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Reverse Dispersal Translocation™ (RDT)
A passive prairie dog relocation method developed by Pam Wanek

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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 <u>overall</u> 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 <u>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.</u>
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.
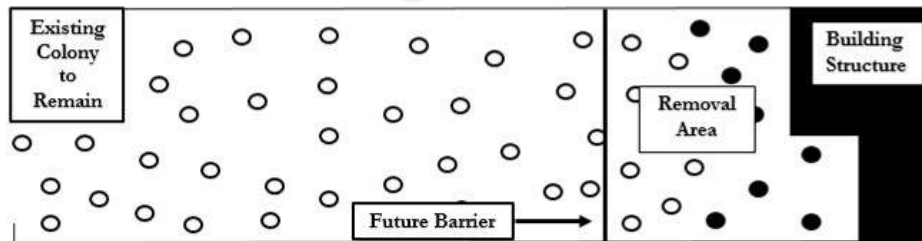
Stage 2: Close remaining burrows and burrows within 15 feet of the barrier on the side where prairie dogs will remain to discourage prairie dogs from going through underground tunnels. When complete, install barrier.
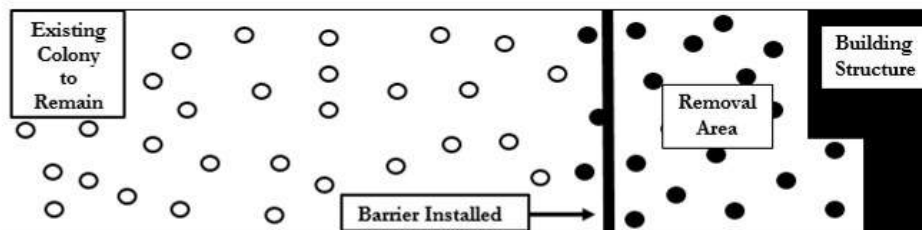
Part the Sea is useful for moving prairie dogs during temporary impact projects such as construction or maintenance of utility lines, trails, or solar energy arrays. Close burrows within entire construction footprint. In some cases a temporary barrier may need to be installed to keep prairie dogs away from the impact zone.
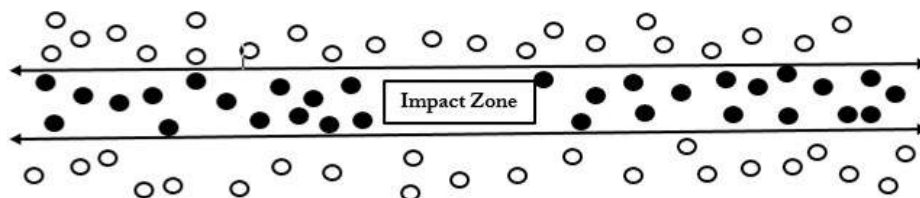
Required equipment: cart (for carrying equipment), shovel, two-foot-wide one-inch poultry (chicken) wire, metal baseball bat, garden hose marked off in one-foot increments (for measuring tunnels), hammer, box cutter, spring-loaded tin snips (to cut poultry wire), bamboo skewers or sticks, six-inch or larger sod staples, softball-sized rocks, bucket (for hauling equipment), flags or wooden stakes to mark burrows.

Step #1: Cut wire

A. Roll out two-foot-wide one-inch poultry wire and anchor both ends with sod pins:

B. Using spring-loaded tin snips, cut directly down the middle of the poultry wire seam:

C. Overlay one long cut piece directly over the other and secure both ends with sod pins.

D. Cut two 12-inch wire pieces at a time use your foot to prevent recoiling).

E. Stack cut squares.

Step #2: Set up wire door:

A. To monitor burrow activity, wedge two sticks in a crossed position roughly three inches below burrow surface (use more sticks if the burrow diameter exceeds four inches).

B. Place two pieces of cut wire (match curve pattern and seams) together. Notice curvature in wire pieces. Place wire over burrow entrance so that curvature faces outward from burrow and covers the entire burrow opening.

C. Check tension on wire door. Hold the bottom of the wire against the burrow entry point with one hand and with the other hand slightly pull up on the top of wire (top of burrow). Release the top of the wire square; it should snap down over burrow.

D. Secure wire square to soil with sod staple at entry point of burrow and each side of the burrow; leaving the top of the wire square unattached (this is where the prairie dog will exit).

E. Mark each burrow with a flag or wood stake (preferred for long-term projects) and labeled with a unique number. The finished product should look like this: crossed sticks three inches below burrow surface, wire door placed over burrow and held in place by one sod staple at arrow points.

F. Adding a softball-sized rock at the burrow entrance further impedes the prairie dog from digging under wire to regain access; the rock will be used later to close the burrow.

Step #3: Monitor burrow activity
Burrows should be monitored daily for stick activity. If the sticks have moved, replace and monitor again. If sticks have not moved for 72 hours, then close the burrow. Note: three days is necessary to insure apprehensive prairie dogs challenge the stick and wire rather than just moving the sticks. Inclement weather may prolong waiting period.

Step #4: Close burrow
A. Remove all wires, then dig back from tunnel entrance at least six inches deep below soil line.

B. Using a bat and hammer, backfill tunnel with soil eight-inches below soil line.

C. Mold one cut square of wire around bat.

D. Insert wire with bat into tunnel. Hammer to secure the wire in tunnel. Remove bat, leaving the wire in place. Place rocks and soil inside molded wire and tamp down firmly.

E. Flatten wire above ground to form a skirt and anchor with six-inch sod staples.

F. Secure second wire with 5 to 6 six-inch sod staples, around the edge of wire: this wire may remain permanently or removed after project completion.
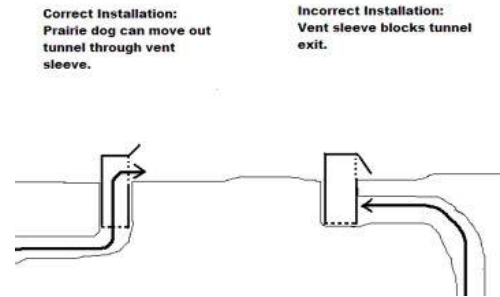
Step #5: Dryer vent door installation (if needed)
In rare cases, using wire doors to deactivate burrows may be difficult and a modified dryer vent door may be necessary.

__Required equipment:__ single-flap four-inch-diameter dryer vent, four-inch-diameter corrugated plastic tubing, duct tape, one-inch   poltry wire, sod staples, box cutter, hammer, shovel.

A. Determine the length of the black tube. The tube should be long enough that it is tightly wedged within the interior wall of the tunnel, forcing the prairie dog to use the black tube rather than move between the tube and tunnel wall. Make sure the tube configuration does not block off the tunnel. After determining the needed length, add 8 inches so that when installed, the black tube extends 8 inches above soil line; this step is necessary so the prairie dog cannot reopen the door flap at ground level. Cut the black tube with a box cutter and install tube in tunnel; this may require twisting the tube for a snug fit.

Proper Vent Installation

Correct Installation: Prairie dog can move out tunnel through vent sleeve.

Incorrect Installation: Vent sleeve blocks tunnel exit.

B. Remove manufacturer's sleeve from dryer vent. Attach the black tube to the collar of the vent using duct tape.

C. Cut one 2' x 2' square of one-inch poultry wire to use as a skirt at the base of the tube to prevent prairie dogs from digging back into tunnel. Cut hole in middle of the skirt for black tube opening. Secure skirt to ground with 6-inch sod staples at base of black tube and skirt edge (see black lines).

Use a stick to prop the flap of the dryer vent slightly open so there is light at the end of the tunnel (this provides the prairie dog with visual direction to exit the tube).Position stick so it moves as prairie dogs leave the tube.

Poultry wire skirt

D. Daily monitoring is important to track activity. Burrows with dryer vents may take longer to deactivate simply because the apparatus is visually foreign to the prairie dog. In some cases the prairie dog may peer out of the flap without fully emerging. If the stick moves, reset and monitor until there is no activity for at least four days. After 100% certainty that all prairie dogs are gone, remove vent, cut black tube to the ground or remove if possible, and fill the hole in with soil.

Prairie dog emergence   *Full emergence, see two prairie dogs*   *Stick moved; reset and monitor for four additional days*

Step#6: A chart for monitoring
For large projects using a chart to indicate progress is helpful; it may also be shared on Google Spreadsheets.

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	VAS	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.

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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?