

2/12/2020

February 12 Open Space Board of Trustees Study Session

Time	Item
6:30	Staff Presentation <ul style="list-style-type: none">✓ Agenda Review✓ Direction and Process Summary✓ Clarifications✓ Boulder County Staff
7:00	Assumptions <p>Do staff's key assumptions seem appropriate?</p>
7:25	Prioritization <p>What potential factors would you focus on for prioritizing removal?</p>
7:50	Action Packages, Staffing and Spending <p>Can the Board provide guidance on which package(s) to focus?</p> <p>Do estimated spending and staffing levels seem appropriate?</p>
8:45	Information for March OSBT Meeting <p>What other information needs are there to be included with staff's recommendation in March?</p>
9:00	Next Steps and Adjourn

Study Session Questions for OSBT

1. Do staff's key assumptions as described in the memo seem appropriate?
2. What potential factors as described in the 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?

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:

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

Potential Factors for Prioritizing Removals

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)

Implementation Packages

All 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% 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)

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

- o Subject to state permitting annually
- o Relocation trapping in a field up to 95+ percent removal, then move to in-burrow lethal control
- o Following plague, funding and relocation efforts shift to removing small remaining populations, future exclusion and restoration
- o \$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.

ALTERNATIVE PACKAGES

A. Increase removal by 25% (slight increase in use of lethal control)

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

B. Increase removal by 100% (balance relocation and lethal control)

- o 40 acres of relocation + barriers + restoration annually focused on Transition areas
- o 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. Increase removal by 240% (increased focus on lethal removal)

- o 40 acres of relocation + barriers + restoration annually focused on Transition areas
- o Up to 97 acres (~10% 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. Increase removal by 260% (sole focus on lethal removal)

- o Up to 145 acres (~15% 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. Increase removal by 500% (sole focus on lethal control and quick restoration of agricultural lands)

- o Up to 242 acres (~25% of occupied acres) (242 addressed through lethal control annually using trap and donate for one week, then in burrow lethal control
- o +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 ¹	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%	6-7	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:

- o Cost estimates do not include additional staff time required
- o Contractors are available for this work
- o Current acreage = overlap of prairie dogs in 2019 and irrigable ag land in study area = 967 acres
- o Cost estimates (packages B, C, D and E) assume one week of trapping and use of CO2 chambers resulting in 25% of animals captured using this method, leaving 75% of control using pressurized exhaust (PERC)
- o Barriers = 25% metal, 75% mesh wire
- o Density averages are 30 prairie dogs per acre
- o Baseline growth rate in acres = +3% to +7% (based on last several years data)
- o Approximately \$400,000 is currently budgeted for prairie dog management including relocations, Prairie Dog Working Group (PDWG) project implementation, and other items
- o FTE = full-time equivalent (2,080 hours)
- o No plague occurs in the area

¹ Includes estimated costs for removal, exclusion, and restoration for each package.

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	\$267,400	\$6,685	Yes	(=)	(=)	(=)
Capture and Kill (C02)												
	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:

- o Cost estimates does not include additional staff time required
- o Current acreage = overlap of prairie dogs in 2019 and irrigable ag land in study area = 967 acres
- o Barriers = 25% metal, 75% mesh wire
- o Density averages = 30 prairie dogs per acre