

# Conservation Planning: Overview and Example

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# Basic Concepts of Conservation Planning

## The Goal -

- **To maintain functioning habitats, populations, landscapes, etc. for the long-term.**
  - **Maintains natural values and quality of life.**
  - **Maintains natural processes.**
  - **Prevents federal listing of species.**

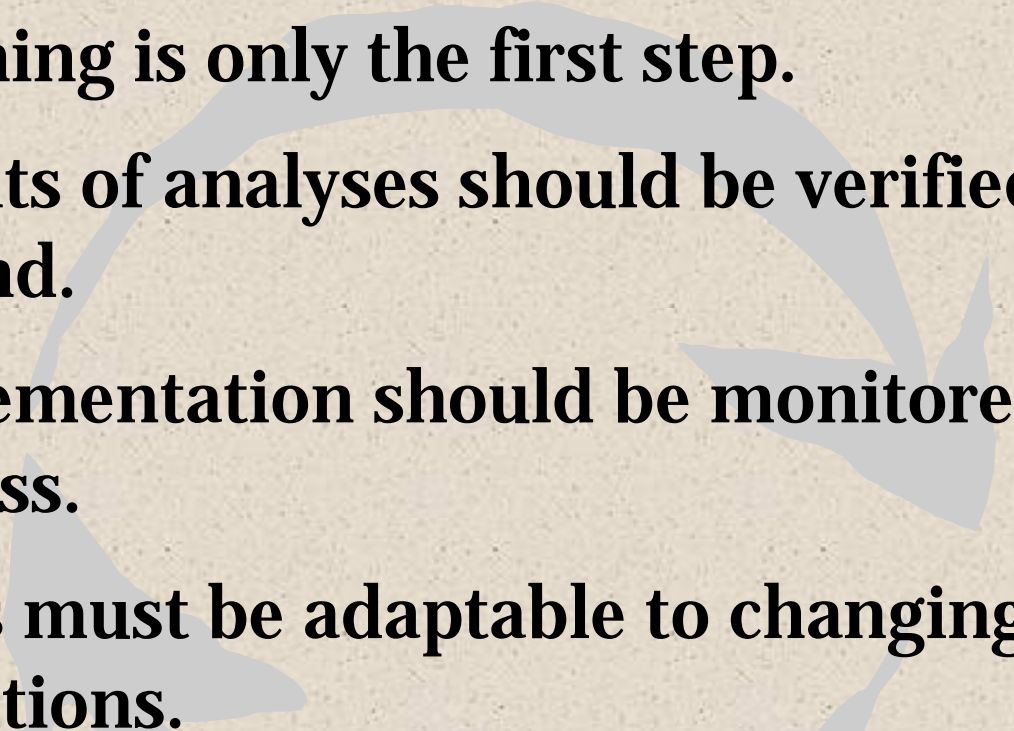


# Basic Concepts of Conservation Planning

- **Plan at multiple scales of time and space.**
  - Life of project and long-term.
  - Project footprint and greater area.
- **One size does not fit all.**
  - Different species have different requirements for successful conservation.
  - Inclusion of local expert opinion.
- **Identification of priorities and maximization of benefits.**



# Basic Concepts of Conservation Planning

- **This is an iterative/adaptive process.**
    - Planning is only the first step.
    - Results of analyses should be verified on the ground.
    - Implementation should be monitored for success.
    - Goals must be adaptable to changing conditions.
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# Conservation Planning Methods

1. Identify conservation targets.
2. Collect information and identify information gaps.
3. Decide whether information gaps require collection of new information or adjustment of analysis methods.
4. Assess areas of concern for their biodiversity values.
5. Set conservation goals (how much to protect where).
6. Analyze and review available data to see how best to meet goals (and which goals may not be met).
7. Use results to select best areas for conservation, restoration, mitigation, etc.
8. Set priorities of what to do first, what can wait.
9. Monitor success of plan/achievement of goals. Modify plan as conditions change.

# CNHP's Areas of Expertise

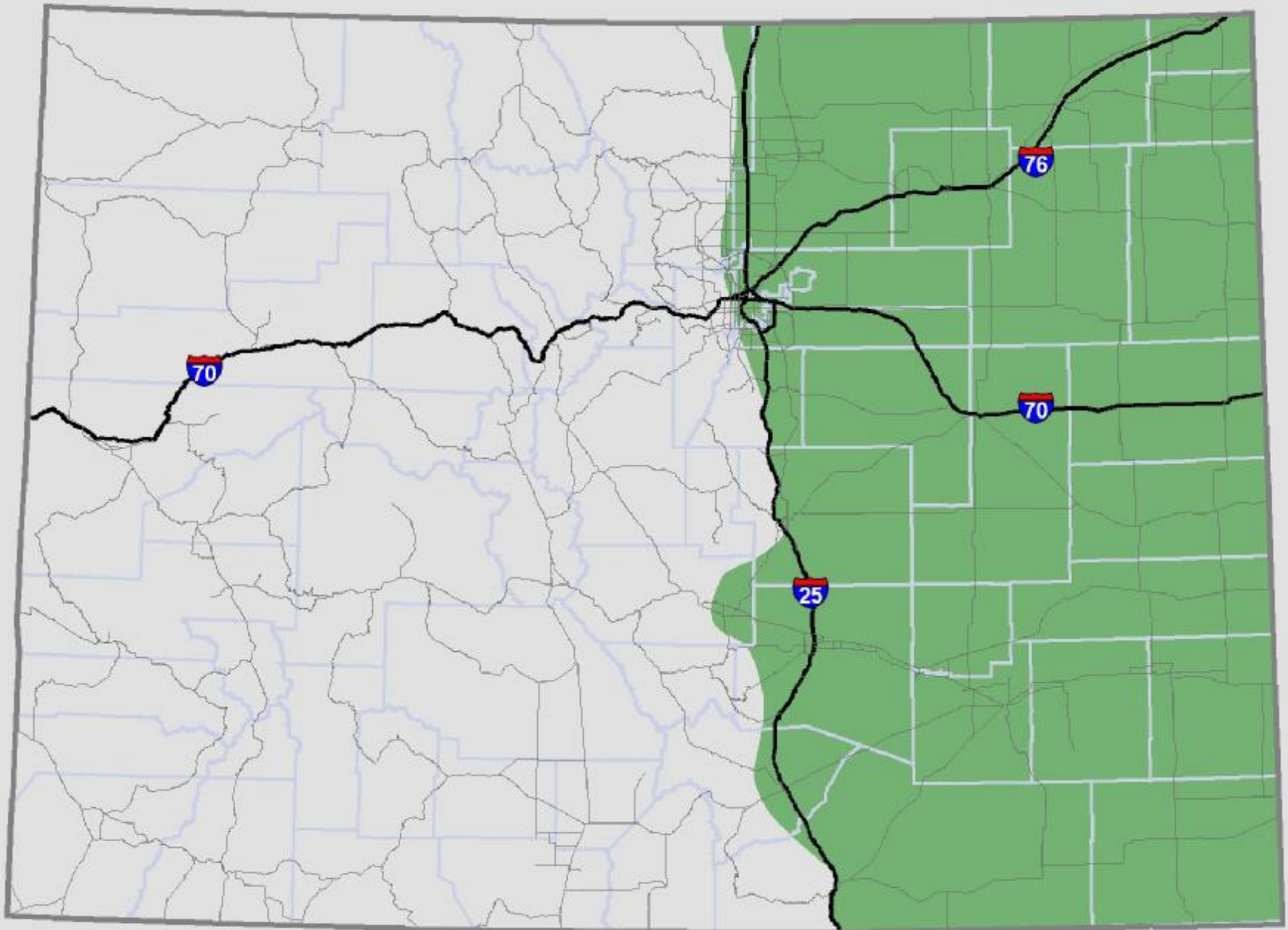
- **Maintain database of at risk species and communities.**
- **Collect field data.**
- **Data analysis.**
- **Evaluate viability and threats.**
- **Recommend or prioritize areas to conserve.**
- **Help develop conservation strategies.**
- **Monitoring and measurement of success.**

# Project Example

## CDOT Shortgrass Prairie Initiative



# Project Area





## Goals:

- Proactive conservation of declining species in Colorado's Shortgrass Prairie.
- Compensate for impacts to these species.
- Improve efficiency of transportation-related environmental assessments.

## Conservation Strategy:

- On-site protection via Best Management Practices.
- Off-site habitat protection through Conservation easements.



## Methods:



- **Selection of target species**
  - Based on TNC's list for the Central Shortgrass Prairie.
  - Modified via expert opinion to reflect criteria:
    - Adversely impacted by CDOT activities
    - Likely to be federally listed within the next 20 years
    - Benefit from either large scale, off-site compensation projects or on-site BMP
  - 38 species were identified for conservation action.
  - 17 of these targeted for off-site compensation for habitat loss, the remaining to be taken care of by BMP on-site.

## Methods (continued):

- **GIS-based impact analysis in conjunction with expert review.**
  - **Potentially suitable habitat identified.**
  - **Acres of habitat potentially lost estimated.**



# Examples of Species included in the GIS analysis

## Mammals (1)

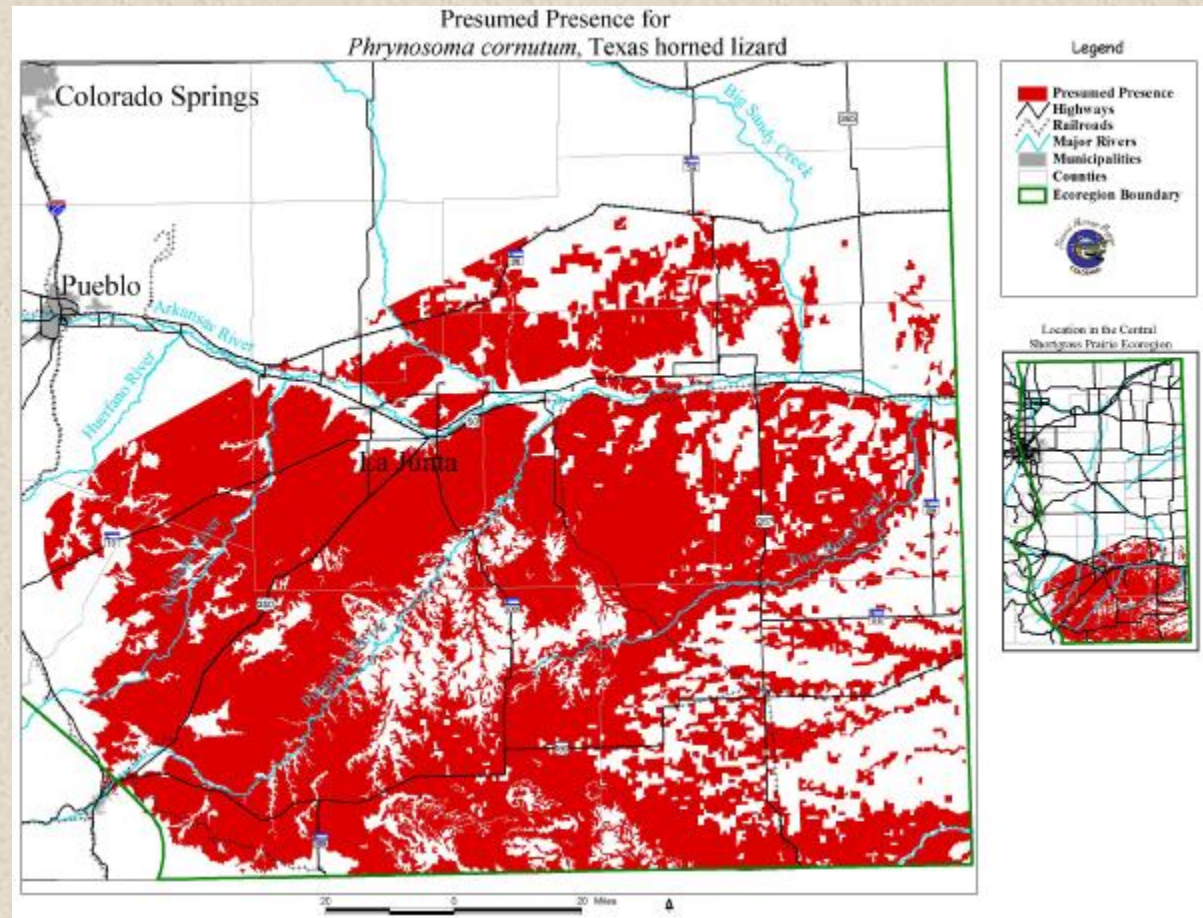
Black-tailed Prairie Dog

## Reptiles (3)

Massasauga Rattlesnake

Texas Horned Lizard

Western Box Turtle



# Birds (10)

Bald Eagle

Burrowing Owl

Cassin's Sparrow

Ferruginous Hawk

Lark Bunting

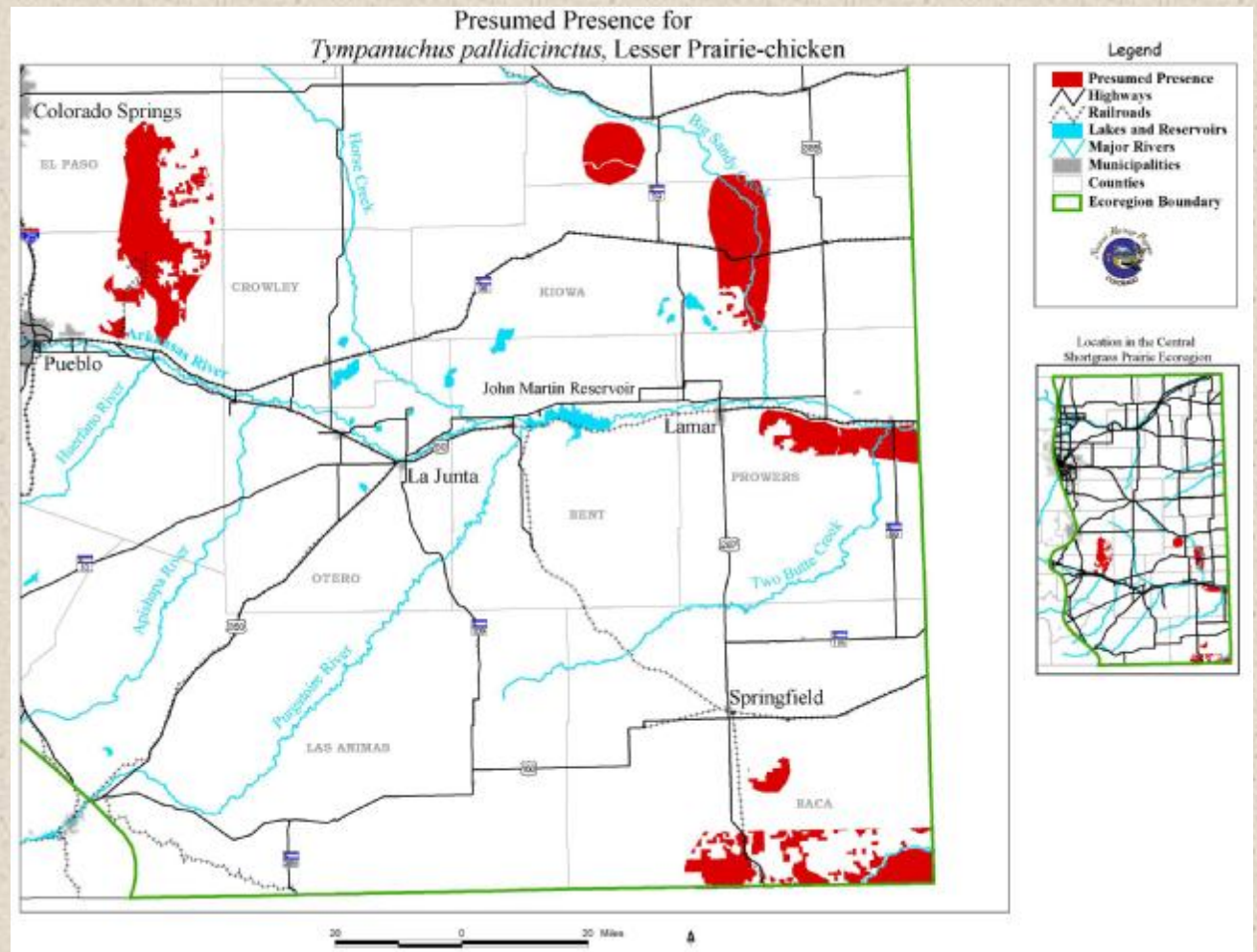
Lesser Prairie-chicken

Loggerhead Shrike

Long-billed Curlew

McCown's Longspur

Mountain Plover

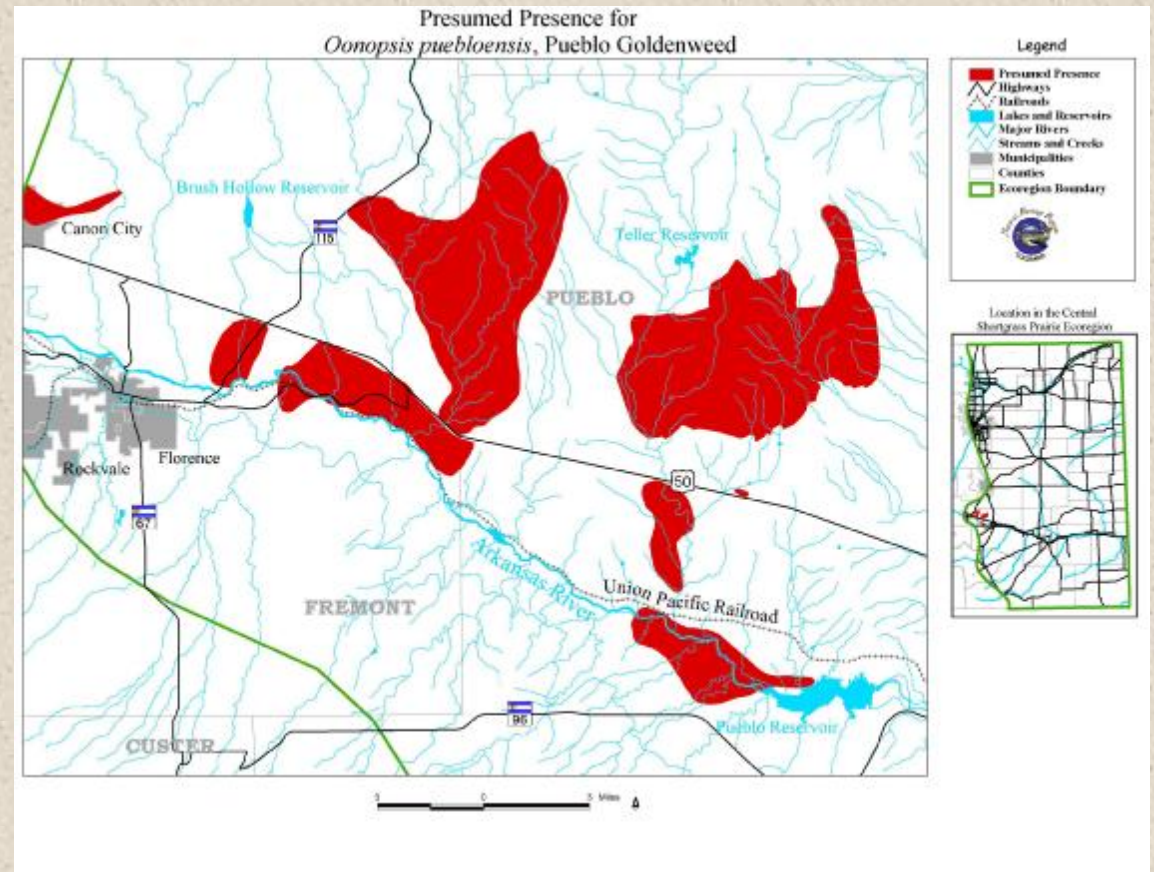


# Plants (3)

Arkansas River Feverfew  
(*Bolophyta tetraeuris*)

Pueblo Goldenweed  
(*Oonopsis puebloensis*)

Round-leaf Four-O'clock  
(*Oxybaphus rotundifolius*)



## Results/Deliverables:

- Estimated 15,160 acres of potentially impacted habitat.
- Programmatic Biological Assessment, report, and conservation strategy submitted to USFWS in 2003.
- TNC contracted to develop and implement management plan.
- CNHP has been subcontracted for monitoring.

