Candelaria Nature Preserve Annual Presentation





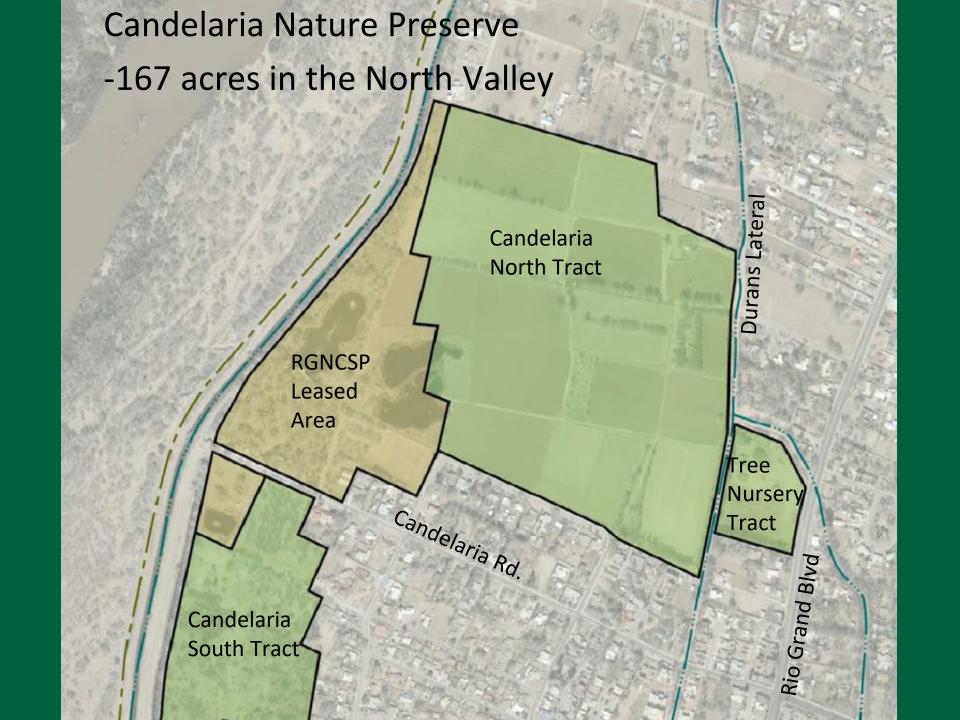




Colleen Langan-McRoberts, Open Space Superintendent

Kyle Faig, Open Space Field Biologist

Sean Ludden, Ciudad SWCD Conservation Program Manager



2022 Accomplishments

- Initiated active restoration on ~14 acres
 - Management of wildlife farming on ~ 43 acres
- Tree Nursery Tract Site Plan
- Design of East and West Wildlife Viewing Areas
- CST: fuel reduction along the fence line; Fuel breaks through middle of property
- Friends of Candelaria
 - 75 members & 897 hrs. worked
 - Lead monthly public tours
 - · Leading the interpretive plan for CNP and Woodward
- Youth Conservation and volunteer involvement
 - Ancestral Lands Conservation Corps & Cottonwood Gulch
- CSWCD awarded \$74,000 in funds from NM Healthy Soil Program (HSP) towards CNT restoration
- Continued engagement with Habitat Council





CNT: Wildlife Farming Activities



- Methods employed are no till
- Increasing diversity in cover crops and native species seeded
- Irrigated acreage increased in 2022
- Maintenance of 100% cover and low disturbance methods in 4B/4C
- HSP-funded mulching in 1A
- Initiating seeding of native grass
 1B, 3B, 4A (dry soil grassland)
- Hedgerows using native plant nursery towards planting in gaps





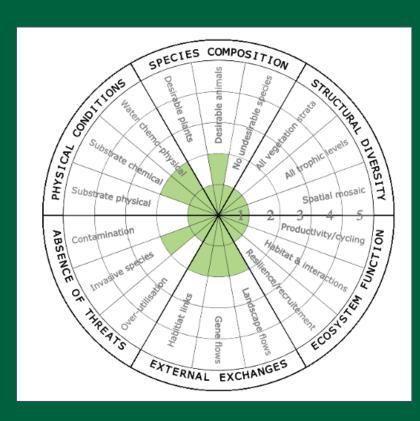
CNT: Restoration

- Operations by Ciudad SWCD/Rio Grande Return on 85.5 acres (78.18 arable)
- Reduced impact to soils
- Managed to limit growth and dispersal of exotics/invasive species
- Fields fallow: target dry soil regimes
- Introduced 4 additional woody habitat features and perches
- Implemented active restoration in field 1B, Out planted 800 native plants over 5 months - Salt Shrubland
- Expansion of native plants nursery
- Maintenance of diverse living surface cover in wildlife fields (migratory bird and terrestrial species)



CNT: Ecological Monitoring

- Ecological models in process to better anticipate and plan outcomes
 - SER recovery wheel utilized
- Evaluation of plant mortality into 2023
- Exotic species presence, "hotspots"
- Monitoring ongoing for soil changes (Lab tests, compaction, aggregate stability, soil cover)
 Photos and documentation ongoing
- of processes, lessons learned
- Observations inform models and crop/restoration planning and design





Overall, operations on CNT in 2022 resulted in an increase in native plant cover, diverse no-till wildlife forage and reduction in exotic species abundance

CNT: Wildlife Monitoring

Photo Points and Wildlife Cameras

Eleven photos points throughout the CNT looking over each farm field plot. Monitoring happening on an seasonal basis during the year. Fifteen wildlife cameras will be installed throughout the property to better monitor the wildlife on the property and the corridors they use. This will allow us to better enhance the preserve and decrease any fragmentation occurring to wildlife mobility.

Avian Survey

Volunteer bird surveys will be conducted by a crew of volunteers from the RGNC. They will be expanding from just the Candelaria Wetlands into the CNT and eventually CST. All data will be input into ebird. Point-count surveys will be initiated shortly after the surveys begin.

Community Science

BEMP held two trainings for Natures Notebook and the Candelaria Nature Preserve is now an online database for users to input observations.

IPM Planning

The Integrated Pest Management plan is in draft form

- Comprehensive approach to protect desired species from non-native invasive species thru prevention and treatment.
- Site inventory and monitoring schedule
- Guidelines on prevention, detection, and appropriate techniques
- Control techniques that are appropriate and accountable to thresholds
- Protocols for informing public, especially neighboring residents, about all methods used to manage weeds, including the use of herbicide
- Revegetation with native species
- Monitor efficacy of control techniques
- Measurable monitoring objectives to evaluate progress
- Adaptive management of IPM; continuing research for new methods, protocols, or survey/monitor techniques
- Life history of target pest species and best management practices table
- Prevention practices for further spread and reinvasion.
- Next steps



Outdoor Recreation and Education

Interpretive signage design

Educational work days

- Students, Volunteers, and Service members
- River Xchange, Cottonwood Gulch, Ancestral Lands, and Holy Ghost Catholic School
- Planted native plants and removed invasives

Nature's notebook training

• BEMP

Monthly Tours lead by Friends of CNP



Tree Nursery Tract

Refined Concept

Maintenance & Operations Yard with Coyote Fence Screening

Restoration Seed Source Field

Arboretum & Climate Ready Tree Research Field

Interpretive Node

Proposed Genotype Cottonwood Study Field

Arboretum Walking Path

Maintenance Access

Time-Locked Vehicle Gate



Planning process included: public site visit, survey, meeting with adjacent residents, three public meetings, OSAB presentation, and EPC review and approval.

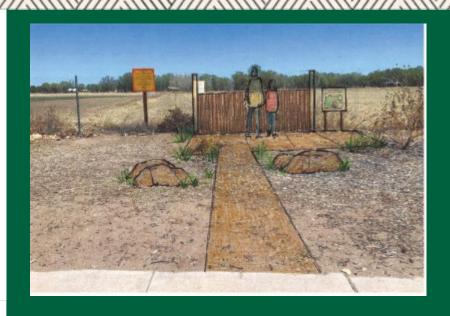
Wildlife Viewing Areas

EAST SITE - PROPOSED DESIGN REVISION









Planning Process included:

- Two public meetings,
- Survey, and
- Site visit with adjacent neighbors.



https://www.cabq.gov/candelaria-nature-preserve