

Southeast Individual Population Area Action Plan for Gunnison's Prairie Dogs November 2009

The Implementation Planning Workshop (IPW) for the Southeast Individual Population Area (SEIPA) was held on October 28, 2009 at the Chaffee County Fairgrounds in Salida. The SEIPA includes portions of Chaffee, Fremont, Teller, El Paso, Custer, Huerfano, and Las Animas counties. Twenty-five participants representing CDOW, USFS, USFWS, Chaffee County, Colorado Correctional Industries, Land Trust of the Upper Arkansas, Chaffee County Cattlemen, and private landowners met and ranked the issues affecting Gunnison's prairie dogs (GUPD) in the SEIPA. Attendees reviewed issues thought to negatively impact GUPDs and ranked their significance in the SEIPA. The issues ranking process resulted in urban development, lack of information on population status and trends, disease, and lack of information on taxonomic status and population structure being ranked as the highest potential threats to GUPDs in the SEIPA. This list is not meant to exclude other important issues, but rather to provide a starting point for identifying some short-term action priorities to be implemented on the ground to help maintain and conserve GUPD populations in the SEIPA.

The participants reviewed the possible strategies identified in the conservation assessment and selected the top strategies for each of the highest ranked issues for possible implementation in the 3-5 year SEIPA action plan. The list of strategies for each issue follows:

Urban Development (i.e. subdividing and housing developments)

- 1) **11.2.1.4 Public Education:** Prepare, distribute and present informational materials about GUPDs to land-use planners, developers, landowners, realtors, utility companies, relevant agencies, and housing residents.
- 2) **11.5.1.3 Cooperative Planning:** Encourage biologists and land managers to work with planners to address GUPDs and development issues
- 3) **11.1.2.2 Sub/Urban Best Management Practices (BMP) Development:** develop BMPs for sub/urban site development in GUPD habitat.

Lack of Information on Population Status and Trends (i.e. population monitoring)

- 1) **7.1.2.4 Standardize Mapping:** Refine and standardize GUPD mapping to facilitate data collection for land-use planning.
- 2) **7.1.2.5 Central Data Repository:** Develop and maintain a central repository for GUPD monitoring and inventory data.
- 3) **7.1.1.1 Three-Year Occupancy Sampling:** Implement occupancy sampling every 3 years (start year for GUPDs was 2005) as per current protocol. If the rangewide trigger (Western Association of Fish & Wildlife Agencies 2007) is reached, increase sampling frequency to annual sampling.

Disease (i.e. plague)

- 1) **3.5.1.2 Public Plague Education:** Improve public understanding of the role of prairie dogs in plague epidemiology (e.g., website, pamphlets, and radio)
- 2) **3.1.1.7 Plague Monitoring and Prediction:** Intensively monitor (long-term) a sample of GUPD colonies throughout their range for evidence of exposure to plague, to develop a model that predicts where plague is likely to occur in prairie dogs in the future.
- 3) **3.2.1.3 Implement Monitoring Protocol:** Implement plague monitoring and surveillance efforts for GUPD management needs.

- 4) **3.4.1.1 Post-Plague Population Recovery:** Monitor GUPD dynamics and demography to understand population recovery following plague outbreaks

Lack of Information on Taxonomic Status & Population Structure (i.e. genetics)

- 1) **5.3.1.2 (NEW strategy) Determine boundary of GUPD & BTPD geographical range:** Collect genetic samples from prairie dogs occupying sites along the geographical boundaries of GUPD & BTPD range (El Paso, Fremont, Huerfano, & Las Animas counties)
- 2) **5.1.2.1 Metapopulation Dynamics:** Evaluate the levels and patterns of genetic diversity and variation among populations of GUPDs to evaluate metapopulation and source/sink dynamics.
- 3) **5.1.1.5 Post-plague Monitoring (NEW strategy):** Monitor a sample of GUPDs following plague events to determine if specific GUPD groups have genetic differences.
- 4) **5.2.1.1 Subspecies data collection:** Collect DNA and morphometric samples from the GU, SLV, SP, SE, SW and LPA IPAs to be used in determining subspecies designation.

ACTION PLAN:

Urban Development

Subdividing/housing developments was identified as the top issue affecting GUPDs in the SEIPA. Conversion of agricultural land to housing developments seems to be a common occurrence throughout the SEIPA. The strategies identified involved public education (11.2.1.4) and working with local land-use planners to address development issues (11.5.1.3) including development of best management practices (BMPs) (11.1.2.2).

Task: Work cooperatively with local land-use planners to address development issues including developing BMPs.

- **Cooperators:** City & County Governments
- **Lead Agency:** CDOW
- **Cost:** Personnel time
- **Timeline:**
 - November 2009 to May 2010** - Work with land-use planners to draft BMPs and discuss possible conservation strategies through land-use planning.
 - June 2010 to 2012** - Use BMPs in land-use planning and continue working cooperatively with local governments.

Task: Increase public education regarding GUPD conservation, natural history, and disease issues.

- **Cooperators:** BLM, USFS, City and County Governments
- **Lead Agency:** CDOW
- **Cost:** Personnel time, cost of materials and printing
- **Timeline:**
 - November 2009 to June 2010**- Prepare informational brochure and develop a strategy to distribute materials to land-use planners, developers, realtors, landowners, etc.
 - July 2010 to 2012**- Distribute brochure and give presentations if needed.

Lack of Information on Population Status and Trends

The local workgroup acknowledged the status and trend of GUPD populations in the SEIPA are unknown. Plague is thought to impact populations within the area at a rate of every 7 years. Populations are

thought to recover to pre-plague densities following outbreaks. However, there is no data to substantiate this claim. Additional information is needed on distributional and population changes of prairie dogs within the SEIPA to better evaluate the impact of plague and other issues. The priority strategies (in order of local importance) identified by the local workgroup are 7.1.2.4, 7.1.2.5 and 7.1.1.1.

Task: Refine and standardize GUPD mapping in the SE IPA to facilitate data collection for land-use planning.

- **Cooperators:** USFS, BLM, state land managers, private landowners (participation voluntary)
- **Lead Agency:** CDOW
- **Cost:** Personnel Time
- **Timeline:**
June 2010 to October 2011 - Make contact with agency folks and stakeholders to get permission to map colonies and develop protocol for mapping colonies. Identify areas that have been impacted by plague and those areas not impacted.
April 2012 – August 2012 - Map colonies and evaluate status every 2 years.

Task: Develop and maintain a central repository for GUPD monitoring and inventory data.

- **Cooperators:** USFS, BLM, state land managers, private landowners (participation voluntary)
- **Lead Agency:** CDOW
- **Cost:** Personnel time
- **Timeline:**
April 2010 to 2015 - Continue to provide input to Species Activity Mapping, Occupancy database, and local mapping database.

Task: Implement occupancy sampling every 3 years for GUPD as per current protocol.

- **Cooperators:** BLM, USFS, state land managers, private landowners (participation voluntary)
- **Lead Agency:** CDOW
- **Cost:** \$90,000.00
- **Timeline:**
Every three years with next survey to be completed April – August 2010.

Disease

Plague seems to be one of the top issues facing GUPD across their entire range. There was much discussion about local plague outbreaks within the SEIPA. Observations from local landowners and wildlife managers show that there is a regular plague cycle within the SEIPA, however GUPD populations seem to recover after each plague event. This could be unique to the SEIPA. For this reason, monitoring (3.1.1.7, 3.2.1.3, 3.4.1.1) was a main theme in most of the strategies chosen. Increasing public education about plague (3.5.1.2) was also identified and is addressed above in the Urban Development public education task. Educational handouts could include local contact information for reporting plague die-outs (see task above).

Task: Implement a plague monitoring protocol including long-term monitoring of a population sample for plague exposure, as well as post-plague recovery.

- **Cooperators:** USFS, BLM, state land managers, private landowners (participation voluntary)
- **Lead agency:** CDOW
- **Cost:** Personnel time, hiring technicians, lab time for analyzing flea samples

- **Timeline:**
November 2009 to December 2010- Gain approval for plague monitoring and develop protocol.
April 2011 to 2014- Implement monitoring protocol.

Lack of Information on Taxonomic Status & Population Structure

Little is known about the genetic diversity of GUPDs throughout their range and within the SEIPA. The eastern side of the SEIPA borders black-tailed prairie dog (BTPD) range and little is known about their exact geographical boundaries (5.3.1.2). Collecting data from the eastern side of the SEIPA will also help fill in the data gaps for the range-wide subspecies data collection effort which is already taking place (5.2.1.1). Metapopulation dynamics and post-plague genetic monitoring were also identified as beneficial strategies. These long-term strategies can go hand-in-hand since post-plague monitoring will directly correlate with source/sink dynamics, however these are long-term strategies that will first need baseline data such as subspecies data collection.

Task: Collect genetic and morphometric samples from GUPDs & BTPDs along the eastern side of the SEIPA, along with additional samples of GUPDs within the SEIPA.

- **Cooperators:** USFS, BLM, state land managers, private landowners (participation voluntary)
- **Lead Agency:** CDOW
- **Cost:** Staff and possibly technician time, sampling materials, DNA sampling and analysis
- **Timeline:**
November 2009 to May 2010- Identify locations to collect genetics samples and begin gaining access if on private land.
June 2010 to August 2012- Collect genetic samples.
September 2012 to December 2012- Analyze genetic samples and complete final report.

Plan Implementation & Follow-up

The CDOW will hold an annual follow-up meeting in late summer or early fall in the SEIPA to update the community on the implementation of the action plan and evaluate the success of each year's activities. The CDOW will schedule this meeting at a convenient time and location so that interested stakeholders will have the ability to attend. In addition, the local CDOW biologists will complete a written annual report for public review.