

White-tailed Prairie Dog

2011 Monitoring

Pinedale Anticline Project Area

(preliminary results)



Joel Thompson, Troy
Rintz, Shay Howlin,

Survey Objectives

1. Monitor long-term trend in occupancy rates via mapping of prairie dog towns
2. Monitor long-term trend in active burrow density/prairie-dog numbers

Monitoring Matrix

- **Sensitive Species (WTPD)**
- **Criteria:**
 - Occurrence of species and change in numbers of each species
- **Changes to Monitor:**
 - 3-year change in presence/absence of species, and in numbers of individuals of each species, compared to reference areas.
- **Specific Change Requiring Mitigation:**
 - 3 consecutive years of decline in presence or absence of a species, or an average of 15% decline in numbers of individuals each year over 3 years.

Original Methods

- Delineate and monitor prairie dog towns through mapping of towns and estimation of active burrow densities
 - Towns were mapped in 2009 to establish baseline for future comparisons
- WY Coop Review
 - Suggested monitoring trend based on occupancy modeling and not monitoring of prairie dog towns.

2010 Survey

- Pilot study based on occupancy modeling methods as recommended by COOP.
 - 500m x 500m plots
 - 99 plots surveyed in PAPA/Core area
 - 30 plots surveyed in Reference area

2010 Pilot Study Results

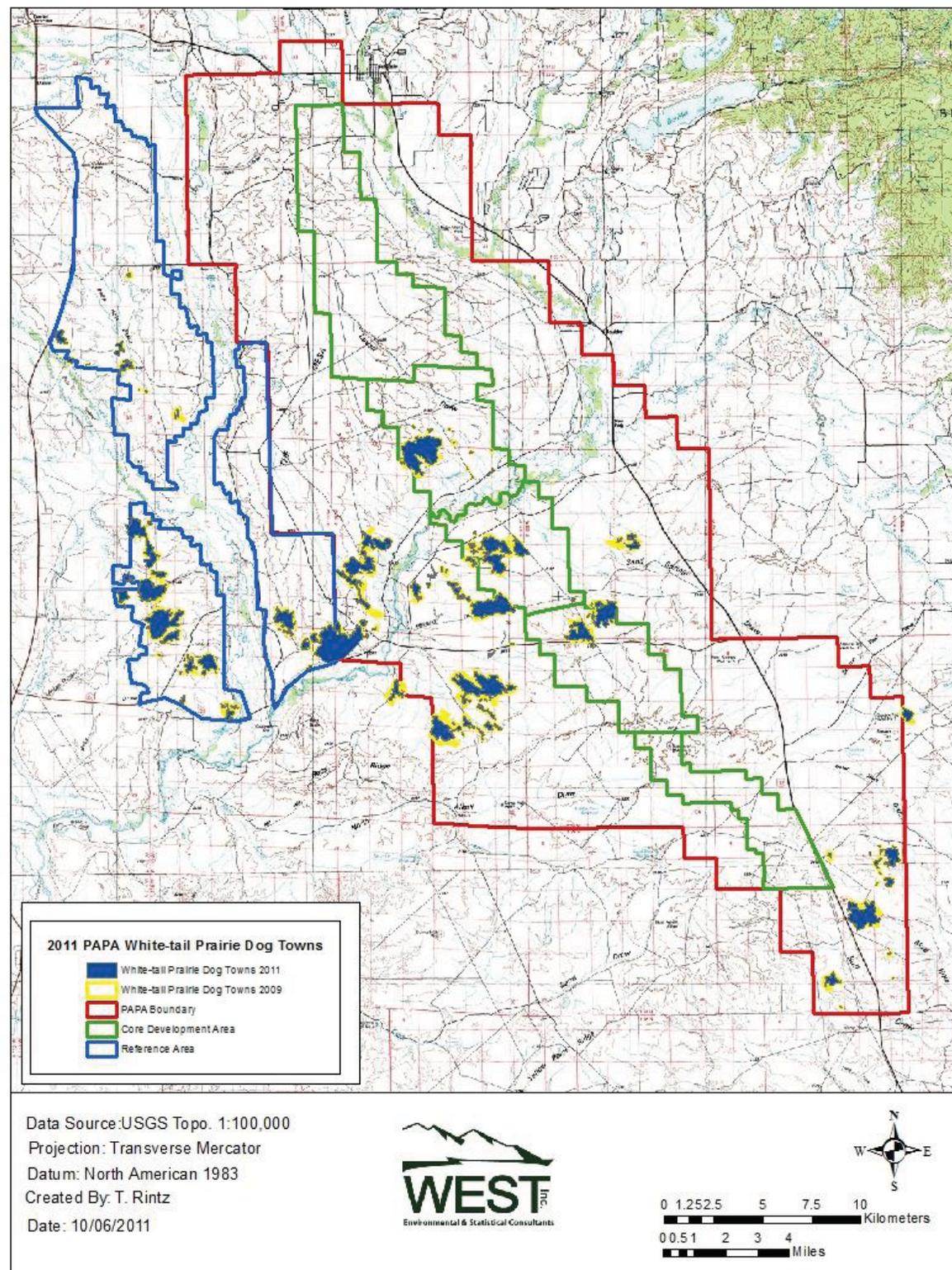
- Occupancy Modeling and Power Analysis determined it was unreasonable to detect a 15% trend over 3-yr period with a reasonable number of sample plots.
- BLM/WGFD decided to go back to the original methods of monitoring towns and burrow densities.

2011 Survey

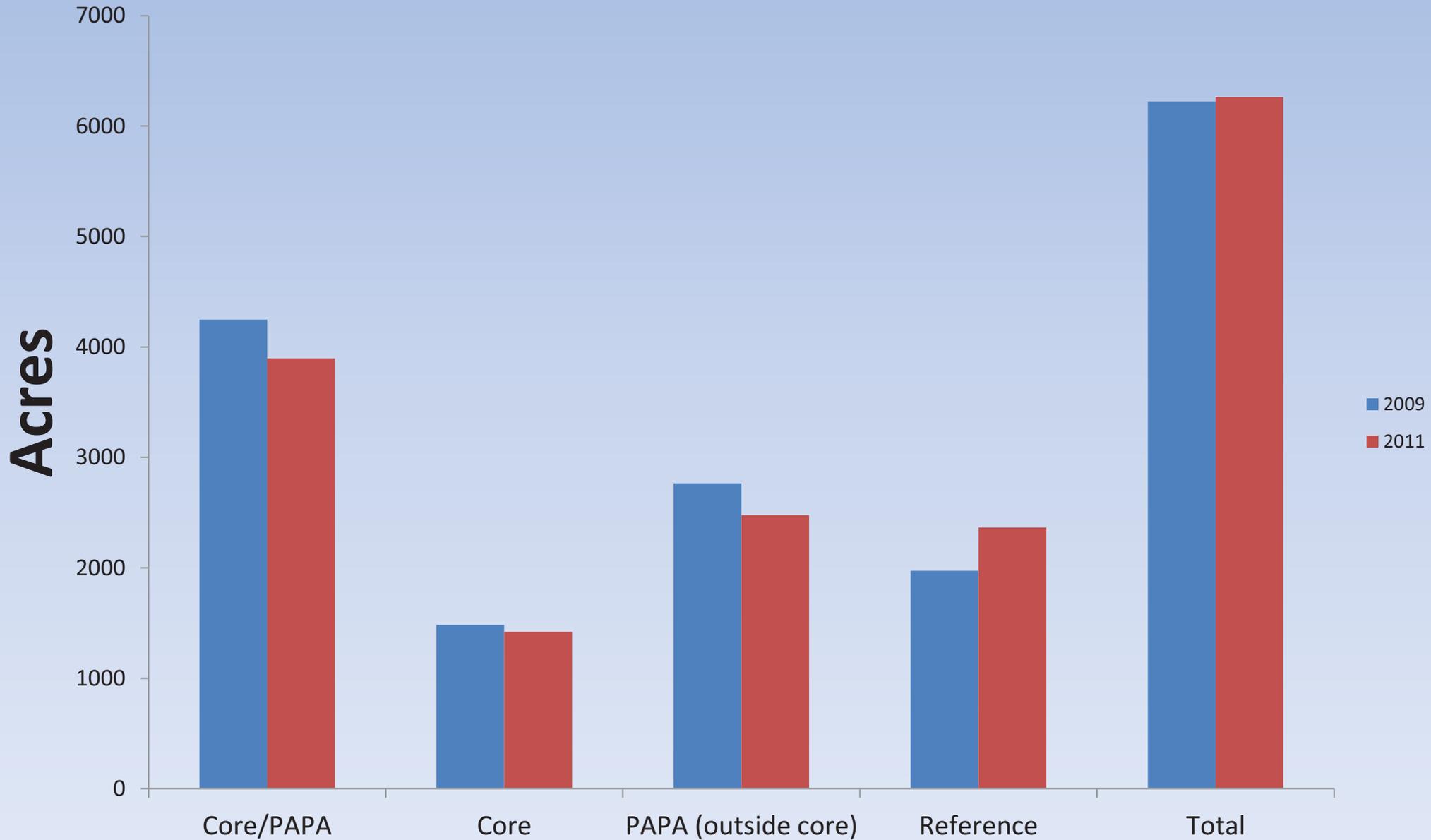
- Mapping of Towns
 - All towns previously mapped in 2009 were revisited and mapped
 - New towns identified while in the field were also mapped
- Burrow Density
 - All mapped towns were surveyed for burrow density

2011 Towns

Mapped based on
Biggins et al. (1992)
methods



Acreege of Towns

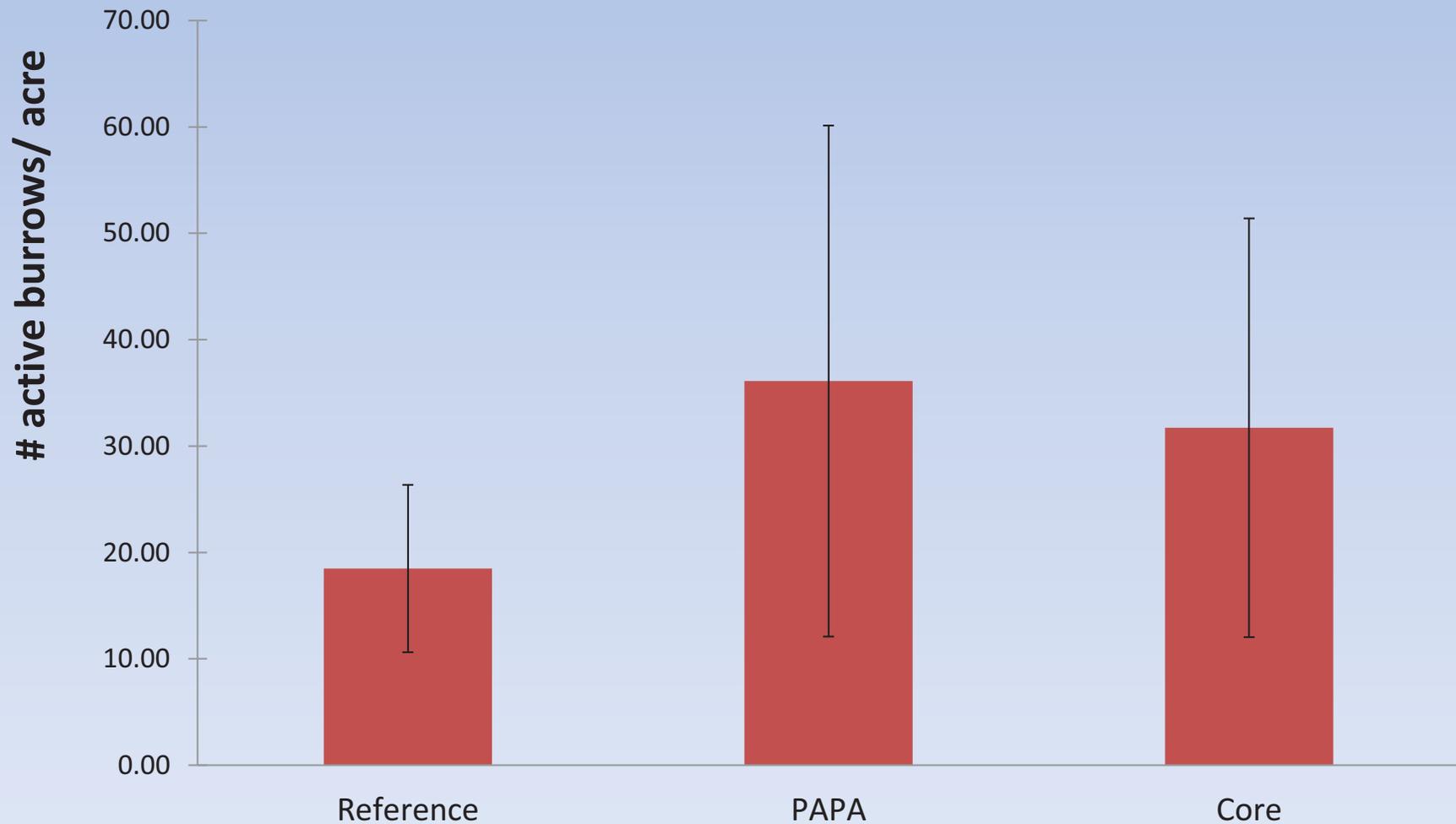


Survey Methods-Burrow Density

- Every town mapped was surveyed for burrow density based on methods in Biggins et al. 1992.
 - Strip transects (3m wide) spaced 60m apart across every town
 - Data Recorded during each visit:
 - Total Number of Burrows (>7cm diameter entrance with end not visible)
 - Number of Active Burrows (fresh scat within 0.5m of entrance)

Active Burrow Density

(Mean and 95% CI)



Future Plans

- Continue with current methods of mapping towns and estimating burrow densities
- Following 2012 season begin comparisons of burrow densities, as well as acreage of towns.