



Planning and Development Services
 350 Kimbark Street, Longmont, CO 80501
 Ph 303-651-8332; Fax 303-651-8930
 planning@longmontcolorado.gov

Prairie Dog Management Permit

Date of Application: *06/05/2019*

Applicant (First): *Collin* Last: *MacMillan*

Property Address of where prairie dogs are located (or directions from nearest cross streets): *N. 75th Street + Kennedy Drive* County: *Boulder* Parcel No.: *131712008003-#10*

Applicant Address: *7911 Shaffer Pkwy* Phone: [Redacted]
 City: *Littleton* State: *CO* Zip: *80127*
 Email: [Redacted]

Property Owner (First): *Longmont Partners LP* Last:
 Address: *5800 Kennedy Drive* City: *Longmont* State: *CO* Zip: *80503*
 Phone: Email:

Minor Prairie Dog Permits are applicable if the property is less than 1 acre and/or if there are less than 25 prairie dogs. If applying for a Major Prairie Dog permit, a \$500 application fee will be charged. At the issuance of the permit, an applicant for a Major Prairie Dog permit may also be issued a \$1,200 Habitat Restoration Fee for each acre of active prairie dog habitat lost. There are also fees and/or deposits associated with signs used for relocation and extermination.

What is the size of the property? Is the property greater than 1 acre? Yes No
 If property is less than 1 acre, please skip the following section.

The City of Longmont requires that properties greater than 1 acre be reviewed by a wildlife biologist and provide a copy of the findings of the survey. Please see the attached checklist for property survey requirements.

Has the property been reviewed by a wildlife biologist? Yes No

What was the identified Active Prairie Dog Habitat (APDH) size? *3.01*
 What was the official count of prairie dogs? *27*

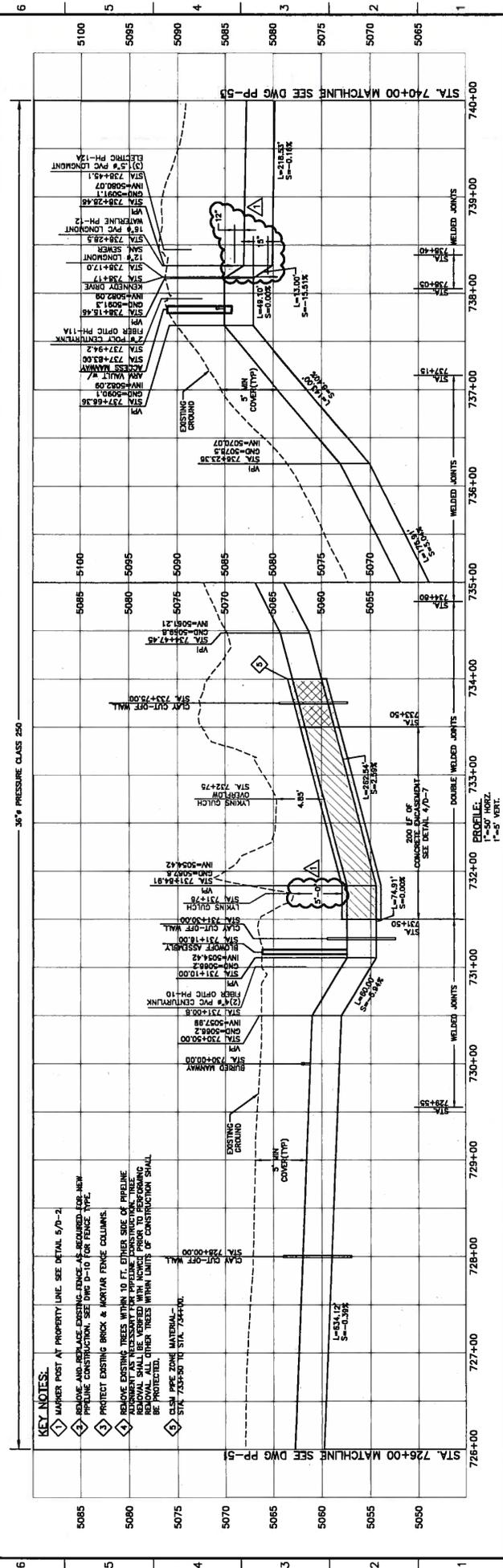
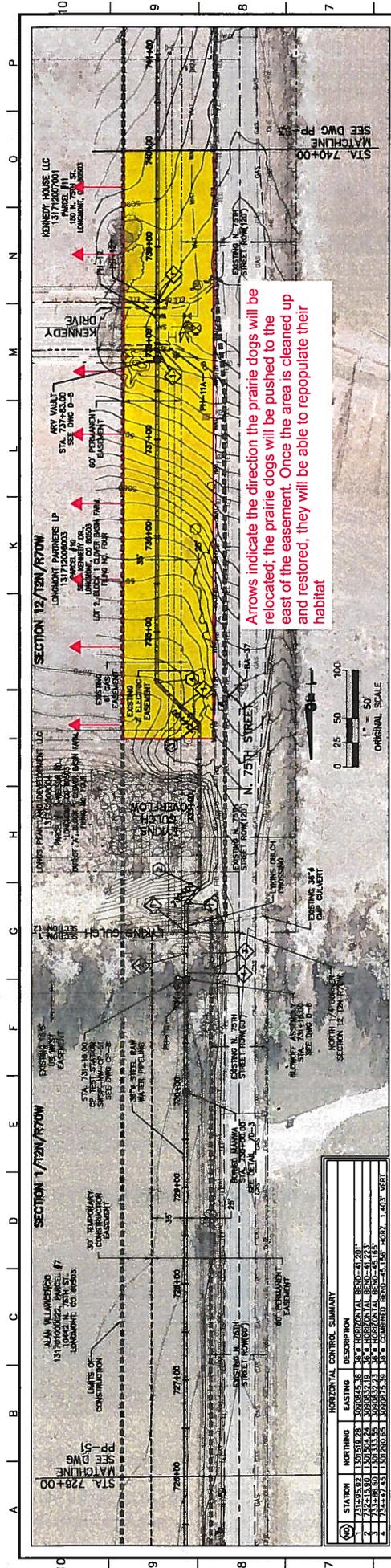
I hereby certify that the information submitted is true and correct. In submitting the signed application, I acknowledge and agree that the application is subject to all the terms and conditions for Prairie Dog Control as defined in Ordinance 0-2019-01. I understand that any false statements or omissions may result in denial or revocation of this permit. I also understand that in accordance with Ordinance 0-2019-01, the City has permission to enter property to confirm the site, prairie dog active habitat size, and count.
 Applicant Name (Printed): *Collin MacMillan* Applicant Signature: *Collin MacMillan*

INTERNAL OFFICE USE ONLY

Reviewed by (Printed): *Joni Marsz* Signature: Date:
 Approved by (Printed): *Joni Marsz* Signature: *6-17-19* Date:

Conditions of Approval:
Add fencing per Dan Wouprd's email 6-13-19. Poultry wire on East side of suit price 4' x 2' + 2' x 6' apron.

Fees, if applicable:



KEY NOTES:

- 1 MARKER POST AT PROPERTY LINE SEE DETAIL S/D-2
- 2 REMOVE AND REPLACE EXISTING FENCE AS REQUIRED FOR NEW PIPELINE CONSTRUCTION. SEE DWG D-10 FOR FENCE TYPE
- 3 PROTECT EXISTING BRICK & MORTAR FENCE COLUMNS
- 4 REMOVE EXISTING TREES WITHIN 10 FT. EITHER SIDE OF PIPELINE ALIGNMENT AS NECESSARY FOR PIPELINE CONSTRUCTION. TREES REMOVAL SHALL OCCUR WITHIN 14 DAYS OF CONSTRUCTION START. REMOVAL SHALL OCCUR WITHIN 14 DAYS OF CONSTRUCTION SHALL BE PROTECTED
- 5 CLM PIPE ZONE MATERIAL - STA. 733+00 TO STA. 734+00

DATE: 12/27/15
 PROJECT NUMBER: 50088933
 REVISION NO.: 2
 DRAWING NUMBER: PP-52
 SHEET NUMBER

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

SOUTHERN WATER SUPPLY PROJECT II

PLAN & PROFILE
 STA. 726+00 TO STA. 740+00

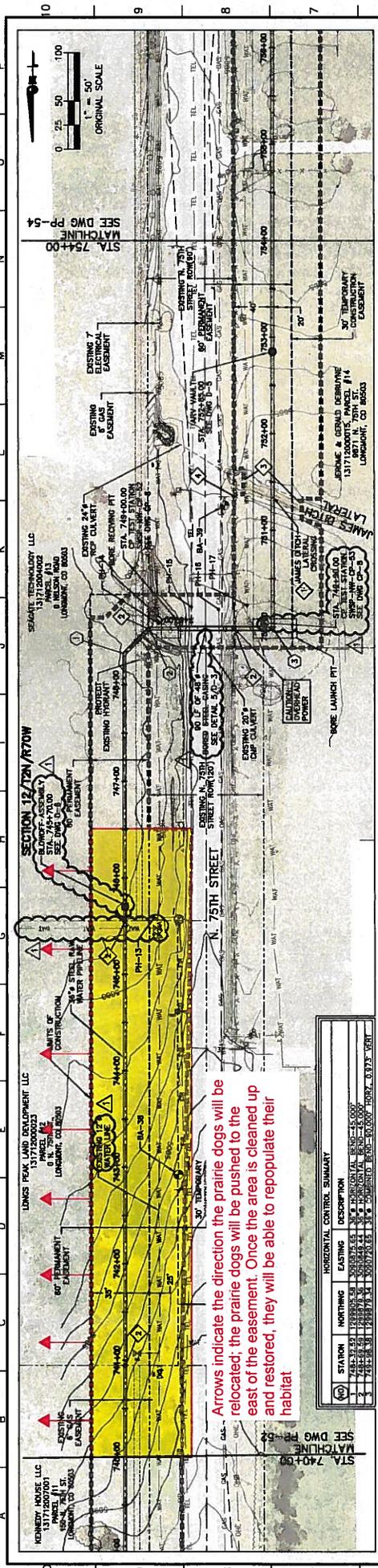
REV.	DESCRIPTION	BY	DATE	APP.
0	ISSUED FOR BID	NLM	02/27/16	JTS
1	ADDITION #2	NLM	03/27/16	JTS
2	CONFORMED DRAWINGS	NLM	03/19/16	JTS

APPROVED: *[Signature]*
 PRINCIPAL
 FEBRUARY 21, 2016
 DATE

UNIVERSITY OF COLORADO
 REGISTERED PROFESSIONAL ENGINEER
 No. 21761
 12-21-2016

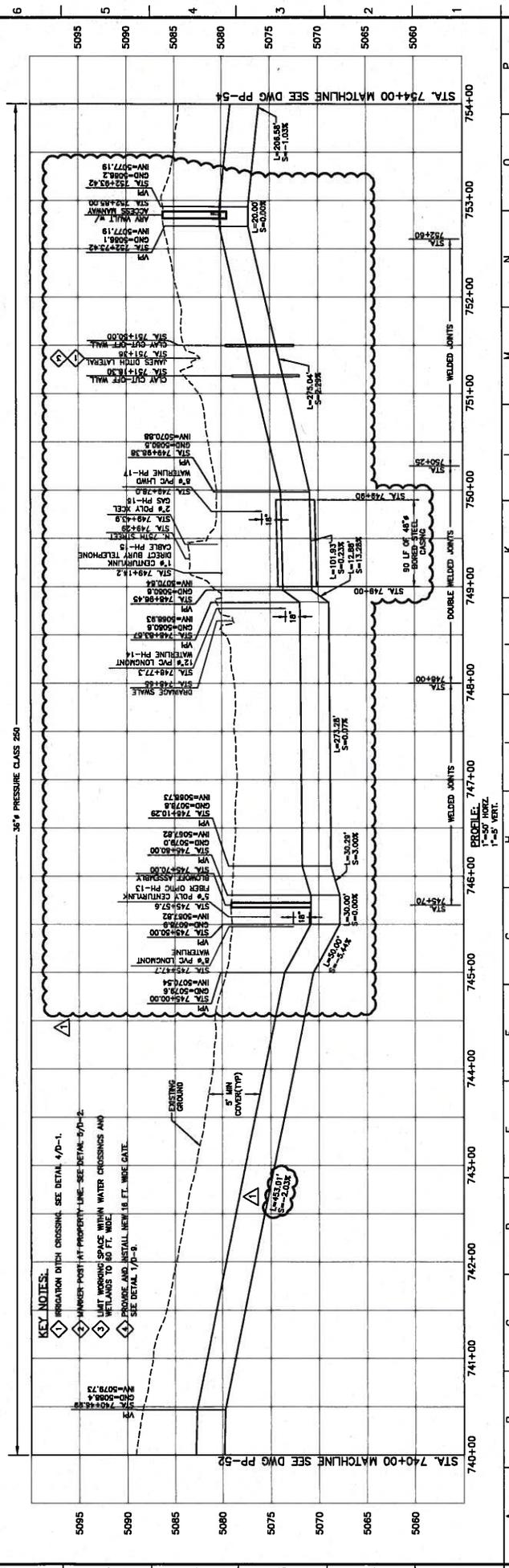
Dewberry
 Dewberry Engineers Inc.
 990 S. BROADWAY, SUITE 400
 DENVER, COLORADO 80209
 (303) 825-1802

LINE 5.7 NOTES:
 OF THE 5.7 LINE (ADDITION #2)



Arrows indicate the direction the prairie dogs will be relocated; the prairie dogs will be pushed to the east of the easement. Once the area is cleaned up and restored, they will be able to repopulate their habitat

STATION	NORTHING	EASTING	DESCRIPTION
740+00	13171200701	13171200701	START OF CONSTRUCTION
741+00	13171200701	13171200701	START OF CONSTRUCTION
742+00	13171200701	13171200701	START OF CONSTRUCTION
743+00	13171200701	13171200701	START OF CONSTRUCTION
744+00	13171200701	13171200701	START OF CONSTRUCTION
745+00	13171200701	13171200701	START OF CONSTRUCTION
746+00	13171200701	13171200701	START OF CONSTRUCTION
747+00	13171200701	13171200701	START OF CONSTRUCTION
748+00	13171200701	13171200701	START OF CONSTRUCTION
749+00	13171200701	13171200701	START OF CONSTRUCTION
750+00	13171200701	13171200701	START OF CONSTRUCTION
751+00	13171200701	13171200701	START OF CONSTRUCTION
752+00	13171200701	13171200701	START OF CONSTRUCTION
753+00	13171200701	13171200701	START OF CONSTRUCTION
754+00	13171200701	13171200701	START OF CONSTRUCTION



Dewberry®
Dewberry Engineers Inc.
980 S. BROADWAY, SUITE 400
DENVER, COLORADO 80209
(303) 825-1802

PROJECT INFORMATION

DATE: 12/27/13
PROJECT NUMBER: 0008833
REVISION NO.: 2
DRAWING NUMBER: pp-53
SHEET NUMBER

CIVIL

NORTHERN COLORADO WATER CONSERVANCY DISTRICT

SOUTHERN WATER SUPPLY PROJECT II

PLAN & PROFILE
STA. 740+00 TO STA. 754+00

REV.	DESCRIPTION	DATE	APP.
0	ISSUED FOR BID	12/27/13	NJM
1	ADDITIONAL #2	02/27/14	NJM
2	CONFORMED DRAWINGS	05/16/14	NJM

APPROVED: *[Signature]*
PRINCIPAL
FEBRUARY 21, 2018
DATE

Wildlife Specialties LLC

"Practical, science-based applications for wildlife and ecological studies benefiting all clients"



June 4, 2019

Ethan Louis
Project Engineer
Garney Construction
7911 Shaffer Parkway
Littleton, CO
80127

Subject: Black-tailed Prairie Dog Active Prairie Dog Habitat Delineation, Count and Population Estimate at 75th and Kennedy Drive, Longmont, Colorado

Dear Ethan:

This letter provides the results of Black-tailed Prairie Dog (*Cynomys ludovicianus* – prairie dog) Active Prairie Dog Habitat (APDH) delineation, counts of individuals, and population estimation within APDH near North 75th and Kennedy Drive in Longmont, Colorado. The APDH delineation and counts were conducted east of North 75th and north and south of Kennedy Drive in Longmont, Colorado (Figure 1). The APDH within the delineated area totals approximately 3.01 acres (the actual area is slightly less since this area includes a portion of Kennedy Drive). Because of the contour and slope of the APDH, two counts to the north and south were required to provide complete visual coverage of the APDH.

The counts were conducted from the bed of a truck parked north of Kennedy Drive and counts were first conducted on the south side. The surveyor used the bed of the truck to elevate the surveyor so that complete visual coverage of each side was possible. The surveyor used a Zeiss Gavia 85 spotting scope and Zeiss Victory 10X20 binoculars. Prior to conducting the counts the surveyor walked the perimeter of the APDH and recorded the area with a hand-held GPS unit. The data was later imported into GIS for mapping and acreage calculation. The surveyor walked south from Kennedy drive to the end of the APDH then north along 75th until the APDH ended on the north side of Kennedy Drive. This allowed the prairie dogs on the south side to return to normal activities prior to the counts. The surveyor waited 15 minutes after returning to the truck prior to completing the first count and the second count was conducted 15 minutes after that time. Once the south side was completed, the surveyor repositioned the truck and allowed the prairie dogs on the north side to return to normal behavior before completing counts using the same 15 minute intervals as used for the south side. The first count of the south side occurred at 1330 hours and the second at 1345 hours; the counts of the north side occurred at 1415 and 1430 hours respectively. The weather was ideal for observing prairie dogs with partially cloudy skies and a temperature of 83°F.

The counts of the south side identified 9 and 11 individuals, respectively; the counts of the north side identified six and five individuals, respectively. The population estimation from the counts was based on the following calculation (Severson and Plumb 1998):

$$X = (Y - 3.04) / (0.40), \text{ where } X = \text{estimated population size and } Y = \text{maximum number observed}$$

Using the above equation for the south side with the maximum number observed of 11 provides a population estimate of 20 for the south side and seven for the north side.

Data was entered electronically into a cloud-based data management program. Copies of the data sheets are available upon request.

Wildlife Specialties LLC

"Practical, science-based applications for wildlife and ecological studies benefiting all clients"



Please contact me if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "Jerry Powell".

Jerry Powell, M.S.
Certified Ecologist

Jerald M. Powell, Wildlife Specialties, L.L.C.



Jerald M. Powell

Education

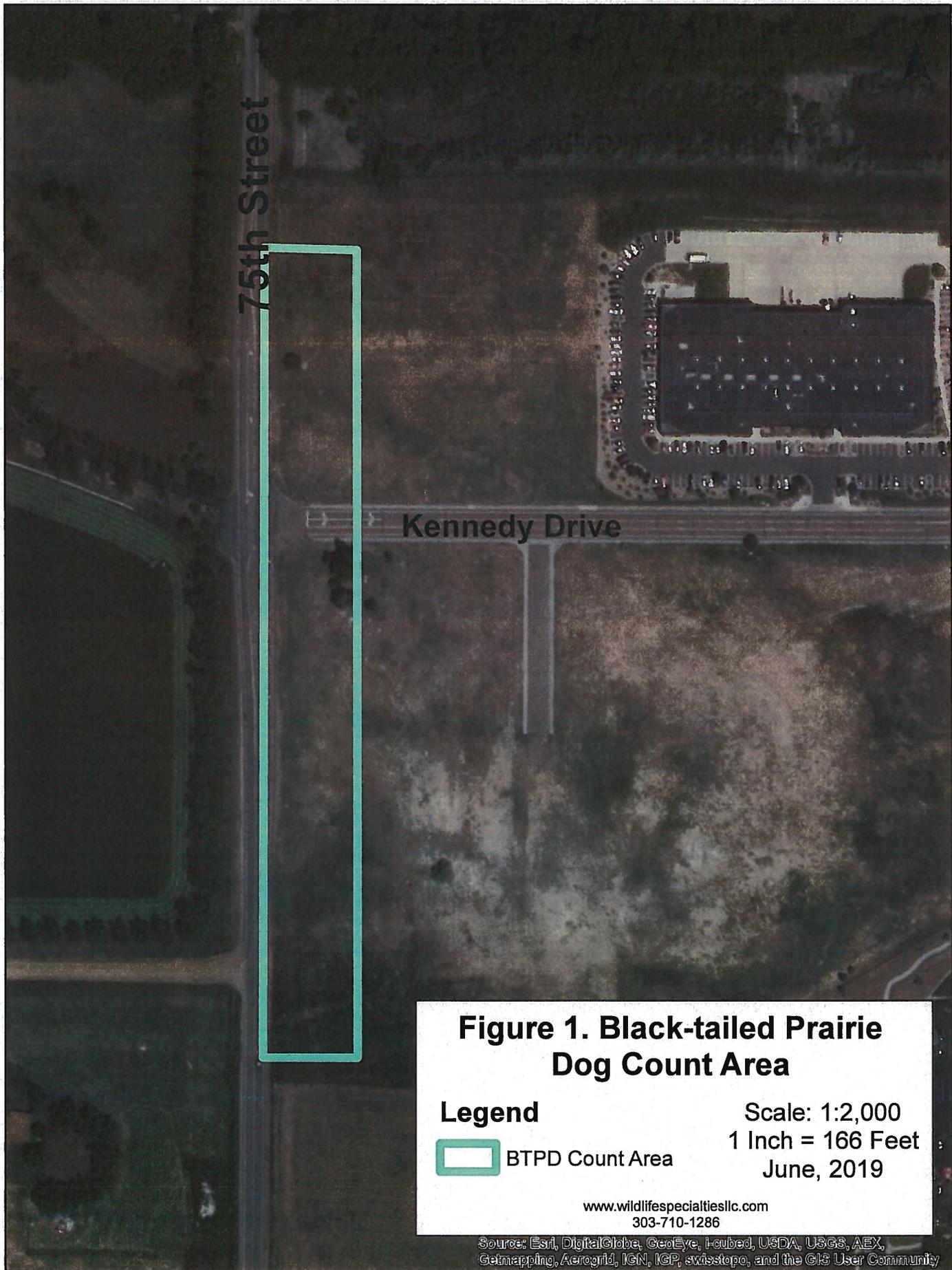
M.S., Fishery and Wildlife Biology, Colorado State University, 1996

B.S., Wildlife Biology, Colorado State University, 1992

Experience

Mr. Powell, the president of Wildlife Specialties, LLC, is a Certified Ecologist with over 23 years of professional experience.

He is licensed by the Colorado Department of Agriculture (Commercial Applicator License No. 13634) for prairie dog management. He has done passive relocation on several CDOT projects and private projects along the Front Range.



75th Street

Kennedy Drive

Figure 1. Black-tailed Prairie Dog Count Area

Legend

 BTPD Count Area

Scale: 1:2,000
1 Inch = 166 Feet
June, 2019

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303-710-1286

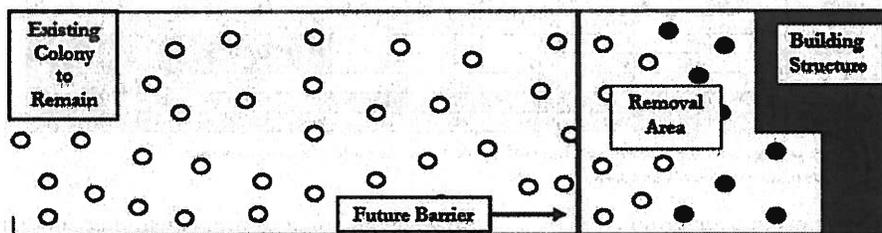
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Reverse Dispersal Translocation™ (RDT)

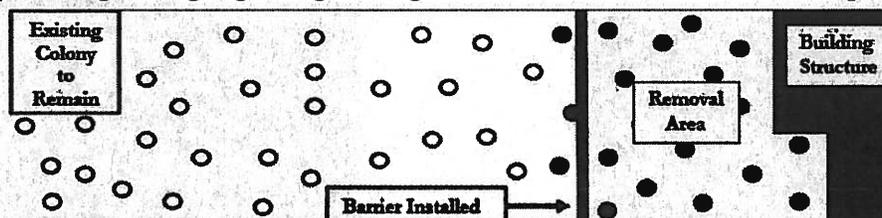
1. RDT is a habitat-based prairie dog relocation method that manipulates the burrow system, causing prairie dogs to leave conflict burrows.
2. In RDT, prairie dogs are not handled; instead they must acclimate themselves into territories with pre-existing burrows.
3. RDT requires access to an existing active colony that is connected to and substantially larger than the removal area.
4. In most cases, barriers (physical structures or vegetative) should be employed after all prairie dogs are removed.
5. RDT is best used after the breeding, birthing, and pup rearing periods (or other time periods that present biological stressors) have passed and when overall population densities are lower, thus reducing competition for limited resources (these periods of time may vary from state to state and species to species). For example, in Colorado, RDT is best used from mid-August through mid-November (except in cases of single dispersers) for black-tailed prairie dogs and August through mid-September for Gunnison's prairie dogs. Other factors such as hibernation, torpor, and poor weather conditions should be considered.
6. The technique is useful for: building and road expansions; utility installations; solar array installation; removal of prairie dogs from developed neighborhoods, parks, athletic fields, commercial building areas, or dams; barrier maintenance; revegetation projects; supporting active relocations; and controlling colony expansions (for example, new burrows established in neighboring yards or commercial areas and parks).
7. Non-target species impacts should be considered during any alteration of prairie dog burrows.
8. In practice, the process can take anywhere from one week to one month depending on the site involved.
9. If spring construction is likely, RDT should be performed during the recommended periods of time (see #5 above) and then periodically monitored throughout the rest of the season up to and sometimes during the construction project.
10. If proper guidelines are followed, RDT can be employed by any able-bodied person; however, project difficulty varies on a site-by-site basis. Any site that contains more than 10 burrows should be reviewed first by someone that is either trained in the technique or has a solid working background with prairie dogs.
11. There are two types of RDT: "The Roll" and "Part the Sea."

The Roll is used when prairie dogs need to be permanently excluded from an area. In this case prairie dogs are gradually "rolled" out of the conflict area using the process described below, and acclimated into the acceptable area. Rolling may require several stages (Note: for large conflict areas, prairie dogs must be progressively rolled to discourage them from reopening originally closed burrows).

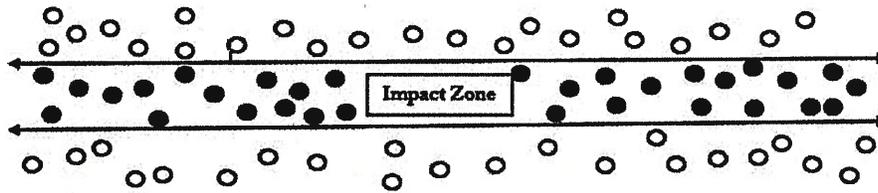
Stage 1: Progressively begin closing active burrows ● farthest away from the receiving prairie dog colony.



Stage 2: Close remaining burrows and burrows within 15 feet of the barrier where the prairie dogs will remain to discourage prairie dogs from going through underground tunnels. Install barrier when complete.



Part the Sea is useful for moving prairie dogs during temporary impact projects such as construction or maintenance of utility lines, trails, or solar energy arrays. Close burrows within entire construction footprint. In some cases a temporary barrier may need to be installed to keep prairie dogs away from the impact zone.



Burrow closure procedure:

Step 1: Each burrow is identified with a numbered wooden stake. Burrows in the process of closure look like this: arrows indicate where the sod pins anchor the wire (top of burrow not anchored for prairie dog exit) and the sticks below wire to indicate activity.



Step 2: Monitor burrows for activity. A spreadsheet is used for this purpose. The spreadsheet can also be used for multi-person sharing on Google Spreadsheet.

Site Name: ACME PROJECT 2008										
Date	15-Sep	16-Sep	17-Sep	18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep
Temp	60	60	70	75	80	65	75	80	60	70
Time	10:30 AM	10 A.M.	10 A.M.	12 P.M.	3 P.M.	10 A.M.	11 A.M.	3 P.M.	10 A.M.	11 A.M.
Stake #1	WS	WAS	WAS	WIS	WIS	WIS	C	C	C	C
2	WS	WAS	WAS	WIS	WIS	WIS	C	C	C	C
3	OAR 1	S	AS	WS	WAS	WIS	WIS	WIS	C	C
4	S	AS	AS	WS	WAS	WAS	WIS	WIS	WIS	C
5	S	WS	WAS	WAS	WAS	WAS	VS	WAS	VIS	VIS

Legend: W=wired, S=Sticked, A=Active, I=Inactive, C=Closed, OAR = Open Active Receiving Burrow, V=Vent
 Note: #5 the wire is replaced with a dry vent.

P. Wanek

Step 3: The burrow is closed once it is determined as inactive (generally 72 hours). First, remove all wires and shovel soil back into tunnel.



Step 4: Tamp soil into tunnel with bat and hammer leaving about 6 inches of tunnel unblocked.



Step 5: Mold wire around bat to form basket.



Step 6: Insert basket into tunnel and seat with bat and hammer. Insert baseball sized rock into basket and set with bat and hammer.



Step 7: Pin outer edges of first wire to sides of tunnel with sod pins.



Step 8: Place second wire over closed burrow and secure with sod pins. This wire is a preventative to protect the primary wire.



In rare cases a dryer vent may be required to evict difficult prairie dogs:



Preliminary dryer vent set-up



Partial emergence



Full emergence see two prairie dogs

Final Notes:

Successful passive relocation requires seeing the site from the prairie dog's point of view. Are there a sufficient number of existing burrows in the adjacent colony? Is the timing within the recommended window; after the young are mobile, populations are lower (naturally), and before hibernation?