

## **2020 Annual Meeting on Prairie Dogs and Irrigated Agricultural Restoration Community Questions**

12/16/20

This document contains questions submitted by community members as part of the 2020 Annual Meeting on Prairie Dogs and Irrigated Agricultural Restoration held virtually on Dec 14, 2020. Answers were provided by Open Space and Mountain Parks Staff. Questions have been grouped by topic area.

### **Relationship between Conservation and Conflict Mitigation**

1. How will the City's data collection and research not compromise conservation goals for the prairie dog species in Boulder's grasslands and beyond with this type of statement (see comments 1-2 below) being made? We are collectively concerned the path OSMP is taking right now is potentially dangerous to the overall conservation of native prairie wildlife.

Answer: The OSMP's Grassland Ecosystem Management Plan is the primary plan directing the conservation of native prairie wildlife. Although irrigated agricultural properties do provide habitat for some wildlife, they are not considered primary habitat for native prairie wildlife communities and the conservation goals in the Grassland Plan do not rely on prairie dogs occupying irrigated agricultural fields.

2. How will the research adequately portray prairie dogs and their ecosystem for the native, burrowing, keystone species that provides ecosystem services and historic land use including agriculture and overgrazing as part of this current land health issue we are all trying to work together to improve?

Answer: OSMP's Grassland Ecosystem Management Plan includes a comprehensive prairie dog management strategy as well as management objectives for OSMP's vegetation communities. OSMP also has an Agricultural Resources Management Plan to guide agricultural management on OSMP lands. Staff believes that these approved plans include the management strategies to manage the OSMP land system to provide the values that the community has highlighted as important. Research on prairie dog removal areas is not intended to represent the soil health and other relationships of prairie dogs within native grasslands.

## Budget

3. When the Expedited Review was originally presented to OSBT and Council, estimated costs were split pretty equally between relocations and lethal control, with about half of the money going to each effort. However, in OSMP's current 2021 cost estimates, \$450,000 is going to relocations and \$257,000 is going to lethal control, or a 64 % to 36% split. This flies in the face of what OSBT originally approved. Will staff consider doing fewer relocations in 2021 and more lethal control, to re-establish the original 50-50 split of allocated monies?

Answer: The \$450,000 worth of prairie dog budget is not only for relocation- it is used for implementing the full suite of recommendations from the prairie dog working group. In 2021 this will likely include other conflict mitigation strategies including passive relocation, barriers not associated with relocations, cost share grant program for private landowners, surveys for sensitive species associated with prairie dogs, etc

4. What is OSMPs total budget for prairie dog management in 2021? Relocation, Barriers, Lethal Control, Restoration, etc.

Answer: The Ag Land Restoration program has \$280,000 allocated for barrier installation, restoration and lethal control efforts. This does not include staff time. \$450,000 is budgeted for prairie dog working group recommendation implementation (also not including staff time). Of this, approximately \$200,000 is budgeted for relocation and barriers associated with relocation. So overall, **\$480,000** is currently budgeted for relocation, barriers, lethal control and restoration.

5. 2021 budget estimates are \$155,000 for barriers, \$32,000 for lethal control, \$70,000 for restoration. What is the 2021 budget estimate for relocations?

Answer: 2021 budget for relocation is approximately \$160,000

6. Do relocation contracts come out of the \$450,000 PDWG budget?

Answer: Yes, relocation and associated barriers are included in the PDWG budget

7. Please explain why most of the budget is being consumed by very expensive barriers and relocation.

Answer: The amount of relocation being undertaken is necessary to meet commitments to implementation of the Prairie Dog Working Group (PDWG) Recommendations. The budget for this work was identified by OSMP for PDWG implementation and was funded as part of our commitment to City Council to implement the PDWG recommendations and is separate from the lethal control and restoration budget. Direction has been given by both the Prairie Dog Working Group and Council in relation to use of lethal control to exclude prairie dogs after removal to reduce the need for ongoing lethal control. Barriers are the most effective means to do this, though where it makes sense, staff are also looking at alternatives like vegetative barriers, etc.

8. Was the \$450,000 that was spent in 2020 on relocations, barriers, etc. PDWG allocated funds?

Answer: The \$450,000 were funds allocated by OSMP for prairie dog conservation and management, including Implementation of Prairie Dog Working Group Recommendations. A portion of this money was spent on relocations and barriers.

9. Will the \$450,000 PDWG funds for 2021 be used to cover the \$402,000 funds being allocated for relocation efforts from the Project Area? Or will there be \$450,000 for PDWG plus \$402,000 for relocation efforts from the Project Area?

Answer: Relocation and associated barriers is budgeted at approximately \$200,000 for 2021. The balance of the \$450,000 will be used for Implementation of other Prairie Dog Working Group Recommendations.

10. How will the 2021 PDWG money be allocated?

Answer: Final decisions will need to be based on staff capacity and final available funding given constantly changing conditions with Covid. Currently main projects include:

- Cost share program for barrier installation with neighboring private property
- Spatial modeling and analysis to update habitat suitability modeling for prairie dogs
- Habitat evaluation for Black-footed Ferret suitability
- Surveys of species of concern in p.dog colonies (e.g. pollinators)
- Mapping of adjacent land conflict
- Plague management
- Passive relocation
- Other barriers to address conflict areas

**11.** What is the breakdown of expenses for the \$402,000 being allocated for the 2021 40-acre relocation effort from the Project Area?

Answer: In 2021, approximately. \$200,000 is allocated to be spent for the 40+ acres of relocation including approximately \$160,00 for relocation and \$40,000 for barriers on the relocation properties

**12.** Can you please explain again the \$450,000 spent and budgeted for relocations in 2019, 2020 and 2021 ie: barriers and relocations or other associated costs?

Answer: \$450,000 is for all Prairie dog Working Group Implementation, not just relocation and barriers.

2019- Relocation- \$145,000, Barriers \$10,000

2020- Relocation- \$40,000 (much of work donated), Barriers \$288,000

2021- Relocation- \$160,000, \$40,000

**13.** What does the \$70,000 for restoration include?

Answer: Much of the budget will go towards seed and seeding expenses, compost applications, leveling burrow mounds following removal of prairie dogs, keyline plow applications (where needed), irrigation conducted by tenants on unproductive fields, and possibly planned/contracted grazing costs. Compost applications will likely be the most expensive part of agricultural land restoration.

## **Cost of Relocation**

**14.** Staff says that it cost \$450,000 to relocate approximately 30 acres of prairie dogs from Nu-West North, Johnson Monarch, Dawson South, IBM, and Foothills Community Park in 2020. Using staff's estimated population density of 30 prairie dogs per acre, it appears that approximately 900 prairie dogs were relocated for \$450,000 or \$500 per prairie dog. Is this relocation cost of \$500 per prairie dog correct? If it is not correct, what was the correct relocation cost per prairie dog in 2020?

Answer: The money spent in 2020 included relocation as well as barriers which were associated with both 2019 relocations and 2020 relocations. As a result, the expenses for barriers was higher than indicated solely from the 2020 acres relocated. In addition, the state permitting for the receiving site in 2019 and 2020 required barrier installation to address neighbor concerns. 2020 relocations are still ongoing, so we do not have final numbers of prairie dogs that will be relocated and the largest share of relocations in 2020 were done by the Humane Society at no cost to the city for the trapping and release portion of the relocation. As a result, the expenditures in 2020 are not indicative of actual cost for typical relocations. The city will spend approximately \$40,000 on the actual relocation portion of these projects for approximately 20 acres on the IBM, Johnson and Johnson Dawson properties. Relocations at Nu West North were completed in 2018 and 2019, and prairie dogs from Foothills Community Park were relocated using funding and staff from Parks and Recreation.

**15.** How much did OSMP spend on relocation

Answer: Currently in 2020, OSMP has spent \$40,000 on the trap and relocate portion of relocation. However, this number does not tell the whole story because the majority of relocation activities were donated by Humane Society of United States. The relocations are continuing, so final expenditure is also unknown. The department spent an additional \$125,000 on the barriers installed on IBM to help prevent reoccupation of the removal area. Other barrier installation costs in 2020 were for barriers associated with relocations begun in 2019.

**16.** How many prairie dogs did OSMP relocate and what is the cost to relocate one prairie dog? The actual numbers are not clear because the mixing and blending of different units - ACRES relocated vs NUMBER of prairie dogs relocated in the video makes the math very muddled.

Answer: These numbers are not included because relocations are not yet complete for this year, so we do not have final numbers or expenditures to share. In 2019, 583 prairie dogs were relocated at a cost of \$145,000. This was only the cost to trap and relocate the prairie dogs, not follow up lethal control, barriers, etc. Cost per prairie dog varies greatly from year to year depending on trapping success, number of sites being moved, population density on site, contractor rates, etc.

## **Relocation Details**

**17.** OSMP reports relocating 561 prairie dogs in 2019 and 12 acres in 2020 from Johnson Dawson. The units being reported are not consistent. In the future can OSMP report more consistently how many prairie dogs as well as how many acres were relocated from each parcel with expenses for those parcels and also give total year end numbers and costs?

Answer: The different units of reporting are due to the 2020 relocations still being underway. Actual numbers of prairie dogs relocated is never known until after the relocations are complete. Trapping is continuing this week with changes to numbers relocated each day. Acres is the most accurate, static number we can report for 2020- actual numbers of animals will be available after relocations wrap up. Numbers so far for this season are 41 from the Johnson properties (as of 12/11), 265 from IBM (as of 12/14).

**18.** How many is a 'few' prairie dogs relocated from Foothills Park?

Answer: To date 3 prairie dogs have been relocated from Foothills Park in 2020

**19.** IBM is a new prairie dog removal site for 2020. \$125,000 of barrier was put up on IBM, including a solid metal fence that transects this property designated a " removal" parcel per the Grassland Plan, basically dividing it in half. See IBM parcel in red on map attached. Prairie Dogs are being removed from the northern portion of the parcel. What is happening to the southern half of IBM and when will those prairie dogs be removed?

Answer: Only the northern portion of the property is fully irrigated and managed for irrigated agricultural uses. The management designations in the Grassland Plan were applied to entire colonies, but in this case, management and level of conflict is not consistent across the colony. To focus removal resources on irrigated agricultural lands and maximize removals there, we are not planning to remove the southern portions of the colony as it does not create conflict with agriculture and supports associated species that OSMP strives to protect.

**20.** Has the City analyzed areas for receiving sites in the Southern Grasslands where co-existence could occur with other uses in a way that would lessen conflicts?

Answer: Our first experience with neighbor issues surrounding a receiving site were in 2019. Through lengthy negotiation and costly barriers, the conflict was mitigated to the point that we were able to secure a permit and relocate in both 2019 and 2020 to that site. We are looking at potential future receiving sites with potential conflict to prioritize those where we feel we would be successful in receiving a state permit. Prairie dog occupation and relocation is considered consistent with other activities on the properties including grazing and recreational use.

**21.** Is the City working with the State on a more efficient permitting process, less stringent habitat criteria for receiving sites, etc.?

Answer: We have inquired multiple times regarding ways to relax permitting criteria or obtain more overarching permits for our properties and been told that CPW could not accommodate our requests.

**22.** Why would PCAs take precedence as receiving sites over Southern Grasslands, where habitat is suitable and could likely be made available for receiving sites if it were an OSMP priority?

Answer: We are and continue to relocate prairie dogs to Southern Grasslands. However, Southern Grasslands and other grassland preserves also protect some of the last remaining untilled prairies in the area including globally rare plant communities like xeric tallgrass prairie that do not tolerate prairie dog grazing at high levels. As a result, our Grassland Preserves represent many overlapping goals of ecological conservation, so relocation and conservation of prairie dogs cannot be the overarching top priority over the long term. We are relocating to try to increase occupancy as prairie dogs are an important part of the grassland mosaic in the Southern Grasslands. PCAs represent areas where intact native plant communities are not a management priority or goal- as a result, these offer opportunities where installation of more densely installed nest boxes and higher levels of occupancy are not in conflict with other conservation goals of the property, as a result in the long-term represent an important relocation opportunity when Southern Grasslands has reached occupancies where we do not want to continue to relocate prairie dogs there or where all feasible relocation sites have been utilized.

**23.** Shouldn't OSMP be able to disclose relocation costs? Costs divided by number of prairie dogs. At the very least, shouldn't you be able to disclose total costs and total number of prairie dogs at the end of the year?

Answer: Yes, both are presented when available at both the annual public meeting and to the Open Space Board of Trustees in our annual prairie dog update. 2019 numbers were presented in the 2020 annual meeting and 2020 numbers will be presented in 2021 (since 2020 relocations are still being completed). In 2019, 583 prairie dogs were relocated at a cost of \$145,000.

## **Relocation Success**

**24.** What are the one-year, two-year and 5 year survival rates of OSMP's relocated prairie dogs? I realize that it is impossible to count actual prairie dog numbers, but staff can count occupied acres. What are the acreages of relocated prairie dogs 1, 2, and 5 years after relocation, compared to their original acreages upon relocation?

Answer: Even tracking acreage at relocation sites is complicated to relate to relocation success since relocation sites are used for more than one year, and receive prairie dogs from multiple sites. For example, the main part of the Damyanovich colony was 22 acres in 2018, 42.8 acres in 2019, and 59.6 acres in 2020, but prairie dogs were moved in during the fall of 2018 and 2019. We can report that the Salstrand relocation colony that was initiated last year did expand when mapped this year prior to the addition of more relocated animals, from roughly 8 acres based on artificial burrows used in 2019, to 22.5 acres mapped this fall.

## **Nest Boxes**

**25.** Prairie dogs relocated to the Southern grasslands have sometimes died from plague. Is it possible to reuse the plastic nesting boxes from previously plagued-out relocations for new relocations to the Southern grasslands? Or are those old nesting boxes now contaminated with plague and un-useable? Will those old plastic nesting boxes remain in place forever? Or will they eventually be removed? Does OSMP maintain an inventory of GPS locations of all nesting boxes?

Answer: We have re-used nest boxes for relocations either if prairie dogs decide not to continue using them, or after plague once sufficient time has passed to mitigate the risk to newly relocated animals. We collected location waypoints for nest boxes installed at the Salstrand colony. Using waypoints from 2019, we assessed occupancy of nest boxes prior to 2020 relocations to determine how many new nest boxes to install. Occupancy of available artificial nest boxes was high. Once installed, nest boxes are likely to be left in the ground due to the disturbance that would occur with removing them.

**26.** What happens to relocation nesting boxes once installed if a new colony plague's out?

Answer: Nest boxes remain in place and in some situations may be used again at a later time to again receive relocated prairie dogs

## **Plague Management**

**27.** Tory states that the City is using the low dose SPV and not the higher dose SPV that is more effective in protecting prairie dogs from the plague. She said that was because “the goal is to maintain some populations in case of plague but we don’t need to maintain high population numbers.” This is concerning, especially when the low dose SPV is not very effective against the plague, the Southern Grasslands are only at 3% occupancy AND the ecological goal in the PDWG recommendations was to build up occupancy in the Southern Grasslands by increasing relocations there to eventually provide an ecosystem that, with adjacent lands, would provide viable habitat for the endangered black-footed ferret. Without adequate plague management, prairie dog occupancy in the Southern Grasslands will never expand.

Answer: Currently available SPV is the lower dosage bait. However, work is underway to try to increase the potency and consistency of the vaccine baits. OSMP only has access to the current formulation. It was an advantage to us this year because the Pocatello Supply Depot was able to provide it free of charge. Although OSMP would prefer to use a higher dose vaccine when available, this year we were glad to at least have access (at no charge) to the current formulation. It is likely that prairie dog populations with some protection are likely to experience more quick recovery than those with none, so we still saw a benefit of using the current vaccine. In addition, administration of SPV in two doses will improve efficacy of the vaccine.

**28.** Is it true that low dose SPV is being used because the City is intentionally managing prairie dogs to keep populations low in the S Grasslands?

Answer: No. The current formulation of the vaccine baits is all that is available. The decision was made to go ahead in spite of the low dose, especially given that we give the vaccine twice each year, which should offer a higher level of protection than just one dose. If higher dose vaccine becomes available in the future, OSMP would use that.

**29.** If yes, why? Why the continued resistance to implement an effective plague management plan for the S Grasslands that includes the effective higher-dose SPV and Delta Dust to adequately protect from the plague the prairie dogs being relocated there?

Answer: Staff is hoping to complete a plague management plan for all city properties in 2021 that will be intended to address long term goals and actions related to plague and prairie dogs. This was supposed to happen in 2020, but due to staffing shortfalls due to COVID-19, it was delayed

**30.** The City used low dose SPV because “the goal is to maintain some populations in case of plague but we don’t need to maintain high population numbers.” Is this goal consistent with the Prairie Dog Working Group Recommendations to reintroduce black-footed ferrets into the Southern Grasslands with adjacent neighbors Boulder County & USFWS? What is the City’s plan to bring this current management strategy in line with USFWS guidelines for healthy occupied prairie dog habitat for ferret reintroduction?

Answer: The City continues to evaluate the potential for Black-footed Ferrets and what would need to occur to support that goal. We are hoping to complete plague management plan in 2021 which will address longer term plans for plague management across city lands. Further planning internally with the city and with outside agencies will inform next steps as related to black-footed ferret reintroduction.

**31.** Does the City plan to use stronger SPV vaccines in 2021 or will they continue to use the free/ lower efficacy vaccines?

Answer: Yes, when higher dose vaccine is available, we would use that.

**32.** Under 2020 PDOG monitoring clarifications. Did there appear to be bigger plague outbreaks from one area to the other, i.e. Southern Grasslands vs Northern Grasslands? According to the bar chart, plague monitoring began in about 1996 on less than a few hundred prairie dogs, was that the total number of prairie dogs within this system or was mapping still in its infancy due to limited resources? In 2005, the highest number of active prairie dog colonies was approximately 3600 acres, but as plague move through prairie dog colonies, the lowest occupied acres occurred in 2009, representing about a 61% occupied acre drop. It would be interesting to document if all the 115 colonies in Boulder experienced plague or if some have never experienced plague. This may help provide target populations that need more intensive plague abatement compared to those colonies that have never plagued.

Answer: In 1996, only a few hundred acres of prairie dog colonies were active on OSMP as this timeframe followed a substantial plague epizootic in 1994-1995. We have done some of the analysis that you mention regarding whether some colonies have avoided plague through 2 epizootics. We have largely found that ones which were not impacted in the 90s were impacted in the more recent epizootic. The epizootic beginning in 2005 moved from North to South over several years, so although 2009 was the lowest number of occupied acres, areas in the north had already begun to recover their populations (happened very quickly) while areas in the South were just experiencing die-offs. So, overall, more than 61% of the areas were impacted, just not in the same mapping years.

**33.** Is DeltaDust being applied in the drainages and 100 year flood plain?

Answer: Deltamethrin Dust (Delta dust) is being applied as required by the State of Colorado in burrows where animals will be trapped for relocation. Delta Dust is applied according to label directions by a licensed pesticide applicator after an evaluation of the property is finished to confirm that the application can be done consistent with label restrictions and uses. It is possible that some of the sites it might be applied to are within 100 year floodplains, but where drainages exist on the properties, care is taken to ensure that there is not a risk of Delta Dust running off into a waterway, consistent with label directions.

### **Conflict between agricultural and prairie dogs**

**34.** It appears that the objective of the Expedited Plan is to remove prairie dogs (lethal and relocations), and thus their numerous associated prey and other species, in order to grow hay. Is that correct? If yes, the City is planning on killing thousands of prairie dogs on our public lands because of the unproven assumption that they damage the soil — resulting in a significant loss of prairie dogs, their predators and individuals of associated species — in order to grow hay for livestock that will further damage the soils and further contribute to climate change?

Answer: There are multiple objectives of the Expedited Plan including prairie dog removal, agricultural land restoration and improving soil health conditions in the northern project area. The OSMP Charter includes a mandate to support agriculture and agricultural uses of OSMP lands. This is primarily achieved by leasing land to local agricultural producers as irrigated lands have been designated as the best opportunity to support agricultural activities. Local producers that hold OSMP leases make their own crop production choices based on their business needs, local markets, and the capability of the land they lease from OSMP. Some irrigated land is only suitable for growing hay or other short season crops because of irrigation water availability.

**35.** Were other options, besides the blanket removal of the prairie dogs from our public lands, given any consideration in terms of offsetting the loss of hay production (e.g., compensation)?

Answer: Many management alternatives were evaluated throughout the expedited evaluation process as directed by the Open Space Board of Trustees and City Council. Individual compensation was considered, but not selected as part of the preferred management alternative that was recently approved by City Council.

## **Burrow Disturbance Rule Modifications**

**36.** When will the new burrow disturbance rule be written, finalized and approved? Will it be before the next planting season? When will lessees be able to start disturbing burrows?

Answer: Staff expects that the administrative rule allowing burrow disturbance will be in place prior to the 2021 planting season. Lessees will be able to disturb burrows within the limits of the approved rule after it has been finalized.

**37.** The new burrow disturbance rule needs to be finalized and approved and make logical sense. Will there be the mechanism in place for the lessees to start plantings using the new disturbance rules?

Answer: Staff expects that the administrative rule allowing burrow disturbance will be in place prior to the 2021 planting season. Lessees will be able to disturb burrows within the limits of the approved rule after it has been finalized.

**38.** When will OSMP begin to pursue the burrow disturbance rule change and will it be put into effect in January 2021?

Answer: Work is in progress to develop the language of the proposed rule. Staff expects that the administrative rule allowing burrow disturbance will be in place as early in 2021 as practicable and prior to the 2021 planting season. Lessees will be able to disturb burrows within the limits of the approved rule after it has been finalized.

## **Collaborative Learning Agricultural Group**

**39.** Regarding the “Collaborative Group” headed by Lindsay Sterling Krank and Cody Oreck: To be able to measure the success of this collaboration, the group must have clearly stated goals to be able to measure success. What are the stated goals of the Collaborative Group?

Answer: Staff is still working with the collaborative group on the details of the collaborative project. However, the basic goal that has been stated is to “implement regenerative agricultural techniques that improve the health of the land while producing food”. The group hopes to demonstrate that this can be accomplished while coexisting with prairie dogs.

**40.** Regarding the Collaborative Group: How is the success of conducting agricultural operations in conjunction with prairie dog occupation being measured? OSMP has already proven many times over that prairie dogs can thrive and expand in the presence of agricultural operations on OSMP lands, but agricultural operations have not been able to thrive in the presence of prairie dogs on OSMP lands so far. What specific parameters is the Collaborative Group going to measure, to determine whether agricultural operations can thrive in the presence of prairie dogs? Will yield per acre, labor and capital costs, profitability of operations, and other measures of viability be tracked? If not, what parameters will be tracked to measure success or failure in reaching stated goals?

Answer: Staff is still working with the collaborative group on the details of the collaborative project. The group and OSMP will certainly monitor soil health over time and basic agricultural production parameters including yields, etc. You make many good suggestions for the group to consider.

**41.** OSMP staff has stated that desired prairie dog occupancy levels on OSMP lands are between 10 and 26%. However, the Minnetrista/Canino properties being considered for the Collaborative Group project are at 70% occupancy according to recent staff estimates. Will OSMP require that the Collaborative Group try to reduce prairie dog occupancy to their recommended 10-26% occupancy levels, as part of their negotiated lease? Or will OSMP staff try to reduce occupancy levels to 10-26% during the lease period, to allow for more agricultural success of the project? Or will OSMP instead ignore the 70+% occupancy levels at the Collaborative Group's planned site?

Answer: The 10-26% goals only apply to Grassland Preserves. The collaborative group has been provided information on the current conditions at the planned site. There has been no discussion of the collaborative group being involved in prairie dog removal.

**42.** What is OSMP's role in this collaborative and will OSMP be providing personnel, services, resources and supplies to this project over and above what they supply to any other tenant?

Answer: OSMP is a partner in this collaborative the same as we are a partner with other OSMP tenants and expects to manage this lease arrangement as we do other lease arrangements. As a collaborative effort, it is likely that OSMP staff will provide more guidance or recommendations regarding practices that are implemented. The labor and costs to implement the selected practices will be allocated as required in the lease agreement and consistent with the OSMP leasing program expectations.

**43.** What is expected to be learned in this collaborative that we don't already know?

Answer: Methods of agricultural production that can be used to help rehabilitate degraded soil and plant communities on irrigated agricultural properties inhabited by prairie dogs to a point where they are feasible for agricultural production. We will expand our current understanding of how agriculture can be used to restore natural areas (rehabilitate degraded wetland and upland plant communities currently on the project site) and suppress noxious and invasive plant species.

**44.** How will 'maintaining viable agricultural operations and healthy soils' be measured or defined?

Answer: Staff is still working with the collaborative group on the details of the collaborative project and what the measures of success will be. The group and OSMP will certainly monitor soil health over time and basic agricultural production parameters including production costs and yields, etc. to determine if what has been implemented is economically viable and achieving resource management objectives.

**45.** What is the goal of the collaborative group? The goals needs to be fully written out with specific performance goals and realistic and attainable goals to set bench marks, so we know that progress is made, and real data is obtained that proves it is working.

Answer: Staff is still working with the collaborative group on the details of the collaborative project and what the goals/measures of success will be.

## **Agricultural Management**

**46.** What prescriptive grazing regime was used at Gallagher and for what purpose did the prescription serve?

Answer: The grazing goal in 2020 was to reduce the amount of thatch building up in the mesic (moist) areas on the property. The lack of grazing coupled with ample moisture and vegetative productivity produced conditions that end up suppressing the grass and native forbs in the area and favors the spread of noxious and invasive plant species such as reed canarygrass, common teasel, and Canada thistle. Grazing occurred in May and June, 2020. This timing is excellent to help suppress noxious and invasive plant species in the area such as reed canarygrass, common teasel, and Canada thistle. A secondary goal was to redistribute the productivity of the mesic area through the sheep (in the form of urine and feces) to areas up the hill that have degraded soil and plant communities. Pastures where set-up to accomplish these goals, but the goals where only partially achieved. We need to improve our ability to distribute grazing animals across the pastures though pasture design, vegetation management (fire, mowing), and strategic placement of supplements and water.

**47.** Are we reclaiming all of these lands for hay production?

Answer: No, some sites are not, for the most part, suitable for hay production. For instance, much of Gallagher will likely be pasture, however, haying could be a valuable management tool even on a property like Gallagher.

**48.** Was Gallagher leased in 2019 and/or 2020. Livestock were visible on the property

Answer: The northern portion of the Gallagher property was not leased in 2019 or 2020. Livestock were plan grazed in collaboration between OSMP and the adjacent tenant to manage noxious and invasive plant species and to accomplish other vegetation management goals.

**49.** Is Salstrand currently under an agricultural grazing lease?

Answer: Yes, Salstrand is currently leased by a tenant for grazing. We are working closely with the tenant to accommodate the relocation in that area.

### **Proposed 2021 Removals**

**50.** If Gallagher and South Nu-West are not currently leased. Why do these properties have priority of humane relocation over other properties that are currently leased for which lethal control is imminent?

Answer: Staff presented eight criteria for prioritizing relocation and removal efforts. The Gallagher and Nu-West sites meet several of these criteria. Council approved relocation or removal from transition and removal areas within the northern project area and some removal and transition areas are currently not leased. Staff believes that any relocation reduces the number of animals that will be lethally controlled to achieve the goals of the approved management alternative. The Gallagher and Nu-West sites are also located adjacent to areas where significant removal efforts have taken place or are planned. We hope that working in habitat blocks or nearby geographic locations within the project area will lead to more success in preventing future reoccupation once removal activities are implemented.

**51.** Will OSMP staff be doing fewer relocations in 2021 and more lethal control to gain better balance?

Answer: In accordance with direction from City Council, OSMP will be doing approximately 40 acres of relocation (similar to the highest levels of relocation in previous years) and between 100-200 acres of lethal control (entirely new levels of lethal control)

**52.** OSMP is planning to remove prairie dogs from Hester, will OSMP remove the 2.48 acres of prairie dogs from Campbell (see PD map in videos and OSMP GIS mapping)? Hester and Campbell are next to each other. If not, why not?

Answer: The prairie dog colony on Campbell is designated as a transition area, and therefore will be prioritized for removal as part of this project using the established criteria. The colony on Campbell was not occupied according to 2019 OSMP prairie dog mapping. The most recent mapping efforts indicate that the colony is now occupied as you suggest. Levels of occupation can sometimes change quickly and certainly change on an annual basis. Staff will continually evaluate prairie dog occupation levels and agricultural site conditions and make management recommendations as necessary to achieve the goals of this project.

**53.** In 2021, why is OSMP planning to relocate the high end of the spectrum, 40 acres, but only lethally control 100 acres, the lower end of the spectrum, when lethal control is the most cost effective removal method?

Answer: Part of implementing the Prairie Dog Working Group Recommendations as directed by City Council in 2019 includes undertaking relocation at this scale (or more if possible). For the first year of lethal control, there are many unknowns and things that staff needs to learn. With the necessity of contracting out all lethal control in 2021, the need to identify contractors, and learn how the projects progress, 100 acres is a large area when in past years, we have done this type of lethal control on only a handful of acres after relocation was complete (low densities of prairie dogs in a few burrows). Given the number of details to be figured out, we believe 100 acres is a feasible scale to tackle in the first year.

**54.** When will actual physical work begin on prairie dog removal projects, relocations and lethal, for 2021?

Answer: There may be limited lethal control in January and February as follow-up control on previous removal sites, however, it is anticipated that actual removal for both lethal control and relocation will begin after June 1 when the prairie dog pupping season is complete. Relocation is usually more successful later in the summer, so may not begin until then. However, a variety of activities including contracting, permitting, installation of barriers and preparatory work will commence earlier in 2021 to get everything ready for removal to begin.

**55.** Since staff convinced Council that the above KBW recommendation was in the Plan, which led to Council's approval of the plan, did staff complete such an analysis prior to determining 2021's 5 lethal sites and the 2 relocation sites? What did that analysis entail?

Answer: Resource management is guided by approved resource management plans, information collected as part of on-going monitoring efforts, and staff's best professional judgement using an adaptive management framework. Staff presented and Council approved the following selection criteria:

1. Areas designated as removal and transition areas
2. Areas where the likelihood of effective removal, exclusion and restoration are most likely to be successful.
3. Areas leased by tenants that are most affected by prairie dog occupation.
4. Areas that are currently unleased but can be restored to production.
5. Areas where successful management will increase OSMP lease revenue.
6. Areas where removal will have least impact to associated species.
7. Areas with the highest degree of neighbor conflict.
8. Areas that provide some degree of relief to the greatest number of tenants.

**56.** Can OSMP please provide documentation of how the 6 lethal and 2 relocation properties were made? And why were they selected?

Answer: There is no formal documentation available , but staff used the approved criteria as stated above, worked closely with the impacted agricultural tenants, and used professional judgement to select sites that presented the best opportunity to achieve success with agricultural land restoration, prairie dog removal, and soil health improvement. Staff believes that the sites selected meet all of the approved criteria listed above. For example, all sites are designated transition (1)(6)(7); the two most heavily impacted lease areas will receive some relief (3)(5)(8); the selected properties are contiguous with one another or to an area where removal has been implemented (2)(3)(4)(5); the selected sites will help reduce conflict on four lease areas and one unleased property (3)(4)(5)(8); and one site selected provides relief for a very long standing neighbor conflict in addition to improving agricultural production (4)(5)(7).

**57.** Why don't any of the proposed lethal sites include some acres for relocation, or for co-existence strategies, or for barriers (fences/vegetation buffer zones/native living windbreaks)? Were these kinds of options given any consideration on these 2021 sites?

Answer: Staff did consider many of the points you suggest. Staff did not believe the selected sites presented the opportunities you suggest. It is possible that vegetation buffer zones or other creative barrier techniques can be implemented on some sites in the future. Staff did demonstrate its willingness to consider the items you suggest when implementing prairie dog removal on the IBM property as only 18 acres of prairie dogs were removed from the approximately 80 acre property.

**58.** Did staff take into account that the proposed 2021 ambitious lethal removal of prairie dogs from the area around Boulder Reservoir would signal a population crash of prairie dogs and an immediate and adverse impact on species associated with prairie dogs, including predators?

Answer: Staff do not see prairie dog removals in 2021 and following years as representing a widespread population crash since prairie dogs will remain in the area and available for predators on nearby Grassland Preserves, Prairie Dog Conservation Areas, Multiple Objective Areas, Parks & Recreation Lands, and non-City owned lands. We recognize the importance of prairie dogs to raptors and other predator populations in the area, and consideration of predators and other associated species is part of the evaluation process for removals.

**59.** If lessening conflicts with lessees is the goal and the cause of the rush for this Plan, which is what the public believes, why are both 2021 relocation projects slated to occur on unleased properties (Gallagher and South Nu-West) where there are no conflicts with lessees? Why not do the 2021 relocations on leased lands to decrease conflicts (e.g, Ditzel, Lousberg & Hester)?

Answer: Decreasing conflict is not the only goal of removing prairie dogs from transition and removal areas in the northern project area. Restoring and returning agricultural land to production, improving soil health, and reducing neighbor conflicts are among the other goals. The proposed removal area on the Gallagher property has recorded one of the lowest soil health scores on OSMP land according to recent sampling efforts. Relocation, regardless of property or site reduces the number of animals lethally controlled.

**60.** If reducing conflicts is no longer the goal of the Expedited Plan, then please explain why there is such a rush to remove so many prairie dogs off the landscape in 2021, when areas of no conflict (Gallagher, South Nu-West) can be relocated on a time-appropriate schedule?

Answer: See answer above.

**61.** If Gallagher and South Nu-West are not presently leased then why are then why are these prairie dogs being actively relocated over other leased properties that where prairie dogs are more in the imminent path of death?

Answer: Decreasing conflict on leased land is not the only goal of removing prairie dogs from transition and removal areas in the northern project area. Restoring and returning agricultural land to production, improving soil health, and reducing neighbor conflicts are among the other goals. The proposed removal area on the Gallagher property has recorded one of the lowest soil health scores on OSMP land according to recent sampling efforts. Relocation, regardless of property or site reduces the number of animals lethally controlled.

## **Restoration Techniques**

**62.** Is the idea of soils amendments with compost (plant or animal compost? Animal compost is known to redistribute weed seeds and weeds love compost too!

Answer: The decision to use compost will be made on a site-by-site basis, depending on the degrees of soil degradation. Both plant- and animal manure-based compost have weed seeds, as does irrigation water. One of the goals of this project is to establish perennial cover that will be resistant to annual weed establishment.

**63.** Will herbicides be used to manage weedy species?

Answer: Herbicides will not be used to control weedy species in most cases. Weedy species, generally, are symptoms of poor soil and plant communities, both of which will be improved as part of the rehabilitation activities. In addition, staff will work with adjacent tenants or contractors to plan graze project sites, if needed, to further improve vegetative and soil communities as well as suppress weedy, invasive, and noxious weed plant species. Targeted use of an herbicide may be used to manage certain noxious weed species that are not easily controlled by planned grazing or improvements to soil and plant community competition. Species that fall into this category and are present, in low quantities, at the project sites are Russian olive, yellow toadflax, and Russian knapweed.

**64.** Will herbicides be used on your restoration efforts?

Answer: The plan is to use herbicide sparingly and only on a few select species that cannot be suppressed through planned grazing and improved soil and plant communities. Some species include Russian olive, Canada thistle, yellow toadflax, and hairy willow-herb, none of which are very common on the project sites.

**65.** Is there an intention to add more native species and/or pollinator plants into these reclamation plans? The monocot crop of smooth brome being pointed to as a success seems limiting and adding a diversified mix to plants, including native plants, is a stated goal by the Colorado Department of Agriculture and many other organizations that want to change old agricultural practices.

Answer: The rehabilitated plant community on each site is variable depending on current site conditions, whether a site is currently leased, and diversity of potential conditions on a site. For instance, Axelson East is already heavily occupied by smooth brome and fescue. It will be very hard to meaningfully increase plant diversity on this site without first directly impacting the existing dominant plant community. Nu-West and Gallagher are currently not leased and both have a diversity of habitat types and will be seeded with a diverse mix (well over 30 species of grasses, forbs, shrubs) of native and non-native plant species suitable for site conditions that will improve overall plant diversity and resilience as well as provide ample forage for future agricultural tenants. Other sites are a hybrid between the two above scenarios, where moderate levels of species (7-10 species) will be added to the site as collaborated with current tenants.

**66.** Curious how much intensive restoration is needed. In many sections reviewed, the grass is still there, it is just short. Simply removing the prairie dogs may restore grass height in many cases. Just as removing any livestock from overgrazed areas will restore grass health. For example, there are many areas on the Ditzel property where grass cover was over 80 to 90 percent, it was just very short.

Answer: In many cases, restoration activities in places with existing vegetation can be minimal. Leveling burrows to help with water distribution and applying compost (this has shown to be very effective to rapidly increase vegetative density, like what happened on Dawson in 2020) should result in immediate robust vegetation growth.

**67.** In your presentation, you mention the removal of clover, this is generally used as a cover crop. Were prairie dogs eating clover or avoiding it? Is clover injurious to cattle?

Answer: Clover can cause bloat in cattle, but generally only in fields where clover makes up a large portion of the forage. The clover on the Cowles property (property mentioned in the presentation) seems to come and go depending on the year. This is likely tied to precipitation. We have not seen evidence that the prairie dogs were eating or clipping the clover (especially the low growing white clover), but our observations are limited.

## **Vegetation Management with Prairie Dogs**

68. The “Prairie Dog Working Group Implementation” slide. Multiple goals are addressed, but no mention of vegetation management or vegetative restoration for on and off colony sites. Is restoration and/or vegetation management a goal of the PDWG?

Answer: Vegetation management is not a specific PDWG recommendation but use of non-lethal methods to reduce prairie dog conflict is. One restoration strategy is to include buffers of ungrazed/uncut vegetation to discourage prairie dog movement. Vegetation restoration has not been very successful on active colonies but is an important component of land management after prairie dogs are removed.

69. PDWG recommendations slide. Were there no recommendations for vegetation management as tool to control unwanted prairie dog expansion?

Answer: Use of vegetation management to control prairie dog expansion is not a specific PDWG recommendation, though it could be considered part of the objective to use non-lethal methods to control conflicts. Uncut/ungrazed vegetation buffers to discourage prairie dog movement are being used as part of restoration methods on parcels where prairie dogs have been removed.

## **Soil Health**

70. Soil health is defined as: “Functional capacity to sustain plant productivity, maintain water and air quality, support human well-being and other essential ecosystem services.” What essential ecosystem service is being referred to here? I would argue that this project is an agroecosystem service but not a natural ecosystem service, such as a prairie ecosystem, and the delineation is important.

Answer: Noxious and invasive plant species, low plant diversity (especially native species), degraded wetland plant communities, and bare soil currently exist throughout the project area. Soils are the foundation of terrestrial ecosystems. Health soils support primary production and biodiversity and are key for nutrient and hydrological cycles. Properly managed soils prevent nutrient loss, erosion, sedimentation and runoff, which results in improved air and water quality. A major piece missing to the rehabilitation of the project area not only to produce local food for the Boulder community, but to restore soil health (and all the ecosystem services this provides), native plant communities, and overall plant diversity are the tools required to do this work. A goal of this project is to use agricultural production in a manner that accomplishes the above stated goals, thereby addressing multiple ecosystem services as well as agricultural services. OSMP staff and agricultural producers around the planet are developing these methods and sharing that knowledge with others. This collaborative project has the potential to expand upon this wonderful work in Boulder.

**71.** Soils tests performed at a six-inch depth is generally adequate for crops/grasses but soils testing for prairie dogs is unique. Soils in prairie dog colonies should be collected inside the tunnels at a one foot or so depth.

Answer: We understand soils in prairie dog colonies are different. After conversations with soil scientists and ecologist, we settled on testing to the 6" depth to be consistent with ongoing departmental soil testing efforts as well as to make agronomic decisions based off of the established depths. We will also have vegetative indicators of performance post-removal, so that will be another way to ascertain a response to prairie dog removal.

**72.** How will the City design its soil research in a holistic manner that recognizes that prairie dogs evolved on the shortgrass prairie ecosystem, including its soils, in co-existence with other species; and, that prairie dogs play a keystone role in grassland ecosystems because their colonies, burrow structures, engineering activity and grazing habits are essential to the survival of a great diversity and abundance of other wildlife species?

Answer: This soil research is looking specifically at prairie dog removal on soil health on non-native irrigated agricultural fields and will be assessing a number of indicators to make a determination at the end of the research period. OSMP has collected soil samples in native grassland communities as part of long-term monitoring efforts in these systems. While there are small occurrences of short grass prairie on OSMP lands, OSMP's native grasslands are primarily made up of mixed grass and xeric tallgrass plant communities.

**73.** How will the impacts from historical and current agricultural practices on soil degradation be incorporated into the soil research as an important component of the problem?

Answer: The soil sampling design will assess the impacts of prairie dog removal and restoration on each individual sites. Each site will be compared to itself from just before removal to 5 and 10 years post-removal. The historic and current agricultural practices are built in, so to speak, in the study design, and cannot be separated from prairie dog impact. However, the direction that the soil health indicators take, will be indicative of the impacts of prairie dog removal and restoration of vegetation on these properties.

**74.** How will data be collected and analyzed to reach a fair conclusion about how the soils have been impacted and what should be done about it?

Answer: The study was designed following to look at the impact of prairie dog removal and restoration on a select set of soil health indicators on a subset of sites within the project area. Study design and site selection will be done prior to removal and samples will be collected in accordance with published protocols. Resampling those same sites at five year intervals will provide the best way to determine the effect of prairie dog removal on soil health.

**75.** What are the different soil conditions on the sites mentioned for reclamation ?

Answer: Soil conditions vary site by site depending on a variety of factors, including duration and density of prairie dog occupation, historical agricultural practices, slope, aspect, soil texture and vegetation. These sites have not had a formal quantitative or qualitative assessment.

**76.** Was it stated that lands with livestock grazing have higher organic matter? If yes, can you please explain this as a benefit and the reverse?

Answer: Organic matter is a key component of soil and it's presence in the soil impacts the physical, biological and chemical properties of soil. Organic matter enhances aggregate stability, which in turn improves water infiltration, gas exchange, and reduces runoff. Soil organic matter increases a soil's cation exchange capacity, which is its ability to hold onto charged particles in the soil. Soil organic matter also provides food and habitat for soil microorganisms, so plays a key role in nutrient cycling. Soil organic matter is also the largest pool of terrestrial carbon. With lower soil organic matter, soils are prone to crusting, sealing and erosion and have a decreased ability to buffer against changes in pH and less resilience to extreme weather.

**77.** Was it stated that prairie dogs have a quantitative effect on soil health? If yes, can you please explain this as a benefit and/or the reverse? Can you speak specifically to water infiltration and vegetation too please?

Answer: There are some studies available that examined the effects of prairie dogs on soils. Most studies took place on national parks or other large native prairie systems where prairie dog colonies are part of a naturally functioning native ecosystem. Prairie dogs typically are associated with vegetation communities that are dominated by forbs (leafy plants) rather than grasses, and have more bare ground than areas with no prairie dogs. In some cases, plants in or at the edge of prairie dog colonies had higher nutritional value and/or palatability for grazers (cattle, bison, elk, pronghorn). Prairie dogs also have been associated with reduced encroachment of shrubs into grasslands.

A couple of studies in the Boulder area, where prairie dog colonies are bounded by a variety of barriers, and may occur on previously disturbed (tilled) soils, indicated that declines in native grasses, increases in native and non-native forbs, and increases in bare ground were exacerbated by the presence of prairie dogs. Furthermore, these studies near Boulder, and at least one other study in South Dakota, indicated that human management/restoration was needed to restore grasslands after prairie dog removal.

With respect to water infiltration, a couple of studies of prairie dogs specifically, and soil-disturbing vertebrates in general, have shown higher permeability near burrows.

**78.** Do the studies also look at agriculture's quantitative effect on soil health?

Answer: The soil testing described for this project will look at the impacts of prairie dog removal and restoration activities on soil health indicators. Looking at agriculture's effects on soil health are outside the scope of this project. The department has completed a baseline soil health assessment on a subset of 119 different irrigated agricultural fields. These fields will be re-sampled in five years and this information will be used to determine trends in soil health on the agricultural landscape.

**79.** According to Kolb soil health is defined as : "functional capacity to sustain plant productivity, maintain water and air quality, support human well-being and other essential ecosystem services." What ecosystem services are we defining?

Answer: Soils are the foundation of terrestrial ecosystems. Health soils support primary production and biodiversity and are key for nutrient and hydrological cycles. Properly managed soils prevent nutrient loss, erosion, sedimentation and runoff, which results in improved air and water quality.

## **Neighbor Conflicts**

**80.** A while back, I attended a meeting regarding prairie dog habitats. I back up to the open space near the White Rocks area (near 75th and Jay, just south of Kincross Drive.) At that meeting, it was discussed that there used to be a barrier containing the colony near Heatherwood school, and since that barrier was removed, the colony has expanded rapidly eastward towards the White Rocks area. At that meeting, one of the people had mentioned that the city could add a barrier to the fence if the colony starts to get too close. The colony has now expanded past our house, and the burrows have been getting closer and closer to our property (and the property of our neighbors.) Over the spring, I've had a couple prairie dogs go through our fence and come into the yard, so I'm wondering who I might talk to about getting that barrier. (If I remember right, I think they were talking about just a fabric that they couldn't see through, that they won't burrow under something they can't see and that the fabric would keep them from coming through the fence...) Or let me know if there is another alternative to consider.

Answer: In general, OSMP does not erect barriers to prevent spread of prairie dogs onto adjacent lands. However, staff routinely talk with neighbors and provide them with info and options if they would like to erect a barrier. In some cases, costs can be somewhat reduced by allowing the landowner to use the OSMP boundary fence to support their barrier. In 2021, staff is hoping to pilot a cost-share grant program with neighbors to help offset the cost of erecting barriers. Additional details will be released later this spring if staff capacity and funding allows the pilot to begin this year.

**81.** Did OSMP work with or speak to any adjacent neighbors to try to reduce fencing type or costs by inquiring about or assisting with concurrent prairie dog removal?

Answer: Staff did not conduct thorough outreach to all adjacent landowners, however, several were contacted notifying them of OSMP management plans on the Johnson and Dawson properties. Neighbors were contacted if the barrier was installed onto the existing and shared boundary fence. One neighbor was also contacted regarding control efforts on their property and chose to control only a portion of the colony on the private property.

**82.** As you prioritize areas to be treated, and our area could be months/years before anything happens, what support are you able to give those who have been asking for years for help? For example, providing us with the means to start removal of the prairie dogs from our property. I will do the work, give me the tools. Every season/year that goes by, we lose more of our property.

Answer: OSMP staff are always available to provide evaluation and technical advice on what options you have for management on your property. If you are an adjacent neighbor, OSMP is always willing to evaluate allowing you to use our boundary fence to help offset some of the cost of erecting an exclusion barrier. In addition, in 2021, staff is hopeful that we can implement a pilot cost share grant program to adjacent neighbors to help fund installation of barriers on our shared boundaries. Details of this program will be communicated as they are developed.

### **Prairie Dog Barriers**

**83.** Why doesn't OSMP allocate more money to the removal of prairie dogs instead of spending huge money fencing off your own parcels? OSMP is spending too much of the budget fencing itself FROM itself.

Answer: Future projects may include looking at fencing external to areas of prairie dog conservation. In addition, OSMP is hoping to pilot a cost-share grant program with adjacent neighbors to partner on installation of barriers on the borders of OSMP properties. Current City Council direction is to prioritize removal of prairie dogs from irrigated agricultural lands and install barriers to ensure that prairie dogs do not move back in after those removals.

**84.** If OSMP feels barriers must be constructed everywhere, why isn't OSMP fencing bigger blocks, perhaps using more economical options and removing more prairie dogs?

Answer: Removals are being planned in a way that will allow removal from larger blocks of irrigated agricultural lands over time. Barriers being installed internally to these larger areas are being constructed to be more temporary at a lower cost with the plan to remove some of these as removals continue to expand the prairie dog free areas to be contiguous to each other.

**85.** Johnson/Dawson appears to have three different types of fences at a cost of over \$100,000. Please explain the need for three different types of fence and include the cost per foot of each type of fence. (The buried solid metal fence even includes a chicken wire skirt, please include all material and labor costs involved.)

Answer: The mix of barriers installed on the Johnson/Dawson site were selected to provide the desired level of protection within the budget constraints of the project. The metal or vinyl barriers were installed on boundaries with direct contact with existing colonies or where long-term prairie dog occupation is expected. The vinyl barrier on the east border of the Johnson property was installed instead of a metal barrier as a cost saving measure to stay within budget. Metal barriers cost \$32-\$38 per foot, vinyl / hardware cloth barriers cost approximately \$19 per foot and the chicken wire mesh barrier is between \$4-\$8 per foot.

**86.** Why wasn't welded wire with landscape cloth, as on Nu-West, good enough for the north edge of this project?

Answer: The northern edge of the Johnson/Dawson properties is adjacent to the Johnson and Dawson prairie dog conservation area designated colony along Niwot Rd. Staff expects these colonies to be occupied by prairie dogs for the foreseeable future and selected the metal barrier design in this location because of its effectiveness and durability.

**87.** How will other wildlife move through these solid fences?

Answer: Some wildlife will not be able to move through solid barriers. This is another reason to use different barrier types to increase permeability to wildlife to the extent possible while minimizing prairie dog movement.

**88.** Please explain why OSMP didn't put a fence around the Johnson Dawson HCA to keep the prairie dogs on a parcel where the objective is conservation? It seems this could have checked a lot of boxes - saved quite a bit of money, allowed for less expensive barrier on other parcels, kept prairie dogs from leaving a protected area and stopped prairie dog damage to private neighbors.

Answer: The direction from City Council was to focus resources on reducing conflict with irrigated agricultural land on OSMP- all 2020 and 2021 projects are focused on that goal. Future projects may focus resources on barriers related to conservation areas, assuming that barrier to movement of other wildlife species being conserved is not severely impacted.

**89.** Is OSMP now willing to consider putting barriers on their own parcels to prevent damage to a neighbor?

Answer: OSMP is hoping to pilot a cost-share grant program to help neighboring landowners install barriers where they are experiencing prairie dog conflict adjacent to OSMP lands. Details will be shared later in the year. In some cases, these barriers may be attached to the boundary fence of the OSMP property as already happens in some cases when adjacent neighbors install a barrier.

**90.** Are any lessees being subcontracted or in other ways involved in barrier construction (as discussed by OSBT) in the 2020 approved plan?

Answer: We are in discussions with 2 of the tenants that lease properties where we are doing relocations or removals next year regarding subcontracting on restoration and field activities. Those are the activities that they have expressed interest in.

## **Grassland Preserve Management**

**91.** With plans to relocate PDs to Southern Grasslands, how are you going to keep them from overpopulating there and destroying unique plant communities?

Answer: The Grassland Ecosystem Management Plan includes several criteria and strategies to help balance relocation of prairie dogs into Grassland Preserves to ensure ongoing conservation of this important species in these habitats with the need to protect unique plant and animal communities that do not thrive with prairie dog occupation. some of these are:

- We only relocate into areas that have previously been occupied by prairie dogs
- We monitor vegetation and have to meet specific vegetative quality before a site can receive prairie dogs
- We attempt to focus installation of artificial nest boxes in areas outside of our most pristine, untilled plant communities
- We avoid relocation when possible into rare plant community areas (e.g. xeric tallgrass)
- We have a goal of 10-26% occupancy of Grassland Preserves, and to support this goal, we will relocate prairie dogs into Grassland Preserves until they reach 10% occupancy giving room for growth of colonies without reaching unsustainable levels of occupation

**92.** Is it the City's goal to not expand beyond 3% occupancy in the Southern Grasslands?

Answer: The Grassland Plan goals for Grassland Preserve Occupancy is between 10-26%. As a result, we will continue as feasible to relocate and encourage population expansion up to 10%. Current percentage occupancy of Southern Grasslands is 4.6%

**93.** Northern Grasslands are 60+% occupancy. Heather noted 26% as desired occupancy. How will OSMP manage this occupancy discrepancy?

Answer: The desired goal for occupancy in Grassland Preserves in the Grassland Ecosystem Management Plan is 10-26%. Although the Grassland Plan provides for the potential of moving prairie dogs out of Grassland Preserves at high levels of occupation if vegetation degradation is being observed, it does not direct that this must be done if occupancy falls above the desired range. In addition, current direction from City Council is to focus all relocation on irrigated agricultural sites experiencing conflict. Management toward this desired occupancy would likely occur if populations were reduced due to plague or other factors and OSMP might work to restore vegetation or make some areas of the Grassland Preserve less likely to be recolonized (with vegetative or other barriers, etc)

**94.** If prairie dog populations in the Southern Grasslands get above 26%, how will OSMP manage those populations?

Answer: Similar to other Grassland Preserves, the Grassland Plan provides for the option of moving prairie dogs out of the Grassland Preserve if occupation is above 26% and vegetative degradation is being observed. Current priorities for relocation as directed by City Council would no include moving prairie dogs out of the Southern Grasslands. Currently occupation is 4.6%.

### **Partner Agency Management**

**95.** If the counties benchmarks are between 10 -26 % occupation, should we be keeping up with their goals since we have common lessees?

Answer: OSMP has goals of between 10-26% occupancy on Grassland Preserves as determined during the planning process for the Grassland Ecosystem Management Plan. We are unaware of the use of 10-26% by the county in an agricultural context, but our expectations on agricultural lands for the long-term is much lower occupation levels than 10-26%. However, if we were to have this as a goal, our current occupation levels system-wide on irrigated lands fall within this range.

## **Future Plans**

**96.** What is the game plan for prairie dog management on Boulder Valley Ranch?

Answer: Boulder Valley Ranch is a complex scenario, given that much of it is a grassland preserve and it's a very open landscape up there with few barriers to separate areas of prairie dogs and irrigated agriculture. We are working with the tenants over the next couple of years to provide some relief on lands that they lease. The relocation that we did in 2020 was a property leased by the Boulder Valley Ranch tenant. Some of the lethal control that we're doing in 2021 will be on that tenant's property as well. We have also completed a property assignment to help that tenant out with leasing some property that was not occupied

**97.** When do you expect to get to removals on Bennet and Oasis?

Answer: It is difficult to forecast future years as populations and on-the-ground conditions change rapidly. However, we will continue to use the 8 criteria to evaluate which properties will be managed each year. In addition, we are hoping to make good progress over the next few years so that a large portion of the conflict areas have been addressed.

## **Other**

**98.** What was the odd colony behavior being investigated?

Answer: Colony behavior that prompted calls to OSMP included sunning/lying prostrate around burrows in late spring, and periods when prairie dogs remained underground during much of the day in hot summer weather.

**99.** Can you explain why Removal Areas have populations increasing at 10% if prairie dogs are being removed?

Answer: The last several years of relocations have occurred on transition, not removal areas. The current project to relocate from the IBM property (which is a removal area) did not begin until after annual mapping was completed, so those changes due to the removal are not captured.