

## **Questions and Answers from 2021 Prairie Dog Management Update Meeting 12/13/21**

**When does the no prairie dogs trapped for 5 day rule= end of project? I remember that was a rule that was implemented on the Armory. When does that rule apply and not apply?**

The 5 day rule (no prairie dogs trapped for 5 clear weather trap days), is used when other specific criteria have not been set in place for a project to determine end of the trapping phase. In the case of OSMP properties, as part of the expedited process to resolve prairie dog conflict on irrigated agricultural lands, the determination was made that using funds and time as efficiently as possible was desirable. In order to avoid extremely lengthy trapping periods at the end of a project and substantial cost associated with that, OSMP pre-determined a desired trap period with relocation contractors (thus far that has been a minimum of 14 trap days, up to many weeks). Following this time of focused trapping, flushing is used on each colony to attempt to capture any remaining prairie dogs prior to lethal control. This is a far more time and money efficient approach than extended trapping. However, in non-OSMP project (such as private property relocations), the determination would need to be made on a case-by-case basis and might look very different than what has been determined for OSMP irrigated agricultural parcels.

**Does or under what conditions does CPW ever suggest not using SPV repeatedly every year?**

Concerns have arisen surrounding the efficacy of SPV to maintain sufficiently high density or prairie dog populations to support black-footed ferrets with plague epizootics. As a result, use of SPV has stopped on some ferret reintroduction sites. However, CPW or others have never suggested that SPV should not be used, or not repeatedly used in prairie dog areas without black-footed ferrets. Unlike insecticidal treatments, there are not similar concerns of resistance to SPV being developed- which might suggest not undertaking repeated treatments every year, as has been suggested in some circumstances for treatments such as delta dust.

**Does the city ever anticipate reclaiming the irrigatable fields that are east of the Cottonwood Trail and south of Jay road? The city has extensive water rights off the White Rock Ditch that is alongside the Cottonwood Trail. The prairie dogs are spreading east onto private pastures causing damage to horse pastures and hay fields. Fighting off these prairie dogs is getting to be expensive.**

This area (OSMP McKenzie property) is a transition area. As such, the department would seek long-term to manage it in the absence of prairie dogs. Currently, staff are operating under City Council direction to focus our management efforts and resources on removing prairie dogs from irrigated agricultural fields in an area north of Jay Road. As a result, McKenzie will not be included in removal projects while irrigated agricultural properties in the northern focal area continue to have prairie dogs. However, if prairie dogs disappeared from the McKenzie property through plague die-off or other reasons, staff would move to exclude recolonization from occurring. Once prairie dog conflict has been addressed in the focal area north of Jay, future efforts could include relocation or removal of prairie dogs from areas outside of the current focal area, including McKenzie. Conditions would be evaluated at that time to prioritize across OSMP agricultural properties designated for prairie dog removal to determine implementation plans and timelines.

**What is the objective of the grant application?**

The grant proposal is focused on a multi-agency project to advance grassland restoration in the southern portion of Boulder County and Northern Jefferson County. If received, the grant would be used to support activities including native seed collection, weed management, plague mitigation and prairie dog relocations as well as experiments to evaluate how agricultural operations can successfully coexist with prairie dogs.

**When someone has prairie dogs removed from private land that you cannot take, what do you recommend?**

Currently the City of Boulder cannot take prairie dogs from outside the city as city projects to move prairie dogs have been prioritized by City Council and are using all available receiving sites. We recommend that property owners check with other local land owners to see if relocation sites are available. However, at this moment, we are unaware of other relocation sites that are actively taking prairie dogs. The City's process in this case would require a land owner apply for a lethal control permit if their property is within city limits. This program is administered through Val Matheson in the Planning and Development Services Department.

**What does examining the feasibility for ferret reintroduction process specifically entail?**

The first step will be determining what the process will entail. Overall the city will need to evaluate the pros and cons, costs and opportunities associated with black-footed ferret reintroduction and the interface with these and other management goals for city lands. Exactly what the process for evaluating this and coming to a decision on whether the city would like to pursue ferret reintroduction still needs to be developed.

**Is the grant for land located on Rocky Flats weapons site?**

One of the agencies involved in the collaborative grant application is Rocky Flats National Wildlife Refuge (US Fish and Wildlife Service). The Wildlife Refuge includes large areas of native grassland adjacent to City of Boulder and Boulder County Grasslands, thus contributing to a much larger system of native grasslands in southern Boulder County and northern Jefferson County that are the focus of the grant application. USFWS involvement is focused activities consistent with their wildlife (including prairie dog) and grassland conservation goals as determined in their planning documents for management of the wildlife refuge. These goals do not include activities within the core contamination area which is not managed as part of the National Wildlife Refuge.

**Would you ever not use SPV because populations were reaching capacity?**

Currently we are using SPV in the Southern grasslands based on direction from the Prairie Dog Working Group and because populations are below our conservation goal of a minimum of 10% occupancy. The city's plague management plan, which is currently available in draft form for public comment, will determine what plague management will look like in the future on OSMP and other city lands.

**Compared to 2021, Will there be fewer prairie dogs killed and a greater number of prairie dogs relocated in 2022?**

In 2021, lethal control was used on 94 acres. In 2022, current plans are to use lethal control on 124 acres. In 2021, relocation was performed on 48.5 acres and in 2022 relocation is planned on approximately 37 acres (likely to be ~40 acres by next relocation season). If grant funding is received,

and additional relocation sites are permitted by the state, this plan may shift somewhat to include additional relocations.

**It seems like there were a large # of pdogs moved to southern grasslands in the last year -- I'm wondering after another year, where will additional pdogs receiving sites be identified (i.e., when the 4 sites shown on your map have as many pdogs as they can hold)?**

We're about 5% occupation on our southern grasslands and our target is 10-26%. The relocation criteria provide for relocation to grassland preserves as long as occupancy is below 10%. As a result, we anticipate continuing to have available sites in Southern Grasslands in future years, depending on population growth and factors related to suitability of sites. The relocation criteria also include thresholds for vegetation to ensure that it is in sufficiently good condition to be resilient to prairie dog occupation. As a result, we do an assessment of vegetation on potential relocation sites each year to determine which sites qualify for receiving prairie dogs.

**Are private landowners using aluminum phosphide or carbon monoxide?**

Within the city, private landowners are using carbon monoxide for prairie dog control.

**Did the city use the financial savings due to HSUS donations on passive measures or other measures that decreased the numbers of prairie dogs killed or that reduced the number of colonies that would otherwise have been killed in 2021 or in future years? In other words, did the lower relocation costs for the City (because of HSUS) benefit the prairie dogs and their conservation in any additional way?**

We were able to add some small additional sites for relocation this year, increasing relocation to 48.5 acres (instead of the planned ~40). Cost savings from 2021 can also be used for additional relocations or coexistence measures in 2022 as the money will be carried forward and available for use on prairie dog conservation projects in 2022.

**How safe really are relocations of Prairie Dogs? What percent of Prairie Dogs survive in a relocation effort?**

We don't track mortality with relocations due to the difficulty in tracking individual animals once they are released. However, we do monitor occupancy on our release sites, and our previous relocation sites are thriving and expanding. We use artificial burrows or intact natural burrows for all released prairie dogs, which has been shown to increase retention of released prairie dogs on the site. The contractors we work with for relocation are focused on maximizing survival of relocated prairie dogs and work to keep families together, relocate them with the same neighbors and that helps keep them alive and healthy. Other steps such as feeding released prairie dogs initially on the receiving site are done to help increase survival probability.

**Will the artificial burrows be removed at some time to enable the southern grasslands vegetation/habitat to be restored?**

We don't plan to remove the artificial burrows as the disturbance related to removing them would be substantial and undo any revegetation that has occurred. In addition, artificial burrows can be used in future relocations if conditions are appropriate, reducing the need to install new ones in the future. Use of artificial burrows, and the associated impact to grasslands is a compromise to have successful reintroductions.

**How will you be able to “restore” something if there’s absolutely nothing wrong with it in the first place?**

Restoration in many areas of OSMP is focused on natural restoration including native plant communities, weed management and wildlife conservation, including prairie dogs. OSMP lands are managed for a variety of purposes and natural areas such as Grassland Preserves are managed to maintain and conserve natural plant and animal communities (including prairie dogs and associated species). Irrigated agricultural properties are managed for agricultural uses and are the focus of the restoration programs highlighted in the meeting. The properties where prairie dog removal and agricultural restoration are being done are a subset of OSMP properties that have been identified as best opportunity areas for agriculture where agricultural production will be the desired management. Due to a variety of factors including prairie dog occupation (but also things like past agricultural uses, ineffective water delivery, etc), these properties are not in sufficiently good condition to support agricultural production or soil retention/health following prairie dog removal. Restoration is focused on returning properties to high functioning agricultural uses and reducing negative impacts such as soil loss and erosion.

**I noticed a metal fence/barrier on Salstrand -- is that included in the budget somewhere?**

The barrier at Salstrand was installed in 2020 as part of requirements for obtaining a state relocation permit (to address neighboring landowner concerns). As a result, that expenditure was included in reporting out on the 2020 budget at last year’s meeting.

**What is "humane" lethal**

The City considers humane lethal control to be the use of carbon monoxide in the form of pressurized exhaust pumped into the burrow. Other forms of lethal control such as anti-coagulant poison is not considered humane and is not used by the City of Boulder

**What is the process to recommend changing designations from removal and transition to PCA or vice versa?**

Management designations of prairie dog colonies are determined based on criteria established in the OSMP Grassland Ecosystem Management Plan. For designations to change, either conditions on the ground would have to have changed- resulting in a new designation under the criteria, or the criteria would need to change if there was an update to the Grasslands Ecosystem Management Plan. The most important criteria in determining transition and removal areas is that the property is irrigable ag land. So for example, if a property was no longer irrigable (due to changes in water rights or something else), that could change the designation of the property.

**Per Council recommendations, isn’t OSMP allowed 100 to 200 acres of lethal control and 40 acres of relocation? So for 2021 & 2022 isn’t OSMP lethally controlling on the low end of the scale and relocating the maximum number per Council guidance?**

That is accurate. Direction from City Council was to relocate approximately 40 acres, and we are planning 40 acres for 2022. We did propose 100-200 acres/year, as a guideline for lethal control. The large span of this goal recognized the complexities in prairie dog and agricultural management. Prairie dog colony acreage does not always occur spatially in manner that is most conducive to meeting specific

acreage goals. As a result, sites most suitable for lethal control in a given year may not add up neatly to 100-200 acres. Staff identify sites each year based on a number of factors including the likelihood of being able to complete full removal in a single year; infrastructure necessary to exclude prairie dogs from re-colonizing; likelihood of success in keeping prairie dogs out; needed upgrades to water infrastructure necessary to ensure adequate irrigation; and scale of restoration necessary to ensure long-term recovery of the property for agricultural use. In addition, some properties support sensitive and protected species that depend on prairie dogs, making careful planning and phasing of removals necessary. As a result, the properties in any given year that make the most sense for lethal control that will be successful in the long-term and the best, most efficient use of staff and budget resources may not always fall in the top end of this range. We are currently recommending 124 acres for 2022. As we evaluated other high priority sites, they were either too large to get all of the prairie dogs within the 200-acre recommendation and the budget, or some of the sites are complex in future management so we want to work closely with the ag tenants to make sure we're doing the removal in a way that makes sense for everyone in the long run. Determining each year's project sites and implementing all parts of successful removal and restoration is complex and challenging.

**How is the City of Boulder working to protect raptors and other species dependent on prairie dogs as well as conserving the important role that prairie dogs play in natural ecosystems (parphrased)?**

The City of Boulder manages prairie dogs and associated species based on goals set out in departmental and citywide management plans. Information on all of these plans can be found on the city's website. On OSMP, prairie dog management and conservation is dictated by the Grassland Ecosystem Management Plan. The plan can be viewed at [download \(bouldercolorado.gov\)](#). The Grassland Plan sets out a variety of conservation and management goals for grasslands, including conservation of prairie dogs and associated species and the native grassland habitats they depend on. The Grassland Plan and Agricultural Management Plan also include goals for conservation of agricultural uses, with a focus on irrigated agricultural properties. In these areas, agricultural uses are the priority and are largely the focus of the management actions highlighted in the meeting. Conservation activities for prairie dogs and other native species occur across the OSMP land system on properties not defined by irrigated agricultural uses. In 2021, mapping of OSMP prairie dog colonies show that 81% of prairie dog colonies occur on properties where conservation of prairie dogs is consistent with management goals of the property. 19% occur in areas of conflict, and are the focus of prairie dog removal efforts (either through lethal control or relocation)

**Is the City of Boulder concerned about worker safety and health when handling poisonous gases used for lethal control?**

Lethal control is performed by contractors qualified, and if necessary, licensed to use the tools for lethal control. The City of Boulder contractors are using carbon monoxide gas in the form of pressurized exhaust for lethal control. All necessary safety precautions are used by contractors to protect their staff from any dangers associated with use of this technology even though the risks are not substantial when used in an open air environment and the carbon monoxide is focused into the burrow system of the prairie dogs using machines designed specifically for this application and to be safe for applicators in these situations.

**Why are there more impact sites then control sites? Do you need the same amount of each to be statistically sound?**

As we are looking at 27 sites for prairie dog removal, we wanted to be able to have enough impact sites to capture the variation within the sites to be able to draw conclusions about all the removal sites without monitoring all the removal sites. It is not necessary to have the same number of control and impact sites to be statistically sound. However, the number of control sites can have an impact on the statistical significance of study findings because of natural site variability. The control sites were selected to span the same range of site conditions (e.g., length of prairie dog occupation, vegetation and soil type) that we are observing on the impact sites.

**Are samples being taken from burrow mounds versus off of burrow mounds? Past government studies have shown greater soil health on burrow mounds.**

Soil samples are being collected at random intervals within each sampling polygon and the individual soil samples are combined to make a composite sample. The composite sample is being evaluated for important soil health parameters. The sample collection protocol was not designed to test the differences of on mound vs. off mound soil health.

**Are you considering other factors other than how will the removal of prairie dogs will impact soil conditions? what about other past land use? ie: ag, tilling, weather, overgrazing etc?**

The control sites where prairie dogs remain will not receive any soil health treatments, irrigation, or any other agricultural management, including livestock grazing. Impact sites will be returned to agricultural production using the management techniques preferred by the agricultural tenant or prescribed by OSMP. We will only be comparing between “active management” and “prairie dog occupation” and will not make comparisons among sites regarding which treatments will be implemented.

The collection of baseline data in both the impact and control sites will allow us to compare trajectories of these two treatments over time and is, to some extent, agnostic to past land use. We will not be able to pick out the effects of removal alone versus removal with the addition of soil restoration efforts with the study design. We will use multivariate analysis and other nonparametric statistical analysis tools to draw correlations between measured response indicators and these interventions.

**Do you think the study is biased against prairie dogs?**

City Council and the Open Space Board of Trustees asked staff to monitor the impacts of these efforts on soil health and to answer the question of whether soil health improves on irrigated agricultural land when prairie dogs are removed. With the sampling design, we will also be able to assess whether soil health is improving on these sites in addition to making the comparison between prairie dog occupied sites and prairie dog free sites.

**What updates are there on the implementation of the prairie dog working group recommendations?**

Information is included in the prairie dog management presentation posted on the webpage. In 2021, staff made progress toward a number of prairie dog working group recommendations. Highlights include:

- beginning work on habitat suitability modeling updates, creating a framework to cost-share with private property owners on prairie dog barriers (both project should be rolled out in 2021)

- Relocation of approximately 48.5 acres of prairie dogs to the Southern Grasslands
- Application of sylvatic plague vaccine to approximately 240 acres of active prairie dog colonies twice during the year (including all p.dogs that were relocated)
- Installation of barriers to prevent recolonization of prairie dogs to conflict areas
- Passive relocation to reduce conflict between agriculture, trails and infrastructure and prairie dogs
- Coordination and collaboration with a “learning collaborative” to lease OSMP property for use in experiments to evaluate sustainable agriculture in the presence of prairie dogs
- Creation of draft plague management plan (currently out for public comment to be finalized in 2021)

**When do you anticipate that you will be able to lethally control 200 acres/year?**

We will look every year for the best opportunities to meet our commitment of 100-200 acres of humane lethal control. If property conditions, funding and staffing all present a feasible opportunity for 200 acres of lethal control in a given year, then we will pursue that. As conditions shift substantially each year, it is difficult to predict future year project sites.

**You mentioned that burrowing owls had been observed in receiving areas. Are observations being collected about the number and diversity of prey species on the receiving sites?**

We do collect comprehensive surveys for burrowing owls. We do not currently collect information on burrowing owl prey or do invertebrate surveys on prairie dog colonies.

**Were the passive relocation effort in the Project Area for irrigated ag lands?**

No, the locations that were best suited for use of passive relocation were not within the northern project area for minimizing conflict with prairie dogs and irrigated ag lands. However, projects were completed on irrigated agricultural lands, just not within the boundaries of the project area.

**So that we can look at the plan vs. the accomplishments for the whole project, will you prepare a table with the total data for the Council-approved plan with # of acres & budget side-by side with the actual acres ( of relocation and lethal control) and the expenditures in each year ?**

This will be included in the materials provided to the OSBT in February and City Council in March

**For ferrets to maintain a stable population, they need at least 10K acres of contiguous prairie dog habitat. Did I just hear you say you wanted to reintroduce ferrets? Is there anywhere that this is possible in city open space?**

Ferret reintroduction does require 10,000 acres of contiguous grassland habitat, but only 1,500 acres of occupied prairie dog colonies. City of Boulder open space lands do not meet either of these criteria along. Ferret reintroduction would require multiple land management agencies with adjacent natural grasslands including Boulder County Parks and Open Space, Rocky Flats National Wildlife Refuge and potentially other adjacent county or local open space lands.

**Tory said that relocation costs for OSMP were \$275,000 and she also stated that HSUS paid for half of the costs of relocations. Are the real costs of relocations for 2021 closer to \$550,000?**

No, total expenditures in 2020 from our prairie dog conservation and management (not including lethal control) budget was \$275,000. This includes relocation as well as a number of other expenditures including barriers (largest % of expenditures), plague management, passive relocation, etc. Relocations including both those partially subsidized by HSUS funding as well as full price relocations completed by another contractor.

**Under what city rule do you believe you can relocate Prairie Dogs to Rocky Flats?**

The City does not have rules that restrict where prairie dogs can be relocated to. The Rocky Flats grasslands are adjacent to our Southern Grasslands properties and so are being considered in broader conversations of grassland conservation and restoration including prairie dogs and associated species at a landscape scale larger than city properties.

**As far as the soil testing process, are activities in these properties identical before, during and at the end of the study? All activities besides just prairie dog occupation creates huge variables. How is that addressed?**

No, they are not the same for each sampling site. There is no one size fits all approach to land restoration, so the information from the soil sampling and field observations will be used to tailor restoration efforts that address the needs while accounting for the resources on each property. As such, the treatments prescribed for each impact site are site specific. Ecological studies are different from agricultural studies and exact replication of treatments is not possible, nor desired in this instance. The before and after sampling design will allow us to plot trajectories for each impact site for a suite of soil health indicators. Annual sampling in the control sites will allow us to account for variability due weather and other factors beyond our control.