

# BLACK-TAILED PRAIRIE DOG MITIGATION STUDY & PILOT PROGRAM

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# LET'S MITIGATE!



Black-tailed prairie dogs (BTPD) are still common, yet declining on the Front Range of Colorado where they live amongst rapidly expanding development. Prairie dog colonies are native to our area and provide ecosystem services to the environment.

Prairie dog colonies losses are often widespread and in noticeable in the public.

The Prairie Dog Coalition of The Humane Society of the United States (PDC) developed a BTPD mitigation pilot program. **The program offers voluntary conservation mitigation options between a willing buyer and a seller.**

The PDC and a science team developed a BTPD Habitat Quantification Tool (HQT) to estimate the ecological impact/offset at the impact site and to be used as the currency in the mitigation transactions.

While this project is focused in Colorado initially, the goal is to develop and transport this mechanism of voluntary conservation incentives to other locations.

# PROJECT PARTNERS



# BIODIVERSITY OFFSETS & IMPACT MITIGATION

## The mitigation hierarchy:

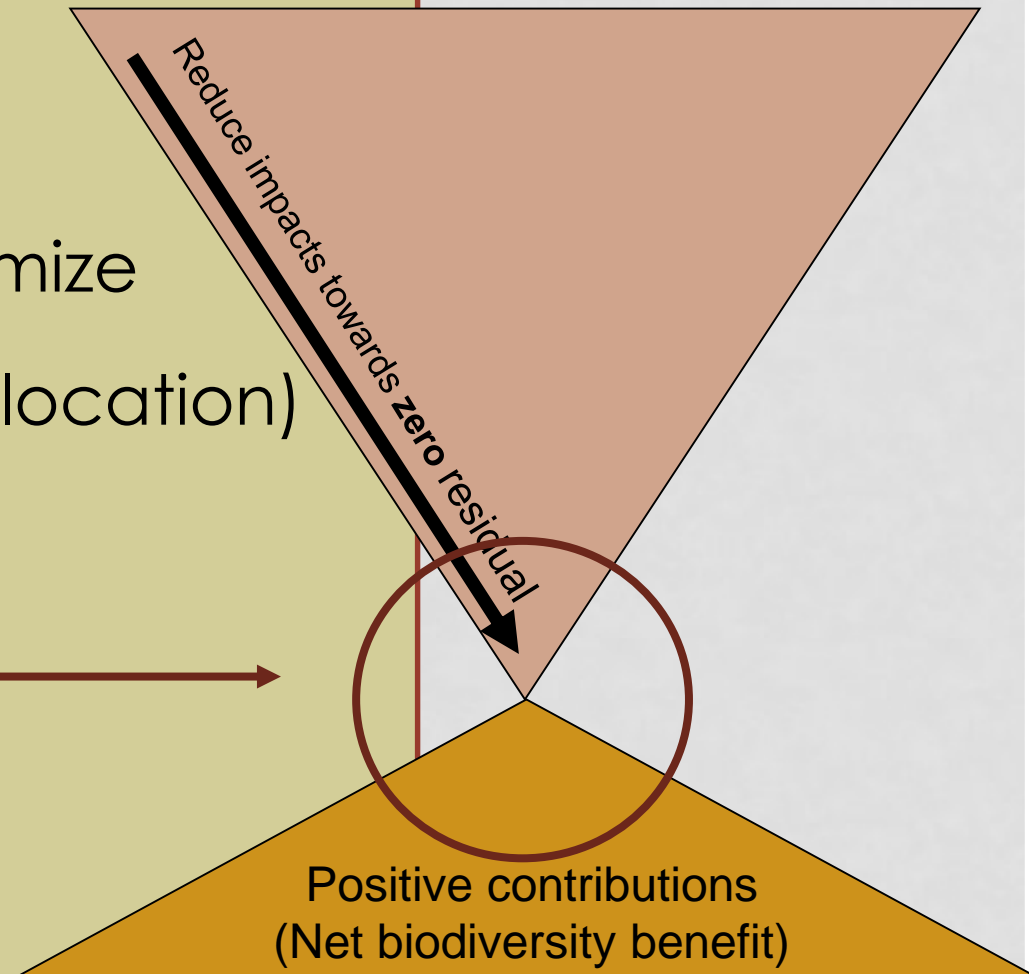
Avoid

Reduce, moderate, minimize

Rescue (relocation, translocation)

Repair, reinstate, restore

**Compensate/offset**

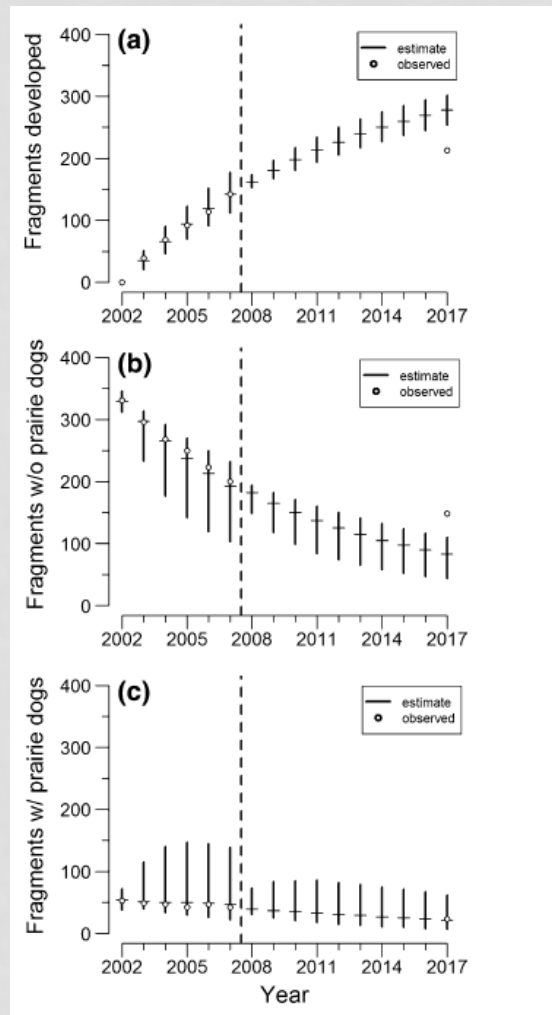




# MAGLE & FIDINO

## LONG-TERM DECLINES OF A HIGHLY INTERACTIVE URBAN SPECIES BIODIVERSITY AND CONSERVATION, 2018

- “Our simulations of this system 50 years into the future revealed a relatively high probability of extinction for prairie dogs by 2067.
- ...between 2002 and 2017 the number of prairie dog colonies throughout the study area precipitously declined from 53 colonies to 23 (Fig. 2c), which provides a strong indication that prairie dogs in this system have been in decline over the last 15 years.
- As prairie dog colonization rates were generally below extinction rates, we expect that more colonies will be lost in the future, especially from the western side of the city of Denver where colonization rates were at their lowest.”

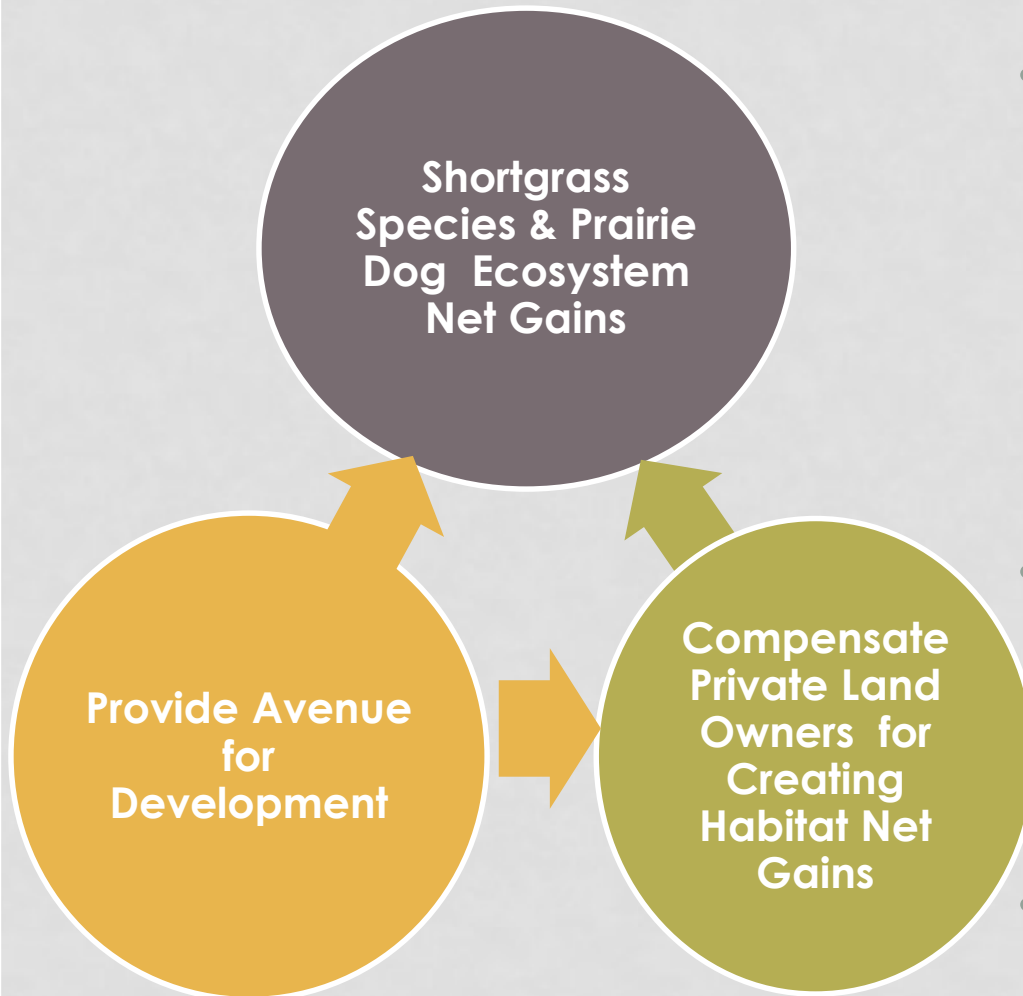


# MITIGATION FOR PRAIRIE DOGS IS VOLUNTARILY OCCURRING ALONG THE FRONT RANGE TODAY

- RTD and many agencies have policies that require mitigation for all environmental impacts created by their projects.
- Humane treatment of prairie dogs is essential, but removal doesn't constitute mitigation. When avoidance of impact, or live relocation, is not possible, enhancement of habitat to preserve the species is the only way to mitigate.
- Though a keystone species, neither humane removal nor prairie dog mitigation is required by law.
- However, in keeping with agency policy, mitigation is necessary, as well as ethically correct. In the instance of the pilot project, avoidance or live relocation of the colony was not possible. Therefore, RTD purchased mitigation credits to truly mitigate for the impact. It is hoped that this can serve as an example for others.
- This methodology used for habitat preservation is not unprecedented, but is similar to wetlands mitigation banking. Differences include regulatory requirement and differences in the commodity exchanged. Prairie dog habitat differs so the exchange rate can differ. Mitigation credits can be purchased at a rate of 1:1, 2:1, 3:1 and 4:1



# MITIGATION THROUGH A CONSERVATION TRANSACTION



- Project Goals:
  - identify the value of habitat lost
  - identify offset opportunities
  - create a program where land managers can mitigate these ecosystem losses &
  - landowners can be compensated for creating habitat net gains
- The Tool is a useful means of quantifying project impacts and demonstrating that those impacts have been fully and meaningfully off-set.
- Creating a positive, voluntary experience with landowners and the prairie dog ecosystem

# LIKELY TYPES OF PROJECT IMPACTS (DEBITS)

- Transportation corridor impacts (e.g., RTD, DOT)
- Municipal buildings and site development
- Private construction projects & development (commercial and residential)
- Energy infrastructure (roads, pipelines)
- Poisoning
- Habitat disturbing activities
- Habitat reduction activities





# LIKELY OFFSET APPROACHES (CREDITS)

- **Habitat acquisition**
  - Example: setting aside protected habitat or preserves
- **Habitat preservation**
  - Example: acquiring conservation easements
- **Population augmentation**
  - Example: restoring relocated prairie dogs to a site
- **Population protection**
  - Example: controlling plague
- **Habitat enhancement**
  - Example: modifying vegetation to encourage expansion



# HABITAT QUANTIFICATION TOOL PILOT PROJECT

- The science committee recently tested the tool through a pilot transaction
- CONSERVATION DEBIT- The pilot entailed habitat loss on the debit side for transportation infrastructure and habitat acquisition at credit site (landowner)
- CONSERVATION CREDIT- Acquisition property contains approximately 80 acres of black-tailed prairie dogs
- Property contains extensive shortgrass prairie to promote ecosystem preservation with a conservation easement and long-term management to ensure prairie dog persistence
- The objective is to show clearly how quantified adverse impacts at debit site are addressed through quantified habitat acquisition and population preservation at credit site
- Location of the credit site is in southeastern Colorado, based on potential for promoting landscape-scale conservation and habitat affordability



# FAQs

## **Q: I'M WORKING ON A PROJECT, CAN I GET CREDITS NOW?**

**A:** Yes, you can currently participate in the Program in a pilot Transaction and claim green credits and wildlife mitigation on your development project.

## **2019 GOAL- 2-4 MORE TRANSACTIONS**

## **Q: WHY SHOULD I MITIGATE FOR PRAIRIE DOG IMPACTS?**

**A:** There is widespread public awareness in Colorado, and particularly in the Front Range, about the ecological importance of black-tailed prairie dogs and the adverse impacts on this species from development. The experts developing this Tool believe mitigation for impacts to prairie dogs can help create extensive prairie dog complexes at a landscape-scale on credit sites. In our view, this will advance prairie dog ecosystem conservation to a greater degree than at present and helps create conservation partnerships that contribute towards listing decision support.

# CONTACT INFORMATION

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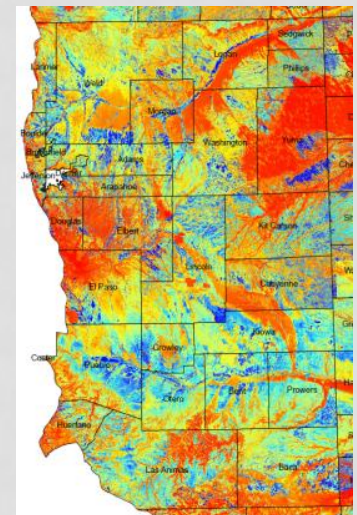
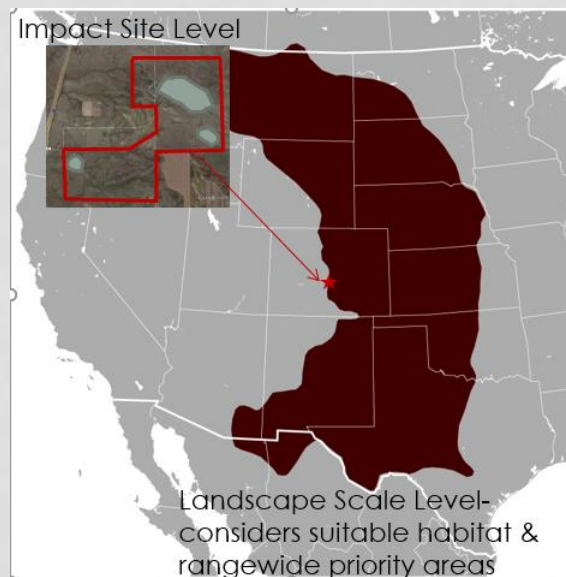
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# HOW DOES THE HABITAT QUANTIFICATION TOOL WORK?

- Habitat Suitability & Landscape Disturbance Index are the variables measured
- Occupied and potential habitat are considered
- Results are given in functional acres

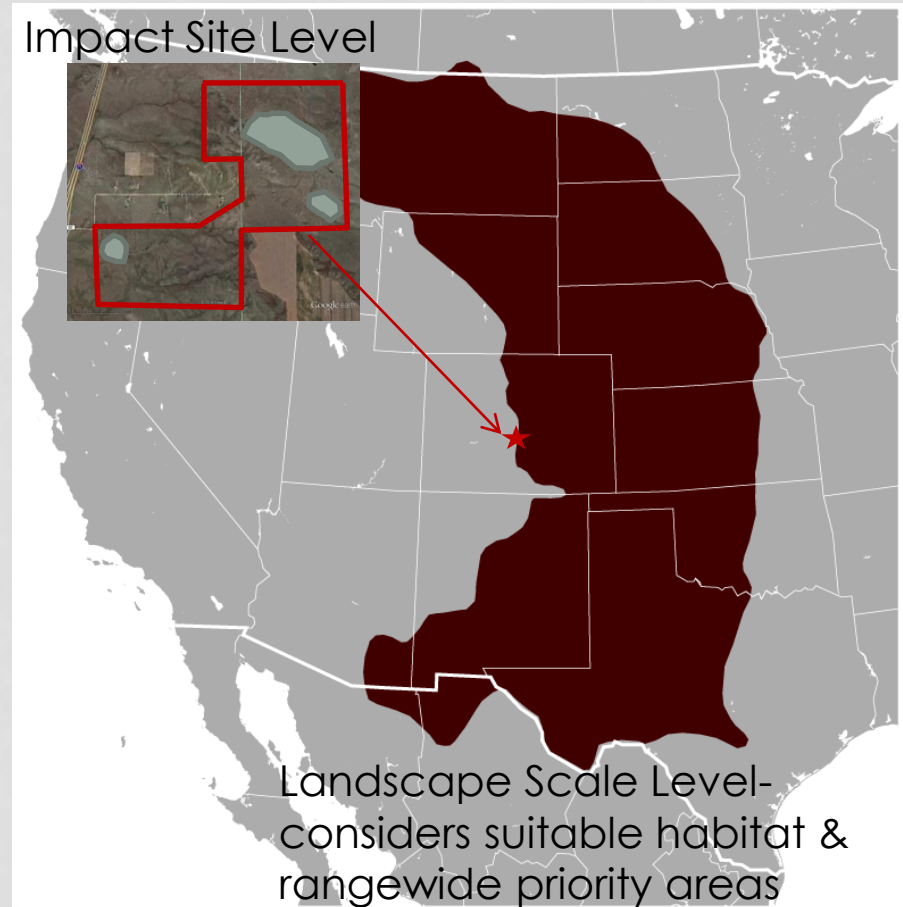


# WHAT DOES THE QUANTIFICATION TOOL MEASURE?

The Tool measures prairie dog habitat at multiple scales.

This provides both:

- an assessment of the immediate impact at a site
- an understanding of how meaningful that impact is at a larger landscape scale



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This methodology used for habitat preservation is not unprecedented, but is similar to wetlands mitigation banking. Differences include regulatory requirement and differences in the commodity exchanged. Prairie dog habitat differs so the exchange rate can differ. Wetland credits are purchased at a rate of 1:1.

# MITIGATION THROUGH A CONSERVATION TRANSACTION

- It is a model similar to conservation banking, in which landowners protect **key species habitat on their own property and sell credits to offset impacts created elsewhere.**
- This mechanism contributes to recovery efforts through permanent protections or a net gain for the prairie dog ecosystem in targeted areas on private land, **compensates private landowners through financial incentives for habitat conservation,** and in addition provides economic benefit through value added mitigation options.

*This slide adapted from the Utah Prairie Dog Exchange, Erica Wightman*