Plan for the Reintroduction of Gunnison's Prairie Dog (*Cynomys gunnisoni*) at Rio Mora National Wildlife Refuge (RMNWR), NM

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Background

Cynomys gunnisoni, Gunnison's prairie dog (GPD)

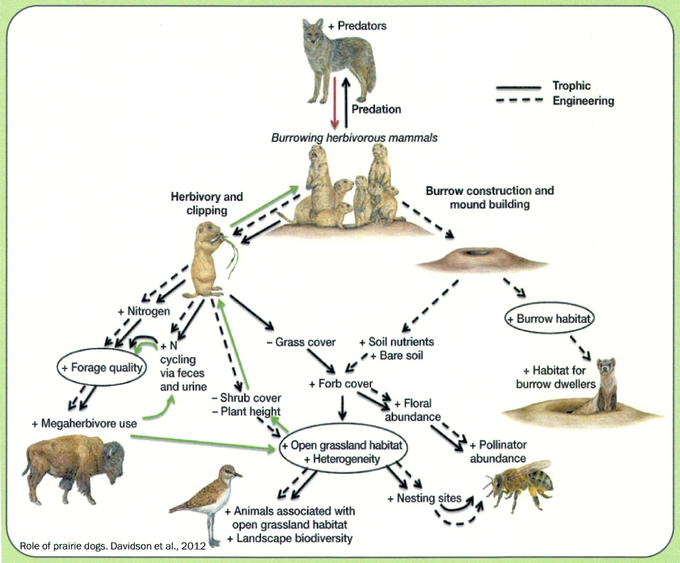
- 2006 RMNWR pop. size: 300
- Conservation Status at RMNWR: **Not Present**
- Conservation Status Nationally: **Least Concern**
- Pop. trend: decreasing
- Historic geographic range: ↘98 – 99%
- Habitat pref.: Shrubland, Grassland, Desert

Description

- 30 – 37cm in length and 0.5 to 1kg
- Yellow/buff coat, some black colored hairs, white tail

Ecological Importance

- Considered keystone species by USFWS
  - Aerate soil to prevent vegetation encroachment
  - Endangered black-footed ferrets, ferruginous hawks, coyotes, etc. depend on GPD for diet[1,2]
  - Inactive burrows, shelter for burrowing owls and mountain plovers[5]



Role of prairie dogs. Davidson et al., 2012

Objectives

- Reestablish keystone species & ecosystem engineers
- Target pop. size: 4,200 (10-yr plan at RMNWR)
- Target range: ~4,000 acres
- Pop. stability

Threats

Actions

Reintroduction at RMNWR to re-establish a stable GPD pop.

- Rationale: 600 GPD reintroduced to Sevilleta NWR each year since 2006[4] has established stable pop.
- Monitoring:
  - Pre-reintroduction: Habitat assessment of RMNWR habitat suitability for GPD
  - Post-reintroduction: Monthly ground surveys to monitor community structure
- Stakeholders: Local landowners, USFWS, Local gov't
- *Potential funding: Denver Zoo, Mora County Commission, Prairie Dog Pals*
- Est. cost: $5 million

Prevent plague to maintain the reintroduced GPD pop.

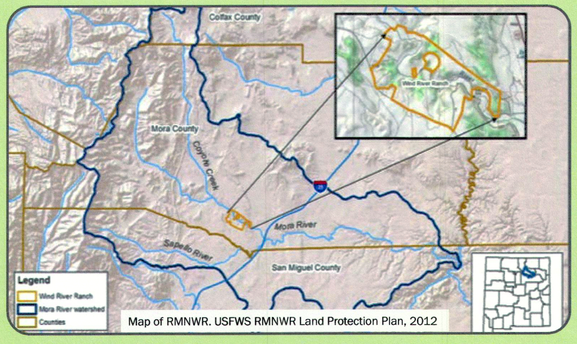
- Rationale: Sylvatic plague causes massive pop. declines[6]; preventing plague will ensure
- Immunization of GPD via vaccination bait
- Monitoring:
  - Pre-treatment: Distribute bait to active burrows
  - Post-treatment: Draw blood to test seroconversion & monthly pop. count and note reason of death
- Stakeholders: Local animal control, Sevilleta NWR, Local farmers
- *Potential funding: USFWS, Local/State gov't, Adopt-a-Dog program*
- Est. cost: 1,400 acres($100 bait/acre + $200 tests/acre) = $420,000[6]

Regulate recreational shooting to support reintroduced GPD pop.

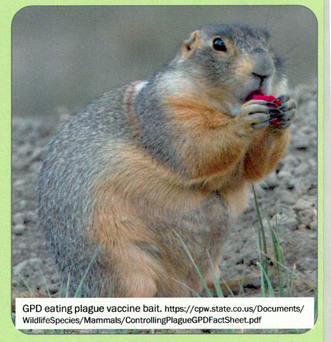
- Rationale: To aid in maintaining a stable population at RMNWR and prevent declines in reintroduced populations
- Monitoring:
  - Pre-treatment: Get estimates of how many prairie dogs are killed annually by hunters through surveys
  - Post-treatment: Surveys & flyers distributed with hunting licenses to obtain new estimates of prairie dogs being shot after listed as game species
- Propose to be listed as game
- Stakeholders: Local farmers, Hunters, NM Dept. of Game & Fish
- *Potential funding: USFWS, NM Dept. of Game & Fish*
- Est. cost: $1,000 for brochures

Community Outreach to increase understanding of importance of GPD in grasslands

- Rationale: To remove the image of GPD as pests but as important ecosystem engineers of the community will help reduce effort to kill them via poisoning or shooting
- Stakeholder meeting to bring awareness of GPD role within an ecosystem and their current population
- Brochures to distribute within community
- *Potential funding: USFWS, NM Dept. of Game & Fish*
- Est. cost: $1,000 for brochures

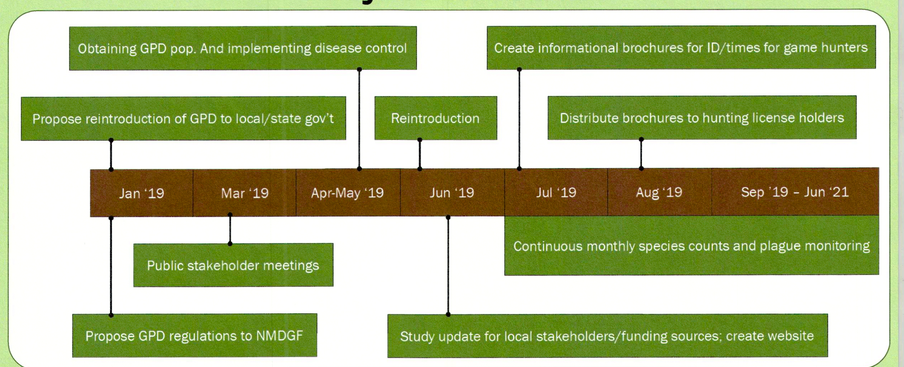


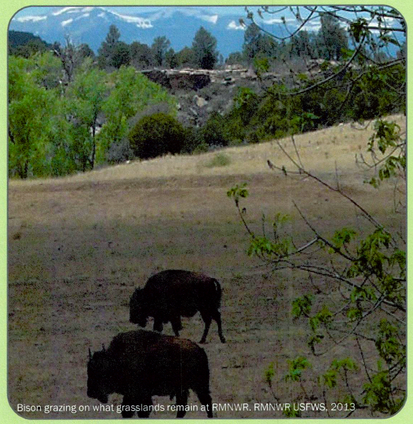
Map of RMNWR. USFWS RMNWR Land Protection Plan, 2012



GPD eating plague vaccine bait. https://cpw.state.co.us/Documents/WildlifeSpecies/Mammals/ControllingPlagueGPDFactSheet.pdf

Project Timeline





Bison grazing on what grasslands remain at RMNWR. RMNWR USFWS, 2013

Key Gaps in Knowledge

- Determine exact population sizes
- Explore more cost-effective methods for preventing plague outbreaks
- Further research on GPD reintroductions
- Practicality of establishing metapopulations
- Effectiveness of game hunting regulations

Acknowledgements

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