of prairie dogs (PD's) is a difficult subject for both OSMP staff and others in our community. However, it is OSMP's job is to protect our public lands and ecosystems, not a single species at the expense of all else, and to follow the Charter, the OSMP Masterplan, the Agricultural Plan, the Grassland Plan, and Boulder's Climate Commitment. We need to:

1. Change the current ordinance and remove special requirements to mitigate.
2. Allow lethal control, and allow burrow destruction on agricultural properties after mitigation to prevent PD's from returning.
3. Start now before another pupping season in May—to wait is inhumane.

Water is Life. Soil is Life

Agricultural lands need to stay irrigated, and without water there is no life. We do not want to lose water rights and we can not afford to lose precious topsoil. At the scale we are at now (20,000 + PD's, double that come May) on City of Boulder Open Space agricultural lands alone, we have few choices. Barriers aren not effective, relocation lands are not available and with it comes high mortality rates, catch and release live animals to ferret reintroduction programs not realistic, not the most human way, and with the numbers we are talking about not going to work. The one humane choice right now—Pressurized Exhaust Rodent Control (PERC). PERC is one of the most potent, yet humane ways to control rodents. Allow burrow destruction on agricultural lands.

Let's make the right decisions for the future soil health of our lands and ecosystem for all species. Let's get started now before another pupping season that will lead to more destruction of our lands.

Warmest Regards,
Linda Parks / Designer
[redacted]

From: Sabrina Gerringer
To: OSMP Input
Subject: Prairie Dogs in City Ag Lands
Date: Monday, February 3, 2020 6:48:56 PM

External Sender

Hello- My name is Sabrina. I have lived in unincorporated Boulder County for a dozen years. I own a small 10 acre farm. I grow grass hay. I live adjacent to one of your Agricultural properties, Brubaker-Sorrenson. It is a designated No Prairie Dog Zone. I have watched the land deteriorate on a daily basis due to overpopulation by PRAIRIE DOGS. There are large areas that no longer grow grass. When the wind blows you can see what little topsoil is left blow east. It looks like a desert landscape with tall mounds (moundtains). The irrigation water on your land doesn't flow as it once did because the prairie dogs have rearranged the landscape. Nothing is growing. The people who lease it from you can no longer use the land as they have for decades because your property no longer grows grass. Why? Because the prairie dogs have denuded the landscape. To make things worse, Now I have to deal with them infiltrating my property! I am able to "take care of them" as soon as they begin to come over .. but The City of Boulder is turning me into a killer!! It pains me that I have to spend time money and energy dealing with YOUR escaped prairie dogs. The only time we had a reprieve, is when the plague came through years ago. Now, come to find out, you are spreading Delta Dust on the property… I have bees and don't appreciate your using a known toxic pesticide so close to our land. It is time for the City Of Boulder to implement new policies on city agricultural land in the county. You need to adopt the policies that boulder county is using. Lethal control is the only means to remedy this exponential problem you have created by allowing the prairie dogs to ruin agricultural irrigated lands. You have screened them out in part of the southern portion of the property- so now they won't cross Neva road and travel south to my neighbor's.. they'll come over to my house. Screens do not work! Fencing does not work. Lethal Control is the only method to restore the lands back to irrigated agricultural land. You are Devaluing our properties out in the county. The City is a terrible neighbor!! Take a look at how the County mitigates and take note!

The way you have been doing things is not working. You are losing valuable agricultural land and the history of boulder county. Prairie dogs belong in your grasslands, not on your historic irrigated agricultural lands. Be a good neighbor- consider lethal control!!

Please please consider changing your policies! Lethal control is the only way to save our soil and save our historic agricultural lands from being denuded by prairie dogs.

Sabrina Gerringer
[redacted]

From: Suzanne Webel
To: OSMP Input; OSBT-Web; Council
Subject: Boulder"s Opportunity to Manage its Prairie Dogs
Date: Monday, February 3, 2020 4:24:32 PM

External Sender

Greetings, neighbors!

An Introduction and An Ask

Yes, you are my neighbors, since my farm in unincorporated Boulder County shares a very long (.5 mile) property boundary with OSMP's Bennett property south of [redacted]. I want you to feel my pain at having to be OSMP's neighbor and I want you to do something NOW to alleviate that pain. Specifically, I want the City of Boulder to add lethal control of prairie dogs to its agricultural management tool box.

I wish to state at the outset that like just about every other farmer I know, I have a deep connection to the land, its wildlife, its biodiversity, its ability to sequester carbon for the planet's health, its cultural heritage, and its agricultural productivity. I am also a scientist by training and I apply that discipline of rational thinking to everything I do. I manage my farm for a wide range of priorities but my overarching priority is maintaining a sustainable balance among them all.

History and Current Status

Before OSMP acquired the Bennett Property property in 2007 and for a few years thereafter, it had been leased by three generations of a longtime tenant and old-Boulder-County family. They in turn raised several generations of black cows, maintained the property including irrigating, fertilizing, fence repair, weed control, and prairie dog management. We bought our 80-acre farm in 1996 and the tenants next door were excellent neighbors of ours for two decades. And then along came OSMP.

As you may know, the Bennett Property quickly turned into a nightmare for OSMP. The rigid policy of preventing tenants from controlling prairie dogs meant that the prairie dog population spiraled out of control. No longer were they contained to a relatively small area (<10%) -- as of last year, prairie dogs had taken over virtually the entire Bennett property (almost 70%, including parts of it that are unsuitable for prairie dogs and part that is under water). The amount of forage available for the tenant's cows diminished to the point where there was none left, due to prairie dog overpopulation. So in 2013 she started renting our hay fields for her cows in the winter and she also purchased some hay from us, to provide that much-needed forage for calving, and providing us with some much-needed winter income for several years. Eventually, however, OSMP's prairie dogs stripped the Bennett land of all its topsoil and brought in an infinite supply of many species of invasive weeds. The longtime tenant could no longer eke out a living on this property and pulled up stakes altogether in 2018, moving to Nebraska and depriving OSMP of an excellent, responsible tenant, depriving us of a great neighbor, and depriving us of some agricultural income. We are now left with uncontrolled prairie dogs, uncontrolled weeds, and uncontrolled soil erosion (it is heartbreaking to see the soil blowing away in great blinding waves during the vicious windstorms that blow year-round off the Bennett property and other mis-managed public lands in this neighborhood). Increasing uneasiness among the neighbors and outright complaints

about this situation have met with hopeless shrugs by OSMP managers. A so-called "Prairie Dog Task Force" was convened to study the matter... but its makeup did not adequately represent any of the stakeholders I know and its conclusions did not represent us either.

Meanwhile, since there is nothing left for the prairie dogs to eat and destroy on the Bennett property, they are now moving onto my farm -- by the thousands. I raise certified weed-free hay, which I try to do as organically and holistically as possible, but the accelerating prairie dog diaspora from the Bennett property has invaded our hayfields. They not only create rock-hard mounds and holes that make irrigation and haying operations impossible, they also destroy desirable forage and they are directly responsible for bringing noxious and invasive weeds with them. Prairie dog holes are hazardous to the horses we board and ride on the farm, because if a horse were to step accidentally into a hole it would break its leg and have to be euthanized. Finally, having any of approximately 64 noxious weeds in my hay crop, many of which are now rampant on the Bennett property, would jeopardize my status as the only remaining certified weed-free hay producer in Boulder County (https://www.colorado.gov/pacific/sites/default/files/Colorado%20Hay%20Directory_0.pdf).

Whereas it used to be possible to ignore the few prairie dogs that strayed from the Bennett property under our common fence line, I can no longer ignore them and they are no longer manageable by any but the most extreme and expensive methods. I try to maintain a "line of defense" against OSMP's prairie dogs at least 20 feet wide, several times a year. If I did not, my entire farm would succumb to devastation by prairie dogs and all sources of agricultural revenue for my farm would dry up.

For purposes of your upcoming policymaking discussion about prairie dog management, I have calculated the direct costs to me of OSMP's irresponsible prairie dog policy on my farming operations since the City of Boulder purchased the Bennett property next door in 2007 (13 years ago). Here is a partial analysis:

Assumptions re: Acreage Affected by Prairie Dogs from OSMP on My Farm

1/2 mi (2,640 feet) of common OSMP boundary fenceline occupied by Prairie Dog colonies
x 20' wide swath, average, of PD infestation (=52,800 SF)
=1.2 ac (52,800 SF / 43,560 SF/ac)
1 PD hole/100 SF, average
440 holes/ac = 528 holes total
ave. x 9 PDs/hole = 4,752 PDs on my farm alone; and yes, they all come from OSMP. Every. Year.

<u>My Costs and Lost Income re: OSMP's Prairie Dogs</u>

1) Prairie Dog Management

$1,440/yr mitigation ($480/application x 3x/yr using a variety of products and techniques including professional exterminators)
+$ 450/yr labor (30 hrs, incl. mine, at $15/hr -- I do it mostly myself; if I were to actually "pay" myself that -- most people charge a lot more than that,
especially the professional exterminators -- this number would be a lot higher)
= $1,890 my cost, annually, minimum

2) Weed management, on PD-affected acreage only
1.2 ac x $100/ac weed suppressors + misc mowing/trimming/pulling expenses = $150, annually
50 hours @ $15/hour = $750 annually
= $900 my cost, annually, minimum

3) Reduced productivity of my hay field, PD-affected acreage only
1/2 mi of holes, mounds, etc. that get into my hay field = 1.2 ac. (see above)
1 ton/ certified weed free hay yield per cutting = 33 bales/ton
$12 ave price/bale = $396/ton
x 1.2ac = $475 lost forage, annually, minimum

4) Lost farm revenue due to neighbor moving away in 2018
$1,400/yr lost lease income (54 cow/calf pairs for 55 days), ave.
+$1,000/yr lost hay sales ($12/bale x 80 bales), ave.
= $2,400 lost income from neighbor, annually, minimum, ave.
x 5 years (2013-2018) = $12,000 total
/13 yrs normalized for this analysis
= $923 annual average lost income from cattle boarding and hay

Sum of 1-4) = $2,298 Total Costs and Lost Income, annually, minimum

x 13 years of OSMP ownership of the Bennett Property next door

= <u>$54,445 Total Cost to Me of having OSMP as a Neighbor (!!!!!)</u>

<u>Summary</u>

So ... has OSMP been a good neighbor? You can now answer that question (hint: you haven't paid me one red cent in compensation for damages incurred by your prairie dogs, and so far you haven't done anything to ameliorate the situation on your side of the fence). But OK, let's say I'm willing to let bygones be bygones.

I am hopeful for the future, because OSMP has finally begun to recognize the severity of the Prairie Dog problem on its irrigated lands. Good start! Staff and the OSBT have acknowledged that non-lethal attempts at PD control are hopelessly inadequate and prohibitively expensive. Good progress! The City of Boulder says it wants to support agriculture in Boulder County. Good goal! You can help us all move forward by starting to be more responsible agricultural land managers, both on your own properties and in your support of your agricultural neighbors who are actually trying to be good stewards of their own land while also trying to make a living as farmers. Please do!

<u>The only way for OSMP be good managers of agricultural lands is by being able to use lethal control when appropriate on irrigated lands as well as certain dry ranchlands, in order to manage the prairie dogs whose populations have exploded in recent years and are making all of our lives miserable. Only then will you be able to meet your own goals and get back in compliance with the City Charter: reclaiming the land, stabilizing the soil, maintaining vegetative cover, sequestering noxious carbon dioxide, and more ... thereby once again making the land productive for agriculture, nature, and people in Boulder</u>

County.

Thank you.

Suzanne Webel
Starlight Farm

From: Molly Davis Fine Art
To: OSBT-Web
Subject: Please read!
Date: Monday, February 3, 2020 7:12:58 PM

External Sender

Dear Trustees,

Our city is experiencing a critical mass in the concentration of prairie dogs in our system. We have let our situation get completely out of control in our Open Space irrigated lands. Please consider the following points.

1. This is public land which we have a fiduciary responsibility to manage better than we are doing currently. We do not have the right to have advocacy groups make unrealistic demands on our system.
2. The loss of land and the subsequent loss of income that we used to make from the leases for the OSMP department is staggering.
3. The numbers of prairie dogs in our system currently is staggering. The estimates of 30 dogs per acre is probably grossly underestimated according to many of the tenants in our Northern Properties who have to deal with them on a daily basis.
4. The cost of relocation with a best case scenario of 147.00 per dog, is going to cause the department to suffer a huge financial hit that it cannot and should not have to absorb. If we have to go to these extremes for one species, then what might we have to suffer through with other species, like bears, etc. should specific interest groups take a position similar to this in the future?
5. The departments lack of being able to motivate and respond to such a crisis should be evaluated. Even if plague should show up on properties, and that property was a voice and sight location, and if the dog got a plaque contained prairie dog it could spread it to the dog and then to its human.
6. The lessees that contribute to our system are invaluable to OSMP being able to manage properties. To replace tenants who have institutional knowledge of our system would unfeasible for the department. OSMP does not have the amount of manpower needed to manage these lands should we continue to lose key tenants like Steve Penner.
7. We are not being good stewards to our neighbors who border our properties. We are causing them thousands of hours and dollars to rid their properties of our prairie dogs. They have been understanding up until now, but I have concerns about law suits in the future against our properties as they perceive us as poor land managers. I recently met with a large group of these neighbors.
8. The soil health in these areas is against what we have identified as a climate commitment priority. The land has literally blown into the valley, and there is just bedrock in many places, with no top soil.
9. If we have senior ditch rights on some of these properties and we mishandle the water, what potential problems are we creating for ourselves in the future? It is a “use it or lose it system” with water rights.

10. We should consider two tracks. One a fast track with the 100% removal of prairie dogs in the Irrigated lands in the Northern OSMP system immediately. Second a slower track that would allow for a code change allowing“ affirmative defense” and allowing lethal control on lands without the six step process.

We need to respond, act, stop studying the problem and do something about it. The tenants, should have the ability to respond with lethal action on their properties, giving them the same ability that the county does to control overpopulation. We should partner with the county, adopt their policies which work much better than the city.

It is a crisis of huge dimensions. It should be immediately dealt with. To allow more dogs to multiply only to their own demise, is more cruel than doing nothing.

Molly Davis

OSBT 2013-2018

From: DENNIS ROBINSON
To: OSBT-Web
Subject: Prairie Dogs on CBOS Irrigated Farm Land
Date: Tuesday, February 4, 2020 7:12:40 AM
Attachments: CBOS Prairie Dogs Board of Trustees.pdf

External Sender

Dear CBOS Board of Trustees,

Please find a letter attached regarding the subject of this email.

Best Regards,
DENNIS ROBINSON
[redacted]

February 2, 2020

To: City of Boulder CBOS Board of Trustees

Dear Board Member,

We are writing this letter to share with you our experience of living in a home surrounded by Irrigated Farmland owned by the City of Boulder Open Space.

In the spring of 1997 we purchased a 3 acre lot at [redacted]. with the plan to construct our dream home in the country. We were excited about being an island inside of City of Boulder Irrigated Farmland, thinking it would be like living on our own farm, enjoying open space, irrigated hay fields and the tenant farmer would be doing the normal farm activities of raising crops and cattle. It was truly a dream coming true for us.

The day we closed on the purchase of our lot we excitedly headed out to spend time on our new property.

What we found when we arrived was something new, prairie dogs had been released at the south east corner of our lot by the City of Boulder Open Space. We could not imagine what the rational was for CBOS making this decision having lived in Boulder for my entire life I was clearly aware of the problems prairie dogs create for farmers and neighbors to their colonies. We had never imagined the City of Boulder would intentionally set up the destruction of irrigated farm land they had purchased with the promise of maintaining the land as irrigated farmland. The tax payers had supported this promise by voting to support the CBOS request for funds. Was this a mistake? No, it was a bad decision by CBOS but not one to be reversed.

We were devastated to say the least, now we owned 3-acres with the plan to build a home and enjoy the wide open space we had searched for years to find near Boulder and now we knew our challenges would be many if we expected to keep our land free of prairie dogs while they naturally expanded into thousands of prairie dogs beginning with less than 25 moved in intentionally by the CBOS. Our choice was to stay and fight or ditch our dream and hope to recover our cost of the lot and start the process all over.

We decided to move forward and build our home. We moved into our new home the summer of 2000 in July. We had constructed a fence surrounding our property but it was not a sufficient barrier to the prairie dogs and they were now a large colony of hundreds and routinely building tunnels into our property. The process of finding new holes and doing whatever we could to stop the march was a daily task and has cost us thousands of dollars and much frustration. Eliminating prairie dogs on a daily basis, is an unpleasant way to spend ones time, but this is the plight of a neighbor to City of Boulder Open Space prairie dog colonies. You either eliminate the prairie dogs on your land or your land turns into a dust bowl with no vegetation. Our situation is common for anyone owning land next door to CBOS prairie dog colonies.

Being a farmer who is the tenant of the CBOS is also a challenge more than owning land next door. In our case we have had two different tenant farmers during the 20 year period. Both have worked hard to make their deal work with the CBOS but it has been far from what they expected. Their hands are tied when it comes to the prairie dogs. They are not allowed to do anything to stop the expanding colonies. The vegetation is destroyed as the colonies expand and the farmers income plummets to the point that it is not a feasible endeavor.

Farmers with the skills to farm CBOS irrigated farm land are a small group in our community and getting smaller every year as result of the policies of the CBOS being influenced by the people who raise their uneducated voice in support of prairie dogs. These voices have no experience of the day to day life and business of a farmer but they silence the voice of an experienced farmer who's families have lived on and worked these, farms for generations, now owned by the City of Boulder. These voices are disrespectful and intimidating to the farmer.

Many of the tenant farmers want to raise grass fed beef rather than raise cattle in a large feed lot. This goal is a worthy one and one that the CBOS should work hard to support by allowing the farmers to control the existence of prairie dogs on this precious irrigated farm land.

In our humble opinion it is far past time the City of Boulder listen carefully to the Tenant Farmers and the Neighbors of CBOS Irrigated Farm land and respect their experience of being farmers and neighbors of CBOS. New

comers to neighborhoods learn first and act carefully in respect of those with a long experience of the neighborhood. CBOS has done the opposite and it has not worked out well for it's neighbors rather turned into a daily nightmare of defending our investments denying us of quiet enjoyment of our homes and land.

We would welcome you to come and visit our land and home so we can show you first hand what we deal with day to day.

Respectfully,

Dennis and Joan Robinson - [redacted]

From: Joel Schaap
To: OSMP Input; OSBT-Web; Council
Subject: Input on PD Expedited Review
Date: Tuesday, February 4, 2020 10:40:15 AM

External Sender

OSBT, OSMP Staff & Council,

We never had a prairie dog problem on our farm until the City of Boulder became our neighbor. The City of Boulder makes it extremely challenging for all the neighbors. Boulder's non-management of prairie dogs on irrigated agricultural parcels has become our problem. I am not against prairie dogs and I do not like to kill them but you leave us no choice. We have been mitigating PDs constantly for several years. Two weeks ago we mitigated many burrows and we were at it again Sunday. (Yes, Sunday was Groundhog Day and we do the same thing over and over; as the City does with examining and re-examing and then double triple examining the prairie dog issue over and over. This whole process and the engagement windows remind me of the movie Groundhog Day. We have been asking the City to manage and steward irrigated parcels appropriately for years!) OSMP claims a 3% prairie dog growth rate. That simply is not accurate. The OSMP parcels next to us are so degraded and overpopulated with prairie dogs that the PDs migrate continuously to our farm. We do not want our property to look like your property and it is very apparent that we are taking care of the PD growth problem for you.

Boulder needs to manage irrigated agricultural lands as the City Charter, BV Comp Plan, OSMP Master Plan, Ag Plan and Grassland Plan dictate regarding the preservation of Ag lands, the incompatibility of prairie dogs and irrigated parcels and the value of healthy, fertile soils. These parcels were purchased for irrigated ag production, not prairie dogs. These lands are to be preserved not destroyed. The best opportunity to meet Boulder's Climate Commitment for healthy ecosystems and carbon sequestration is on irrigated parcels with healthy soil, not on parcels denuded or degraded by prairie dogs. Well over 1000 of 2400 irrigated acres in the proposed project area are in CRITICAL decline because of prairie dog occupation. Council & OSBT have a fiduciary duty to take care of these irrigated lands and manage them appropriately - and that does not include prairie dogs. Boulder can have whatever Urban Wildlife Policy it wants within the city limits but when it comes to properties outside of the city, OSMP properties in the county with completely different objectives and purposes, Boulder needs a different policy, an agricultural wildlife policy.

Non-lethal management methods are not working; PD populations continue to grow exponentially on irrigated parcels. Thousands of new prairie dogs will be born in another month. To solve this conflict, the City of Boulder needs to manage using lethal control with PERC machines, as Boulder County does *very successfully*. PERC machines are the most humane, effective and efficient way to mitigate prairie dogs and take care of this exploding conflict. City ordinances need to change to allow OSMP to use lethal control on irrigated parcels. No six step process, no permit required - lethal control should be by right to fulfill the charter purpose of OSMP or an affirmative defense. If an ordinance change is going to get bogged down in government deliberations, then in the short term, move straight to step six and remove the PDs from irrigated parcels. Non lethal methods have been tried over and over and over and they are not working. Additionally, consider putting barriers on the protected prairie dog habitats to keep them contained and stop them from migrating back to irrigated ag.

It used to be that living next to OSMP land was a good thing. That is no longer the case and that myth has blown away in the wind with your soil. To a person, every single one of my neighbors says that the City of Boulder is the worst possible neighbor one can have. Don't you want that to change - or don't you care? OSMP needs the tools to manage the irrigated parcels appropriately per OSMP's own Ag plan objectives: desired condition = zero acres degraded by prairie dogs; decrease impacts to ag production from PD occupation; increase soil organic matter; long term sustainability of agricultural operations. Move forward and use PERC on your irrigated parcels to remove the prairie dogs. Restore and regenerate ag parcels & soil to be healthy ecosystems and be a good neighbor. Everyone will win.

Lastly, if you are not going to take care of agricultural properties, stop buying them. Irrigated agricultural land is too valuable to waste.

Sincerely,
Joel Schaap

From: adrienebo[redacted]
To: OSMP Input
Subject: Draft Boulder OSMP Prairie Dog Management Plan public comments
Date: Tuesday, February 4, 2020 1:09:12 PM
Attachments: OSMP_PD_Mngt_Plan_2020.docx
Hester_OSMP_Land_Aerial.jpg
Hester_Western_Pasture_Jun1993.jpg

External Sender

Dear Boulder Open Space and Mountain Parks,

In preparation for your upcoming February 12th meeting, attached are public comments regarding the Boulder Open Space & Mountain Park's "Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs: Draft Approach and Evaluation of Potential Actions."

In addition to Draft Boulder OSMP Prairie Dog Management Plan public comments, attached are (2) historical aerial and terrestrial photos documenting the landscape condition of James and Adrienne Hester's [redacted] irrigated agricultural land prior to my Father; James Hester (deceased), selling our 40-acre hay meadow and adjacent northern land parcel to the City of Boulder OSMP in 2002.

The aerial photo of the Hester's hay meadow and adjacent northern land parcel (Boulder OSMP land) is circa late 1980's/early 1990's. Terrestrial photo of the Hester's adjacent 3505 Nebo Road western pasture is June 1993 vintage.

Contemporary landscape conditions of these Boulder OSMP lands with an overpopulation of prairie dogs can best be viewed by OSMP staff visiting their 3517 Nebo Road land as well as the Hester's adjacent [redacted] property.

Thank you for the opportunity to provide public comments regarding the Boulder OSMP Draft Prairie Dog Management Plan.

Regards,

John David Hester
Financial Power of Attorney for Adrienne A. Hester
[redacted]

City of Boulder
Open Space and Mountain Parks

Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs:
Draft Approach and Evaluation of Potential Actions

Public Comments
February 3, 2020

Dear City of Boulder Open Space and Mountain Parks,

The Hester Family; that is James and Adrienne Hester, have been Boulder County landowners at [redacted] ince 1968 and have seen many land cover, socioeconomic, demographic, and land use management changes during the past 50-years.

Being successful and even profitable in practicing Boulder County agriculture as a landowner is dependent on a multitude of factors. Those factors include not only land-use zoning regulations, but also property tax rates, water rights, commodity prices, labor rates, farm equipment expenses, climate, land uses of adjacent property owners, land parcel size, and the assistance of neighboring agricultural landowners.

During the 1970's, the Hester Family and their cattle partner; that is H-P Charolais Associates, owned approximately 100-acres in Boulder County for grazing 40-head of beef cattle as part of their agricultural land use. In addition, the Hester Family owned 27-shares of Left Hand Ditch Company water for irrigating agricultural land for grazing as well as hay and alfalfa crop production to feed the cattle during the winter.

In the 1980's, the H-P Charolais partnership was terminated when my Father's cattle partner passed away. Since the 1980's, the Nebo Road land owned by the Hester Family has been maintained in agricultural crop production and cattle ranching through grazing-lease agreements with Boulder County ranchers.

Sustaining Boulder County private land in agricultural land use has become even more challenging as both Boulder County and the City of Boulder have acquired adjacent lands for Open Space using bonds and taxpayer approved funding.

Agricultural Conservation Easements and Lease Agreements with Boulder County ranchers have assisted in conserving and preserving these lands for irrigated agricultural crop production and cattle ranching operations.

After the September 2013 catastrophic Front Range flooding, the City of Boulder Open Space & Mountain Parks; who are an adjacent landowner to the Hester Family 3505 Nebo Road property, were very instrumental in providing assistance in dredging and rebuilding the Crocker Ditch irrigation network for Left Hand Ditch Company shareholders.

Even though the City of Boulder Open Space & Mountain Parks were beneficial as an adjacent land-owner after the 2013 Front Range flooding, they have not been good land stewards for compatible land uses adjacent to private property that is still being used for irrigated agricultural crop production and cattle ranching operations.

Since the start of the 21st Century, the City of Boulder Open Space and Mountain Parks has permitted their adjacent Boulder County lands at [redacted] to become denuded of vegetation resulting in major erosion during windstorms similar to the 1930's Dust Bowl era. The cause of this agricultural landscape change has been the City of Boulder Open Space insistence on allowing their land at 3517 Nebo Road to transition into an ecosystem for hosting prairie dog colonies and has also resulted in an increased risk of losing valuable livestock grazing on these Boulder OSMP leased-lands.

The prairie dog colonies located on the City of Boulder Open Space lands at [redacted] have migrated into the Hester's [redacted] private agricultural lands since the Hester's sold their 40-acre hay meadow and adjacent northern land parcel to Boulder OSMP in 2002.

Due to the overpopulation of prairie dogs on Boulder OSMP 3517 Nebo Road land and migration of these prairie dogs into our adjacent [redacted] agricultural land, the Hester's have spent $5,467 in mitigation expenses since 2015 for our western, southern, and eastern pastures that share a property line with Boulder OSMP land.

We are fighting a losing financial battle to keep the existing [redacted] prairie dog population in check that consistently migrates into our private property from the adjacent Boulder OSMP lands. Since 2015, the Hester Family has consistently been losing money overall as our [redacted] prairie dog mitigation expenses exceed our annual agricultural operations income.

In addition, these prairie dog colonies have also begun migrating into the City of Boulder Open Space 3517 land parcel's 40-acre hay meadow which is currently leased to Nebo Road Black Angus Ranch (Fred and Jan Stengel).

Prairie dogs migrating into the irrigated 40-acre hay meadow leased to Nebo Road Black Angus Ranch will eventually negate any future agricultural hay production and thus eliminate future Boulder OSMP Agricultural Lease Agreement payments from Boulder County ranchers as these OSMP lands are no longer profitable for agricultural operations.

Maintaining and sustaining private agricultural lands in Boulder County is challenging enough without adjacent landowners such as the City of Boulder Open Space making agricultural land use economically unsustainable due to hosting prairie dog colonies.

City of Boulder OSMP Department, Open Space Board of Trustees, and Boulder City Council need to implement the following Prairie Dog Management Plan lethal and non-lethal options:

1) In collaboration with the Boulder County Assessor's Office institute a Boulder County Agricultural Land Property Tax Exemption to financially compensate adjacent private landowners whose property values have been diminished due to overpopulation and migration of Boulder OSMP prairie dog colonies onto adjacent private property.
2) Financially reimburse and (or) cost-share with adjacent private property landowners for prairie dog mitigation expenses due to migration of prairie dogs from OSMP lands.
3) Collaborate with the U.S. Fish & Wildlife Service (USFWS) to re-introduce the endangered black-footed ferret as a natural predator to better manage the overpopulation of prairie dog colonies on Boulder OSMP lands.
4) Prioritize relocating the Boulder OSMP 3517 Nebo Road prairie dog colonies to a more suitable Boulder County location that does not impact and conflict with adjacent private lands used for

livestock grazing and agricultural crop production as well as OSMP lands in proximity that are leased for agricultural land use.

Better land use management of Boulder OSMP prairie dog colonies will hopefully reduce the economic impacts to adjacent Boulder County private landowners as well as enhance sustainability of both private agricultural land use and City of Boulder OSMP land leased for agricultural operations and crop production.

Sincerely,

John David Hester
Financial Power of Attorney for Adrienne A. Hester
[redacted]

D-190

D-191

From: David Hindman
To: OSMP Input
Subject: Prairie dog issues
Date: Tuesday, February 4, 2020 1:35:04 PM

External Sender

My name is Dave Hindman and I live at [redacted]. My wife and I own 40 acres on the south side of Niwot Road, about a quarter mile west of the intersection with 63rd Street (Section 34 NW1/4NE1/4 T2N R70W). Most of our land is pasture, used for our cows and horses. The city of Boulder's Open Space owns the land directly to the west of us and to the south of us. Based on the old farms out here, I refer the area to our west as the Dawson property and that to the south, the Johnson property. I have been dealing with the prairie dogs coming in from both these City of Boulder's properties for the last 30 years. After years of work, my pastures are almost free of these animals, but by spring and another round of babies, I become inundated again. It's just a daily maintenance issue and it goes on year after year!

My grandfather and his two brothers used to use this property as pasture for part of their cattle operation. This was 70 to 80 years ago. It was rocky but good ground for pasture. I don't know when the prairie dogs first started to come in but where they became established, there is now nothing but weeds and rocks, the top soil having blown away long ago. The private property out here is well cared for and there is a lot of effort to keep the p. dogs out. However, until this fall, the City had not done anything about taking care of their property. Besides the prairie dogs, the wind and irrigation waters continually bring an array of weeds into my fields from the ill-kept open space.

This fall, there was a good effort to remove the prairie dogs from the Johnson property to my south. I was impressed with the effort and so worked hard to remove the p.dogs along my south fence line. From what I can tell from the OSMP maps, the Johnson property is classified as irrigatable and so the effort has been made remove the animals. However, the area to my west, the Dawson property, is classified as non-irrigatable and so, as best I can tell, there are no plans to remove them from this parcel, which stretches from my west fence line to 55th Street. I'm not a biologist but I can guarantee that, within two years at most, there will be prairie dogs back on the Johnson property and they will come from the area west of me. All the time, money and effort to remove them from this parcel will be wasted. If Open Space is serious about eliminating the prairie dogs in this part of the County, there cannot be these "islands" where the animals are allowed to live, breed and migrate.

Dave Hindman
[redacted]

From: Paula Shuler
To: OSBT-Web; OSMP Input; Council
Subject: Input - PD Draft Approach & Evaluation
Date: Tuesday, February 4, 2020 3:04:52 PM

External Sender

Council, OSBT & OSMP Staff,

You should know how I feel about prairie dogs on irrigated parcels; I have written many many times over the last several years. I value all OSMP lands but especially fertile irrigated pastures, healthy ecosystems, and wildlife as well a good management and stewardship. I believe that irrigated lands are the best opportunity for food, forage and carbon sequestration. More than anything, I value our 160 acre private farm, sustainable agriculture and good land ethic - it is our land, our legacy and our future. I want to see irrigated agriculture and prairie dogs both thrive on OSMP lands but in appropriate, separate locations.

OSMP's management plans are very clear that the burrowing and foraging of prairie dogs are incompatible with agricultural production and water management. OSMP also considers overlap of irrigated agricultural fields and prairie dog occupation as a conflict. Yet for the past 15 years, nothing has been done to manage the prairie dog populations taking over and destroying irrigated fields. Parcels that once were beautiful producing hay pastures are now bare ground and the only thing they produce is more prairie dogs, weed seeds and soil and land destruction. In 2019, the OSMP Master Plan added the ATT Tier 1 priorities of 'increasing soil health & resilience' and 'address conflicts between agriculture and prairie dogs' to the long list of plans, strategies and objectives that are written down on paper by the City of Boulder but are never put into practice. Boulder's emphasis on Climate Commitment weighs in with a commitment to healthy ecosystems and soil sequestration. That doesn't happen on bare ground where the soil has blown away. Management of prairie dogs needs to change. Protection of *only* the prairie dog has gone on for far too long. There is no balance. Boulder needs appropriate management tools to protect the irrigated agricultural lands. OSMP's agricultural lands should and can be so much healthier and productive - the City Charter, Boulder's Climate Commitment and OSMP management plan(s) objectives can be met with truly effective prairie dog management.

My Input for Draft Approach & Evaluation of Potential Actions:

Problem Statement: The 'problem statement' in the evaluation is confusing, muddled, too complicated and not clearly defined. I read it many times and I don't understand the intended message. *Real problem*: High abundance of prairie dogs in irrigated open space agricultural fields has led to likely soil erosion, impacted the availability of irrigation water, and reduced crop productivity and the viability of farms and ranches. This, in turn, makes it difficult for the city to fulfill specific open space agricultural purposes in the Boulder City Charter. Those purposes require OSMP to preserve Boulder open space's "agricultural uses and lands suitable for agricultural production." Additionally the objectives of the BV Comp Plan, the OSMP Master Plan, AG Plan, Grassland Plan and Boulder's Climate Commitment are not being met. Current, prioritized non-lethal management techniques have proved insufficient and ineffective. Prairie dog populations continue to explode unchecked on irrigated parcels and the conflicts between prairie dogs, viable agricultural operations, tenants, soil health, carbon capture and neighbors continue to grow. Prairie dogs are not essential to and are destroying irrigated agricultural parcels. That's the problem.

Management Solutions: Boulder needs to add lethal control as a management tools and a straight line of defense for OSMP irrigated agricultural parcels. We are in this crisis because the

prioritized non-lethal methods and the six step process (which rarely get to step six) are not working. Non lethal methods cannot even begin to scratch the surface of the PD reproduction rates let alone the tens of thousands of prairie dogs that are already in residence and creating conflict on irrigated lands. Policies and ordinances need to be modified/changed to allow lethal control of prairie dogs by OSMP, either by right or by affirmative defense to fulfill the City Charter, BV Comp Plan, Boulder's Climate Commitment and OSMP's Master Plan, Ag plan and Grassland Plan. Additionally, the burrow ordinance needs to be modified/changed to allow burrow destruction on irrigated parcels. Organic farmers need management tools. All of this needs to happen on the fast track, the expedited expedited approach and not get buried in more government deliberations. If ordinance modification/changes require a lengthy process, in the short term OSMP needs to go straight to step six and lethally control the PDs on irrigated lands, because it has been proven year after year that the non lethal methods are ineffective. OSMP needs to start lethally controlling the prairie dogs on all the irrigated lands while working to change the ordinances. The level of removal needs to be 100% on irrigated parcels. Tenants should be allowed to use lethal control on their leased properties with guidance from OSMP. Barriers and relocation are not the solutions for the scope and scale of this conflict Boulder County has developed a successful lethal control program for removing prairie dogs from their No Prairie Dog (NPD) land designations. The City of Boulder can learn and follow the County's lead, not try to re-invent the wheel and possibly fail. It would also be a great opportunity for the two agencies to collaborate and partner on common goals of irrigated parcels being prairie dog free.

Boulder's Climate Commitment: Soils are the basis of life. They play a key role in absorbing carbon from the atmosphere and filtering and holding water while supporting biodiversity. Almost 50% of the irrigated ag parcels in the project area are in decline. On many irrigated parcels the soil has blown away and they are bare ground. Carbon sequestration, a priority for the City of Boulder & Council does not happen on eroded, desertified bare ground. For example, Brewbaker & Stratton are two of those parcels - I have personally watched the soil blow away. Brewbaker and Stratton are removal areas per the Grassland Plan but not one prairie dog has been removed, ever. Brewbaker & Strattton are full of weeds and prairie dogs - there are thousands and thousands of prairie dogs on these two parcels. Nearly $4 million dollars of once beautiful irrigated land, has been devastated by prairie dog occupation and zero management from the City of Boulder and that is so very wrong. A yeoman's plow and compost are not going to fix this level of degradation and restoration will not happen quickly. Healthy ecosystem? Not here. Climate change means that if lands are damaged, there is no guarantee they will return to what they used to be. Climate change means Boulder must act quickly and strategically to manage the prairie dogs, protect the soil, and ecosystems. From Boulder's Plan for Climate Commitment: "Soils are integral to healthy and functioning ecosystems. As Boulder strives to meet goals related to the CAP and its broader vision of sustainable ecosystems, soils should be considered in our planning". The IPCC 1.5 report and the National Academies of Sciences report on carbon dioxide removal (October 2018) *both recommend major investment in agriculture as a critical pathway for sequestering carbon and increasing resilience*. The prairie dogs need to be removed from all irrigated parcels and restoration and regeneration needs to start now to try and bring these parcels back to the producing hay fields and fertile soil that existed before the City of Boulder purchased them. Land & soil degradation from prairie dogs occupation is happening all over the project area. Boulder's master plan claims: "Using the best available science, we protect healthy ecosystems and mend those we have impaired." It would be wonderful if that statement changed from ideology and became reality.

Water is Life: Unleased irrigable land needs to be irrigated. OSMP has changed the designation on these properties from 'OSMP Irrigable Land' to 'OSMP Managed Land'. Water is a foundation of healthy soil, regardless of prairie dog occupation. Carbon sequestration is a key component of Boulder's Climate Commitment and OSMP needs to do everything possible to nurture and enhance the microbial life on all irrigable parcels. Do not remove the water from irrigable parcels,

do not stop irrigating these properties and do not change the management designations.

Reality: OSMP's PD growth rate figure of 3% is not correct, PD growth is well above that number. Neighbors of OSMP irrigated ag parcels throughout Boulder County are forced to spend time and money mitigating OSMP prairie dogs that migrate to their private property. No private property owner in Boulder County wants prairie dogs. I collected information from several neighbors, and they are all killing prairie dogs in significant numbers. If all the neighbors of OSMP irrigated lands with PDs weighed in on their mitigation numbers, I would estimate that over 10,000 prairie dogs are being mitigated per year. Bottom line, your neighbors are controlling huge numbers of OSMP PDs through whatever method of lethal control they choose. The negative affects to private property and neighbors needs to be part of the information and conversation presented to the public.

There will always be prairie dogs: Prairie dogs will remain abundant on the City of Boulder's GPs, MOAs and PCAs designated for prairie dog protection. Tens of thousands of PDs, over 2000 acres of PDs will not be touched by the proposed lethal control and will remain in the northern project area. Birds of prey & predators will not suffer. Additional prairie dogs will remain protected on Table Mountain (Dept of Commerce) and on BCOS protected habitats. This is about balance and protecting irrigated lands. Prairie dogs need to be removed from irrigated lands so that the City Charter, BV Comp Plan, Master Plan, Ag Plan and Grassland Plan & Climate Commitment objectives and goals for agriculture can be met.

Fragmented Colonies: It is unrealistic to talk about the historic range of the prairie dog anymore because that range no longer exists. We humans have developed Colorado's front range and prairie dogs must live mostly in static, fragmented colonies. Fragmented prairie dog colonies do not create or sustain healthy ecosystems. For example, "prairie dogs may have very different ecosystem impacts when they are living within a landscape matrix of urban development and fragmented grassland remnants, and have their movements restricted. Prairie dog colony densities are higher in more urbanized areas (Johnson and Collinge 2004), which could increase grazer densities, alter resource competition within colonies, and ultimately transform plant community compositions. When examining the effects of prairie dogs on vegetation in an urban landscape outside Denver, Colorado, USA, Magle and Crooks (2008) observed an increase in bare soil and forb cover on colonies, similar to results found in previous work conducted in more natural areas." The OSMP irrigated parcel next to our farm is bare ground and weeds. If healthy ecosystems are truly the goal, prairie dog populations must be managed and removed from agricultural parcels.

It only makes sense: The project area should be expanded to include Belgrove & McKenzie. Belgrove is an irrigable parcel with high density PD occupation just across Jay Road from the project area. It is only logical that it be included in the project area so that prairie dogs don't continually re-infest the project area and so that another irrigable parcel can be restored and put back into ag production. McKenzie is across the diagonal and has neighbor and tenant issues because of the PD occupation that can be addressed if this parcel is included in the project area. It makes sense to include these two parcels in the project area.

Housekeeping: The next survey for public input could be improved by being simpler, shorter and to the point. The on-line survey for the 58 pages evaluations of actions was an uneccesarily layered and complicated document. I almost gave up halfway through. The way the questions are posed should be so much simpler, more straight forward. How many members of the public do you actually think read the 58 pages of evaluations?? Not too many but I read it 4 times. Granted, I am not the smartest person and I have a pretty good understanding of the complexities of this issue. The evaluation document was completely muddled and confused the real issue of prairie dogs on irrigated ag and the survey had way too many layers. 58 pages? Was it necessary to repeat so many things? Take out the options that don't work. Evaluate the options

that can work and provide a real solution. It would be great if OSMP would consider putting the different management options and solutions in a chart(s)? (Not like the " charts" in the 58 pg document). A side by side comparison chart - charts for the different categories of options. To me, this would be a much better way to see the overall options, rather than flipping through pages and pages and re-reading the same words repeated over and over again.

Irrigated agriculture and prairie dogs can both thrive on OSMP lands but in separate, appropriate locations. Where there are water rights, there should not be prairie dogs. Boulder has a chance to make things better on so many levels. It is my hope that real, appropriate management and stewardship solutions to address the critical conflicts with prairie dog occupation on irrigated parcels can come out of this process in an expedited expedited fashion. Irrigated lands, healthy ecosystems and soil, sustainable agriculture for future generations, tenants and neighbors are depending on it. It's time to protect & HEAL Boulder's agricultural lands.

Best Regards,
Paula Shuler

From: Ruth Wright
To: Council; OSMP Input; OSBT-Web
Subject: Prairie Dogs
Date: Tuesday, February 4, 2020 3:24:53 PM

External Sender

Dear Members of the Boulder City Council and Members of the Open Space Board of Trustees,

The issue of overpopulation of prairie dogs on our open space is a difficult and emotional issue. They are an important specie in the eco system and very appealing. But when their population grows exponentially they can become "pests", like the rabbits in Australia..

The only point that I want to make is that the City Council and the Administration have the fiduciary duty to protect our open space lands from degradation –and you are not complying with your duty if you continue to let the lands be degraded. Most of it has been purchased (some in fee, most in conservation easements), using tax dollars and is governed by the City Charter, adopted by the citizens.

The precious natural areas, of course, must be protected like the jewels that they are –- not as recipients of prairie dogs to relieve degraded agricultural lands or foreign prairie dogs received from developers.

The agricultural open space lands in the Boulder Valley were purchased to fulfill the purposes set out in the City charter, and before that in the 1973 City Ordinance No 3940, including urban shaping, limiting urban sprawl and preservation of agriculture. Here is where the contractual relationship between the City and the farmers/rancher comes in. It is definitely a "quid pro quo: the City provides quality land and the lessees promise to take good care of it while using it for agricultural production. That quality land is rapidly deteriorating to the point where the farmers cannot farm and are dropping their leases .That also means that open space ag lands are not providing income to the City, and actually become a huge cost to restore. It is a lose-lose situation that

Council must resolve soon

As I have often said, my favorite open space location is at the top of Davidson Mesa, looking down at a green, untrammeled, undeveloped valley, with Boulder nestled against the mountain backdrop, and the Rocky Mountains in the distance. Will we lose that inspirational view? Will that valley turn gray ? Will Boulder's best idea of 50 years ago not even last another ten?

Sincerely, and best wishes,

Ruth Wright

From: Dan Moorer
To: Council
Subject: Homeowner Daniel Moorer comment on City of Boulder OSMP prairie dog policies
Date: Tuesday, February 4, 2020 3:48:46 PM

External Sender

To Boulder City Council Members.

I'm writing today to comment on the upcoming decision on lethal control of prairie dogs on City of Boulder OSMP lands. My comments are in addition to those of my wife, Elizabeth Potter, who submitted her comments earlier today. My intent is not to restate her position, only to describe and elucidate some of the points raised in her letter.

As she said, we purchased land along Niwot Road in January 2017. We were dismayed to discover that in order to repair the land and return it to its potential with native grasses, we would have to somehow control the prairie dogs that had overpopulated it.

Our problem is one that is commonly known nowadays; that is when any species (or system) is allowed to operate without controls, there is the possibility of the system getting out of balance. In the system under consideration (prairie dogs in Boulder City and County), there do not seem to be an appropriate number of controls (predators). Given that, the numbers associated with overpopulation do not seem to be growing linearly; instead, they seem to grow exponentially.

Our land borders the City's Axelson Open Space. Exponential growth was evident on our agricultural land: acres upon acres of prairie dogs (a professional estimated 2,500 on 34 acres) with the areas surrounding each colony (we counted 10) completely denuded of vegetation for hundreds of feet in all directions. Noxious weeds dominated those areas not denuded. We could not walk across our land without the danger of injuring ourselves by stepping into a prairie dog hole. We described our new land purchase to our friends and family as a "moonscape".

Before implementing measures to control the population on our land, we fully understood that prairie dogs are a keystone species. We have heard some proclaim that these animals are good for the land. Perhaps this is so when appropriate populations of predators control their numbers. In our case, the incredible prairie-dog density that exists next door in Axelson Open Space had simply expanded to include our land. We discovered from our neighbors that we were not alone: all along Niwot Road, where farmland borders City Open space, the open space is overrun and farmers are expending considerable time and exorbitant funds to control the situation.

Our other discovery was that, when we were forced to control our prairie-dog population, the native grasses returned! Denuded areas all along our border with Niwot Road bloomed again. Native grass seeds now found a way to germinate and grow to maturity without being eaten. It was a pleasant surprise.

I would support the council strongly considering allowing the use of legal means to control what seems to be exponential growth until it shrinks to a point where the numbers are then manageable by non-lethal means.

Thank you for listening to our story and for your service on our council.

Sincerely,

Daniel Moorer
[redacted]

From: Chris Brown
To: OSMP Input; OSBT-Web; Council
Subject: PRAIRIE DOG CONUNDRUM
Date: Tuesday, February 4, 2020 4:55:27 PM

External Sender

CHRIS BROWN PHOTOGRAPHY

[redacted]

Dear Boulder City Council, Boulder OS&MP & OSBT:

RE: The great prairie dog conundrum: overpopulation, destruction of land and crops, lethal control.

I have been watching prairie dogs in Boulder for 20, 30, 40+ years, and a couple of things seem to me self evident truths:

1: After millions of dollars of taxpayer money spent trying to control PD overpopulation and migration, and millions of dollars in damages to private landowners, farmers and City infrastructure, it is clear we are loosing this battle. Whatever we are trying to accomplish with prairie dogs is clearly not happening. Time to stop digging this hole, don't you think?

2: People have caused this problem, in multiple ways. First, the westward expansion and settlement has occupied and destroyed prairie dog habitat. The historic balance of nature has been upset, not just predator–rodent relationships. There is simply not enough land for both prairie dogs and people in this county. Abetting this, human agriculture has provided a 24-hour salad bar for the prairie dogs, and they have taken advantage of this to reproduce spectacularly. The pressures of human activities have reduced the predator population, which has augmented this exploding PD population.

The result is that prairie dog populations are exceeding the carrying capacity of the lands available in this valley. And of course humans are approaching that point too. One of us has to leave. Guess who?

Unless the City and its reluctant farmers are prepared to fund an eternal Supplemental Nutrition Assistance Program (SNAP) something drastic has to occur. Guess what?

Lethal control.

The current situation is not sustainable. We, the people, have created this problem, and it is for us to find a solution, and it is not going to be easy or pleasant. It's time to stop kicking the can down the road, and act soon and decisively. There is no immediate happy ending to this situation. We should be smart enough to realize it is time to quit doing the same thing over and over, expecting a different outcome. That will drive us all crazy, if we aren't already.

All of you reading this are responsible to make difficult decisions. You and I both know that lethal control is inevitable, and I applaud your bravery in finally allowing this into the discussion. Nobody likes killing things, but more killing now means less killing, and a better life later.

Be brave, be courageous, fix it now. No more procrastination: lethal control now.

In respect, and sympathy,

Christopher Brown

Boulder

From: Denise Pinkard
To: OSMP Input
Subject: Prairie Dogs
Date: Tuesday, February 4, 2020 5:29:36 PM

External Sender

Hello,

First want to say thank you for listening. I am genuinely grateful to have an avenue to speak and share my story and concerns. I do also want to say, it is not my intent to be offensive in any way in my communications. That being said, please understand I feel the need to be very direct now. My hope it that my story will not fall of deaf ears this time. For years now, I have spoken at City of Boulder meetings, written letters and emails, called the offices, requested site visits to our property etc. I am exasperated and at this point don't feel I have any "soft approach" left. I am simply going to say what I think without holding back and hope I do not offend anyone.

I am concerned (have been for a number of years) about City of Boulder Prairie Dog Management Plan (specifically the *lack of management*). I am hoping that the City, this time around, will now finally *actually hear what it's property owners and farmers, ranchers, and residents have to say*. Those of us whom are living with the problem on our properties caused by the extreme overpopulation of prairie dogs. Listen to us too, those who are NOT prairie dog advocates (in past that is all that seemed to be important to the City of Boulder).

Who I am: I am a rancher/farmer/resident on 30 acres in Boulder County next to 60 acres of City of Boulder Open Space property (Oasis) Longmont. That open space is overrun with PD's - has been for years. I have been living this nightmare of trying to control them, for more than 25 yrs. I also need to clarify; I am an animal lover. I do not hate animals nor prairie dogs. I have a degree in veterinary science. I am a wildlife and animal lover. I have horses, raise and train Labrador Retrievers as guide dogs for the blind (volunteer), have pet dogs, birdwatch, as well as photograph and enjoy our vast wildlife in Colorado. I love and animals and nature immensely!

I am however very concerned about the overpopulation of PD's in Boulder County. It seems the City of Boulder has had a total lack of interest or concern for its' open space neighbors (whom have private land that is being taken over by city prairie dogs). I am concerned how long we have let go dealing with this issue. Concerned about the current poor state of condition for so many properties in Open Space program. Concerned about the cost and time it will take to restore lands (if even possible), to restore farming and ranching occupations when leases have been abandoned, and restore lands which have become bare lands and longer contribute to the scenic beauty of our area.

For so long, City of Boulder has just listened to the advocates, and not those who have to deal with the problems that the City Prairie Dogs Management Program has caused. For 25 yrs. I've been here, we have had prairie dogs neighboring 2 property lines, one on north, and other on south. City of Boulder Open Space (Oasis property) is north one. The property owners prior to me, also farmed/ranched for more than 25 yrs. They produced Hay (same exact fields) and also grazed Angus cattle. I've been fighting this problem of pushing back on prairie dogs trying to take over our land since we came in 1995. We have built barrier fences, hot wire fences, killed prairie dogs, filled holes, flooded holes, and anything else we thought may work. The neighboring City of Boulder prairie dogs have 60 aces to live on. It is primarily barren land w/ prairie dogs. All weeds. native grass gone. All food sources used up. The PD's are overpopulated, and continue to expand to all of the adjacent neighbors' properties, <u>especially my hayfield</u>. I have ~ 15 acres of irrigated grass hay field just across the fence line. I have lost approximately 1/3 of my hay production over the years. My long-term hay contract farmer will back that up. I actively fight back with lethal control and filling holes about 4-5 times a year, only to be repopulated again. I maintain a dept of agriculture license to

purchase lethal control methods. I spend an inordinate amount of time, money, risk my personal health, and still cannot win. It's only gotten worse. More time and money spent each year, and more and more prairie dogs on my property. Last year there were over 100 PD holes in my north pasture next to city land. Every year, the situation worse and I fear it is a battle I am losing. It's impossible situation as the Oasis parcel is fragmented property that cannot handle the population of prairie dogs unless all the PD's are removed on city property, they will continue to breed and expand and given no food, travel to neighbor's property to find food and build new coiteries. I pray the City will finally listen now finally and act swiftly. I have only two resources left. Either sell and give problem to someone else, or sue. I don't want to do either but something must change.

But, it's not just about me… I am also equally concerned at another level. Our ranching and farming of Boulder's historical agricultural lands is ending in so many places. Primarily because these lands are becoming desolate dirt landscapes. Damaged soils over a period of time can no longer can support grazing of livestock or farming. In addition to the ecosystem losses, there are visual and recreational impacts, as well as direct impact on climate change caused by the loss of viable plants and grasses.

I'm concerned for my fellow farmers and ranchers on private properties. I want to see the city restore its relationship's with private landowners whom have been dealing with problem for so long. The situation is now being called a crisis now. Why wait until it's so far out of control? So many more prairie dogs to kill now subjecting them to this, all because it wasn't managed property from the start? The problem is there is no balance or control or co-existence possible in areas as colonies live on fragmented pieces of land (unlike colonies in vast plains). Yes, prairie dogs too are part of our ecosystems and I recognize their value. I am a huge animal and wildlife lover, but as with everything in life we need balance. We have no balance due to restrictive policies and things have gotten out of control.

Policy change needs to happen now so that our lands can be restored and agriculture can survive. This will not happen until polices are changed to allow lethal control and extensive management for staff to deal with immense problem that has been created. This is extremely important to act on now. We need management. We will always have prairie dogs in Boulder County, but balance must be restored.

Sincerely,

Denise Pinkard

From: roxanne perkins
To: OSMP Input
Subject: prairie dogs on Boulder Valley Ranch
Date: Tuesday, February 4, 2020 5:32:47 PM

External Sender

I love Boulder Valley Ranch!!! I have boarded horses there for 30 years in June. The change that i have seen is heartbreaking. What used to be lush pasture land is now barren waste land. It obviously didn't happen overnight and we all kept thinking ok, this is the year that they will control the prairie dogs. I just wonder who's idea it was to destroy this land? We need to understand why! Stewards of the land? I don't think so.
I keep hoping for reasonable people to fix this. Please listen to the ranchers who understand and truly love Boulder Valley Ranch and all the agriculture properties in this beautiful valley.
Thank you and good luck in fixing this huge problem.

Roxanne Perkins

From: Pam Wanek
To: OSMP Input
Subject: Response to Expedited Review of Prairie dogs
Date: Tuesday, February 4, 2020 5:46:26 PM
Attachments: Wanek Evaluation as of 2.2.2020.pdf

External Sender

Attached please find my comments to Expedited Review of Prairie Dogs on OSMP lands

Thank you

Pam Wanek

February 4, 2020

RE: Specific Comments in Response to OSMP Statements in the Expedited Management Review of Irrigated Fields Occupied by Prairie Dogs as of 8 January 2020

Submitted by: Pam Wanek

It is concerning that from a time period of May 2019 through 8 January 2020, less than 9 months, that the city is considering immediate removal of approximately 1000 occupied acres of prairie dogs on irrigable agricultural land. According to the city's Expedited Review, it is estimated that on average, 30 prairie dogs per acre exist on irrigable lands that are in conflict; this equates to about 30,000 prairie dogs.

This situation is an unusually large and difficult problem that will require additional information and research prior to committing to any of the alternative actions presented in this original document. Staff evaluations must not only address the immediate conflict areas but how these pieces interplay with other properties within the landscape. The loss of 30,000 prairie dogs is significant for any ecosystem and is surely to present large environmental impacts to the wildlife community.

The Expedited Review does not adequately address the required prerequisites to make informed decisions. Instead, staff has provided general ideas that could be applied to any one property. The fear here is that the problem is so big that giving the attention to detail that would potentially present the Best Management Practices (BMPs) may be overlooked due to the inability of staff to effectively help implement unique protocols to each site. The idea of just giving up and exterminating the majority of the prairie dogs for example may see like a quick fix to make the problem go away but quick fixes rarely resolve problems in the long-term.

Adding confusion to the Expedited Review is that the backbone of solutions offered by the city's own Prairie Dog Working Group (PDWG) are being "nixed" as a different "track" away from the problems presented. The city, staff and board members have spent numerous hours reviewing reports, documents and working out different ideas in cooperation with diverse stakeholders to support the following outcomes (see pg. 58 of Expedited Review):

- Non-lethal control options are considered first before lethal control
- To produce economic models that compare the values of occupied prairie dog lands versus agricultural use
- Consider cost forgiveness to compensate tenet farmers and ranchers
- Reimbursement to private landowners for negative impacts to resulting from prairie dog occupied areas
- Pilot the PDWG economic considerations

The idea of re-categorizing leased irrigated lands into a different land-use category altogether as an "affirmative defense" is also problematic. This category is reserved for civic services (airports, dams, and research) and for the destruction of burrows under 6-1-12 B.R.C. 1981. Agricultural is not a civic service and therefore, should not be re-categorized as an "affirmative defense."

Other specific comments are as follows:

1. The Expedited Plan states that OSMP was directed to evaluate at least 6 items (pg 1):

1. ecological conditions of **<u>the</u>** land
2. soil health
3. healthy agricultural uses

4. wildlife health
5. other conditions
6. new land management tools including key-lining, soil amendments, lethal control and other measures to achieve charter open space goals.

Comment: Most of the above factors are addressed in broad terms but not one example of a property situation is presented using these guidelines. How will the city evaluate each property in question? How will decisions be made on that subject property? Or does the city intend to apply one set of generalized areas to all properties even though each property may have vast differences? As presented in this Expedited Review, there is not enough information to provide decision-makers with the necessary information to move forward with prairie dog removal on any property in question.

2. Charter goals - Under factors to consider (page 1): The following statement is made:
"The degree to which the action would allow OSMP to more fully meet charter goals."

This statement implies, that moving forward with lethal/removal control on irrigable agricultural lands is allowable as a charter goal but Section 176 (d) of the Charter states: **"Preservation of agricultural uses and land suitable for agricultural production."** What the Charter does not say is that 100% of irrigated agriculture are to be used for only agricultural uses without prairie dog occupancy. It appears that the city has some flexibility here.

If the issue is water rights, then it would seem more relevant to include some legal language whereby adherence must respected to protect water rights; this would provide a better understanding of the situation and better transparency.

On page 4 it states that **"Over the past 50 years, the city's history of open space acquisition and management practices have demonstrated that there is on-going support for integrating both agriculture and prairie dogs into open space delivery."**

This statement implies a harmonious partnership with diverse open space uses, but if there is now a problem with 30,000 prairie dogs, it seems that relationship is fractured and probably has been for quite some time.

3. Unclear why staff is only permitting for relocation on 40 acres - Referencing pages 2, 3, 25 Table A-8

- 6,641 acres of OSMP lands are leased irrigable lands and OSMP supports these lands remain in acceptable condition
- 5,300 acres of OSMP lands are designated for prairie dogs to live in protected status
- 800 to 3,137 acres equals the desired target range of lands to be occupied by prairie dogs
- 2039 acres are presently occupied by prairie dogs.
- 280 irrigable lands managed by OSMP removed from production due to prairie dog occupancy, 690 acres if irrigable lands leased by tenants. Approximately 970 acres are in conflict.

Evaluation:

- 5300 - 2039= 3,261 acres of land that could be occupied by prairie dogs but are not, why?

This report should clearly state that 3,261 acres are available for translocation and at current staffing levels, the maximum capacity is 40 acres.

4. Economic and environmental considerations - After reviewing various control scenarios versus lessee income it is apparent that there is not enough information to make a decision that is both financially and environmentally relevant. Based upon the data provided, only the following calculations could be made:

Lessee income:
1000 x $12000 = 12,000,000 (vegetables)
1000 x $152 =$152,000 (grass hay production)
1000 x $70 = $470,000 (alfalfa production)
1000 x $6.70 - $8.85 = $ 6,700 to $8,850 (grazing)

Average = 12,000,000 + 152,000 + 470,000 + 8,850=12,630,850/4 = $315,771 average value of income received from 1000 leased irrigable acres. Or $316 per acre. Excludes costs for re-establishing soils and plants and/or fencing out prairie dogs.

Costs to remove prairie dogs:
1000 x ($3,000 to $4,000) = 3 to 4 million dollars (active relocation)
1000 x ($1,250) = $1,250,000 (passive relocation)
1000 x ($4000) = $4,000,000 (Carbon dioxide donation)
1000 x ($65) = $65,000 (carbon monoxide cartridges)
1000 x ($221) = $221,000 (PERC carbon monoxide)
1000 x ($4,400) = $4,400,000 (donate to ferret recovery)

Average cost = 4,000,000 +1,250,000 + 4,000,000 + 65,000 + 221,000 + 4,400,000=13,936,000/6= $232,266 average cost to remove prairie dogs from 1000 acres or $232 per acre or $8 dollars per prairie dog (30 animals). These costs do not include modifications to keep prairie dogs out of removal areas or to restore lands back into agricultural production (depending on the crop).

As we can see, an $8 cost to remove one prairie dog is just as unrealistic as it is to believe that each irrigable acre produces income at $316 per acre! What are the economic impacts?

5. Not implementing plague vaccine SPV (Sylvatic Plague Vaccine); as a method to remove prairie dogs - Plague (Yersinia pestis) is an exotic disease that rapidly kills any animal that does not have immunity to the disease. As prairie dogs do not have immunity, plague can quickly move through a colony and kill prairie dogs within a short period of time. Plague is so decimating to prairie dog colonies that it has been considered as a primary reason for listing under the Endangered Species Act.

While we cannot assess how prairie dogs feel pain, we do know that plague is painful to humans and is therefore likely to be painful to prairie dogs. Using plague as a cost saving management tool to intentionally allow prairie dogs to succumb is an inhumane practice.

SPV is only in an experimental stage and should not be relied upon as the only method to protect colonies. According to Colorado Parks and Wildlife, both SPV and dusting burrows with

Deltamethrin should be used as an integrated plan to protect prairie dog colonies. *Burrow Dusting or Oral Vaccination Prevents Plague-Associated Prairie Dog Colony Collapse. Daniel W. Tripp, Tonie E. Rocke, Jonathan P. Runge, Rachel C. Abbott,and Michael W. Miller, EcoHealth 2017*

6. Gas Cartridges - remove that prairie dogs are trapped and killed (second paragraph). Prairie dogs are fumigated in the ground and not handled.

7. Consult and share information with experts and agencies -

This section provides information about the behavior and biology of prairie dogs, their role in vegetation management, their importance in carbon sequestration and the fate of prairie dogs as they adjust to climate change.

The behavior and biology of prairie dogs has been extensively studied and probably the most comprehensive results about these characteristics can be found in two books authored by Dr. John Hoogland: *Conservation of the Black-tailed Prairie Dog: Saving North America's Western Grasslands (2006) and The Black-tailed Prairie Dog, Social Life of a Burrowing Mammal (1995).*

Some key points about prairie dogs:

- are not migratory, they disperse singly, generally to another coterie within the birth colony and rarely, in search of another colony.
- they are a prey species that enjoys safety in numbers, sometimes at high costs such as a lack of forage and breeding mates.
- they live in highly territorial matriarchal harams comprised of close family units called coteries; coteries do not blend with each other.
- colonies can be viewed as stable, a colony that has occupied an area for a long period of time wherein expansion is limited or unstable, a colony where expansion is unlimited.
- stabilized colonies can remain in the exact area, with little variation in burrow density, for decades. Stationary colonies provide a predictable food source and homes for other wildlife species.

Understand colony structure, burrows and tunneling is equally important. In *Hygnstrom, S. (2002): Prairie Dogs and the Prairie Ecosystem Scott E. Hygnstrom University of Nebraska-Lincoln, shygnstrom1@unl.edu*

- colonies of black-tailed prairie dog have between 10 to 100 burrow entrances per acre.
- burrow tunnels are usually 6 to 15 feet deep and 15 to 30 feet long.
- burrow mounds serve as lookout stations, prevent water from entering their tunnels, and promote passive ventilation of the burrows.
- burrowing can be beneficial to the soil as it results in the mixing of soil types, incorporation of organic matter, increased soil aeration, and decreased compaction.

Regarding vegetation, for more intact prairies, vegetation on prairie dog towns is more diverse compared to offsite towns. Also, considering this very important fact is that prairie dogs do not move, they like to remain in the exact same area for decades if not centuries. It is their persistence in one area that alters plant composition from a monoculture of grasses to a diversity of grasses, shrubs and forbs that are resistant or resilient to prolonged grazing pressures. Over the last 150 years, agricultural practices intentionally sprayed herbicides or plowed under many forbs across rangelands

to protect livestock from being potentially poisoned by the consumption of unknown plants. Today, as prairie dogs occupy historical ranges, and grasses are clipped, the remaining forbs are generally introduced Eurasian weeds that can severely inhibit the functional diversity of native flora needed on occupied prairie dog sites.

Studies on the effects of vegetation consumption by black-tailed prairie dogs on mixed-grass prairie indicated that within two years of colonization, mixed grasses were almost reduced by 50 percent. As grass cover decreased, forbs increased until they were almost equal to the previous cover of grasses (Detling, 2006). There are distinct zones in prairie dog occupied sites where the core of a colony that has been occupied the longest is predominately forbs, annuals and shrubs and in transition zones (newly colonized areas) plants are a mixture of forbs and perennial grasses. (Slobodchikoff et al., 2009).

Research into native plants that resist or are resilient to prairie dog grazing has gained attention as a potential strategy to combat nonnative plants and to control erosion from blowing soil. Plants that have a disagreeable taste (milkweeds, snakeweed); a strong odor (fetid marigold, cleomes, sage, rabbitbrush, penny royal); are prickly (rosa spp., prickly poppy, purple three-awn); have an abundance of hairs (blazing star, golden rod, aster, vervain); are prostrate (bracted vervain, woolly plaintain, buffalo grass) or are sticky or gummy (gumweed, bee plant) appear to be strongholds on active prairie dog sites (Vickery 2015). Plants observed on prairie dog sites such as: asters, geraniums, flax, mallows, penstemon, yarrow, primrose, rose, milkweeds, lupine, sage, verbenas, succulents, dwarf shrubs and shortgrasses (blue grama and buffalo grass) are good candidates for reintroduction into denuded or degraded prairie dog sites. Native plants are valuable commodities and some communities have expanded local seed banks to address limited commercial seed availability (Jones, T & Wanek, P. 2019).

Creation of windbreaks may also help control erosion and blowing soils. Windbreaks have at least three benefits; to direct wind away from fragile soils, capturing moisture and as living fences that can help to exclude prairie dogs from conflict areas. Having personal experience with windbreaks, especially in very dry areas, the following plants appear to have to provide the best resistance to dramatic temperature extremes and low pest problems: tall rabbitbrush (Chrysothamnus nauseosus), three-leaf sumac (Rhus trilobata), New Mexican Privet (Forestiera neomexicana), and Rocky Mountain juniper (Juniperus scopulorum). Two good sources for implementing and maintaining windbreaks can be found at either the local CSU Cooperative Extensive Services and the following document:
https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10797.pdf

Other methods to control prairie dog movements is to relax grazing on mixed height grasses and to potentially add taller native forbs into these grasses to extend seasonal effectiveness.

Sources:

Detling, J.K, & Whicker, A.D. (1987) *Do Prairie Dogs Compete with Livestock?* In J. Hoogland (Ed.), Conservation of the Black-tailed Prairie Dog: Saving North America's Western Grasslands (65-88). Washington, D.C.: Island Press

Jones, T. & Wanek P. (2019). *Creating Prairie Dog Management Plans: A guide for Local Governments and Stakeholders. Part 1: Background and Context.* Denver, CO: WildEarth Guardians and the Prairie Dog Coalition of the Humane Society of the United States.

Slobodchikoff, C.N., Perla, B.S., & Verdolin, J.L. (2009) *Prairie Dogs: Communication and Community in an Animal Society.* Cambridge, MA: Harvard University Press

Vickery, J. (2015). *Vegetation Management in Urban-to-Exurban Prairie Dog Colonies: Context, Issues and Native Plant "Survivors."* Conference poster. High Altitude Revegetation Conference. Central Rockies Chapter of the Society for Ecological Restoration and the HAR Committee. March 10-12, 2015, Ft. Collins, CO

Carbon sequestration -
The Conservation Reserve Program (CRP) states that one of the most powerful ways to encourage carbon sequestration is to plant perennial grasses and forbs and to reduce tillage and harvest as these later activities release carbon back into the air either through plant depletion or the release of fossil fuels, please see: https://www.fdcenterprises.com/native-grasses-and-forbs-for-carbon-sequestration/

Carbon sequestration also has economic incentives through carbon exchange credits. Ranchers and farmers may be more motivated to change their practices if other sources of revenue are available. The "cap and trade" policies have limited how much pollution industries can release into the air and many big industries are buying carbon credits to offset pollution. Carbon credits are traded on the Chicago Climate Exchange where in the first nine months of 2008, more than 60 million credits were traded on the exchange. https://www.scientificamerican.com/article/carbon-cowboys/

While the exact role of prairie dogs in carbon sequestration is limited, only due to lack of research, it is inconclusive that they are exacerbating an already difficult problem on degraded agricultural lands. In multiple studies, arthropod communities were higher on occupied prairie dog sites compared to offsite colonies. Arthropods are important for carbon sequestration due to their ability to reduce below ground compaction and increasing airflow.

One of the most compelling documents to encourage a change in how we have historically used agricultural is found in a document entitled *"Restoring Atmospheric Carbon Dioxide to Pre-Industrial Levels: Re-Establishing the Evolutionary Grassland-Grazer Relationship."* This document approaches carbon sequestration as a holistic approach within natural environments.

Key points:

- The quantity of carbon contained in soils is directly related to the diversity and health of soil biota. Since virtually all organic carbon sequestered in soils is extracted from the atmosphere by photosynthetic organisms, and converted to complex molecules by bacteria and fungi in synergy with insects and animals, we propose an effective and sustainable method for increasing soil organic carbon by restoring degraded and desertified grasslands worldwide.

- Plants in a healthy biodiverse soil will release much of their photosynthetic sugar (perhaps 40%) to symbiotic mycorrhizal fungi. In return the fungal mycelia distribute energy in the form of sugars to microbial communities deep in the soil, which find and extract minerals for the plant. The mycelia are also active in finding water in pores inaccessible to plant roots. This mycorrhizal system also produces a carbon-rich glycoprotein called glomalin, which comprises a large percentage of organic matter in healthy soils. They are sticky substances that can bind soil particles together, providing air spaces and structure for the movement of water and soil organisms and holding many times their own weight in water.

- Synergy is at the heart of effective eco-restoration. To restore grasslands as healthy ecosystems and effective carbon sinks, we must re-establish the evolutionary relationships between grazing animals and their habitats.

- Over a period of as few as three years, many long-disabled processes come back to life. Insects such as dung beetles retrieve excreta and store it more than 18 inches beneath the surface. Worms and small mammals such as moles and prairie dogs churn the soil, while deep-rooted perennial grasses regrow and create channels for water and gases. Mycorrhizal fungi, transport nutrients which they have the unique ability to obtain from soil minerals, and exchange them for carbohydrates from photosynthetic plants. The fungi synthesize a stable glycoprotein, glomalin, which holds 4 to 20 times its weight in water. Micro-organisms join the elaborate fray, accessing minerals that they supply to fungi which in turn supply them to the green plants, and in the process create complex carbon molecules that store carbon deep in the soils for a long period of time. This is the embodiment of carbon sequestration.

- the Keyline system, is an approach to sub-soil contour plowing that can rapidly increase the depths at which soil biota are active. From a whole-system perspective, however, this technology is only a proxy for the essential impact of burrowing mammals, many of which have been eliminated as a result of modern agricultural and rangeland practice. Burrowing mammals and their predators must be considered within the context of holistic planning. The digging and churning activities of these animals enable the capture of far more rainwater on capped soils, and begin eco-restoration in areas where it is difficult to bring livestock on a regular basis. Prairie dogs and moles were once numerous in North America when our soils were much deeper. They may well be critical to the hydrology and to the reduction of wildfires in a warming climate.

- Prairie dog dens are dug as deep as 3 to 4 meters, making pathways easier for all the other soil biota from worms and beetles to fungal mycelia seeking minerals.

  Source: Restoring Atmospheric Carbon Dioxide to Pre-Industrial Levels: Re-Establishing the Evolutionary Grassland-Grazer Relationship. Adam D. Sacks, Richard Teague, Fred Provenza, Seth Itzkan, Jim Laurie. Biodiversity for a Livable Climate, Lexington, Massachusetts, Ecosystem Science and Management, Texas A&M AgriLife Research Texas
  A&M University System, Vernon, Texas

Finally, what is the fate of prairie dogs with climate change? Research here is also limited, but in the Colorado State Wildlife Action Plan (SWAP), there are concerns that that prairie dogs populations could succumb to decreased forage. According to the 2015 SWAP research conducted on Gunnison's and White-tailed prairie dogs indicated total colony collapses directly attributable to the changing climate.

8. Allowing tenants to control with BMPs - as I work in the field and view many conflicts with prairie dogs, I would support tenant control of prairie dogs but only with BMPs. OSMP has clearly stated that their capacity is limited to deal with every situation on a timely manner. Had tenants had this option in prior years, it is quite likely we would not be dealing with such a large problem right now! I also think that optimistically, these landowners can learn a lot about prairie dogs, techniques for lethal control and even partner with active relocation to lands that are presently available, thus removing the 40 acre limit proposed by OSMP.

9. Burrow Destruction Ordinance - There should be flexibility with this ordinance if using BMPs. If the intent of the ordinance is to curtail or limit willful disregard of prairie dog habitat, then using BMPs for each given circumstance should be considered. I **do not** agree with granting agriculture "affirmative defense" category, but would rather see a plan and permitting process. Giving three years to achieve a desired objective is ample time to determine if such practices are in fact BMPs. In this way, OSMP and the city can be apprised of innovative ideas that work or do not work.

10. Work with CPW to modify relocation policies - there are certain areas that this would be both helpful to both the applicant of the permit and CPW by both freeing up time for both parties. If OSMP has a comprehensive plan for shifting around prairie dogs into more appropriate areas, it is possible that CPW may find this acceptable, in fact, having such a plan in place approved by the state may incentivize other communities to do the same.

Pursuing cross county transfer, SB99-111, may not be beneficial for Boulder, primarily because Boulder already has a great deal of open space for prairie dogs. I do believe however, that SB99-111 has severely hampered the ability to create complexes by limiting both financial incentives to private landowners that wish to conserve prairie dogs and granting county commissioners control over wild species whereby even their own communities may not even recognize that prairie dogs are a Species of Greatest Conservation Need as identified in the State Wildlife Action Plan. The goal in all federal and state policies is range-wide distributions of prairie dogs within historically occupied counties. Counties that do not recognize the importance of prairie dog "occupied acres" create huge opportunity costs for wildlife and the taxpayer.

11. Prairie Dog Working Group Related Actions - staff makes a comment that "this" review effort is a separate track from the PDWG recommendations. This is unacceptable for so many reasons and it is unclear exactly why the city is not embracing decisions that are the result of multi-stakeholder recommendations.

Thank you for your time in this matter

Pam Wanek

From: Andy Breiter
To: OSMP Input; OSBT-Web; Council
Subject: Regarding Prairie Dogs
Date: Tuesday, February 4, 2020 6:26:11 PM

External Sender

Hello all,

My name is Andy Breiter. I am a young farmer in Boulder and I am the President of the local Flatirons chapter of the National Young Farmers Coalition. I am emailing you my personal opinion regarding this issue.

First I want to say that I am glad you all are reviewing the land with a close eye. Prairie dogs are a large issue on our public lands.

The way prairie dogs are degrading the land is not in conjunction with nature. Due to a variety of reasons, humans included, there is no longer a natural predator for prairie dogs. We must be that predator. In order to manage the prairie dogs, we need to use all tools at hand including lethal control. Lethal control, however, needs to be used along with agricultural practices that will support soil health, ecosystem health and communal health.

As a young farmer this is important to me because it hurts me to see a large opportunity not being taken advantage of. 1000 acres of agriculturally designated land is no longer in use because of prairie dogs. Myself and others could work this land with guidance from the Ag Management Plan to improve the landscape and make the land productive. It is a tremendous opportunity and due to rules and regulations it is not being taken advantage of.

I think we are on the right path, but I believe that lethal control along with ecosystem regeneration will restore the land while giving young farmers an opportunity to prove themselves.

Thank you for your efforts,

Andy Breiter

From: Eric Aslakson
To: OSMP Input
Subject: Prairie dogs
Date: Tuesday, February 4, 2020 6:26:48 PM

External Sender

I have 40 acres in the San Luis Valley. It is surrounded by grazing land and is approx 6 miles nw of Moffat. I'd love to start a prairie dog colony there. Let me know if it is possible.

I could transport them if you would show me what I would need to do once they arrive. My phone is 212-796-5300

Best, Eric Aslakson

Sent from my iPhone

From: Taylor Jones
To: OSMP Input
Subject: Comments on OSBT/OSMP EVALUATION OF EXPEDITED PRAIRIE DOG MANAGEMENT OPTIONS
Date: Tuesday, February 4, 2020 9:28:26 PM
Attachments: 2_4_20_Comments.pdf

External Sender

Attached please find comments on the evaluation of expedited prairie dog management options submitted on behalf of Keep Boulder Wild. Thank you for your consideration.

Sincerely,

Lindsey Sterling-Krank
Carse Pustmueller
and Taylor Jones

FEBRUARY 4, 2020 COMMENTS ON: OSBT/OSMP EVALUATION OF EXPEDITED PRAIRIE DOG MANAGEMENT OPTIONS

Submitted on behalf of Keep Boulder Wild
to osmpinput@bouldercolorado.gov

Lindsey SterlingKrank, Carse Pustmueller, and Taylor Jones

I

Our scenario for how to reduce conflicts on irrigated agricultural lands where prairie dog numbers are high

- Reduce the size of the conflict area.
    - It is our understanding that there are two lease areas in the project area (Boulder Valley Ranch and Axelson/Johnson) that have significant conflicts and that reducing the conflict on these areas was the purpose of creating an Expedited Plan. The Expedited Plan should focus on these two areas of most conflict (BVR has prairie dogs on 322 acres of irrigated land (53% of the lease area); Axelson/Johnson has 319 occupied acres (50% of the lease area), thus realistically increasing the chance of success and decreasing the number of prairie dogs on the areas where doing so is most important. The remaining leases on irrigated agricultural (ag) lands in the project area are minimally impacted by prairie dogs (less than 12% of the remaining irrigated ag leases are occupied by prairie dogs) and should and can be managed by implementing the PDWG recommendations.
    - Instead of removing all 967 acres of prairie dogs in conflict, remove only 25% (Q1) or 50% (Q2) on BVR and Axelson/Johnson leases using non-lethal options. This action responds adequately, economically, and realistically to the conflicts on these leases and significantly decreases the number of prairie dogs needing to be removed from the irrigated ag lands in the project area.
- Minimize lethal control by using lethal methods only after exhausting the following non-lethal options:
    - Implement the PDWG fundamental principle (agreed upon by all PDWG participants) to emphasize non-lethal methods of control and to minimize lethal control.
    - Allow co-existence of prairie dogs on irrigated agricultural (ag) lands, where feasible, by installing barriers to separate the prairie dogs from ag activities.
    - Provide barriers on irrigated ag lands having prairie dogs and adjacent to private land to reduce conflicts with neighbors and decrease removal activities from private lands.
    - Increase capacity to relocate prairie dogs away from irrigated ag land conflict areas.
    - Collaborate with community partners (e.g., Prairie Dog Coalition or Defenders of Wildlife) to implement conflict prevention strategies and for

volunteers to relocate the remaining 20% of untrapped/unrelocated prairie dogs (that would otherwise be killed) away from city efforts.
  - Pilot a minimum of two conservation leases (either leases between the City and co-lessees (both the ag tenant and the conservation organization/group) or leases between the City and a conservation entity; See 2019 Keep Boulder Wild alternative lease recommendations). This provides lease income to the City and allows for ag and prairie dogs to co-exist on some irrigated ag lands and/or for some leased ag lands to be leased for prairie dog conservation purposes instead of for ag purposes.
  - Make changes to the Wildlife Protection Ordinance to increase coexistence and allow for burrow destruction by ag operations under certain conditions.
  - Work with Colorado Parks & Wildlife to speed up and simplify the relocation permit process so that the City can obtain permits in a more time-efficient manner and for more relocations either through appointed staff or a consultant
  - Modify leases annually based on precipitation and wildlife occupation to reflect a stasis yield for lessees by entering into conservation leases with a land trust and maintain habitat for wildlife on irrigated lands occupied up to 25%.
- <u>Integrate the PDWG Recommendations and the Expedited Plan. They should not be considered separate projects.</u>
  - The PDWG Overarching Prairie Dog Conservation Goal: Sustainably conserve prairie dogs in the Boulder Region by implementing the following ecological, social, and economic goals, objectives and strategies (as outlined in the recommendations).
  - The Expedited Plan's project area is a subset of the area within the Boulder Region. As such, the PDWG goals should serve as the umbrella under which the Expedited Plan exists. PDWG's fundamental principles, as well as its ecological, social, and economic goals, objectives, and strategies, should be those of the Expedited Plan as well. This gives us all a guiding principle for this process which we are currently lacking.
- <u>Do not allow removal, especially lethal removal, on properties where preventing reoccupation is not feasible. Lethal removal under such circumstances would lead to repeated killing of wildlife on public open space.</u>
- <u>Respectfully, Colorado is a fence-out state. The Shulers' are performing their duty on their own private lands to keep wildlife from migrating from public lands to private lands. This scenario plays out in every state over multiple species. We have offered to help with their barrier installation and costs, but they have maintained they only want the prairie dogs gone. While we can understand wanting to use irrigated lands for plans other than prairie dogs, the lands in question are public lands hosting a native, keystone species.</u>

II

Specific Comments in Response to OSMP Statements (in orange) in the Expedited Plan Evaluation

1. OSMP Statement from Page 1:

Following an April recommendation by the OSBT, in May the City Council directed OSMP staff to undertake an expedited review of the management of irrigated lands occupied by prairie dogs, with a focus north of Jay Road.

COMMENT: The Expedited Plan was created in response to a need to decrease prairie dog numbers on two irrigated ag land lease areas in the Northern Grasslands (specifically Boulder Valley Ranch and Axelson/Johnson lease areas) where conflicts are a concern to the lessees. The Expedited Plan should be limited to those two lease areas, and not include all 967 acres of irrigated ag lands in the project area that have prairie dogs. Creating an expedited plan for all 967 acres would potentially include removing or killing 19,340 to 29,010 prairie dogs.

2. OSMP Statement from Page 6:

Outside of the project area, prairie dogs occupy an additional 292 acres of irrigable land on OSMP-managed properties. It is anticipated that the approach and many of the strategies developed through this process could be applied to those areas.

COMMENT and QUESTION: The PDWG created recommendations for all city-owned lands having prairie dogs, and this expedited plan is a specific plan for specific problem leases on irrigated ag lands in the project area. It is concerning that OSMP is considering the use of actions and strategies in the Expedited Plan for application on other city-owned lands outside of the project area for which the Expedited Plan is being created. We are concerned the PDWG recommendations will be usurped and discarded over time by the Expedited Plan and by the future use of the Expedited Plan on additional prairie dog habitat in the future. What plan does the City have to prevent this from happening, in order to prevent all the good work of PDWG from being undone?

QUESTIONS:

a. What is the City going to do to keep prairie dogs on the North landscape in the face of imminent plague epizootics? What is the City going to do to maintain prairie dogs on the landscape in the Northern Grassland?

   If we are going to do an expedited removal, then we need to do an expedited implementation of plague management tools to conserve prairie dogs on the landscape.

   If we are considering using plague management as a lethal tool, we are responsible for putting a mechanism in place to limit the toll. As we are looking towards a more stasis population that is less boom-and-bust, we must consider applying insecticide strategically in limited underground burrows to protect some of our prairie dogs in and/or adjacent to the project area.

b. Where is the proof that removing prairie dogs is going to improve irrigated lands, both immediately and in the long-term? Please provide scientific proof that prairie dogs are decreasing carbon sequestration and/or soil health and not playing their keystone role on irrigated ag lands.

   If prairie dogs are removed from irrigated ag lands, data should be collected from both on and off colonies on irrigated ag lands for a ten-year period to compare results.

c. If the data are just from the single Bennett property, how do staff and Trustees justify making lethal wildlife decisions on public lands based on one data set collected over one year? Please explain.

3. OSMP Statement from Pages 1-2:

Staff then evaluated each of the potential actions regarding their benefit and feasibility. For benefit, staff considered several factors:

a) Scope: The degree to which the action would allow OSMP to more fully meet charter goals. Staff examined how fully would the strategy allow for the implementation of Master Plan Strategy ATT.3, and implement the Master, Ag and Grassland Plans.

COMMENT: The Charter does not specifically state that 100% of the irrigated ag lands be used for ag. The City can set/change its goal for what percentage of irrigated ag lands should be used for ag purposes and what percentage for other uses.

b) Spatial Scale: The degree to which the action is likely to be effective across the project area.

c) Contribution: How much the action contributes to addressing the situation. This factor also required staff to examine what other actions would be needed to ensure success.

d) Duration: Will the action secure a long-lasting outcome or is it a temporary fix?

COMMENT: Effectiveness, Contribution and Duration of an action must be determined by subsequent actions, e.g., if prairie dogs are removed from an area, actions need to be taken to insure that the prairie dogs won't re-establish the take site.

QUESTION: Were protections from re-colonizing (e.g., subsequent actions) included in OSMP's determination of "effectiveness of an action" and of estimated costs to implement the Expedited Plan?

4. OSMP Statement from Page 2-3:

The city seeks to ensure that all 6,641 acres of irrigable fields are leased and in agricultural production, and that the water delivery infrastructure that supports irrigated agriculture is in acceptable condition.

COMMENT: In the Project Area there are:

- 5,000 acres of OSMP land of which 2,400 acres are irrigable lands.
- Of these 2,400 acres, 967 acres have prairie dogs
    - 690 acres are leased to producers (private landowners)
    - 280 acres managed by OSMP

Ensuring the removal of *all* prairie dogs on *all* 967 acres is overkill (no pun intended), unrealistic, absolutist, economically unfeasible, and unfair to other uses of irrigable lands. Prairie dogs can be compatible with some irrigated ag lands where passive relocations can be implemented and barriers can be installed to separate prairie dogs from conflict areas on the property. There must be some reasonable approach to the overcrowding problem. The Charter's goal of preserving agricultural uses and land suitable for agricultural production can be met without removing all prairie dogs from all irrigated ag lands. The PDWG discussed this at length and came up with several recommendations to help resolve conflicts between prairie dogs and irrigated ag lands. The PDWG recommendations should be implemented and their use exhausted before any lethal control occurs on the irrigated ag lands in the project area.

5. OSMP Statement from Page 3:

The most widespread impacts from prairie dog occupation on irrigated lands are reduced agricultural productivity and changes to the type of agricultural use. The typical transformation can be described as follows: Initially, irrigated hayfields are switched to irrigated grazing land as prairie dog occupation makes the operation of haying equipment difficult or impossible. As populations increase and the area of prairie dog occupation increases, irrigation becomes too difficult or impossible. If prairie dogs fully occupy an irrigated field, there is typically no benefit to continue agricultural operations, and the property is taken out of agricultural production – and often removed from the agricultural lease program. Damage to the irrigation infrastructure from the direct effects of prairie dogs or from lack of use and maintenance have resulted in degradation of open space assets, reducing the long-term agricultural or ecological sustainability of the land.

COMMENT: This is unfair. This is exactly the kind of language that makes *all* of our jobs harder. It vilifies the animal and singles the prairie dog out despite there being multiple variables at play. Past land uses, including ag itself, are causing widespread impacts and making ag use unproductive. Please amend this document or rhetoric to include the fact that prairie dogs are not the sole cause of the state of our lands and that historic land uses, including cattle grazing and agriculture, combined with climate change, contribute to the current scenario.

6. OSMP Statement from Page 3, Para 6- 4th sentence:

Until very recently, OSMP's relocation needs were not prioritized and relatively few relocation projects could be implemented. As a result, prairie dog populations continued to expand in Removal and Transition areas.

COMMENT: This is unfair. Prairie dog population expansion in the areas of concern is not only a result of OSMP's relocation needs not being prioritized; it is also a result of the long amount of time it takes for the City to file and process a CPW permit in addition to the too-strict criteria placed on grassland preserves to be receiving sites, resulting in years when no receiving sites were available. Please adjust this language to be more realistic and encompassing of all the factors involved.

7. Charter Purpose Table from Page 4.
QUESTION: Please explain how ag meets the second purpose. Also, we suggest both prairie dogs and ag could be used for the 5th purpose, "preservation of passive recreational use…"

9. Page 9:
QUESTION: What other management tools have not been successful as mentioned in paragraph 2, "Values"?

10. OSMP Statement from Pages 10-11:
Both the community meeting and the online engagement in fall 2019 asked participants to answer the question: "*What is most important to protect when figuring out how to manage irrigated lands with lots of prairie dogs living in them?"* The respondents were prompted with the suggested responses in the table and were given the opportunity to provide other entries if the available options did not reflect what was important to them.

Response Options (or "write in" others)

- Animals dependent upon prairie dogs
- Farming and ranching on OSMP
- Grasslands plants and soils to capture carbon
- Land management goals of OSMP neighbors
- Lives of individual prairie dogs

Although not a statistically valid survey, the responses to this question helped OSMP get an impression about what was important to community-engagement participants.

COMMENT: The response options provided to the community in the Values Exercise were weighted in favor of non-prairie dog uses on irrigated ag lands, which contributed to the results OSMP received from the exercise. The overarching goal of the PDWG was to "sustainably conserve prairie dogs in the Boulder Region" by implementing the PDWG's recommendations. This would have been a stronger option than "lives of individual prairie dogs," which downplays the importance of preserving prairie dog habitat and protecting prairie dog colonies. This survey shows an unconscious bias against prairie dogs. Please work with a social scientist to curb this damaging rhetoric. Please also note we recognize the City does better than other agencies in this regard, however, the language is still damaging and does a disservice to the education needed on behalf of this imperiled ecosystem inside and outside of this expedited process context.

11. OSMP STATEMENT from Page 10:
Many people opposed the use of lethal control of prairie dogs because of the reductions in populations of the black-tailed prairie dog throughout its historic range. Several people

commented that prairie dogs should not be killed because they were present on the landscape before agriculture and are acting naturally in their native range, whereas agriculture is introduced and artificial. Others alluded to the important role that prairie dogs play in structuring grasslands and the cascading effects on other species from killing prairie dogs. Other comments expressed a belief that killing prairie dogs is fundamentally wrong, disrespectful and does not demonstrate compassion for life or that lethal control takes an emotional toll on the community.

COMMENT: Add: "One of the PDWG's fundamental principles, agreed upon by all participants, was that non-lethal methods of control should be used and exhausted before lethal control measures are implemented (e.g, emphasize non-lethal options and minimize lethal)."

This principle should also be a fundamental principle of the Expedited Plan. OSMP should incorporate the PDWG recommendations into the Expedited Plan and not proceed as if they are two separate, unrelated, and unintegrated plans.

12. OSMP STATEMENT from Page 13, Table 6 (and later in document):
Law/Code/Policy Changes

- Allow tenants to control prairie dogs

COMMENT: While we understand some of the benefits of allowing tenants to control prairie dogs, we cannot support this. Allowing lease tenants to control prairie dogs gives them too much authority over public lands. These lands are public OSMP lands and do not belong to the lease tenants, who may not follow best practices. Prairie dog control options require OSMP oversight, period.)

- Change prairie dog management designations

COMMENT: This issue was discussed by the PDWG. The Prairie Dog Conservation Areas (PDCs) are touted as habitat where only prairie dogs have priority. The reality is that PDCs are small pieces of habitat usually surrounded by development. Prairie dog populations on PDCs have no opportunity to expand and become sustainable parts of a larger prairie dog ecosystem, one of the main objectives of the PDWG. The PDWG entertained the idea of creating PDCs on the Southern Grasslands to help create a sustainable prairie dog ecosystem there for eventual release of black footed ferrets. The limited habitat on PDCs is another reason why prairie dogs should be allowed to occur on irrigated ag lands when compatible and mitigatable.

Additionally, changing designations of irrigable lands occupied by prairie dogs to something else could reduce the number of lands in conflict. For example, changing the designation of 50 acres of irrigated lands occupied by prairie dogs to MOA and then adding 50 acres of Grassland Preserve to agriculture leased for bee keeping and forbs could provide an alternative that has multi-stakeholder support and reduce number of acres in conflict.

- Reducing/removing agriculture from irrigated lands
    - Consider conservation leases

COMMENT: This option is summarily dismissed in the Expedited Plan evaluation. It should be given serious consideration. It makes sense to a) add a conservation partner(s) to the most conflicted leases (the conservation entity and the ag lessee share the cost of the annual lease depending on prairie dog populations) or b) remove ag leases and ag uses on some of the existing most conflicted lease areas and instead create a conservation lease (the conservation group would pay for the annual leases). The City retains its income, conflict irrigated ag lands is decreased and more suitable prairie dog habitat is available.

- Don't lease irrigable OSMP when occupied by prairie dogs

COMMENT: Yes. See comment immediately above.

- Don't lease land for agriculture
- Modify agriculture goals to allow prairie dogs to coexist with agriculture

COMMENT: This is a good idea, especially allowing prairie dogs to remain on irrigated ag lands where non-lethal methods (relocation, barriers, passive relocations, etc.) can decrease conflicts with ag.

State of Colorado

- Work with Colorado Division of Parks and Wildlife to modify relocation policies and practices

COMMENT: Yes. If removal is rated as a high need, then this responsible goal needs to be rated high as well. Please appoint someone or hire a consultant to work with the state to improve prairie dog relocation permitting process.

- Change state law to allow landowners in other counties to receive relocated prairie dogs

COMMENT: The Humane Society of the United States (HSUS) currently has legislative language proposed that would provide a solution here. Please reach out to the City's legislative and lobbyist aides (Adam or Carl) and ask them to contact the HSUS and their lobbyist Christopher Votoupal at vga@chrisvotoupal.com for details on how the City might help.

13. OSMP STATEMENT from Table 7, Page 15 (concerning the PDWG):
Summary of benefit and feasibility ratings for actions to address irrigable fields occupied by prairie dogs. Starred (*) items are actions currently in use by OSMP.
COVERED BY PRAIRIE DOG WORKING GROUP (PDWG) RECOMMENDATIONS

a. Don't use lethal control until all non-lethal options are exhausted*
b. Economic benefit model

c. Lease cost forgiveness/compensate for lost production.
d. Pilot PDWG economic recommendations
e. Reimburse private owners

COMMENTS:

- The PDWG and Expedited plan should not be separate projects.
- The OSMP Expedited Plan Evaluation states that the PDWG recommendations and the Expedited Plan are separate projects. However, it also states "staff is aware that the PDWG and the expedited process need to be integrated projects."
- Use Principles of PDWG in the expedited process (e.g., exhaust non-lethal prior to any lethal use, etc.)

14. Page 16:
COMMENT: Please add the number of animals proposed to be killed/ removed to the table on page 16 titled "Management scenarios…"

15. OSMP Statement from Pages 19-20:
When considering relocation, the percentage of the estimated population to be removed by trapping is an important factor affecting both the cost and duration of a project. While more prairie dogs can be captured with prolonged effort, there is a steep drop off in trapping success after about 80 percent of the animals have been trapped. Continuing trapping after that point increases costs per animal captured significantly and precludes the relocator moving to another site. Relocation costs vary greatly depending upon site. The average cost to trap and relocate approximately 95 percent of the animals is estimated at $4,400 per acre. The estimated cost of trapping until 80% of animals are caught is about $3,000 per acre.

COMMENT: To cut down on costs and to increase numbers relocated to the Southern Grasslands where the goal is to create a sustainable prairie dog ecosystem, please organize an effort to reach out to community volunteers. Experienced relocators would be willing to volunteer to assist the city in trapping and relocating the remaining 20%.

QUESTION: The relocation cost at Foothills/Waneka Grassland in 2012/2013 was approximately $1,714 an acre. The Foothills/Waneka relocation may provide a good cost scenario that should be included in the relocation average. At a minimum, relocation costs vary and that should be represented instead of only the high end of the spectrum.

16. Page 20:
QUESTION: Please state why does the City not take advantage of the disturbed soils created in artificial burrow installation to add native seed back into the grassland. This is common practice with other land managers in the region. The City repeatedly states the one-sided view of the negative results of relocation. Rocky Flats NWR is using reintroduced prairie dogs to reduce noxious weeds across the street of the Southern Grassland Preserve.

17. OSMP Statement from Page 21:
Prairie dog contraception as means of population control/reduction and alternative to lethal controls is limited by several factors, including mode of delivery, toxicity and effects upon non-target species and availability.

COMMENT: The cost of contraceptives would likely fall between the cost of dusting an acre of burrows underground with insecticide and relocating prairie dogs. Additionally, this method could likely be researched or tested on a plot or small set of acres to reduce the number of acres in conflict.

18. Page 23:
COMMENT: Please state and include what happens to a prairie dog when they are captured and killed by carbon dioxide and carbon monoxide.

19. Page 25, Table A-8:
QUESTION: The total number of acres occupied by prairie dogs is 2,709: true or false?

If true, this is below the maximum desired threshold stated range of 800-3,137 occupied acreage. If false, please explain.

20. OSMP Statement from Page 30:
Community members submitted several comments regarding that OSMP emulate the prairie dog management of Boulder County Parks & Open Space.

COMMENT: While this may make sense in certain locations, Boulder County could be doing a lot better on their non-lethal prairie dog management. Keep Boulder Wild and other groups will and have recently submitted comments with this sentiment to Boulder County.

QUESTION: Does the 967 acres include the transition areas mentioned on pg. 30? If not, how many additional animals would now be considered for lethal control?

Overall:
We appreciate staff very much, and also the stakeholder's two-year participation in the Prairie Dog Working Group that minimizes lethal control. Minimizing lethal control is something the Open Space Board of Trustees should be taking seriously for City of Boulder residents and tax payers.

Any removal must be accompanied by effective means of excluding re-colonization.

This expedited process marginalizes minimizing lethal control on our public lands and language used throughout the evaluation alludes to the point that many more than 20,000-30,000 prairie dogs' lives hang in the balance of this decision (19,340 prairie dogs represent a low average of 20 prairie dogs per acre and 29,010 represent a high average of prairie dogs per acre multiplied by the stated project area of 967 acres).

III

Request for extension of comment period until February 18

We would like to request an extension of the public comment period until Tuesday, Feb. 18, as the end of the current comment period falls on a Sunday.

From: Marcus McCauley
To: OSMP Input; OSBT-Web; Council
Subject: Prairie Dog Concerns
Date: Tuesday, February 4, 2020 11:39:47 PM

External Sender

I'm writing you from the frontlines of prairie dog impact. I am a local regenerative farmer, concerned citizen of North Boulder County, Open Space neighbor, and lover of animals and soil.

A dust storm during Christmas 3 years ago blew a large portion of topsoil from City of Boulder Open Space (the Bennett property), adjoining us to the west, onto our property. Almost all day, the visibility on our farm was reduced to a few hundred feet because of Open Space soil in the air (it took millennia to build that soil, then Open Space owns it for about 10 years, and it's suddenly gone in a day). Several inches of soil fell onto our spring lambing pasture, delaying the emergence of our spring forage by several weeks, which harmed our business. Our bees were sandblasted and left their hives never to return. A quarter to half-inch of soil was on our screened-in porch and outdoor furniture (so we installed screen covers throughout our patio because we don't know how often Open Space dirt will visit us).

Over the last two seasons, I have been involved in a project to restore that Bennett Open Space land. We have used the same practices on Bennett that we have been using on our farm: holistic management, keyline design with flood irrigation, compost, and annual covercrops. We made progress in our first year, with germination of the annuals and hopes that this would give us a foothold to get perennials germinated and growing. We were encouraged and heartened that the resources invested and the hardwork we put in would pay off, and that the land would begin to recover. Unfortunately, the prairie dogs destroyed all of our progress. This was devastating to see and experience.

Unfortunately and reluctantly, I must now advocate for the lethal control of prairie dogs. I have tried to manage land without lethal control, on my farm and Open Space, and things are getting worse and worse. I'm saying this with experience, having spent my own blood, sweat, and tears, on my own farm and Open Space, trying to regenerate the land without lethal control. I do not believe it is possible to regenerate the land without lethal control.

More broadly speaking, humans have broken these brittle lands and ecosystems, and they won't be healed by do-nothing preservation. Important ecological functions are now missing, and we must fix them. We must take responsibility for what we have broken. We must play a conscious healing role, even if it means making difficult decisions.

Specifically, some of the missing functions are:

- There aren't enough natural predators of the prairie dogs to keep the prairie dog numbers down through predation alone.
- The prairie dogs can't move off their land due to fencing, etc.
- Ruminants are not grazing the lands and building topsoil and denser, taller stands of grass.

- Large predators are not forcing ruminants to mob graze.

We must be willing to serve as these missing/broken functions for the ecologies since we broke these functions. If we truly love the land, then we need to do what is necessary and what is right for the whole system. We need to actively manage the lands, which means that in order to solve the above problems, we need to play the role of predator in these ecologies by managing prairie dog numbers lethally, and move them off the land since they can't move themselves, move grazing animals in, and manage them holistically.

I believe we can reverse the desertification of Our Open Space lands, and that they can be more diverse, support more life, sequester carbon (the degraded lands must currently be a net carbon emitter), and harvest more water IF we are willing to allow ourselves the tools that serve as the ecological functions that these beautiful natural systems need.

I've attached photos of the soil deposition that occurred during the dust storm I mentioned. Almost all of the accumulated soil that you see along the fenceline that separates our farm from Bennett was deposited in this one wind event. All of this soil came from Bennett. Unfortunately, our young sheep could walk right over the fence all along the fence line after the soil was deposited.

Also attached is me standing just a couple hundred feet to the west of that fence line, on Bennett Open Space property. There used to be 12 inches of topsoil where I'm standing, but now only subsoil (B horizon) is left. It is almost gravel.

Lastly, the photo of the green growth is almost that exact same section of Bennett property, but this time it is after we've achieved the annual germination along our keylines. This was all destroyed by the prairie dogs.

Please feel free to contact me if you have any questions or need any more info.

Sincerely
,
Marcus McCauley
Farm Manager - McCauley Family Farms, LLC
Founder of Foremother Foods, LLC
[redacted]

D-231

From: William Stonehocker
To: Council
Subject: Prairie Dog management options in irrigable lands of OSMP.
Date: Tuesday, February 4, 2020 11:54:54 PM

External Sender

Dear Boulder City Council,

My wife and I own farm ground that we raise grass hay and board horses on. Our property borders Boulder County open space that shares borders with city OSMP on the Brewbaker-Sorensson property. We purchased the property two years ago and were happy to have Boulder County as a neighbor since it was open grassland that was being leased for grazing cattle. It was not long after we bought the property that we noticed we had a few prairie dogs on our property that we had not noticed before. I found out that the PDs were coming from OSMP property to the south west of us. Also later that summer I noticed a few PDs on the county property just to the west of us. I was very discouraged and dishearten to hear that the City has a poor record of being able to deal with prairie dog control on open space lands. My family has been farming along the front range for three generations and in my 60 years I have seen productive neighboring properties turn to dusty weed patches due to unchecked prairie dog colonies. It has been a near constant battle dealing with migrating PDs on the family farm.

Since we only had a few PDs I decided to shoot them because I don't like to use poison or Phos-Toxin if I don't have to. I also think it is more humane. I was able to clear our property that first winter but next spring I had 3 more show up and before I could clear them I drove in one day and had 10 more. It took me most of the summer to clear those and fill holes and then two more moved in later in the fall. It is very frustrating that I must deal with this problem because OSMP cannot control the prairie dog colony expansion on their lands. I am more saddened to think of what will happen to the property just to the west of us if nothing changes. All I have to do is look to the south when the wind blows to see the dust clouds coming off the prairie dog colony that looks like it was overgrazed. Since nothing is being done to stop them it will only be several years and it will be in the same state.

I am hopeful after reading the management review of irrigated fields draft that there is consideration of using lethal control. I can tell you from experience that you will not win the battle of prairie dog over expansion without some component of lethal control.

Please, Please, Please consider your responsibility to take care of these beautiful irrigated properties that may be forever changed if nothing is done.

Sincerely,

Bill & Terri Stonehocker

[redacted]

Comments on NextDoor

Brian B., The Hill
Could we work on the areas with a high number of vagrant campers who are not from this area first? It would be really meaningful to solve this problem first and then move on to prairie dogs next. Thank you.

Caroline W., Heatherwood
Lethal control. We need serious soil conservation efforts in these areas. I'm tired of watching top soil blow away because there is no ground cover left to keep it stable.

Me B., Highland Park
Use farmland to feed humans, not rodents. The gestation of the prairie dog is 30 days with 2-8 per litter. I can't believe the wasted taxation and efforts to relocate these animals to a sanctuary space. Use them to feed other raptors and predators both in captivity and the wild.

Erica E., Palo Park
Prairie dogs are a keystone species on the plains and help the soil: http://gprc.org/research/prairie-dogs-the-truth/prairie-dogs-and-soil-impacts/ Also their mating period is one single hour per year. They breed once per year. https://www.worldwildlife.org/stories/8-surprising-prairie-dog-facts Lots to learn about this little animal, and if you spend some time getting to know them, you might appreciate their presence.

Shelley A., West Gunbarrel
Leave the prairie dogs alone!

Me B., Highland Park
Move them to your yard if you value them over humans. Feed the humans and care for the topsoil.

Me B., Highland Park
They also carry the plague per CSU local experts. "Prairie dogs are hosts for fleas, making them susceptible to plague. Plague may be transmitted to humans via flea bites. Early symptoms of plague include swollen and tender lymph nodes, chills and fever. Early diagnosis and treatment is imperative. When walking through suspected plague areas apply an insect repellent to socks and pant cuffs before tucking pants inside boots." Sounds lovely.

Erica E., Palo Park
I think it's cool that Boulder has made room for them as we invade their habitat and pave over the plains. I value all life.

Lynn S., Newlands
Make a REAL Wildlife Refuge in their name! I'm a cat person but that's one dog I love!

Janine K., Newlands
I second Brian Barrett's comment.

Scott L., Whittier
Control the PD population in the least expensive way possible. Hunting and poison come to mind. Like it or not, as the apex species, we as humans must actively manage this planet to our benefit. PDs are vermin in these large numbers. Believe me, there will still be plenty of PD for our descendants to enjoy. And then move on the more serious issue transients, and needle injection and drug abuse, and human feces in our public places. Let's get some perspective.

Richard W., Frasier Meadows
To the Communications Specialist for OSMP: Most of us are not going to read the 54-page draft approach. How about a 1 page executive summary with a list of options, pros and cons for each?

Erica E., Palo Park
Human beings. The only species on earth that actually believes it's superior to all others, and more deserving of space and resources, then blames the innocent ones when we decide they've become a nuisance. I get it, they're overpopulated because we've upset the natural balance of an ecosystem. But while we poison them, can we have some reflection on how things got this way? No bigger topic out there than reverence for life. That's perspective!

Scott L., Whittier
The reason humans are the apex species on this planet is b/c we have big brains, opposing thumbs, and all of that. The decision about whether humans would dominate the earth was made many millennia ago long before anyone reading this post was alive. We inherit the world we have and that boat has long since sailed. The natural balance that some romantically crave was not as friendly as we might imagine. That balance was maintained by large predators like wolves, mountain lions, packs of coyotes, and a healthy dose of plague in addition to freezing temperatures, hunger, and early death. We humans have modified the natural balance so we can expand, multiply, and enjoy long lives on this earth largely free from the obstacles listed above. I didn't invent that and neither did any-"one" else. But we all benefit from it. We are warm in our homes with plenty to eat. When is the last time a friend or relative was eaten by wolves or died from gangrene? Modern society provides us those benefits and I for one am not willing to go back to subsistence surviving even if we could. That means we need to manage this artificial world we created and that includes deciding how many of other species we tolerate. Prairie dogs, racoons, elk, bears, mosquitoes, are all subject to that. And while the management of other species does involve death at our hands, there is simply no other reasonable way to enjoy the fruits of modern human existence. And while we are talking about saving the lives of a few rodents, thousands of humans (read: mothers, fathers, sons, daughters, cousins, and friends) die each year from needless drug overdoses. More than 700k americans have died since 1999 from opioid overdoses with more than 70k in 2017 alone. Is a human life worth more attention than a prairie dog? Absolutely. Ignoring the transient and homeless issue which is largely driven by mental illness and drug addiction is not empathy. Allowing someone to live on the street corner (look at Valmont and 28th this evening) is cruelty. I suggest we quickly and efficiently manage the rodent population which is easy to do, and turn our attention to the hard problem of saving nearly 100k of our brothers and sisters this year from dying of overdoses and mental illness due to our misplaced priorities.

Mary B. Dakota Ridge

Scott Lehman as David Byrne said, “Stop Making Sense.!!”

Me B., Highland Park
"MMMM, GOOD! A PESKY RODENT TURNS OUT TO BE DOGGONE TASTY" per
https://www.chicagotribune.com/news/ct-xpm-1991-10-02-9103300257-story.html

Me B., Highland Park
https://wildfoodgirl.com/2013/how-we-ate-prairie-dog/ Better than the alternative from the movie "Soylent Green" from 1973. Since PD is much like a squirrel, perhaps the population was kept under control by selective harvesting for food thus keeping the ecosystem in balance (when there were no grocery stores.)

Comments on OSMP's Facebook account

Carol Case Enough already. I saw prairie dogs being poisoned in a median strip of grass, where they were not hurting anything. There was black top on all sides so they could not spread their burrows. They were happy there.

Brandon Carrino Sounds like the farmers want the land, and is interested in adding chemicals into the ground. Hard pass.

Comments on the City of Boulder's Twitter account

Benedict Cumberbatch's Hair @zago_vasna ·Y'all going to murder those prairie dogs, aren't you? Disgusting. 🤬

Policy and Plans Guiding OSMP Conservation of Prairie Dogs

Federal

Other than interstate commerce laws related to wildlife, prairie dogs are not regulated at the federal level. Prairie dogs were proposed for listing under the Endangered Species Act and were briefly listed as "Warranted but Precluded". However, they were subsequently removed from that listing and are not currently considered threatened or endangered.

State of Colorado

The State of Colorado manages prairie dogs as small game, a species of concern and a rodent pest. The Colorado Division of Parks and Wildlife's (CPW) Conservation Plan for Grassland Species in Colorado sets objectives for statewide occupancy levels but does not give guidance of occupation at local levels. The CPW has established regulations for how prairie dogs can be killed, captured and moved within the state and regulates relocation of prairie dogs. A permit from the state is required prior to engaging in relocation.

City of Boulder

The City of Boulder Urban Wildlife Management Plan Prairie Dog Component (2006) identifies prairie dog protection opportunities in the urban service area and outlines strategies for resolving short-term and long-term conflicts.

The city has also established a suite of ordinances[1] referred to as the Wildlife Protection Ordinance that includes direction on when and how prairie dogs can be lethally controlled and burrows can be damaged.

The framework for the Management Plan and the Wildlife Protection Ordinances is a six-step decision making that describes prairie dog mitigation steps from least impactful (no action) to most impactful (in-ground fumigants).

Open Space and Mountain Parks (OSMP)

The OSMP Grassland Ecosystem Management Plan, accepted by City Council in 2010 provides management direction for management and conservation of prairie dogs and associated species. The OSMP Grassland Plan designates management categories for all prairie dog colonies and has objectives for maintaining or enhancing prairie dog populations in three designations areas (Prairie Dog Conservation Areas, Multiple Objective Areas and Grassland Preserves), totaling over 3,000[2] acres of colonies. The Grassland Plan also identifies two management designations where the activities of prairie dogs are not compatible. There are currently over 1,000 acres[2] occupied by prairie dogs system-wide that fall into the two designations (Transition and Removal areas) that anticipate the removal of prairie dogs. Most irrigable land is designated either as a Transition or Removal area.

[1] The sections of the Boulder Revised Code dealing most directly with prairie dog management are appended to this attachment including references to the related ordinances establishing them.
[2] Per most recent, fall 2019, OSMP prairie dog colony mapping.

All five prairie dog management designations include exceptions that allow for the removal of prairie dogs at any time for maintenance of existing irrigation facilities, such as a headgate, ditch, lateral ditch, reservoir or irrigated field.

OSMP Management Designations:

The management designations each allow for different activities related to prairie dog management. The designations are described below:

Grassland Preserves (GP)

Grassland Preserves are areas where prairie dogs and their associated species are part of large and ecologically diverse grassland habitat blocks. These areas are considered the best opportunity to conserve prairie dogs and their associated species. In most cases, prairie dogs will be allowed to persist without removal in Grassland Preserves. However, removal will be allowed for the purposes of maintaining existing irrigation facilities such as headgates, ditches, lateral ditches, reservoirs and irrigated fields. In addition, to ensure protection of habitat within Grassland Preserves, the need for limited removal from a Grassland Preserve will be assessed if prairie dogs occupy more than 26% of the Grassland Preserve (i.e. viability drops below "Good") and indicators of vegetation composition fall below identified thresholds. Inactive, previously occupied colonies within Grassland Preserves could serve as relocation receiving sites (where there is an existing burrow infrastructure) and if the area meets relocation criteria included in the Grassland Plan. However, prairie dogs will not be relocated into irrigated fields nested within Grassland Preserves. Following a die-off or other disappearance of prairie dogs from an area, they could be excluded to allow for habitat restoration or to protect existing habitat restoration projects.

Multiple Objective Areas (MOA)

In Multiple Objective Areas, preservation of prairie dogs and their associated community is one of several management objectives. Prairie dogs will be allowed to persist without removal except for the purpose of maintaining existing irrigation facilities such as headgates, ditches, lateral ditches, reservoirs or irrigated fields. MOAs will not be used as receiving sites for relocated prairie dogs. Exclusion of prairie dogs attempting to re-colonize an MOA could occur to allow habitat recovery.

Prairie Dog Conservation Areas (PCA)

PCAs are areas where the conservation of the prairie dog is the primary management objective and are managed opportunistically for associated species. These areas would serve as receiving sites for relocation with the minimum requirements described in the relocation criteria. No removal of prairie dogs would occur in PCAs except for the purpose of maintaining an existing irrigation facility such as a headgate, ditch, lateral ditch, reservoir or irrigated field. Prairie dogs will not be relocated into irrigated agricultural fields within PCAs.

Transition Areas

Transition Areas are grassland areas where the preservation of conservation targets other than the prairie dog and associated community takes precedence. Prairie dogs may inhabit transition areas, but will be relocated away from the property when feasible (i.e. relocation receiving site available). Following relocation, die-off or other natural events such as dispersal that leads to a reduction of the population and result in uninhabited areas, re-colonization could be prevented or discouraged using barriers, re-seeding, grading, burrow destruction, passive relocation or other methods available to the department. After efforts are made to trap and relocate all remaining prairie dogs, removal through

lethal control will be allowed in accordance with applicable regulations and policies, and if numbers do not exceed 20 individuals. Removal would be allowed at any time for maintenance of existing irrigation facilities such as a headgate, ditch, lateral ditch, reservoir or irrigated field. Continued irrigation will also be allowed in irrigated fields regardless of prairie dog occupancy.

Removal Areas

In removal areas, prairie dogs are incompatible with OSMP management objectives. The designation of a property as a Removal Area provides the option to remove prairie dogs from the property in accordance with applicable regulations and policies. Following removal, efforts would occur to prevent re-colonization including restoration or irrigation of the property, destruction of burrow system, exclusion structures, etc. Continued irrigation will be allowed in irrigated fields regardless of prairie dog occupancy.

Conservation Goals/Objectives:

The Grassland Plan defines conservation goals and objectives for all 8 conservation targets included in the plan. The conservation targets/objectives for prairie dogs include:

Indicator	Good	2009	2015	2018
% of occupied land in Protected Status (GP + PCA + MOA)	≥ 70%	75%	79%	69%
GP with occupancy between 10-26%	All 3	1	0	1 *(2 over, 1 under)*
Extent of active colonies in Grassland Area	800-3,137acres	1,733	1,748	4,153

6-1-11. - Limitation on Lethal Means of Control for Prairie Dogs and Birds.

(a) Except as authorized by other provisions of this chapter, no person shall utilize lethal means of control for prairie dogs or wild birds or remove prairie dogs from the ground with the intent to kill them.

(b) It shall be an affirmative defense to a violation of this section that behaviors described in Subsection (a) of this section:

(1) Were undertaken by a person who owns, or is responsible for operating, an airport facility or a person who acted at the direction of the owner of an airport facility, where such action is necessary in order to promote human safety or in order to comply with Federal Aviation Administration standards or regulations;

(2) Were undertaken by a person who owns or is responsible for operating a dam or other existing structure where structural integrity or safety is threatened by the activities of prairie dogs or birds;

(3) Resulted from public or utility-related projects conducted in conformity with management practices designed to minimize avoidable harm to animals located within an area containing prairie dog habitat;

(4) Were undertaken by a permitted academic investigator or by a city or state employee while in the process of bona fide research related to animal control or protection issues;

(5) Were required in order to resolve immediate and verified health or safety hazards pursuant to a permit issued in conformity with Section 6-1-39, "Special Permit," B.R.C. 1981; or

(6) Were undertaken as part of an ongoing and continuous program approved and permitted by the city manager that was designed to prevent recolonization of lands from which prairie dogs had previously been lawfully removed, but only where such program had been initiated immediately following the lawful removal.

Ordinance Nos. 7133 (2001); 7321 (2005)

6-1-12. - Damaging Prairie Dog Burrows Prohibited.

(a) Except as authorized by other provisions of this chapter, no person shall damage any prairie dog burrow.

(b) It shall be an affirmative defense to a violation of this section that:

(1) The burrow was uninhabited when it was damaged;

(2) A state permitted relocator had, within the twelve previous months, attempted to relocate all prairie dogs utilizing that burrow, whether or not all those prairie dogs were successfully captured and relocated;

(3) The burrow was damaged by a person who owned, or was responsible for operating, an airport facility or by a person who was acting at the direction of the owner of an airport facility and the activity that damaged the burrow was necessary in order to promote human safety or in order to comply with Federal Aviation Administration standards or regulations;

(4) The burrow was damaged in connection with temporary disturbances caused by public or utility-related projects where such activities were conducted in conformity with best management practices within an area containing prairie dog habitat;

(5) The burrow was damaged by a person who owned, or was responsible for operating, a dam or other existing structure where the structural integrity or the safety of the dam or structure was threatened by the burrow or by burrowing;

(6) The burrow was on the property of a single-family residence in which the person who destroyed the burrow, or authorized its destruction, was residing;

(7) Activities were undertaken by a permitted academic investigator or by a city or state employee while in the process of bona fide research related to animal control or protection issues;

(8) The burrow was damaged during the process of utilizing lethal means of control in conformity with the provisions of this chapter; or

(9) The burrow was damaged in connection with an ongoing and continuous program approved by the city manager that was designed to prevent recolonization of lands from which prairie dogs had previously been lawfully removed, but only where such program had been initiated immediately following the lawful removal.

(c) If the manager has reason to believe that work pursuant to any permit or other approval will damage any prairie dog burrow not subject to the defenses set forth in this chapter, the manager shall deny the permit or approval or condition its exercise on lawful relocation of the animals. Appeal from such a denial or conditional approval shall be in accordance with the provisions for denials of such permits or approvals.

Ordinance Nos. 7133 (2001); 7321 (2005); 7831 (2012); 7965 (2014)

6-1-36. - Procedures for Obtaining Prairie Dog Lethal Control Permits.

(a) Except as otherwise provided in this chapter, no person shall utilize lethal control measures for prairie dogs without first having obtained a lethal control permit from the city manager.

(b) An applicant for a lethal control permit shall file an application with the manager on forms supplied by the manager for that purpose.

(c) Each lethal control application shall include or be accompanied by:

(1) Proof that the applicant is the landowner on which the lethal means of control will be employed;

(2) Payment of a processing fee as prescribed by section 4-20-58, "Prairie Dog Lethal Control Permit Fees," B.R.C. 1981;

(3) The name, address and telecommunications numbers of:

(A) The applicant;

(B) The property manager of such property (if any);

(C) Any consultants retained or consulted with regard to proposed lethal control measures; and

(4) All information required by the forms supplied by the city manager in subsection (b) of this section;

(5) A description of:

(A) The reasons why lethal control measures are required;

(B) A description of any projected development that makes use of lethal control necessary;

(C) The proposed lethal control measures;

(D) The date and time on which the lethal control measures will be initiated; and

(E) The steps that will be taken in order to preclude recolonization following the utilization of lethal control methods;

(6) Authorization to the city manager or to a designee to be present during all extermination activities;

(7) Documentation that the following options were considered and the reason that they were not utilized:

(A) Nonlethal control measures;

(B) Minimizing on-site conflicts between desired land uses and wildlife;

(C) Relocation alternatives;

(D) Where no reasonable relocation options exist, participation in an animal recovery program for the preservation of endangered species; and

(E) Trapping and individual euthanization as a method of lethal control;

(8) A description of steps considered in order to minimize potential negative impacts upon nontarget species;

(9) A map of the property on which lethal control measures will be employed that includes the address or legal description of the property and the general location of prairie dog burrows on that property;

(10) The number of acres of prairie dog habitat on the property;

(11) An estimate of the number of live prairie dogs inhabiting the site and an explanation of the methodology utilized for developing that estimate; and

(12) Demonstration, to a high degree of probability, that:

(A) The land on which the prairie dogs are located will be developed within fifteen months of the date of the application and the continued presence of prairie dogs would make such development impractical or impossible;

(B) A principal use of the land will be adversely impacted in a significant manner by the presence of prairie dogs on the site; or

(C) Established landscaping or an open space feature established and installed prior to any prairie dog colonization will be adversely impacted by the establishment of new prairie dog colonies;

(13) The application shall establish that the applicant has adopted an adequate plan to protect, to the extent possible, nonprairie dog wildlife during the process of utilizing lethal control measures for prairie dogs;

(14) If pesticides are going to be used, the application shall establish that the applicant will utilize any measures required by state or federal regulations to protect, to the extent possible, nonprairie dog wildlife during the process of utilizing lethal control measures;

(15) The application shall establish an adequate plan designed to prevent the reentry of prairie dogs onto the land on which lethal control measures are to be utilized. No person shall fail to comply with the provisions of such a plan after having utilized lethal control measures based upon an application containing it;

(16) The application shall establish that reasonable efforts will be made to avoid utilizing lethal means of control for prairie dogs during prairie dog birthing periods;

(17) If the applicant is proposing to poison prairie dogs, the application shall establish that the applicant has:

(A) Identified and employed a person approved for that purpose by the State of Colorado; and

(B) Submitted a plan to comply with chapter 6-10, "Pesticide Use," B.R.C. 1981, relating to the regulation of pesticide use and required notice.

(d) The city manager shall, within sixty days, review any application for completeness and shall accept the application upon determination that it is complete. An application shall only be deemed complete if it includes an adequate showing that the applicant has demonstrated reasonable efforts to identify and use relocation alternatives in lieu of lethal control measures. Factors to be considered by the manager in determining whether the showing is adequate shall include, without limitation, the following:

(1) Whether or not the manager has determined that city lands are available for relocation. Such determination shall be based upon the wildlife carrying capacity of city lands and upon the manager's consideration of the policies set forth in the Boulder Valley Comprehensive Plan bearing upon natural ecosystem management and the management of wildlife-human conflicts. The manager's determination in this regard shall be final and not subject to appeal or review;

(2) Whether or not there are non-city lands available or feasible for relocation; and

(3) Additional information relied upon by an applicant to determine that relocation is unavailable, not feasible or otherwise inappropriate.

(e) A property owner of a site on which burrow fumigation measures will be utilized shall post signs on the affected property designed to give reasonable notice to neighbors and passers by. Such signs shall be posted within one day of submission of an application and shall remain posted until two days after the use of lethal control measures is completed.

(f) Not less than fifteen days after accepting an application as complete, the manager shall commence a sixty day public comment period on the application, soliciting public comment on relocation alternatives for prairie dogs that would otherwise be lethally controlled under the permit application. The only information from the permit that the city manager shall make available to the public for purposes of this subsection shall be information that is submitted by the applicant pursuant to paragraphs (c)(7), (c)(10) and (c)(11) of this section.

(g) Not less than fifteen days after the close of the public comment period, the city manager shall determine whether or not to issue the permit.

(1) If the city manager determines that relocation alternatives exist, the city manager shall delay issuing the permit for an additional twelve months to allow for relocation to occur.

(2) If the city manager determines that relocation alternatives do not exist, the city manager may issue the permit.

(h) Owners or occupants of residential lots containing a single residence may, at any time, obtain a lethal control permit to exterminate prairie dogs on their property. No fee shall be charged for such a lethal control permit and no waiting period longer than that period of time reasonably required to process an application shall be required.

(1) The intent of the permit process for such residential lots is to provide a mechanism for the city to monitor prairie dog populations and related ecological issues within its boundaries while allowing owners or occupants of small residential lots to respond to the presence of unwanted wildlife.

(2) Applications for a lethal control permit for such residential lots shall be approved upon receipt of the following information:

(A) Address of the subject property;

(B) The name and telephone number of the applicant;

(C) The date of application;

(D) A demonstration of compliance with any applicable state and federal regulations pertaining to the utilization of lethal control measures; and

(E) Such other information as the manager may require to adequately evaluate such requests, their purposes, and the expected outcomes of the use of lethal control measures.

(3) Lots containing multi-family residential structures shall not qualify for treatment under this subsection.

(i) The city manager may impose upon the exercise of the permit any conditions reasonably related to the purposes of this chapter.

(j) A permit issued under this chapter is specific to the property for which application is made and is not transferable.

(k) The requirements of this section apply to all private lands within the city limits of Boulder, all lands owned or managed by the city, and all city activities affecting prairie dogs inside or outside of the city limits.

(l) Any applicant for a lethal control permit aggrieved by a decision of the city manager concerning an application may appeal such decision to a hearing officer appointed by the manager by filing an appeal with the manager within fourteen days of the issuance or final denial of a permit. After giving notice to all interested parties, the hearing officer shall hear the appeal within thirty days of the notice of appeal, or at such other time to which the applicant and the city may agree, and the hearing shall be held pursuant to the procedures prescribed by chapter 1-3, "Quasi-Judicial Hearings," B.R.C. 1981. The hearing officer shall determine whether the permit meets the requirements of this chapter and shall grant or deny the application with conditions, as appropriate.

(m) The manager shall specify the term of each permit, which shall be a reasonable amount of time under the circumstances.

(n) The manager may revoke a permit issued under this chapter for the grounds and under the procedures prescribed by section 4-1-10, "Revocation of Licenses," B.R.C. 1981, and also for failure to abide by any provision of this chapter or condition of the permit.

(o) The manager may suspend any portion of this chapter in the event of an emergency situation which threatens irreparable harm to the health, safety or welfare of the inhabitants of the city or to the city's planning area or to the city's environment.

Ordinance Nos. 7227 (2002); 7321 (2005)

6-1-39. - Special Permit.

(a) The city manager may grant or deny a special permit for the killing or the capturing and releasing of birds or prairie dogs when it is shown in writing that:

(1) The birds or prairie dogs constitute a health hazard in a particular location in the city and that the specific actions are needed in order to eliminate the health hazard; or

(2) The birds or prairie dogs must be removed in order to permit completion or maintenance of a public improvement project approved by the city council, but only after the city council has been provided with notice that bird or prairie dog removal will be required.

An applicant for special permit pursuant to this subsection must show in writing that he or she has taken reasonable steps to control the situation by exclusion devices, noninjurious repellants or other nonlethal means. Where such steps are not feasible, the applicant shall provide the reasons why such alternative measures are not feasible.

(b) The city manager may grant or deny a special permit to allow a landowner to damage prairie dog burrows on that landowner's property where that landowner produces proof satisfactory to the manager that the following conditions exist:

(1) The legal parcel or lot on which burrows may be damaged had no prairie dog habitation for a period of at least three hundred sixty five consecutive days;

(2) Following the period without prairie dog habitation, at least one but not more than five new burrows were established;

(3) The landowner wants to be allowed to damage the new prairie dog burrows as part of an ongoing program to halt new colonization; and

(4) No permit shall be issued pursuant to this subsection between March 1 and June 1.

Ordinance No. 7321 (2005)

Attachment F: Cost analysis of Humane Lethal Control Tools at Five levels of Use

Methodology	Level of Use	Total Acres	Numbers of prairie dogs lethally controlled	Cost of Removal	Cost of Barriers	Cost of Restoration	Total Cost	Cost/Acre	Meet Grassland Plan Conservation goals	Impacts to predators	Impacts to other associates	Benefits for neighbors experiencing conflict with prairie dogs
Relocation												
		40	0	$176,000	$80,520	$10,880	$26,7400	$6,685	Yes	(=)	(=)	(=)
Capture and Kill ($C0_2$)												
	Low	40	1,200	$160,000	$80,520	$10,880	$251,400	$6,285	Yes	(-)	(-)	(+)
	25%	242	7,260	$968,000	$487,146	$65,824	$1,520,970	$6,285	Yes	(--)	(--)	(++)
	50%	483	14,490	$1,932,000	$972,279	$131,376	$3,035,655	$6,285	Yes	(---)	(---)	(+++)
	75%	725	21,750	$2,900,000	$1,459,425	$197,200	$4,556,625	$6,285	Yes	(----)	(----)	(++++)
	100%	967	29,010	$3,868,000	$1,946,571	$263,024	$6,077,595	$6,285	Yes	(-----)	(-----)	(+++++)
Capture and donate to ferrets												
	Low	40	1,200	$176,000	$80,520	$10,880	$267,400	$6,685	Yes	(=)	(-)	(+)
	25%	242	7,260	$1,064,800	$487,146	$65,824	$1,617,770	$6,685	Yes	(-)	(--)	(++)
	50%	483	14,490	$2,125,200	$972,279	$131,376	$3,228,855	$6,685	Yes	(--)	(---)	(+++)
	75%	725	21,750	$3,190,000	$1,459,425	$197,200	$4,846,625	$6,685	Yes	(---)	(----)	(++++)
	100%	967	29,010	$4,254,800	$1,946,571	$263,024	$6,464,395	$6,685	Yes	(----)	(-----)	(+++++)
Gas Cartridges												
	Low	40	1,200	$2,600	$80,520	$10,880	$94,000	$2,350	Yes	(-)	(-)	(+)
	25%	242	7,260	$15,730	$487,146	$65,824	$568,700	$2,350	Yes	(--)	(--)	(++)
	50%	483	14,490	$31,395	$972,279	$131,376	$1,135,050	$2,350	Yes	(---)	(---)	(+++)
	75%	725	21,750	$47,125	$1,459,425	$197,200	$1,703,750	$2,350	Yes	(----)	(----)	(++++)
	100%	967	29,010	$62,885	$1,946,571	$263,024	$2,272,450	$2,350	Yes	(-----)	(-----)	(+++++)
Pressurized Exhaust (PERC)												
	Low	40	1,200	$8,840	$80,520	$10,880	$100,240	$2,506	Yes	(-)	(-)	(+)
	25%	242	7,260	$53,482	$487,146	$65,824	$606,452	$2,506	Yes	(--)	(--)	(++)
	50%	483	14,490	$106,743	$972,279	$131,376	$1,210,398	$2,506	Yes	(---)	(---)	(+++)
	75%	725	21,750	$160,225	$1,459,425	$197,200	$1,816,850	$2,506	Yes	(----)	(----)	(++++)
	100%	967	29,010	$213,707	$1,946,571	$263,024	$2,423,302	$2,506	Yes	(-----)	(-----)	(+++++)

Assumptions used in cost estimates:

- Cost estimates does not include additional staff time required
- Current acreage = overlap of prairie dogs in 2019 and irrigable ag land in study area = 967 acres
- Barriers = 25% metal, 75% mesh wire
- Density averages = 30 prairie dogs per acre