

Black-footed Ferret Recovery in Canada, Mexico and the United States

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A Species on the Edge...

- Described late and ecology not well understood.
- Mellette County, SD population studied in midst of decline; first captive rearing efforts initiated.
- Last known specimen died in captivity in 1979; species believed to be extinct.
- Population discovered near Meeteetse, WY in 1981; declined shortly thereafter due to plague.
- 2nd attempt at captive rearing successful; founder population of 18 individuals (7 bred).
- A conservation success, but complete reliance on captive rearing is problematic.

“Frankenferret”?

Emerging technologies bring opportunities and challenges

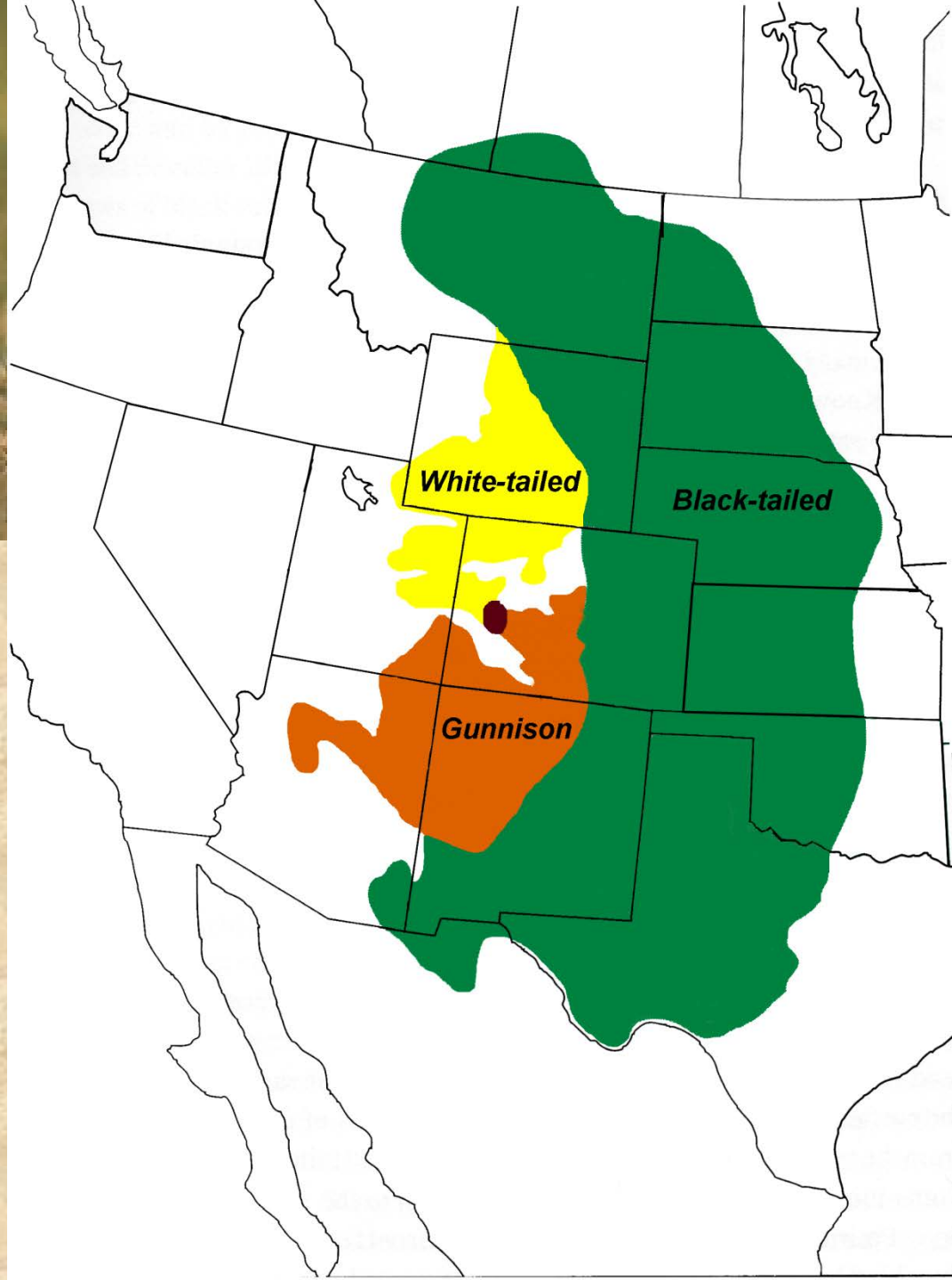


Challenges require policy development and raise ethical questions

Credit: Sierra Tamkun, 2015



The historical range of the black-footed ferret coincided with ranges of the black-tailed, white-tailed, and Gunnison's prairie dogs. Approximately 85% of all ferrets occurred in black-tailed prairie dog habitat, 8% in Gunnison's, and 7% in white-tailed.

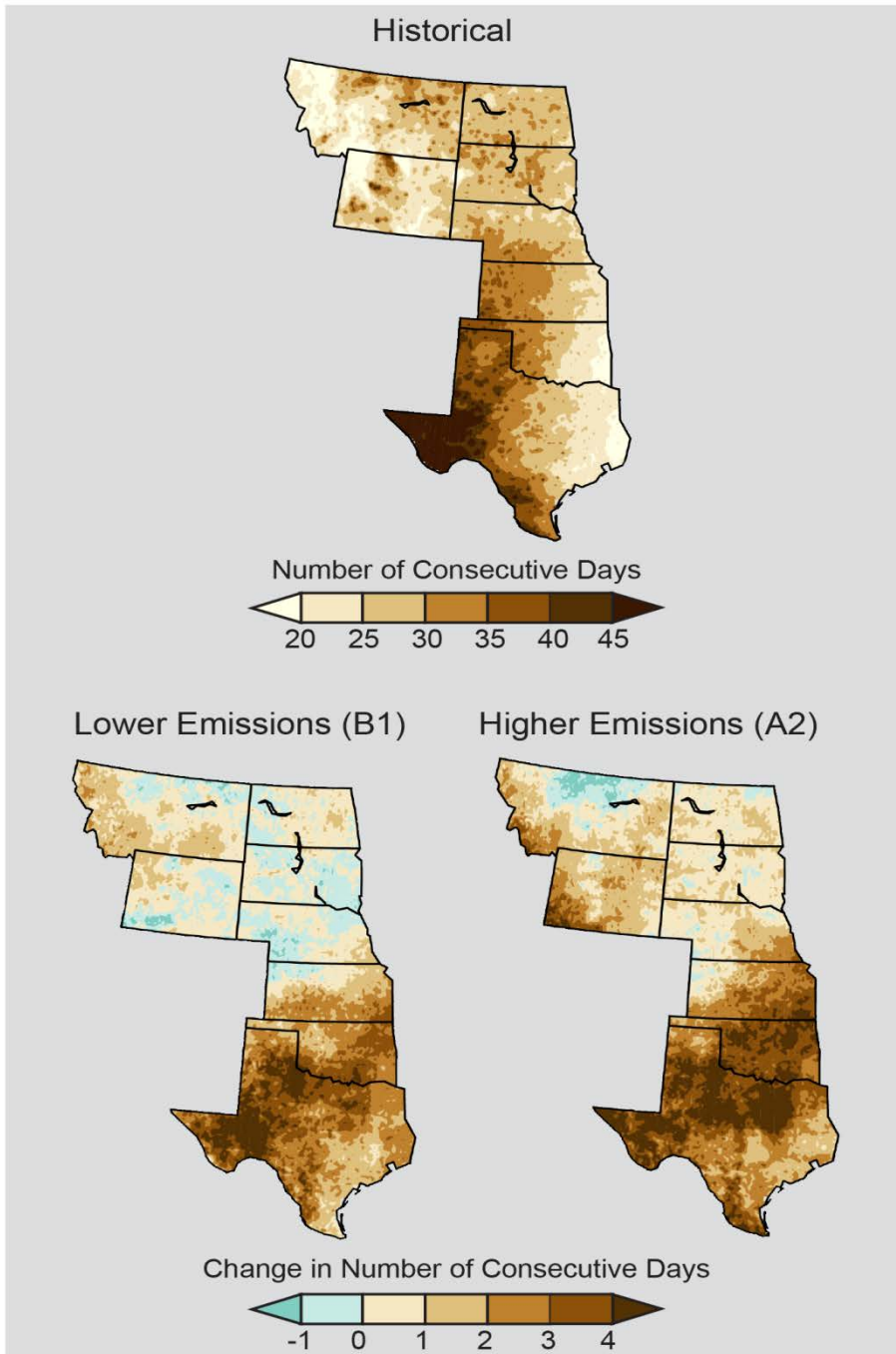




Plague Considerations

- Plague **directly** impacts ferrets via infection and subsequent mortality.
- Plague **indirectly** impacts ferrets via its effects on prairie dogs and subsequent dramatic declines in the ferret's primary prey base.
- Plague can be **managed** through ferret vaccination and vector control, but this approach has limitations; an IPM strategy is needed.
- Oral sylvatic plague vaccine research trials show promise, and other options are being explored.

Projected Change in Number of Consecutive Dry Days



Possible Effects of Climate Change:

- Increased variability in a variable landscape
- Drought will be more prevalent at southern reintroduction sites
- Wetter conditions in northern Great Plains may improve habitat conditions for PDs
- Effects on plague occurrence and duration unknown and very difficult to model

Black-footed Ferret Recovery Goals & Habitat Needs by State

STATE	Minimum # Breeding Adults Alive	# Adults / # Acres Suggested to Downlist	# Adults / # Acres Suggested to Delist
Arizona	31	74 adults/17,000 ac	148 adults/34,000 ac
Colorado	38	149 adults/29,000 ac	288 adults/58,000 ac
Kansas	14	123 adults/18,500 ac	246 adults/37,000 ac
Montana	32	147adults/22,000 ac	294 adults/44,000 ac
Nebraska	0	134 adults/20,000 ac	268 adults/40,000 ac
New Mexico	2	220 adults/39,000 ac	440 adults/78,000 ac
North Dakota	0	38 adults/6,000 ac	76 adults/12,000 ac
Oklahoma	0	70 adults/10,500 ac	140 adults/21,000 ac
South Dakota	129	102 adults/15,000 ac	204 adults/30,000 ac
Texas	0	254 adults/38,000 ac	508 adults/76,000 ac
Utah	10	25 adults/6,000 ac	50 adults/12,000 ac
Wyoming	45	171 adults/35,000 ac	342 adults/70,000 ac
Total	301	1,507 adults/256,000 ac	3,004 adults/512,000 ac



**Black-footed Ferret
RECOVERY**

Regulatory Assurance

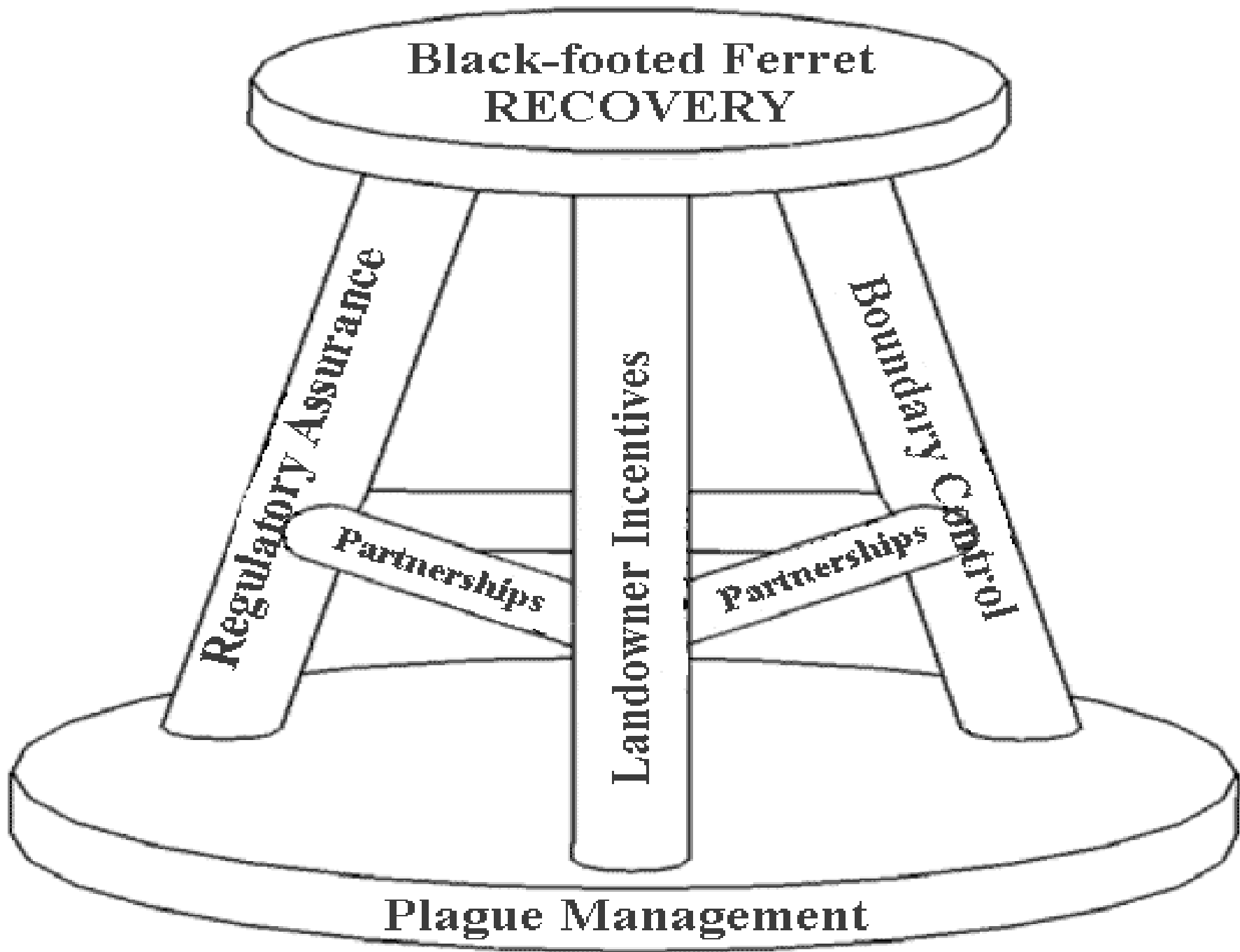
Landowner Incentives

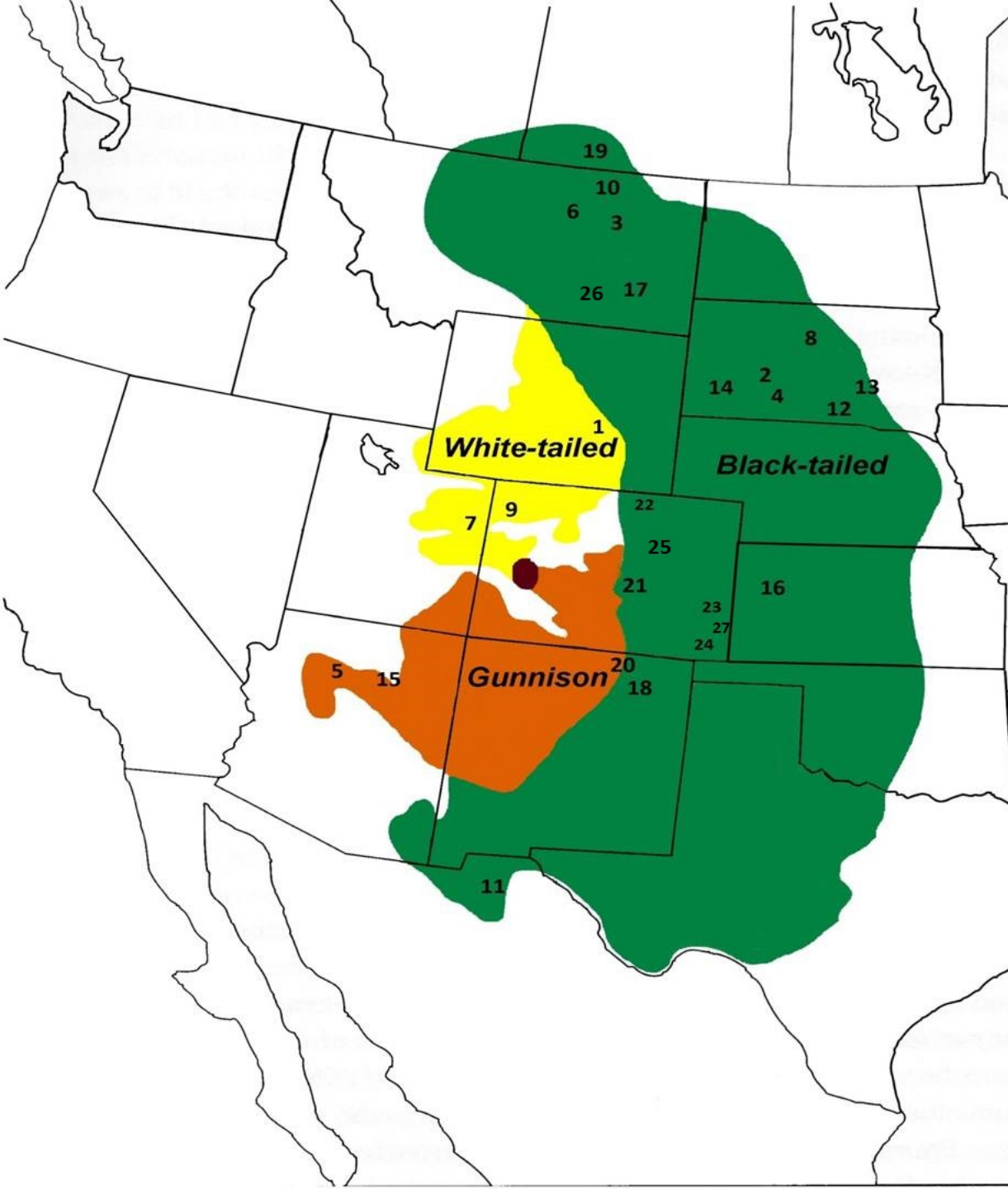
Boundary Control

Partnerships

Partnerships

Plague Management

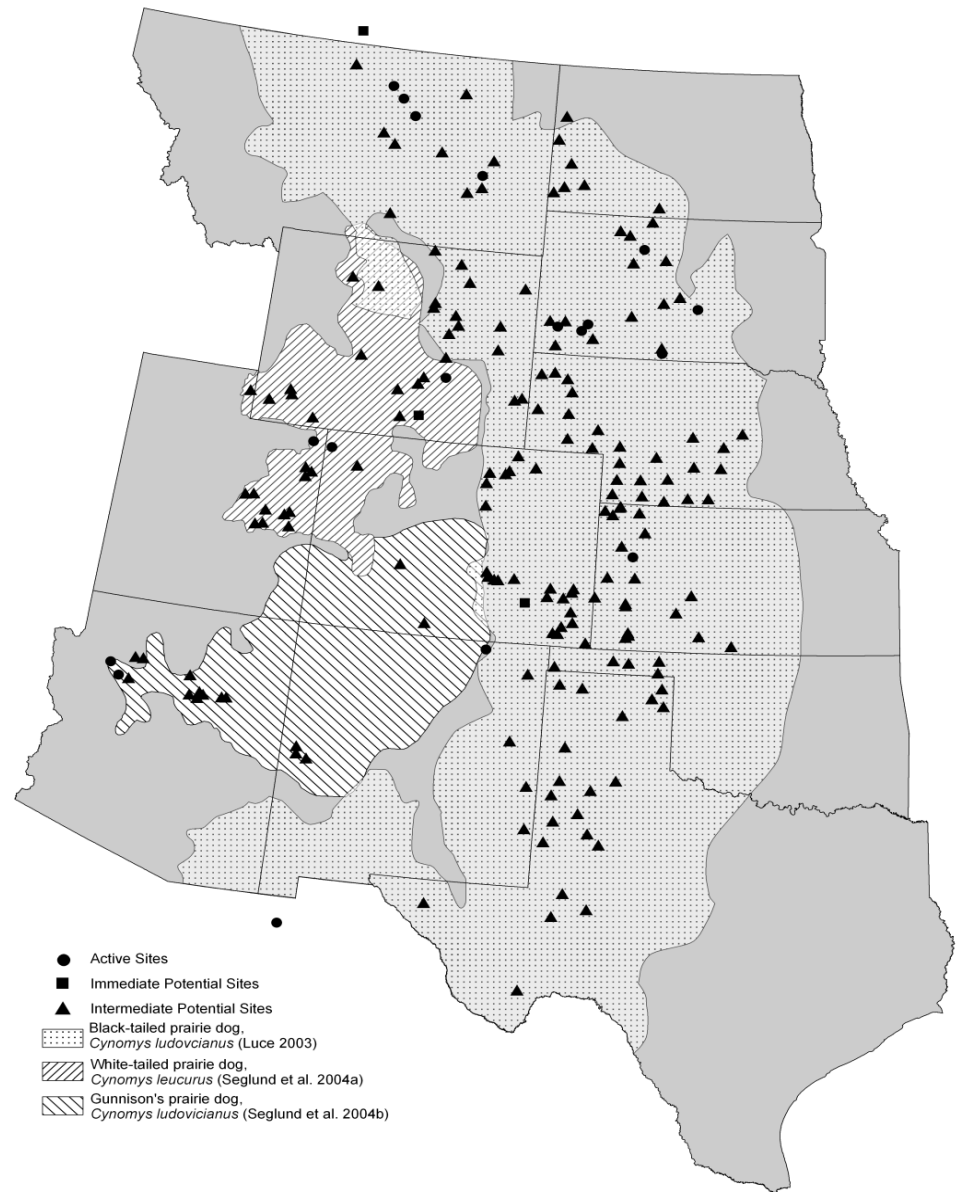




- 1) Shirley Basin, WY, 1991
- 2) Badlands NP, SD, 1994
- 3) UL Bend NWR, MT, 1994
- 4) Conata Basin, SD, 1996
- 5) Aubrey Valley, AZ, 1996
- 6) Ft. Belknap, MT, 1997
- 7) Coyote Basin, UT, 1999
- 8) Cheyenne River, SD, 2000
- 9) Wolf Creek, CO, 2001
- 10) BLM 40 Complex, MT, 2001
- 11) Janos, Mexico, 2001
- 12) Rosebud, SD, 2003
- 13) Lower Brule, SD, 2006
- 14) Wind Cave NP, SD, 2007
- 15) Espee Ranch, AZ, 2007
- 16) Logan County, KS, 2007
- 17) Northern Cheyenne, MT, 2008
- 18) Vermejo Ranch, btpd NM, 2008
- 19) Grasslands NP, SK, 2009
- 20) Vermejo Ranch gpd, NM , 2012
- 21) Walker Ranch, CO, 2013
- 22) City of Fort Collins, CO, 2014
- 23) South Holly, CO, 2014
- 24) Liberty, CO, 2014
- 25) Rocky Mountain Arsenal, CO, 2015
- 26) Crow Reservation, MT, 2015
- 27) South Holly, CO, 2015

Additional Release Sites are Needed:

Past planning
efforts need
to be revisited
and
expanded



Locations of active, immediate potential, and intermediate potential black-footed ferret reintroduction sites (Luce 2008)

Future Recovery Efforts

- An “all of the above” strategy is needed.
- Plague management is critical and needs to be expanded to sites in Canada and Mexico.
- Political hurdles preventing reintroduction efforts at some sites must be overcome.
- Incentives for private landowners and funding for boundary prairie dog control must be expanded.
- Complex size matters; smaller sites will likely require periodic augmentation.
- The ability to trap and translocate wild-born kits will be key to future reintroduction efforts.