

**MINUTES AND PROCEEDINGS OF THE
PARKS AND OPEN SPACE ADVISORY COMMITTEE
January 28, 2016**

The meeting was called to order at 6:30 p.m. by Eric Hozempa in the Hearing Room of the Board of Commissioners, Third Floor, Boulder County Courthouse, Boulder, Colorado.

POSAC Members in Attendance

Present: Jenn Archuleta, Sue Cass, Cathy Comstock, Russell Hayes,
Eric Hozempa, James Mapes, Scott Miller, and John Nibarger

Excused:

Staff in Attendance

Renata Frye, Tina Nielsen, Ron Stewart, Jeff Moline, Claire DeLeo, Susan Spaulding,
Rob Alexander, Therese Glowacki, Conrad Lattes, and Janis Whisman

December Meeting Minutes

Scott Miller moved to accept the December 17 minutes. John Nibarger seconded the motion. ***Motion carried 7-0.*** [Cathy Comstock abstained because she was not at the December 17 meeting.]

Public Participation for Items not on the Agenda

None

2015 Acquisition Summary

Staff Presenter: Janis Whisman, Real Estate Division Manager

Action Requested: Information Only

See Staff Memo for Detail on Presentation.

Questions

None

Proposed Amendments to the Prairie Dog Habitat Element of the Grassland Management Plan: Vegetation Relocation Criteria Changes, Prairie Dog Relocation Criteria Adjustment, and Exclusion of Phostoxin (Aluminum Phosphide) for Lethal Control of Prairie Dogs

Staff Presenters: Claire DeLeo, Senior Plant Ecologist; Susan Spaulding, Senior Wildlife Biologist; Rob Alexander, Agricultural Resource Supervisor
Action Requested: Recommendation to the BOCC

See Staff Memo for Detail on Presentation.

Questions

Jenn Archuleta: Prior to the plague, were the plant numbers better or about the same, or did they decline along with the prairie dog?

Claire DeLeo: We started our monitoring in 2001. I don't remember what the vegetation was like back then, but I can look into it for you.

Scott Miller: Do you have vegetation thresholds when it looks like the prairie dogs have taken over to the point where it is a detriment to the grasslands?

Claire DeLeo: We don't have a particular metric, like percent of cover or percent of bare ground, but when we are observing and we see a collapse in the native vegetation we have the ability to do management on the HCAs [habitat conservation areas].

Jim Mapes: Would it be reasonable to set a lower standard to shorten the time span? Why not make it 30% coverage by grass?

Claire DeLeo: We're looking at habitat conservation areas that are primarily native vegetation. We're not really restoring these areas; they are recovering on their own. Looking at data, and the current criteria, we're trying to come up with the best compromise between providing enough vegetation for prairie dogs in the long term, but also not introducing too soon because these areas need time to recover.

Russell Hayes: How many prairie dogs can a land hold? Do we have places that man has not fiddled with and we can see what the long-term impact is of prairie dog occupation?

Susan Spaulding: We have talked about that. When we see grasslands start to collapse, we do have the ability to go in and thin the prairie dogs and get their numbers back down. In Boulder County, we do have a higher density of prairie dogs because of development.

Public Comment

- Lindsey Sterling-Krank [Director, Prairie Dog Coalition]. She is happy that staff has decided eliminate the use of poisons [to control prairie dogs] on our public lands. She supports the goal of reintroducing the black-footed ferret and she would like to

be involved with that. She would like the translocation date moved from October 15 to December 1. She asserts that she has had successful translocations in December.

- Ruby Bowman, 1512 Lefthand Dr., Longmont. She is pleased with the October 15 translocation date, but she would like to see an extension to November 15 or December 1 instead. She acknowledged that the number of prairie dogs on county open space has come down, but she asked why so many prairie dogs are being killed on NPDs [no prairie dog areas] and how is the county preventing reoccupation once the prairie dogs have been removed? She questioned if the county was following its own cropland policy of discouraging prairie dogs.
- Susan Sommers, 1418 Galilee Lane, Longmont. She is a member of Wildlands Defense. She is concerned that the plan places extreme limits on prairie dog relocation. She also argued that the plan fails to provide a mechanism for effectively recovering habitats, such as limiting livestock grazing, in areas identified as habitats for prairie dogs.
- Amy Strombotne, 8502 Stirrup Ct., Boulder County. She would like Boulder County to stop sending prairie dogs to the black-footed ferret rehabilitation program. She stated prairie dogs are sentient and self-aware, and she doesn't think they should be removed from their families and kept in a cage, as is the case when they are sent to the black-footed ferret rehabilitation program. She argued that providing prairie dogs to the program will not ensure the county receives black-footed ferrets in the future, but rather the county will receive them by having the appropriate habitat. She believes policies that open up natural lands that can support all sorts of wildlife that feed on prairie dogs is a better solution.
- Anna Rivas, 4501 Nelson Rd., Longmont. She asks why it matters if prairie dogs come from non-county property versus county property? If there are populations on non-county property that are in imminent danger from development and there is land available in habitat conservation areas, why not allow those prairie dogs to be relocated to the property?

Staff Response [to public comment]

Ron Stewart: There was a reference to POS having a goal of reintroducing black-footed ferrets by 2020. Our department has created vision documents for things we would like to say we have done. Our current vision for the year 2020 includes the reintroduction of ferrets by 2020, but that hasn't been adopted by POSAC and the BOCC yet.

Jenn Archuleta: Is grazing allowed on habitat conservation areas?

Claire DeLeo: Grazing is allowed on some of our habitat conservation areas. The Southcentral Grasslands and Rock Creek Farm have grazing leases. When we did our revisions to the vegetation criteria, we are taking into account those grazing leases. Grazing leases are adapted on a yearly basis. If there is a year with low precipitation, the number of livestock is reduced; or in some cases, like a bad drought year, there is no grazing.

Cathy Comstock: Are all the NPDs on agricultural lands? Do we kill prairie dogs on lands other than agricultural NPDs?

Rob Alexander: The majority of lethal control is on agricultural lands. There is a very small number in the past where lethal control was used on land that was in the process of being restored.

Motion

Sue Cass moved to accept staff recommendation for the proposed amendments to the Prairie Dog Habitat Element as presented, and Scott Miller seconded the motion.

Cathy Comstock offered a friendly amendment to add flexibility to extend the timeframe for relocation, as determined by staff.

Sue Cass moved to accept staff recommendation for the Prairie Dog Habitat Element that takes into consideration flexibility regarding the relocation timeframe up to October 15 or beyond, as determined by staff. In years of poor conditions, relocations will cease on September 15. Scott Miller seconded the motion. ***After discussion, Motion carried unanimously.***

Discussion on Motion

Sue Cass: Most of you know I am a raptor ecologist and we all know what prairie dogs mean to raptors and to a lot of other wildlife. I strongly support staff's incremental changes as we adapt these marginal ecosystems to accommodate more and more prairie dogs. I think it's important that we remember that these are ecosystems we're talking about. There are a lot of other animals out there that are depending on the grasslands. We are not just managing prairie dogs, we're managing ecosystems.

Scott Miller: As an agricultural tenant for 15+ years, I think there have been good steps in managing prairie dogs, in trying to create not just more habitat, but better habitat.

Cathy Comstock: I'm so appreciative of staff's constant desire to be aware, collect data, and collaborate with the Prairie Dog Coalition and others.

Unmanned Aircraft Systems Policy

Staff Presenter: Jeff Moline, Resource Planning Manager

Action Requested: Recommendation to the BOCC

See Staff Memo for Detail on Presentation.

Questions

Jenn Archuleta: In the policy it says the UAS Advisory Team will evaluate the application and make a recommendation to the Department Director, but the Department Director will have the ultimate say on whether or not the applicant can do that work?

Jeff Moline: Right; the director will make the final approval based on the team recommendation. We anticipate that our own staff will make some of these requests, in collaboration with other groups.

John Nibarger: Will there be an appeal process if an application is denied?

Jeff Moline: There isn't an appeal process that's spelled out, but if someone was denied, staff might suggest other opportunities regarding different dates or properties, and hopefully we would be able to work with the applicant.

Public Comment

- Tom McKinnon, 2218 Mapleton Ave., Boulder. He represents Agribotix, a local company that implements UAS for agriculture. He supports this latest draft of the policy, which will allow tenant farmers to use drones on county agricultural lands.
- Amy Strombotne, 8502 Stirrup Ct., Boulder County. She had a question about farmers being able to have a blanket permission to use drones, which would save time.

Staff Response [to public comment]

Jeff Moline: We would still need to review requests, but we should be able to give a seasonal approval to our agricultural tenants.

Motion

Jenn Archuleta moved to accept staff recommendation for the Unmanned Aircraft Systems Policy as presented, and John Nibarger seconded the motion. **After discussion, Motion carried unanimously.**

Discussion on Motion

Jenn Archuleta: You've covered all of my concerns. I was worried about being able to protect our resources if a UAS takes off from private land and flies over open space land, but you've addressed it.

John Nibarger: Coming from the first draft, this draft seems much more flushed out and you've addressed our concerns.

Eric Hozempa: I agree; this draft is more flushed out, but it also gives a lot of latitude, which you need in the first year. I would also encourage staff to monitor how this technology might be affecting wildlife.

Director's Update

- The Board of County Commissioners along with POSAC will hold a public hearing on Feb. 29 at the Plaza Event Center in Longmont to take public input on whether to continue or change the current approval for the use of genetically engineered (GE) crops on Open Space land, which expires on Dec. 20, 2016. Online sign-ups for people interested in speaking at the hearing will open Monday, Feb. 15 at noon. Written comments may be submitted prior to hearing; the deadline to receive written comments is Friday, Feb.26 by 2 p.m. POSAC will vote on this matter at a special meeting on March 15 at 6:30 p.m.
www.bouldercountyopenspace.org/croplandpolicy
- City OSMP staff will present information on the entire North TSA planning process at the February 25 POSAC meeting. POSAC will take public comments on their presentation and make a recommendation to the BOCC. This input will be considered by the BOCC. City staff will also hear POSAC input as they are drafting the plan.

Adjournment

The meeting adjourned at 9:29 p.m.

Note: This is only a summary of this month's POSAC meeting. You may listen to the entire audio recording at: www.BoulderCountyOpenSpace.org/POSAC



Parks and Open Space

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PARKS AND OPEN SPACE ADVISORY COMMITTEE MEETING

DATE: Thursday, January 28, 2016
TIME: 6:30 pm
PLACE: Commissioners' Hearing Room, 3rd Floor, Boulder County Courthouse,
1325 Pearl Street, Boulder, CO

AGENDA

Suggested Timetable:

- 6:30 1. **Approval of the December 17, 2015 Meeting Minutes**
2. **Public Participation - Items not on the Agenda**
- 6:45 3. **2015 Acquisition Summary**
Staff Presenter: Janis Whisman, Real Estate Division Manager
Information Only
- 6:55 4. **Proposed Amendments to the Prairie Dog Habitat Element of the Grassland Management Plan: Vegetation Relocation Criteria Changes, Prairie Dog Relocation, Criteria Adjustment, and Exclusion of Phostoxin (Aluminum Phosphide) for Lethal Control of Prairie Dogs**
Staff Presenters: Claire DeLeo, Senior Plant Ecologist; Susan Spaulding, Senior Wildlife Biologist; Rob Alexander, Agricultural Resource Supervisor
Recommendation to the BOCC
- 8:00 5. **Unmanned Aircraft Systems Policy**
Staff Presenter: Jeff Moline, Resource Planning Manager
Recommendation to the BOCC
- 9:00 6. **Director's Update**
- 9:10 7. **Adjourn**

*Available staff memos & related materials for this meeting may be viewed on our website:
www.BoulderCountyOpenSpace.org/POSAC*



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PARKS AND OPEN SPACE ADVISORY COMMITTEE MEETING

TO: Parks & Open Space Advisory Committee

DATE AND LOCATION: Thursday, January 28, 2016, 6:30 p.m. Commissioners Hearing Room, 3rd floor Boulder County Courthouse, 1325 Pearl Street, Boulder, CO

AGENDA ITEM TITLE: 2015 Open Space Acquisitions Summary

PRESENTER: Janis Whisman, Real Estate Division Manager

ACTION REQUESTED: Information Only

This memo and the attached spreadsheet together provide the annual summary of open space acquisitions and other real estate activity for the Parks and Open Space Department. In summary, Boulder County accomplished these transactions in 2015:

- Invested a net of \$4,846,568 to preserve 4,438.31 acres of land and water rights having a net total value of \$12,240,281, including:
 - 3,413.80 acres in seven conservation easements that extinguished 90 development rights
 - 227.54 acres in fee title that extinguished 8 development rights
 - 796.97 acres in lease from the State Land Board (Bald Mountain and Heil Valley Ranch)
 - 1 TDR (transferable development right) that was retired, so it will not be used.
- Sold the 80-acre Bouzarelos-Keller-Knopf agricultural property and associated water rights subject to a conservation easement.
- Completed 11 condemnation transactions (also called ‘takings’) for by CDOT for Highway 36 repairs and by Xcel for pipeline easements.
- Invested \$653,585 to make option payments on five properties to be purchased in future years (Dowe Flats/CEMEX, Golden-Fredstrom, Loukonen-Dairy Farm, Walker Trust and Zweck) and to make the 9th payment (out of 10 total) on the Farm in Boulder Valley transaction.
- Completed two other easement transactions: a new easement to the South Ledge and Meadow Ditches over the Hall Ranch 2 property enabling their headgates to be rebuilt; and resolution of an adverse possession claim on the Winter property.

Two of the year’s most significant acquisitions were:

Tolland Ranch CE and Trail Easement: Boulder County contributed \$1,500,000 to help acquire a conservation easement over 3,334 acres in Boulder County and Gilpin County, along with a trail easement across the property that will allow a connection from the US Forest Service’s West Magnolia area to the US Forest Service’s Jenny Creek area south of Eldora.

Schmidt Trust: Boulder County acquired 51 acres that lie just south of Gold Hill and adjacent to the ‘town meadow’ for \$458,000.

The Real Estate Division also continues to work on flood-related projects and handle a high volume of inquiries from other county staff and the public. Inquiries tend to be requests for information about open space properties or requests from utility companies for access across open space. The time needed to be responsive can take just a few minutes or may require several days of work. This is a vital role the Real Estate Division serves in helping provide the best in public service.

2015 Closings

Acquisitions (* denotes projects that were a Boulder County priority)										Resulting County Interest							Notes
#	Closing Date	Property	Dev. Rights Acquired	Dev. Rights Retained by Seller	Acres	Price	Donation Value	Grants	Total Value	Fee	CE	CE Am.	Trail	Other	Land Ofcr	Para-legal	
1	1/7/2015	Tolland Ranch*	88	15	3,334.00	\$1,500,000.00	\$250,000.00	\$5,600,000.00	\$7,350,000.00		1		1		JW	ML	County granted 10 TDCs in exchange for fee title.
2	1/8/2015	Phillips (Mark) TDC	1	0	1.72	\$0.00	\$0.00	\$0.00	\$0.00	1					JW	EG	
3	1/14/2015	Hutchinson-McDowell Water	0	0	0.00	\$45,000.00	\$0.00	\$0.00	\$0.00				1		JW	ML	County acquired 10 shares of the Left Hand Ditch Company in this water-only transaction.
4	2/24/2015	Hoffman Farm*	2	0	71.22	\$1,421,651.00	\$0.00	\$1,588,713.00	\$3,010,364.00		4				MS	ML	1 CE + 3 Restrictive Covenants
5	3/24/2015	Bald Mountain-SLB Lease & Heil Valley Ranch-SLB Lease	0	22	796.97	\$175,000.00	\$0.00	\$0.00	\$175,000.00					1	JW	--	5-year lease through 12/31/2019
6	4/23/2015	Schlagel Family Farm (Parcel B)	0	0	185.90	\$0.00	\$0.00	\$0.00	\$0.00				1		MS	ML	Amended CE to clarify permitted and prohibited agricultural and recreational activities.
7	4/24/2015	Welch (William)-2015 Division of Land	0	0	16.53	\$0.00	\$0.00	\$0.00	\$0.00					1	JW	ML	County completed a division of land for the homestead parcel, which retained 1 development right; no new rights were granted and no county rights were relinquished.
8	9/8/2015	Forbes	0	0	2.20	\$0.00	\$0.00	\$0.00	\$0.00				1		JW	EG	Amended CE to relocate building envelope closer to the road.
9	9/9/2015	Loukonen-Dairy Farm (Parcel F)*	1	0	40.00	\$1,000,000.00	\$0.00	\$0.00	\$1,000,000.00	1					JW	ML	included 32 shares of Left Hand Ditch and 1/4 share of Lake Ditch.
10	10/15/2015	Bumble Bee	1	0	29.00	\$40,000.00	\$0.00	\$0.00	\$40,000.00	1					SD	ML	Deal included senior water rights in the Denio-Taylor Mill Ditch
11	11/5/2015	Gilbert	1	0	19.40	\$450,000.00	\$0.00	\$0.00	\$450,000.00	1					SD, MS	ML	
12	11/6/2015	Carlin	1	0	4.28	\$5,000.00	\$0.00	\$0.00	\$5,000.00	1					SD	ML	CE was required by a Land Use docket, so it was not donated.
13	11/16/2015	Schmidt Trust	1	0	50.88	\$458,000.00	\$0.00	\$0.00	\$458,000.00	1					SD	ML	
14	12/8/2015	Cito Company-Barn & Cookhouse-CE Amendment	0	0	4.29	\$0.00	\$0.00	\$0.00	\$0.00		1				JW	EG	
15	12/16/2015	Ertl (Jill)	2	0	82.26	\$85,000.00	TBD	\$0.00	\$85,000.00	1					JW	MD	CE was required by a Land Use docket, so it was not donated.
16	12/22/2015	Brandau	0	0	4.29	\$0.00	\$0.00	\$0.00	\$0.00		1				JW	MD	
17	12/22/2015	Diggins TDR	1	0	0.00	\$80,000.00	\$0.00	\$0.00	\$80,000.00					1	JW	ML	1 TDR required only; no land or water.
Totals:			99	37	4,642.94	\$5,259,651.00	\$250,000.00	\$7,188,713.00	\$12,653,364.00	7	7	3	1	3			

Dispositions Subject to County-Held CEs										Resulting County Interest							Notes
#	Closing Date	Property	Dev. Rights Sold	Acres	Sale Price	Donation Value	N/A	Total Value	Fee	CE	CE Am.	Trail	Other	Land Ofcr	Para-legal		
1	4/24/2015	Bouzarelos-Keller-Knopf	0	80.00	\$400,000.00	\$0.00		\$400,000.00		1					MS	MCH	Ag land sold subject to conservation easement with water rights that were tied to the property via the conservation easement
Totals:			0	80.00	\$400,000.00	\$0.00		\$400,000.00	0	1	0	0	0				

Fee Title Dispositions <u>Not</u> Subject to County-Held CEs										Resulting County Interest							Notes
#	Closing Date	Property	Dev. Rights Sold	Acres	Sale Price	Donation Value	N/A	Total Reduction in County Costs	Fee	CE	CE Am.	Trail	Other	Land Ofcr	Para-legal		
1	3/12/2015	Winter-Kasemir Adverse Possession	0	0.05	\$0.00	N/A	N/A	\$0.00	1						JW	None	Adverse possession claim against Winter property. County cooperated, so no quiet title action was necessary.
2	3/26/2015	Forsberg (Ken)-2015 CDOT Hwy 36 Taking	0	0.82	\$13,083.00	N/A	N/A	\$13,083.00	1						MS	MCH	CDOT took this parcel for restoring Highway 36 after the 2013 flood. GOCO received \$6,214.43 of the proceeds.
Totals:			0	0.87	\$13,083.00	\$0.00		\$13,083.00	2	0	0	0	0				

Easement Dispositions <u>Still</u> Part of County Open Space (non-exclusive easements)										Resulting County Interest							Notes
#	Closing Date	Property	Dev. Rights Sold	Acres	Sale Price	Donation Value	N/A	Total Reduction in County Costs	Fee	CE	CE Am.	Trail	Other	Land Ofcr	Para-legal		
1	1/2/2015	Xcel Gas Line Turner-Taylor (Lot 5)	0	0.38	\$100.00	N/A	N/A	\$100.00					1		SD	MCH	
2	3/5/2015	Darby-2015 Pleasant Valley Reservoir Flood Easement	0	204.20	\$5,000.00	\$0.00		\$5,000.00					1		MS	--	
3	3/27/2015	Fairgrounds-2015 Xcel Easement	0	0.20	\$10,000.00	N/A	N/A	\$10,000.00					1		MS	MCH	
4	5/1/2015	Turner-Taylor (Lot 4)-2015 Xcel Easement	0	0.54	\$241.82	N/A	N/A	\$241.82					1		SD	MCH	

2015 Closings

Easement Dispositions *Still Part of County Open Space (non-exclusive easements)*

Resulting County Interest

#	Closing Date	Property	Dev. Rights Sold	Acres	Sale Price	Donation Value	N/A	Total Reduction in County Costs	Fee	CE	CE Am.	Trail	Other	Land Ofcr	Para-legal	Notes
5	6/18/2015	Nelson (Bert) LOBO-2015 Xcel Easement		0.05	\$500.00	N/A	N/A	\$500.00					1	SD	MCH	
6	6/18/2015	Yoakum (West)-2015 Xcel Easement	0	3.39	\$16,927.50	N/A	N/A	\$16,927.50					1	SD	MCH	
7	6/23/2015	Laber (Alex)-2015 Xcel Easement	0	2.85	\$37,300.00	N/A	N/A	\$37,300.00					1	SD	MCH	
8	6/23/2015	Lohr-2015 Xcel Easement	0	2.24	\$27,300.00	N/A	N/A	\$27,300.00					1	SD	MCH	
9	6/25/2015	Nelson (Bert)-2015 Xcel Easement	0	4.21	\$23,982.68	N/A	N/A	\$23,982.68					1	SD	MCH	
10	7/24/2015	Turner-Taylor Ranch-2015 Xcel Easement	0	0.06	\$2,055.04	N/A	N/A	\$2,055.04					1	SD	MCH	
11	8/5/2015	Hall Ranch 2-South Ledge & Meadow Ditch Easement	0	1.23	\$0.00	N/A	N/A	\$0.00					1	SD	--	
Totals:			0	218.12	\$123,407.04	\$0.00		\$123,407.04	0	0	0	0	10			

	Price	Donation Value	Grants	Total Value
Net Financial Values:	\$4,846,568.00	\$250,000.00	\$7,188,713.00	\$12,240,281.00



Parks and Open Space

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PARKS AND OPEN SPACE ADVISORY COMMITTEE MEETING

TO: Parks & Open Space Advisory Committee

DATE AND LOCATION: Thursday, January 28, 2016, 6:30 p.m. Commissioners Hearing Room, 3rd floor Boulder County Courthouse, 1325 Pearl Street, Boulder, CO

AGENDA ITEM TITLE: Proposed Amendments to the Prairie Dog Habitat Element of the Grassland Management Plan: Vegetation Relocation Criteria Changes, Prairie Dog Relocation Criteria Adjustment, and Exclusion of Phostoxin (Aluminum Phosphide) for Lethal Control of Prairie Dogs

PRESENTERS: Claire DeLeo, Senior Plant Ecologist; Susan Spaulding, Senior Wildlife Biologist; Rob Alexander, Agricultural Resource Supervisor

ACTION REQUESTED: Recommendation to BOCC

Summary

Boulder County Parks and Open Space staff proposes the following revisions to the Prairie Dog Habitat Element of the Grassland Management Plan:

- Revisions to the vegetation relocation criteria. The current vegetation relocation criteria for areas to receive prairie dogs are:
 - Average cover of bareground no more than 22%.
 - Average native species richness of at least 18 species for native grasslands.
 - Average relative cover of perennial graminoids of at least 55%.

Staff studied the criteria for three years on the Lindsay and Zaharias properties located in the South Central Grasslands Habitat Conservation Area (HCA). The first two criteria will stay the same. The last criteria was determined to be too restrictive. Staff is proposing the following changes to the last criteria, which is twofold:

- 40% relative cover of perennial grasses or 80% relative cover of the reference area's perennial grasses, whichever is less and
- 55% relative cover of native perennial vegetation or 80% relative cover of the reference area's native perennial vegetation, whichever is less.

The proposed revisions will enable additional previously occupied HCAs to be eligible for relocation under the vegetation criteria.

- Extending the dates for prairie dog relocation one month from July 1 to October 15 annually. The current relocation dates are July 1 to September 15.
- Excluding the use of Phostoxin (aluminum phosphide) for lethal control of prairie dogs that is currently allowed under the plan.

Background: Vegetation Relocation Criteria

Boulder County Parks and Open Space last updated the Prairie Dog Element of the Grassland Management Plan in 2012. The 2012 revision added relocation site requirements to meet minimum vegetation cover and diversity as outlined in Appendix I: Relocation Methods and Procedures.

The original language read:

Vegetation and habitat within receiving site meets the following minimum standards based upon data from at least four transects within each habitat type on the receiving site:

- Average bare ground no more than 22% cover.
- Average native species richness at least 18 species for native grasslands. Non-native grasslands, such as those dominated by crested wheatgrass (*Agropyron cristatum*) and Russian wildrye (*Psathyrostachys juncea*), are excepted from this criteria.
- Average relative cover of perennial graminoid species at least 55%.

These criteria were adopted from the City of Boulder Open Space and Mountain Parks Grassland Management Plan with some slight revisions. Staff committed to testing these criteria for three years to determine if the criteria were appropriate for Boulder County Open Space lands.

Staff studied two properties, the Lindsay and Zaharias properties within the South Central Grasslands Habitat Conservation Area (HCA). Both these properties have potential for prairie dog relocation as the plague decimated prairie dog populations between 2008-2009. Staff established permanent transects both within and outside the prairie dog towns and monitored them between 2012 and 2014. Lindsay was monitored a fourth year in 2015. Results from the monitoring will be presented during the POSAC presentation.

After careful analysis of the results, staff felt that the last criteria could be adjusted to allow more HCA areas to qualify for prairie dog relocation and that at the same time would allow sufficient vegetation to support a grassland ecosystem with prairie dogs. The first two criteria will remain, and staff is proposing the last criteria to be revised twofold as follows:

- 40% relative cover of perennial grasses or 80% relative cover of the reference area's perennial grasses, whichever is less and
- 55% relative cover of native perennial vegetation or 80% relative cover of the reference area's native perennial vegetation, whichever is less.

The reference area is the grassland area that was not previously occupied by prairie dogs. Relative cover is the total of vegetative cover adding up to 100% and excluding other aspects of cover, including bare ground, litter, and rocks. Staff observed the following changes in relocation acres when applying the new vegetation criteria.

- Lindsay: 27 acres historically occupied
 - 0 acres met the current vegetation criteria
 - 21.5 acres meet the proposed new criteria
- Zaharias: 57 acres historically occupied
 - 14.7 acres met the current vegetation criteria
 - 42.3 acres meet the proposed new criteria

Staff presented the results of our three year study and the proposed new vegetation relocation criteria to the public at our annual stakeholders on Monday, December 7, 2015. Stakeholder comments are collected and published each year (attached or found on the web here <http://www.bouldercounty.org/os/openspace/pages/pdog.aspx>). These comments help staff understand community concerns and to address issues over the coming year.

Relocation Criteria for Restored Grasslands

POS hired Smith Environmental and Engineering in 2015 to help staff develop an ecosystem based evaluation tool to determine when restored grassland sites are established to the point that they can support and sustain occupation by prairie dog colonies and maintain healthy ecological function. The tool evaluates many aspects of the restored ecosystem in addition to the plant community characteristics criteria used for HCA evaluation, including soil stability and ecological processes. Staff will be testing this tool this summer and refining the criteria later this fall. Staff's goal is to present the results to the stakeholders at the end of the year.

Relocation Timing

Staff is also recommending lengthening the timeframe during which relocations of prairie dogs may occur. The current criteria states:

- BCPOS will conduct relocations starting July 1, and ending no later than September 15, annually, as needed. By starting relocation efforts no sooner than July, juvenile and female survivorship is maximized (Jacquert et al. 1986). No relocation will be conducted after mid-September to allow for burrow acclimation and body conditioning for reduced winter foraging (Coffeen & Pederson 1986).

Based on recent relocation efforts staff feels that this timeframe can be lengthened by 30 days during years with appropriate conditions. We are proposing to alter this criterion to the following:

- BCPOS will conduct relocations starting July 1, and ending no later than October 15, annually, as needed. By starting relocation efforts no sooner than July, juvenile and female survivorship is maximized (Jacquert et al. 1986). Although it has been shown that halting relocations in early Fall allows for burrow acclimation and body conditioning (Coffeen & Pederson 1986), locally it has been observed that in years with the proper conditions (ex: increased levels of vegetation due to high annual rain amounts), relocating into mid-October can be successful. Therefore, with staff approval, based on the current year conditions, relocations may occur up until October 15. In years with poor conditions, relocations will cease on September 15.

Exclusion of Phostoxin

The plan currently permits the use of Phostoxin (aluminum phosphide) as a means of lethal control. Since the advent of compressed carbon monoxide as a lethal control alternative, staff feels we can eliminate the use of aluminum phosphide entirely on POS lands.

Prairie Dog Questions & Answers from December 7, 2015 Stakeholder's Meeting

When will Boulder County get Black-footed ferrets?

Boulder County Parks & Open Space does not currently have any areas that meet the US Fish and Wildlife Service requirements for the reintroduction of Black-footed ferrets. The staff is proposing to target 2020 for reintroduction. BCPOS is working with City of Boulder Open Space and Mountain Parks and U.S. Fish and Wildlife Service to achieve this goal.

Are there government programs for experimenting with plague management tools such as vaccines?

We are aware of testing being done on an oral vaccine for prairie dogs. We have made inquiries about participating as a test site, but as the research on the vaccine is well underway, no new test sites were needed. We expect that the oral vaccine may be available by 2017, and are committed to utilizing this method when it becomes available. This vaccine is being developed by USGS - National Wildlife Health Center.

Is there an alternative to the 30-day quarantine required for donating prairie dogs to the BFF program?

A 21-day quarantine is required to ensure that the Black-footed ferrets in the recovery program do not contract the sylvatic plague. Not all of the live delivered prairie dogs are quarantined; some are immediately euthanized at the facility, and frozen for future use.

Will translocations require quarantine if ferrets are reintroduced?

Our understanding is that if the "take" site is dusted with insecticide three weeks prior to removing prairie dogs for relocation, there is no need for a quarantine period.

Why do we have vegetation criteria for relocation?

Boulder County Parks & Open Space manages our properties for many objectives. On grasslands designated as Habitat Conservation Areas (HCAs) and selected for prairie dog reintroduction, it is our goal to develop and maintain a diverse and resilient grassland ecosystem that can support prairie dogs over the long-term as well as many other organisms native to the prairie grasslands. Vegetation criteria help us to maintain a diverse and hopefully resilient ecosystem that can do just that.

Why haven't we relocated to the oldest of the restored grasslands yet?

The grassland restoration program was not designed to provide prairie dog relocation sites when conceived. At the time, the goals focused on restoring native prairie grasses, forbs, and shrubs. As with many restoration programs, we have learned a lot about grasslands and restoration processes since 1996.

The Prairie Dog Habitat Element identified a desire to see prairie dogs return to these restored grasslands, our staff proposed developing a tool for identifying restored grasslands that had become resilient enough to see the reintroduction of prairie dogs while remaining largely intact.

Until these tools are in place, we do not plan to allow prairie dogs on restored grasslands of any age. We do not plan to actively relocate prairie dogs onto any restored grasslands at this time, but once a property has been identified using our restoration tools, we will not remove prairie dogs that migrate onto these properties.

BCPOS hired Smith Environmental and Engineering to help formulate the criteria for restored grasslands. BCPOS plans to test these criteria throughout 2016.

The Rock Creek Grasslands Management Plan can be found at:

<http://www.bouldercounty.org/doc/parks/rcgrasslandsmplan.pdf>

Will the new vegetation and restoration criteria improve the potential for relocation?

Under the current vegetation criteria, 25% of transects studied by BCPOS met the criteria originally approved in the Prairie Dog Habitat Element, but no sites as a whole qualified for relocation. Under the new criteria, a number of sites are now eligible for relocation efforts. We feel that adjusting these criteria has made relocation a real possibility and one that can be pursued responsibly in order to maintain grassland resiliency.

Do we still use poisons for the treatment of prairie dog colonies on No Prairie Dog Areas?

The BCPOS prairie dog program has elected to no longer use aluminum phosphide or "Phostoxin" on any properties. Instead, our program and our partners use either a Carbon-monoxide (CO) machine or CO cartridges to treat colonies in No Prairie Dog Areas. At the 2016 tenant training, BCPOS will inform tenants that phostoxin will no longer be permitted on Boulder County Parks & Open Space property. In addition we will be proposing an amendment to the Prairie Dog Habitat Element stating that aluminum phosphide will not be used on BCPOS properties.

Could BCPOS convert the treatment crew into a relocation crew?

Our prairie dog management crew has led relocation efforts in the past and will be the major contributor to any relocations in the future.

How many properties do we remove prairie dogs from in a year?

The number of properties varies based on where prairie dog colonies grow and the time required to manage the colonies each year. In 2015 the prairie dog management crew removed prairie dogs on 30 properties.

Do any private landowners have an interest in prairie dog conservation agreements?

We work closely with property owners adjacent to our NPD, MOA, and HCA properties. While we have not received requests for such agreements in the past, we would certainly pursue such agreements if there was interest on the part of the private landowner.

Will relocation become annual?

Not necessarily. According to the Prairie Dog Habitat Element, relocation can only occur in areas of HCAs with prairie dog populations below a particular threshold. These areas must meet the vegetation criteria and have been historically occupied by prairie dogs. Therefore, it is difficult to predict how often relocations will occur.

When will BCPOS determine locations for 2016 relocations?

Until the vegetation criteria for relocation are updated, no areas on HCAs within the BCPOS system meet the relocation requirements. Once they are updated through public hearings with POSAC and the Board of County Commissioners, we expect to relocate to eligible sites on the South County Grasslands in 2016. Efforts to identify relocation sites on our HCAs are on-going.

When will restoration criteria go into effect?

Since the final draft of the grassland restoration protocols has not been submitted, we cannot accurately identify a date for when they will go into effect. However, we do plan to field test the protocols in 2016.

How will we open up burrows on restored or “recovered” sites?

One of the criteria for relocation is existing or historic prairie dog colonization. Therefore, if possible we will use existing burrows. However, in many cases, over the time required to see resilient vegetation on these sites, burrows entrances fill in. Therefore, our staff will pursue auguring to open identifiable burrows, in the hopes that the burrow network attached to these burrow entrances is still intact.

Why can't we relocate prairie dogs into other counties?

Colorado law requires that the county commissioners of both the sending and receiving counties approve relocations across county lines. Such relocations are rarely pursued for that reason.

How will climate change impact policy decisions?

BCPOS works to manage our lands adaptively; regularly monitoring the impacts of management and policy decisions to improve our management. Climate change may have a wide variety of impacts on Boulder County and we will seek to flexibly manage our lands to meet those impacts. The Boulder County Climate Change Preparedness Plan provides guidance to county agencies on how to pursue adaptive management in the face of climate change.

Why do we have agricultural land in areas appropriate for prairie dogs?

The agricultural land in Boulder County has been in agriculture for more than 100 years. When we purchase properties we assess the current use of the land and interact with the seller to understand their interests. If the land is currently in agriculture, on valuable agricultural land, or the seller requests that it remain agricultural land we manage it to remain in agriculture in most cases. This is in accordance with the expressed goal of the Comprehensive Plan to maintain agriculture in Boulder County.

In the case of about 2,000 acres of land across the county, we have decided over time that the land would be more suitable as native grassland and we undertake an effort to restore these lands to native grassland. These areas may be suitable for prairie dogs when they are deemed to be resilient and "restored".

Prairie Dogs seem fine in current colonies and on marginal land, why do we concern ourselves with restoration?

Prairie dog colonies are located throughout the plains region of the county and many are located on marginal properties in road medians and other such undesirable locations. However, BCPOS is charged with managing the entire ecosystem on our properties not just for one species. Our goal is to support prairie dog populations on properties that can support a resilient ecosystem that supports a wide variety of organisms.

What is the oldest colony in the county?

BCPOS does not maintain a database of colony age across the county. We have been monitoring prairie dog colonies on our properties since the 1980s (mapping since 1997) and we are aware of colonies that existed prior to that decade.

Can you make the vegetation monitoring results available to the public?

The proposed vegetation criteria are available on our website. Once the proposals are prepared for presentation to POSAC and the county commissioners, we will provide the formal proposal as a memo to both bodies on our website. We will also post the data used to develop and test the proposed changes.

As Boulder County prepares to open land up for prairie dogs in 2016 what is the actual number of dogs, or acreage, you plan to relocate/make available?

As per the Prairie Dog Element, Appendix I: Relocation Methods and Procedures

- The minimum size of a relocation area is not pre-determined, but rather will be considered, among other criteria, by BCPOS staff on a case-by-case basis.
- The minimum number of prairie dogs to be relocated during each event shall be >60 (Robinette et al. 1995), although greater numbers may increase relocation success (Hoogland 2006; Dullem et al. 2005; Griffith et al. 1989; Roe & Roe 2003; Meaney 2001), particularly at areas without an existing active colony (Robinette et al 1995).
- A target release number of 4-7 prairie dogs per available burrow will be followed (Shier 2006), with the assumption that additional burrows will be constructed by the colony following release.

Given these criteria, acreage and prairie dog numbers will vary by relocation effort. There will be a minimum of 60 animals relocated. As for additional numbers, this will depend on the site characteristics (i.e.- how many open burrows are available?)

How many prairie dogs per acre are allowed, assuming a relocation actually occurs?

As per our relocation criteria, we base our numbers on how many burrows are open. Our goal is to place 4-7 prairie dogs per burrow (depending on gender/age parameters).

All proposed relocation efforts must be reviewed by CPW, and this review includes site assessments and approval/disapproval of proposed numbers of animals.

It was indicated by Susan Spaulding that as the land becomes available, prairie dogs currently on BC land (either open space, AG, or abutting AG) would take priority over dogs in eminent danger on private land. If this is correct I would assume you have an idea of the number of dogs, and their current location, that would be allowed to be relocated on these newly open lands. If so, what are the numbers and the locations.

We will prioritize removal of prairie dogs for relocation from NPD properties. At this time we do not know which exact NPD properties will be prioritized for the removal and relocation efforts.

The number of prairie dogs to be relocated will depend on the relocation site conditions, but will be >60 per relocation effort..

What would be the anticipated time frame for these relocations?

BCPOS will conduct relocations starting July 1, and ending no later than September 15, annually, as needed. By starting relocation efforts no sooner than July, juvenile and female survivorship is maximized (Jacquert et al. 1986). No relocation will be conducted after mid-September to allow for burrow acclimation and body conditioning for reduced winter foraging (Coffeen & Pederson 1986).

Once the relocation of the dogs from BC lands is complete will you open up land to prairie dogs in eminent danger from development of private land?

Our Prairie Dog Habitat Element requires us to prioritize Parks and Open Space lands for relocation. However, in the case that we have accomplished our relocation goals (removal of animals from NPD properties is complete), we will consider animals from non-County owned lands.

How many prairie dogs would you need to have to introduce the BFF and what data are those numbers based on?

The USFWS service does not identify a number. Instead they require 1,500 acres of active prairie dog colonies on contiguous lands to support 30 adult ferrets (20 females and 10 males). The acreage number of 1,500 is based on a home range of an adult female ferret being 75 acres. . These 1,500 acres of colonies are required to be active, and as research has shown that prairie dog colonies in Boulder County are more densely populated than in less bounded areas, we foresee no issues with having enough numbers of prairie dogs within our colonies to support ferret predation levels.

Does Boulder County only intend to focus on 1,500 acres for the BFF?

BCPOS intends to relocate to Habitat Conservation Areas in an effort to achieve the required acreage of active prairie dog colonies to support ferret reintroduction. Of note, we will be working closely with City of Boulder OSMP in the south central part of the county. Only by combining our land base do we have enough colony acreage to achieve the 1,500 acres needed.

For the purpose of long term survival of the BFF it would seem that Boulder County would need to begin re-population of prairie dogs now to be able to determine if the colonies are stable and healthy prior to BFF introduction, what consideration if being made for this?

Based on considerable review of available research, we will not relocate during the winter months, as this limits success. (See below).

As outlined in our Prairie Dog Habitat Element, Appendix I-

BCPOS will conduct relocations starting July 1, and ending no later than September 15, annually, as needed. By starting relocation efforts no sooner than July, juvenile and female survivorship is maximized (Jacquert et al. 1986). No relocation will be conducted after mid-September to allow for burrow acclimation and body conditioning for reduced winter foraging (Coffeen & Pederson 1986).

How many individual ferrets do you plan to introduce?

At this time, USFWS considers a minimum release number of 20 adult females and 10 adult males per reintroduction effort. This is the minimum number to ensure the best chance of establishing a self-sustaining population.

How many acres are currently in the Open Space system that could take the BFF right now?

There are no sites currently appropriate for ferret reintroduction. We have no contiguous habitat with 1,500 acres of active prairie dog colonies.

Is it correct that Boulder County previously agreed to set aside 5,000 acres for prairie dogs, and currently only 1/2 of that land is actually occupied by prairie dogs?

BCPOS has designated 19,290 acres as HCA. However, within this acreage, only a proportion is suitable for prairie dog occupancy, based on their habitat requirements (for example, steep slopes, rocky outcrops, water bodies, forested lands are not suitable).

BCPOS proposed a goal of 5,000 acres of **suitable** habitat acres within Habitat Conservation Areas. Currently, the suitable acreage within designated HCAs is 3,326. Our goal is to acquire the additional land necessary to achieve 5,000 acres of suitable habitat with the addition of Dowe Flats adjacent to Rabbit Mountain. We will also add acreage to our suitable habitat totals when Rock Creek Grasslands are fully restored and deemed resilient enough for prairie dog occupancy. Our model parameters for what is determined as “non-suitable” are listed below and are based on extensive research review as well as internal management decisions to preserve certain areas, such as rare plant associations.

Appendix E: Non-Suitable Habitat Definition and Areas

- Slope 10% or less
- Fee properties (COS, JOS, or Suitts CE) 7,000 feet or less
- No wetlands (United States National Vegetation Classification (USNVC) vegetation mapping data, Wright Water Engineers data, BCPOS wetland mapping data)No riparian areas (CPW riparian data)
- No rare plants or rare plant alliances⁵/communities with a Colorado Natural Heritage Program (CNHP) ranking of G3 S3 or rarer:
 - Bell's twin pod (*Physaria bellii*): G2G3 S2S3 (BCPOS rare plant mapping data-polygons and points buffered 20 feet)
 - No tallgrass prairie or other sensitive grasslands (USNVC vegetation mapping data correlated with CNHP rare plant communities), which excludes the following rare plant communities:
 - Needle-and-threadgrass (*Hesperostipa comata*): G1G2 S1S2
 - Big bluestem Xeric tallgrass prairie, Big bluestem-yellow indiagrass⁶ (*Andropogon gerardii-Sorghastrum nutans*): G2 S1S2
 - Indian ricegrass (*Achnatherum hymenoides*): G2 S2
 - New mexico feathergrass (*Hesperostipa neomexicana*): G3 S3
 - Little bluestem (*Schizachrium scoparium*)-sideoats grama (*Bouteloua curtipendula*): G3S2 at Wolf Run property only.
Note: this plant community is thought to have been xeric tallgrass prairie prior to prairie dogs removing the tallgrass prairie component.
- No Forests, Woodlands, Shrublands (USNVC vegetation mapping data)
- No Lakes (USGS lakes data)
- Suitable soils (excludes rock outcrop, gravel, or terrace escarpments)

When was the vegetation criteria in Boulder County first introduced? What year did Smith Ecological present these ideas to Boulder County?

Our vegetation criteria were developed using criteria originally developed the City of Boulder's Open Space and Mountain Parks. We changed them to reflect our interest in relocation and the reality of grasslands on our properties. We proposed these criteria in 2012 and included the requirement of assessing the criteria for three years before making any further necessary changes. The most recent proposals are the result of that three-year assessment.

Smith Environmental and Engineering was hired to address another question posed during the update of the Prairie Dog Habitat Element. BCPOS has been restoring grasslands since 1996 and since that time we have been searching for scientifically tested ways to identify when a restored grassland is resilient enough to be more lightly managed and to see the return of prairie dog colonies. There is no current published scientific literature or technical guidance available to reference for this specific question. Smith was hired in 2015 to help our staff develop protocols for performing that assessment.

It is the understanding of many prairie dogs advocates that Smith Environmental is in the business of exterminating prairie dogs. If this is correct does it not seem a conflict of interest to hire Smith Environmental to dictate grassland policy?

Boulder County Parks and Open Space released a public Request for Proposals seeking a consultant qualified to develop protocols for identifying when a grassland is “restored” to a level that means it is resilient enough to weather the impacts of drought, prairie dogs, and other impacts. The request for proposals was released widely, and staff spoke directly with consultants and academics seeking those interested in tackling the subject. The selected consultant was able to provide both an adequate proposal and the qualifications necessary to address the interests of our ecologists, biologists, and rangeland managers. Our staff was as selective as possible and would not have selected a consultant that they did not feel could provide the service in a professional and comprehensive manner.

Are any other counties, that you know of, in the US implementing these policies prior to establishing prairie dogs colonies on the land?

We studied the policies of various county and municipal governments during the development of the Prairie Dog Habitat Element. Our relocation criteria were developed using a template developed by the City of Boulder and in consultation with existing literature. At this time, there are no nationally-accepted standards for identifying a, “restored” grassland. BCPOS is leading the field in this effort. We plan to field test and verify all protocols proposed by our consultant and will not implement the protocols unless they meet with our professional satisfaction.

How many actual acres of potential prairie dog land was added with the recent change in the vegetation criteria? If none, at what time will you consider loosening the vegetation criteria rules further?

The vegetation criteria have not been applied in the manner suggested by the question to all our HCAs. For the two properties that we studied, the Lindsay and Zaharias properties, the following changes in acreage were observed:

Lindsay: 27 acres historically occupied

0 acres met the current vegetation criteria

21.5 acres meet the proposed new criteria

Zaharias: 57 acres historically occupied

14.7 acres met the current vegetation criteria

42.3 acres meet the proposed new criteria

Other relocation criteria besides the vegetation criteria must also be met for an area to qualify for prairie dog relocation. We identify appropriate areas for relocation and then use the vegetation criteria to test whether the identified areas can meet the criteria. Because of the intensive nature of testing the criteria at identified sites, it would be extremely difficult to test every acre of identified HCA.

Does Boulder County map prairie dog colonies/numbers on both county owned and private land? If yes, what are those numbers?

BCPOS maps prairie dog colony acres on BCPOS land only. We have access to the mapping done by the municipalities in Boulder County as well. BCPOS land contains 2,059 acres of prairie dog colonies as of the end of 2015. We have information on the City of Boulder Open Space and Mountain Parks and Parks and Recreation mapping effort. In 2015, they mapped 3,031 acres of active colonies.

Is Boulder County required to maintain a certain population of prairie dogs within its borders?

There is no requirement at the local, state, or federal level to maintain a number of acres or individuals. Our goal with management on MOA and HCA acres is to allow colonies to grow and change with as little management as possible.



January 6, 2016

Re: Boulder County Prairie Dog Management

Attn: Jesse Rounds

Dear Staff,

Thank you for hosting the annual prairie dog stakeholders meeting on December 7, 2015. As a result of the information exchanged at that meeting, we'd like the County to formally consider the following comments and requests:

1. Thank you for eliminating the use of poisons to exterminate prairie dogs on your properties.
2. We applaud the three years of data collection and analysis of Grassland Restoration. We are interested to know when this study will be completed and when the sites will officially be deemed "completely restored" so that additional land uses may be considered on these parcels again. Please keep us apprised of any dates discussing the study and its results.
Specifically, we are interested in:
 - i. We would like a firm plan for when restoration is considered complete for these areas. Also, are there different criteria for when areas are considered completely restored, and therefore, can be considered as potential release sites for prairie dog translocation projects? Are these sets of criteria different?
 - ii. We understand there is a vegetation criterion that has to be met for relocations to occur. How does that criteria relate to when restoration is completed ?
3. We applaud the extensive property acquisition the County has focused on. We recommend that, if acquired, that staff designate the additional acreage adjacent to Rabbit Mountain as a Habitat Conservation Area (HCA).
4. We recommend the County continue to work towards the 2012 goal of establishing 5,000 occupied acres of prairie dog habitat and urge the County to please halt lethal control on county properties until this goal is met.

5. We recommend that the County implement more non-lethal prairie dog management programs on County property. Please evaluate the option of turning the County trap and donate crew into a trap and relocate crew at least until Goal #4 is met and a report is submitted on the results. The Prairie Dog Coalition would be willing to train the County's crew.
6. We strongly recommend that the County grant burrowing owl areas the highest protections. Currently, a few nesting areas are slated to be designated as MOAs. Could they be even more protected if they were designated HCAs? What assurances can we have that the burrowing owl nest areas will be completely untouched by adjacent land use? Similarly, what types of protections will be afforded to future black-footed ferret reintroduction sites? Please advise.
7. We applaud the County's goal to reintroduce black-footed ferrets by 2020. The PDC would like to partner with the County in any way possible to help make this goal a reality.
8. Please work with the Colorado State NRCS representative Noe Marymor-Area Biologist, Chanda Garcia-State Biologist and adjacent landowners to areas being considered for future black-footed ferret reintroduction to thoroughly explore adjacent landowner incentives.
9. Are there any opportunities for voluntary grazing buyouts in key conservation areas or HCAs in the County? We would like to discuss this option with staff for additional conservation gains.
10. Translocations:
 - i. Please consider increasing the prairie dog population in the key conservation areas on Boulder County lands. When making decisions on which prairie dogs to translocate into these areas, we recommend not differentiating between public or private prairie dog lands. Taking prairie dogs from smaller urban public, rural or private lands to restore grasslands could come with a conservation fee for the county thereby taking the fee off the taxpayer and helping balance the County's time for overseeing translocations.
 - ii. Please consider conducting research with the Prairie Dog Coalition on the Boulder County/ Colorado Horse Rescue Relocation study –'The Efficacy of Translocations: A comparison of three release techniques on Boulder County Open Space.' This study would examine prairie dog reintroduction into three different types of release burrows: augured holes, abandoned burrows and artificial burrows.
 - iii. Please change the timeline for relocations to extend beyond September 15 for the following reasons:
 - a. Juveniles born in the spring have had time to gain strength or expire making the population to be moved smaller in numbers and healthier.

- b. Temperatures during the fall days are cooler than the summer months causing less heat stress on the animals being moved and less concern for animals in traps.
 - c. The fall grazing forage is lower quality than in the spring and summer months creating the opportunity for the prairie dogs to become more interested in the baited traps.
 - d. The PDC has experienced multiple successful relocations during the fall months.
- iv. Please amend the current prairie dog reintroduction regulations so that translocating prairie dogs to areas with abandoned burrows is a guideline rather than a requirement.

With the amount of time the County has allowed for restoration prior to reintroduction, abandoned burrows have mainly collapsed and the infrastructure to receive prairie dogs no longer exists. Because of this, prairie dogs will need to be released into something secure – perhaps even including artificial burrows.

Please contact us with any questions.

Thank you so much for the positive contributions you have made for the prairie dog ecosystem. We look forward to continued collaboration for an even brighter future for our native wildlife.

Sincerely,

A handwritten signature in black ink, appearing to read "Lindsey Sterling Krank". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Lindsey Sterling Krank



Parks and Open Space

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PARKS AND OPEN SPACE ADVISORY COMMITTEE MEETING

TO: Parks & Open Space Advisory Committee

DATE AND LOCATION: Thursday, 1/28/2016, 6:30 p.m. Commissioners Hearing Room, 3rd floor
Boulder County Courthouse, 1325 Pearl Street, Boulder, CO

AGENDA ITEM TITLE: Policy for Unmanned Aircraft Systems (UAS) on County Open Space

PRESENTER: Jeff Moline, Resource Planning Manager

ACTION REQUESTED: Recommendation to BOCC

Introduction

The use of unmanned aircraft systems (UAS) for the scientific monitoring and research of natural resources is growing. A number of federal agencies have begun to use UAS, often popularly referred to as “drones”, because they present an opportunity to obtain high-quality information in a more timely and cost-effective method than typical remotely-sensed data. However, concerns have been raised about the use of UAS, especially in U. S. National Parks where visitor safety, nuisance noise, and disturbance of wildlife have led to their prohibition in some areas. In order to take advantage of this new technology while protecting natural resources and visitor experiences, Boulder County Parks and Open Space (BCPOS) is proposing a policy that would limit the use of UAS to scientific research and monitoring, agricultural purposes, and emergency operations. It also describes a framework for managing this use by providing a process for analyzing and assessing the impact of each mission and giving BCPOS the discretion to determine whether a proposed UAS operation will be allowed on county open space. BCPOS anticipates reviewing and updating the policy as UAS and their uses evolve in the future. While the policy would apply to commercial operators associated with agricultural tenants and properties—as well as County Fairgrounds events—other commercial uses would remain prohibited. Additionally, recreational and “hobby” use of UAS on open space uses would continue to be prohibited in accordance with the existing rules and regulations for county open space. In sum, the policy will regulate any use of UAS on BCPOS properties as provided by Federal Aviation Administration (FAA) guidance.

Policy Background

The Boulder County Comprehensive Plan provides the overarching vision and guiding policies for managing county open space lands. Policy OS 2.03.03 states “Management of individual open space lands, including those under agricultural leases, shall follow good stewardship practices and other techniques that protect and preserve natural and cultural resources.” BCPOS is committed to conserving natural, cultural, and agricultural resources and providing public uses that reflect sound resource management and community values—a commitment which is reflected in the department’s mission statement. Additionally, BCPOS strives to use the best methods

and techniques available, including technological advancements, when performing land management activities. UAS have been shown to aid and improve the understanding and management of natural resources, but detrimental impacts to resources and visitor experience are possible as well. The policy proposes a process to assess impacts and approve appropriate UAS missions.

The Boulder County Commissioners support the use of UAS for the purposes of managing public lands in remote areas. In the Commissioners' 2015 Legislative Agenda, the Board stated that

The Boulder County Sheriff's Office has launched a program to utilize an unmanned aerial vehicle (UAV or drone) to assist with immediate public safety issues such as search and rescue calls, wildfires, mapping and photographing crime scenes, and other approved uses. Drones are also now commonly used by federal and state land managers to determine the health and conditions of land and wildlife from the air, providing landscape scale information not previously available. Drone research provides lower cost and better quality data, and can capture data in even the most challenging terrain that cannot be accessed on foot. It also allows for the collection of data with minimal intrusion to an ecosystem and little impact. *Boulder County supports the ability to expand the use of drones specifically for natural resource management purposes.* (Emphasis mine.)

Analysis

BCPOS acknowledges that UAS have the capacity to provide important information to land management agencies. These systems can be used to support a variety of natural resource management activities, including ecological mapping, crops and soil analysis, land cover classification, vegetation and wildlife monitoring, forest health assessment, wildfire suppression, change detection, recreational impacts, and law enforcement. UAS can often collect this data easily, in a timely manner, and at a fraction of the cost of traditional remote sensing applications such as satellite imagery and fixed-wing aerial photography.

The department anticipates that most requests for UAS use on BCPOS lands will be from internal staff, especially in partnership with governmental organizations or private companies that will provide the platform and service in support of scientific research and resource monitoring. Staff expects other requests will originate from agricultural tenants who will want to use UAS to optimize operations and productivity. While the specifics of the commercial aspects of UAS use on agricultural properties would be described in the lease, the UAS operation would still be subject to BCPOS review and approval. The same situation would apply to UAS at the Boulder County Fairgrounds where several requests from organizations have been denied in the past. Again, while the contractual administration of the UAS operation would be addressed in the facility lease, the impacts of the use would still need to be reviewed and approved by the BCPOS Department.

Other county or governmental organizations may request to use UAS on county open space and, unless they are otherwise permitted, would also need to apply through BCPOS. Examples of this could be search and rescue or other emergency operations.

BCPOS would expect that such organizations would apply for use in certain situations for a long-term time frame, avoiding the need for urgent approval during the actual emergency event. Subsequent, follow-up UAS operations would be coordinated with BCPOS staff.

Since this is an emerging technology, there are not numerous studies about the impacts of UAS on natural resources and visitor experiences in the academic literature or scientific community. Nevertheless, BCPOS wants to insure that UAS are employed in a manner that does not create negative impacts. Therefore, BCPOS would administer and manage UAS operations with a team of interdisciplinary staff that would review the proposed use on county open space and, after considering the benefits and impacts of the activity, will make a recommendation to the department director. The policy and accompanying process would provide the methods for assessing the impacts of proposed UAS missions so that their value can be properly measured. The policy will allow the department to approve UAS missions that help understand, manage, and monitor county open space properties and resources. Special attention and consideration would be given to identified environmental resources and recreational sites. And, proposed missions with unacceptable impacts would not be permitted.

Currently, the FAA allows the use of public and civilian UAS through primarily two processes. For public aircraft (operated by a government agency) the operator must apply and receive a Certificate of Waiver or Authorization (COA) while civil aircraft must also obtain a Section 333 Exemption. These processes provide guidelines for the allowable use of UAS by an operator. All UAS missions on BCPOS would comply with these and all other FAA regulations. The FAA is developing regulations for small UAS (platforms of less than 55 lbs.). Those new rules would change how operators are permitted and administered by the FAA. While a change in any approved county UAS policy would likely not be necessary, BCPOS will continue to monitor and review this and other new regulatory developments and suggest changes and modifications if warranted.

This policy shall be periodically reviewed and revised, as needed, in response to new scientific developments, new farming and land management tools and techniques, environmental changes, and the evolution of community goals for this publicly-owned land. In addition, as UAS technology, regulations, and circumstances change, this policy will be reviewed and updated.

Public Process

The draft policy has been posted on the BCPOS website and has been available for comment since late last year. Approximately 20 comments were received; about 75% were supportive of the policy while the remaining were concerned about impacts to wildlife and visitor experience. At the August 2015 POSAC meeting for the draft policy, some citizens and UAS operators spoke in support of a policy that would allow UAS on county open space; there were also a significant number of residents who opposed UAS operations, especially for privacy concerns, effects on visitor experiences, and wildlife impacts. An open house held on January 13 2016 was attended by about thirty members of the public and included presentations by Dr. Eric Frew of CU's RECUV program, Skip Miller from UASUSA, and Tom McKinnon of Agribotix.

Staff Discussion and Recommendation

As the use of UAS become more common and accepted, BCPOS anticipates that there will be opportunities to use them to perform research and monitoring activities on Boulder County Open Space. Because the department manages the county's open space resources for a variety of uses and values, we have evaluated UAS to determine whether their use can be compatible with our management. The department has determined that UAS are appropriate for scientific and agricultural research and monitoring, as well as emergency purposes with conditions and restrictions. Additionally, the department would review requests for leased uses at the Boulder County Fairgrounds for conformance to the policy and make recommendations to the department director. In order to ensure that UAS use on BCPOS lands does not cause negative impacts to natural resources and visitor enjoyment, proposed UAS operations will be reviewed and only permitted if its impact is judged, by BCPOS staff, to have an overall benefit for resource management and/or is within the department's mission. The department will not permit UAS operations that are predicted to have unacceptable impacts to the natural resources and visitors of an affected open space property. If this policy is approved by POSAC and the BOCC, a change in the department's rules and regulations would follow such that UAS could be allowed on BCPOS property for research and monitoring purposes if the specific operation is reviewed and recommended by staff and approved by the director.

This UAS policy will not offer or suggest any changes to the department's current rules and regulations with regard to recreational and personal (or "hobby") use of UAS or drones. These uses would remain prohibited because of their potential negative effects.

Staff recommends that POSAC recommend that the Board of County Commissioners approve the BCPOS Policy on UAS.

BCPOS Draft Policy on Unmanned Aircraft Systems (UAS) and Process for Review of Requests to UAS on County Open Space. January 19, 2016

Summary

This policy provides direction for the use and regulation of unmanned aircraft systems (UAS) on Boulder County's open space properties. It guides Boulder County Parks and Open Space (BCPOS) to allow and permit this use for specific purposes, while protecting resources and visitor experiences. It also describes a framework for managing this use in an appropriate and publically acceptable manner and for determining its ongoing use in the future. Use of UAS on open space will only be allowed for activities that contribute to the understanding or management of BCPOS properties or resources and in situations in which UAS provide a better or more cost effective alternative for gathering remotely sensed information. This includes uses such as natural resource monitoring and research, resource management activities, agricultural operations, and for leased activity uses at the Fairgrounds. The operation of UAS for all other unpermitted uses (including recreational or hobby uses) will remain prohibited on BCPOS properties.

This Policy shall be periodically reviewed and revised, as needed, in response to scientific and technological developments, new agricultural methods and techniques, new regulatory or legal guidance, environmental changes, and the evolution of community goals for county open space.

Goals and Objectives

1. Safety

UAS use must not jeopardize the health, safety, and welfare of either county open space visitors or resources.

- A. UAS operators on BCPOS properties must comply with this policy, the department's Rules and Regulations, the department's UAS regulations, and all local, state, and federal laws, including Federal Aviation Administration (FAA) regulations.
- B. UAS operators must immediately cease operation on county open space when requested to do so by authorized personnel of BCPOS or the Boulder County Sheriff's Office.
- C. UAS operators assume all the risks associated with use on county open space and must meet Boulder County insurance requirements. Operators of UAS on county lands will be financially responsible for damage or injuries to persons, structures, vehicles and resources caused by negligent actions.

2. **Acceptable Uses**

UAS will only be allowed for activities that contribute to the understanding or management of BCPOS properties or resources. This includes scientific uses such as natural resource monitoring and research, resource management activities, agricultural operations, and for leased activity uses at the Fairgrounds. In addition, proposed UAS operations will be evaluated to determine their need, value, efficiency, and cost-benefit in the acquisition of high-resolution information.

- A. An interdisciplinary team of BCPOS staff will review each request to use UAS on open space properties. This team will evaluate each request (including internal BCPOS requests) to determine its necessity and suitability as well as its conformance with BCPOS policies and the department's mission. BCPOS will have final discretion to approve or deny any and all UAS operation on open space properties. Approved UAS operations must be permitted by BCPOS.
- B. For the Boulder County Fairgrounds specifically, UAS use can be permitted for other uses in facility lease contracts but only after the BCPOS interdisciplinary team has reviewed the proposed use and determines it will not have significant resource or visitor impacts.
- C. Authorized emergency operation of UAS is considered an acceptable use.

3. **Protection of Resources and Recreation**

Since the protection of cultural and natural resources and providing recreational opportunities are components of the primary mission of BCPOS, the Department will only approve and permit UAS operations which do not diminish these values or their enjoyment by the visiting public. Visitors to publically-accessible BCPOS lands expect an outdoor experience with a degree of solitude and freedom. The use of UAS should not detract from our recreational experiences or become a nuisance to visitor enjoyment. Neither shall the use of UAS negatively impact the environmental conservation goals of BCPOS, including the protection of sensitive species to disturbance. In addition, UAS use shall conform to the Department's "good neighbor" policy as well and avoid impacts to adjacent and nearby property owners and residents.

- A. An interdisciplinary team of BCPOS staff will review each UAS request to assess the proposed operation's impacts to natural resources and visitor use.
- B. Following the review and evaluation by the BCPOS interdisciplinary team and the department's management staff, only those UAS operations which have no unacceptable impacts to sensitive sites, cultural and environmental resources, popular locations and trails, and visitor use will be approved and permitted. Decisions will be based on current research and will continuously incorporate new research.

- C. BCPOS approval and permission for UAS operation only applies to Boulder County Open Space. BCPOS cannot permit or authorize use on adjacent private property or other public lands.
- D. UAS operations will be allowed on fee-owned lands and, when proposed by the underlying landowners, on properties with conservation easements.
- E. BCPOS will designate a staff person to be a liaison to the UAS operator. The department's liaison will make periodic field inspections of the permitted UAS operations and as needed, provide direction and guidance. The liaison will also act as the Department's contact for public and staff inquiries.
- F. UAS operators must immediately cease operation on county open space when any authorized member of BCPOS informs the UAS operator that its use is posing a threat to a natural resource.

4. Privacy, Data Management, and Program Monitoring

UAS operations that are permitted by BCPOS are only authorized to collect information for approved uses on approved properties. UAS operations must comply with all federal, state, and local laws, including data management. BCPOS will collect public feedback about permitted UAS operations and monitor and document impacts on county open space, such as visitor experiences and wildlife responses to UAS operations. This information will be saved and used to monitor the program and continually assess its impacts and benefits.

- A. The Department will designate a staff liaison to monitor UAS uses, activities and impacts.
- B. Permitted UAS operations may only collect information related to the permitted activity. Collection, use, dissemination, and retention of UAS-recorded data will be limited to data legally acquired and relevant to the approved operation.
- C. UAS-collected information will not be disseminated outside of BCPOS unless it is required by law or fulfills an authorized purpose and complies with both this policy and the permitted use.
- D. BCPOS will provide notice to the public concerning where and when UAS are authorized to operate on county open space.
- E. BCPOS will annually inform the public about the number, location, and types of UAS operations permitted each year.

5. County UAS Program

If Boulder County in the future decides to adopt a countywide UAS program and/or policies, this policy shall be interpreted to be consistent with the county's policies. To the extent of any conflict between the BCPOS policy and a countywide policy, until such

time as the BCPOS policy is amended to be consistent, the countywide policy shall control.

Procedure

Every request to use UAS on Boulder County Open Space will require a representative from the operating organization to complete an “Application for UAS Authorization”. The completed form will explain the purpose of the proposed mission, type of equipment, etc. Most UAS operations will also require a Research Permit to perform work on county open space.

Each UAS application must be reviewed by an interdisciplinary team of BCPOS staff specifically designated for such purpose—the UAS Advisory Team. Following the review and evaluation of the application and proposed mission, the team will make a recommendation to the department director who will, at their discretion, either issue the permit, request changes to the mission, or deny the application within 30 days. The Advisory Team’s review of the proposed UAS operation will consider all of the goals and objectives in the policy including impacts on natural resources, adjacent properties, and visitors. An approved mission will include a range of dates and times and locations that are acceptable for the proposed use. Approved missions will also include an agreement on how information collected with UAS is managed and stored.

The Federal Aviation Administration (FAA) governs the use of public and civilian UAS operations. UAS missions permitted by BCPOS may be flown by public or civilian operators that have received FAA authority to operate.

Procedural requirements:

- Applicants must submit the proper forms and request all of the appropriate permits for a mission.
- BCPOS will notify the public of all approved missions.
- Operating times and locations for each mission will be reviewed as part of the application process. Applicants may be requested to amend mission times and locations due to resource and public safety concerns.
- BCPOS will designate a staff person to be a liaison to the requesting organization. The department’s liaison will make periodic field inspections of the permitted UAS operations and as needed, provide direction and guidance. The liaison will also act as the department’s contact for public and staff inquiries. The staff liaison has the authority to immediately stop missions if in their opinion the operators are not in compliance with the approved permit and its conditions.

- All missions will adhere to the FAA conditions of the approved operation, in addition to any restrictions or limitations stipulated by BCPOS.
- Public notification will be required for all missions for the public's benefit and will be the responsibility of the applicant.

Terms of Reference:

- 1. Boulder County Parks and Open Space (BCPOS):**
- 2. Unmanned Aircraft System (UAS):** an unmanned aircraft and associated elements, including communication links and the components that control the unmanned aircraft, which are required for the pilot to operate safely and efficiently in the airspace.
- 3. Certificate of Waiver or Authorization (COA):** an authorization issued by the Air Traffic Organization to an operator for a specific unmanned aircraft activity.
- 4. Federal Aviation Administration (FAA):** the national aviation authority of the United States. An agency of the United States Department of Transportation, it has authority to regulate and oversee all aspects of American civil aviation.