

Candelaria Nature Preserve Resource Management Plan

Public Meeting #1
January 30, 2019



SWCA
ENVIRONMENTAL CONSULTANTS

DEKKER
PERICH
SABATINI

Meeting Agenda

Christina Sandoval, CABQ Parks and Recreation
CIP Program Manager

- 5:30-6:00 Open House
- 6:00-6:55 Presentation
 - Introduction
 - Colleen Langan-McRoberts- Superintendent of City of Albuquerque Open Space Division
 - Brian Hanson- Chairman of the CNP Technical Advisory Group (TAG)
 - Planning Overview
 - Ken Romig, DPS Landscape Architect
 - Ecology
 - David Lightfoot, SWCA Ecologist
 - Proposed Strategies and next steps
 - Ken Romig, DPS Landscape Architect
- 6:55 –7:30 Public Input Session



Candelaria Nature Preserve

Introduction

Colleen Langan-McRoberts



CABQ Open Space Superintendent

Brian Hanson

Technical Advisory Group Chairman



RESOURCE MANAGEMENT PLAN STUDY AREAS

-  Candelaria Nature Preserve
-  Rio Grande Nature Center State Park



Candelaria Nature Preserve

Planning Overview

Ken Romig, Dekker Perich Sabatini Landscape Architect

Meeting Purpose:

1. Present the current status of planning, management and operations of Candelaria Nature Preserve
2. Gather public input for the Resource Management Plan for three significant topics:
 - a) Public Access
 - b) Wildlife Habitat
 - c) Farming



Candelaria Nature Preserve

Candelaria *Farm* History

1928- Matthews Family Dairy

1950- Land purchased by Mrs. Leola Smith and Mr. Hugh Woodward

1968- Land transferred to the Sandia Foundation

1977- A portion of land purchased by the City of Albuquerque with city, state, local and Land and Water Conservation Funds

1980-The Rio Grande Nature Center State Park leases 38.8 acres

1981- Rio Grande Nature Center State Park Visitor Center is constructed

- 80+ acres have been farmed under contract since the Nature preserves' establishment.



Regulatory Background

Federal/National Park Service: Land and Water Conservation Fund (LWCF) Requirements

- A. LWCF funds are to be used for the acquisition and development of public outdoor recreation sites and facilities. Once LWCF funds are used by a community, the property must comply with LWCF requirements in perpetuity.
- B. Outdoor recreation areas must be kept reasonably open, accessible and safe for public use according to the type of area or facility.
- C. Acquisition of agricultural land primarily for the preservation of agricultural purposes is not allowed. LWCF clearly excludes agriculture as an acceptable natural resource management practice on LWCF properties; however, limited agricultural activity is allowed to the extent that it is necessary to support the outdoor recreation activity.
- D. Wildlife viewing is considered an acceptable outdoor recreation use according to LWCF guidelines.
- E. Signage at LWCF properties shall acknowledge LWCF in the acquisition or development of the property.
- F. A State's LWCF Liaison is responsible for ensuring that the property's approved Resource Management plans are in compliance with LWCF regulations and guidelines.



Regulatory Background

- State of New Mexico

1983 Memorandum of Understanding for Rio Grande Nature Center State Park to lease 38.8 acres and to be managed according to a separate management plan that is updated periodically.

- City of Albuquerque

Managed through the City of Albuquerque's Parks and Recreation Department, Open Space Division. Resource Management Plan oversight by the Open Space Advisory Board and the Technical Advisory Group per City Council Resolution R-16-147 and R-17-159.



LWCF and CNP Regulatory Issues

Candelaria Nature Preserve is not compliant with LWCF regulations:

1. Resource management plans have not been approved by regulatory bodies
2. Public access was restricted except for scheduled group tours
3. For-profit/commercial farming is not defined



Goals of the Resource Management Plan

- Comply with City Council requirements by:
 - Managing the property for its original dual purpose of a nature study area and wildlife preserve, while providing compatible public outdoor recreation opportunities, and;
 - Correcting issues of non-compliance with Land and Water Conservation Fund rules and policies, and;
 - Basing the Resource Management Plan primarily on the 1979 Predock Plan and drawing relevant information from other planning documents, and;
 - Developing feasible alternatives that comply with the City Council Resolution R-16-147 and LWCF regulations.



Public Outreach to Date

Stakeholder interviews (complete)

- Ciudad Soil and Water Conservation District, North Valley Coalition, Rio Grande Nature Center State Park, Surrounding Neighbors, Sierra Club, New Mexico Wilderness Alliance, Several Local Farmers

Discovery Hikes (2 per day):

- February 23 from 9-10 a.m. and 10:30-11:30 a.m.
- February 23 from 12-1 p.m.: Nature's Notebook presentation
- March 23 from 9-10 a.m. and 10:30-11:30 a.m.

Public Meeting #2:

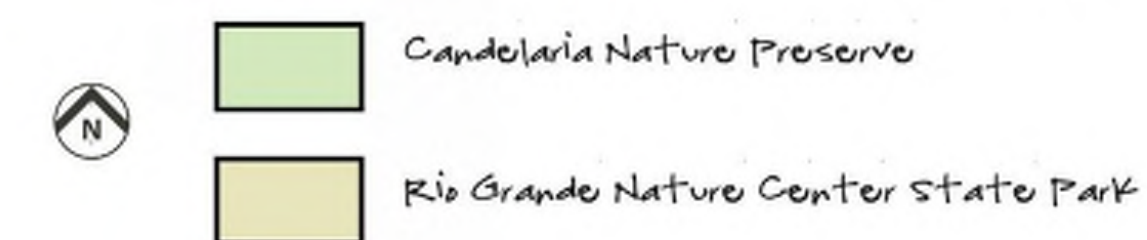
- June 22 from 8:30-10:30 a.m. at Woodward House: Alternative Presentation

Public Meeting #3:

- September 11 from 5:30-7:30 p.m. at the RGNC: Preferred Alternative Presentation



RESOURCE MANAGEMENT PLAN STUDY AREAS



Candelaria Nature Preserve

Ecology

David Lightfoot, SWCA Ecologist



Coyote in a tree



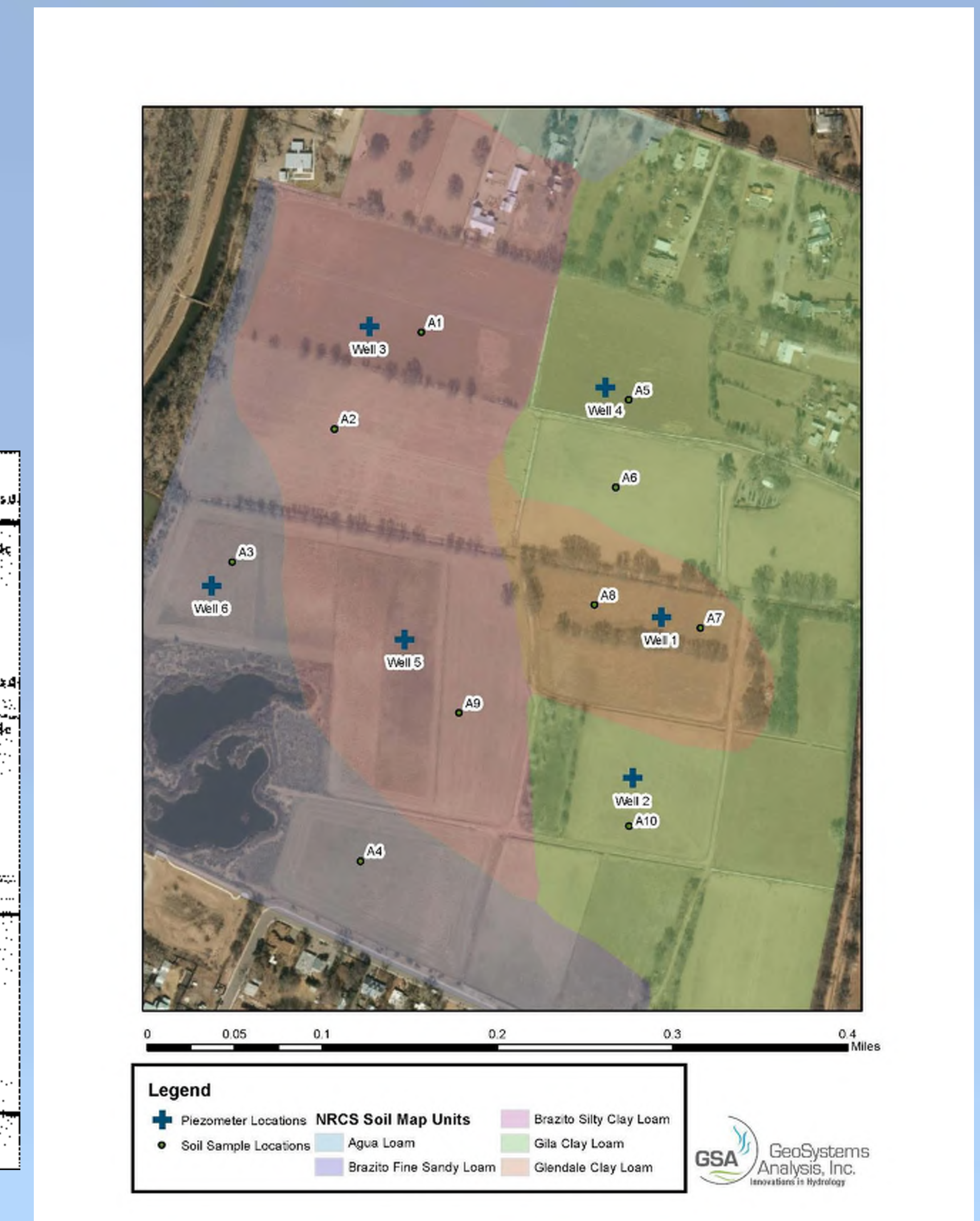
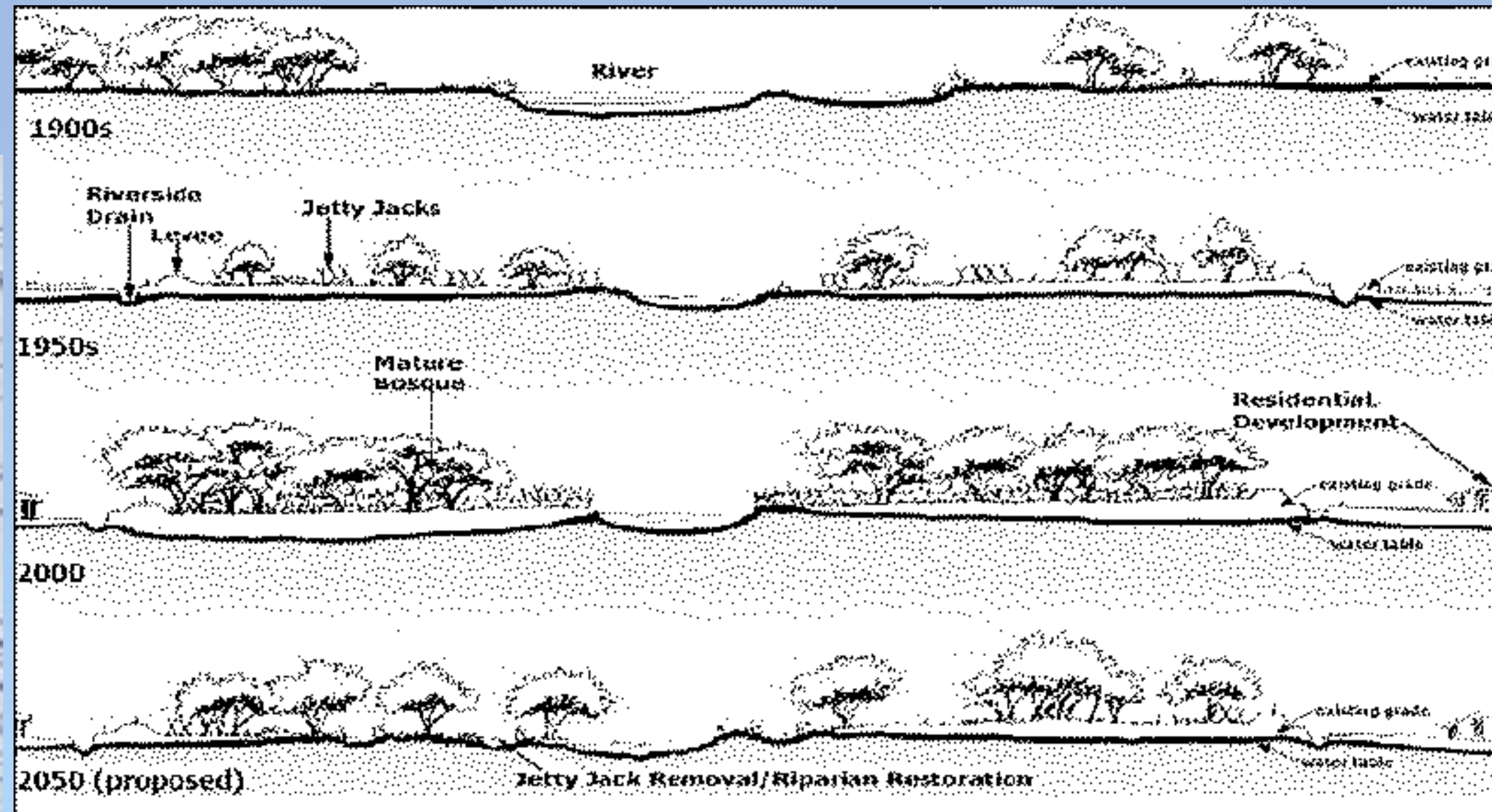
Porcupine at night



Candelaria Nature Preserve

The Physical Environment

- Topography; level, modified by humans, formerly river channels/floodplain, now farmed cropland.
- Soils; silty clay loams, no ongoing nutrient input from Rio Grande.
- Surface Water; disconnected from Rio Grande, no historic flooding, only ditches and rain pools.
- Groundwater; connected to the Rio Grande, below historic levels, currently 10-feet below surface.
- Climate; semi-arid, summer monsoon, forecast warmer and drier, and reduced Rio Grande flow.



Historic Rio Grande:

- No dams, levees or ditches.
- A meandering river across an open floodplain.
- Constant natural flooding disturbance over time.

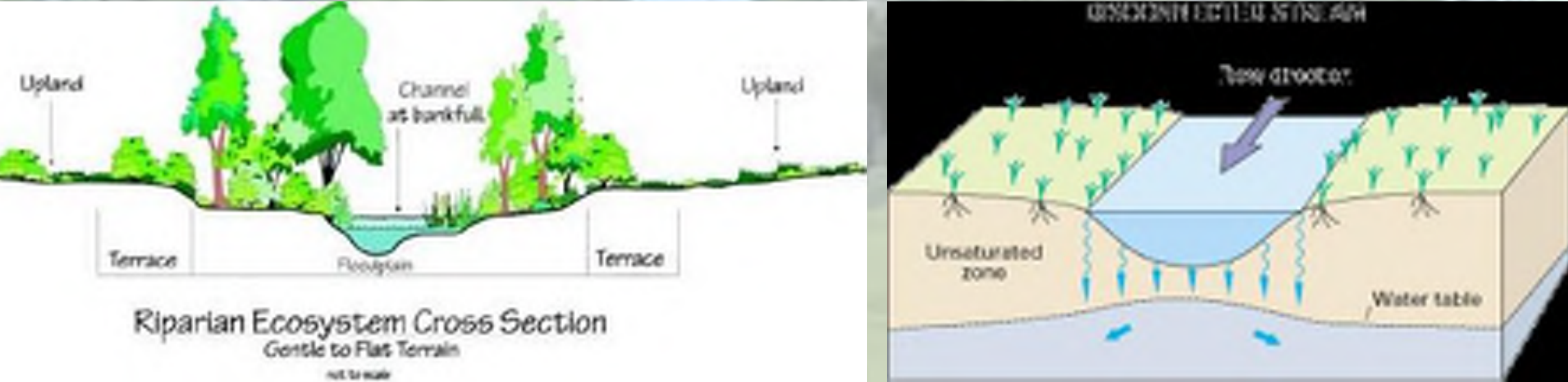
The Rio Grande floodplain has been disconnected from the Rio Grande by dams and levees:

- No flooding, disturbance, no nutrient input.
- Floodplain water table connected to Rio Grande flow, but lower than historic.
- Static landscape with no natural surface water.

The Candelaria Nature Preserve is currently managed as wildlife cropland; grain crops to provide food for wintering sandhill cranes and Canada geese.



Rio Grande/groundwater connection: Historically there was surface flooding, but now, no natural surface water connection.



Candelaria Nature Preserve

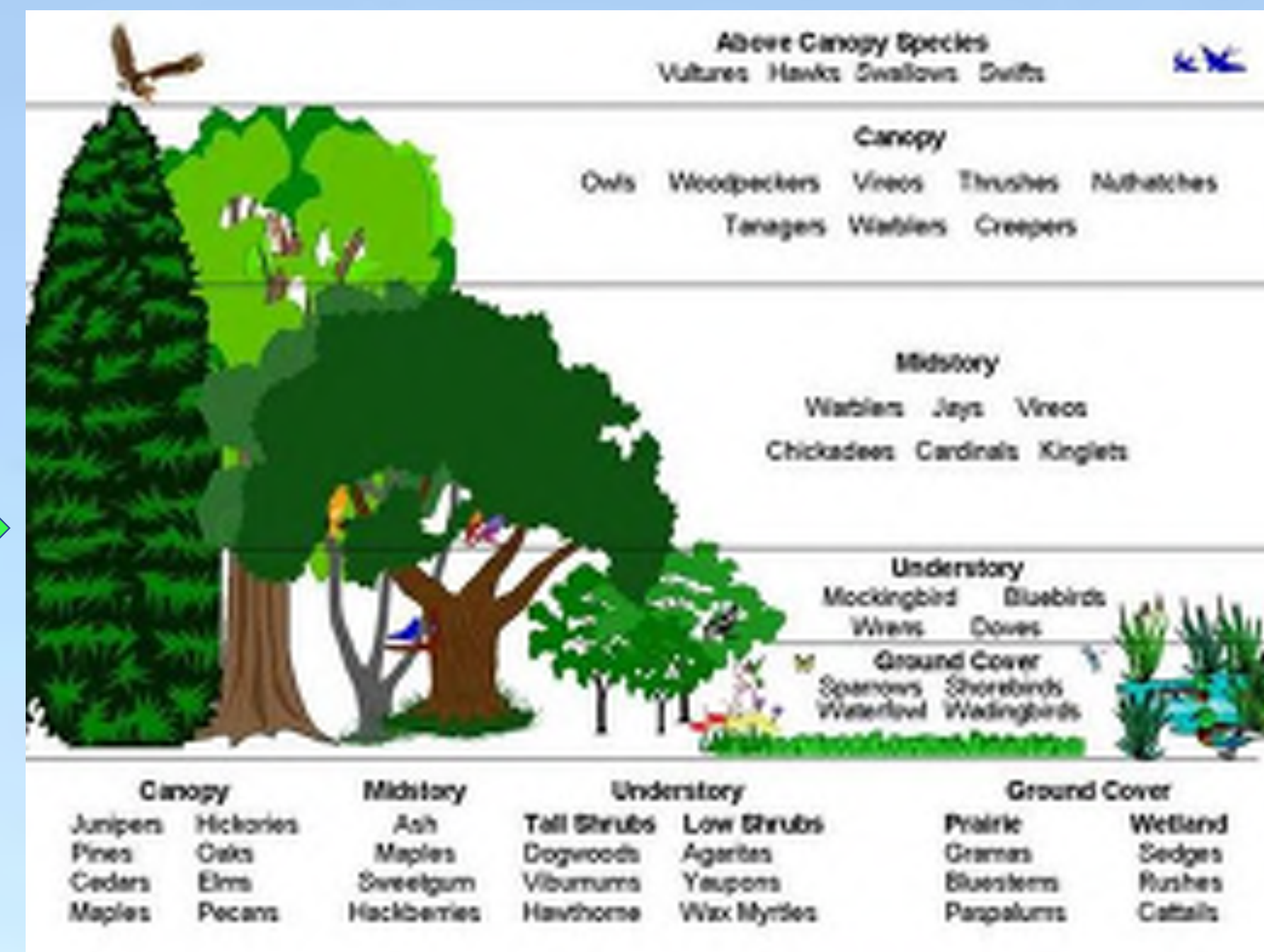
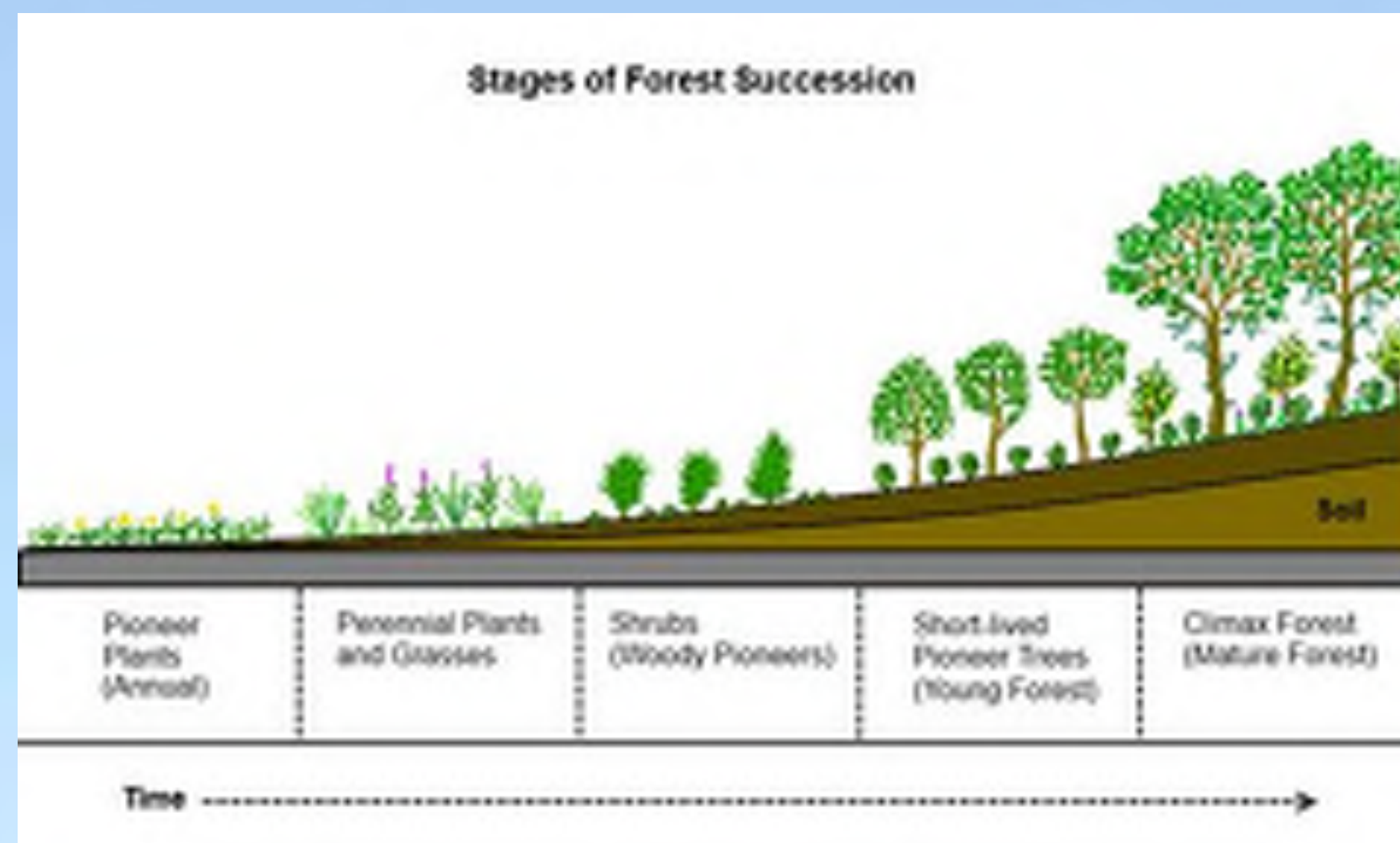
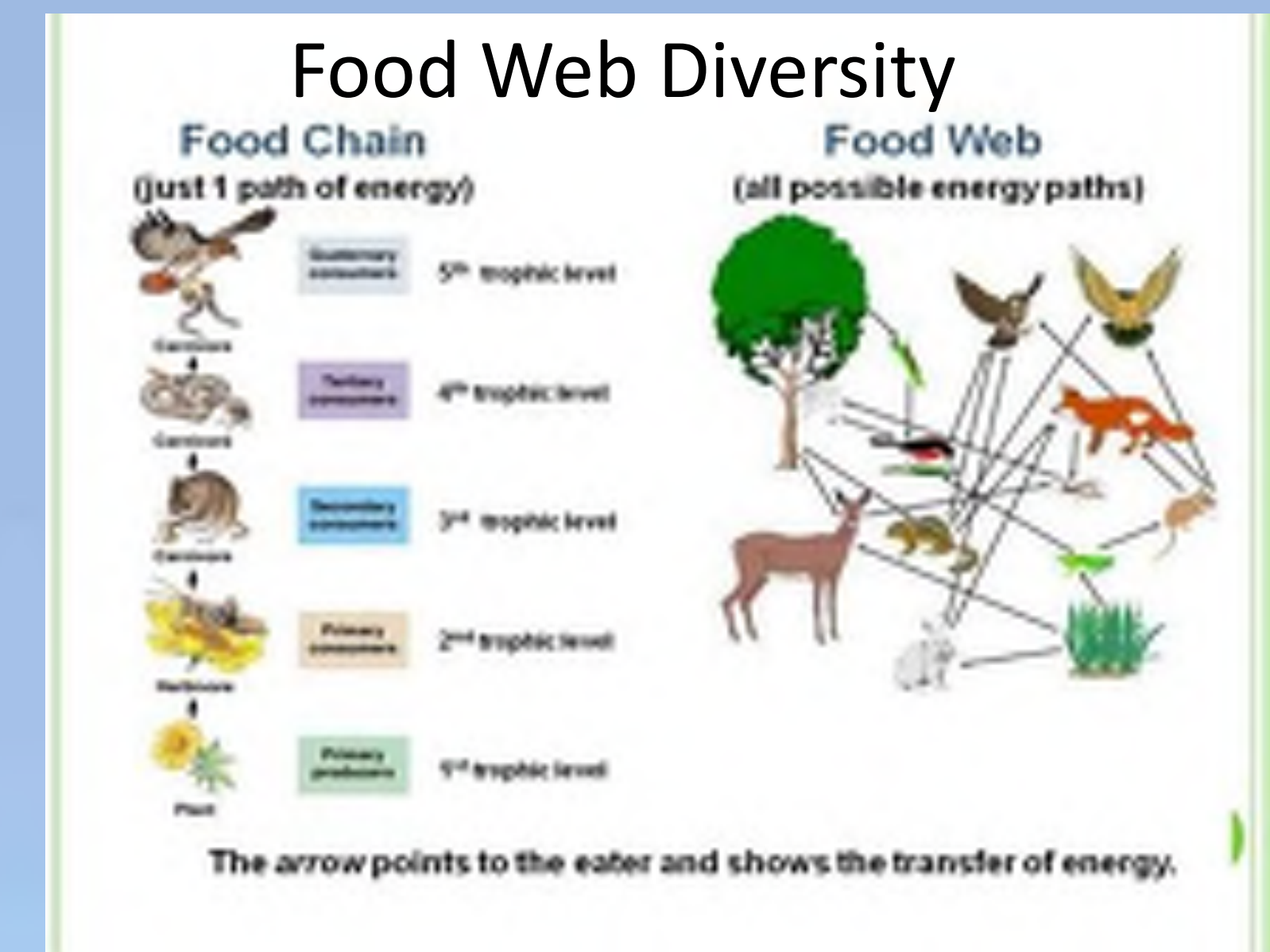
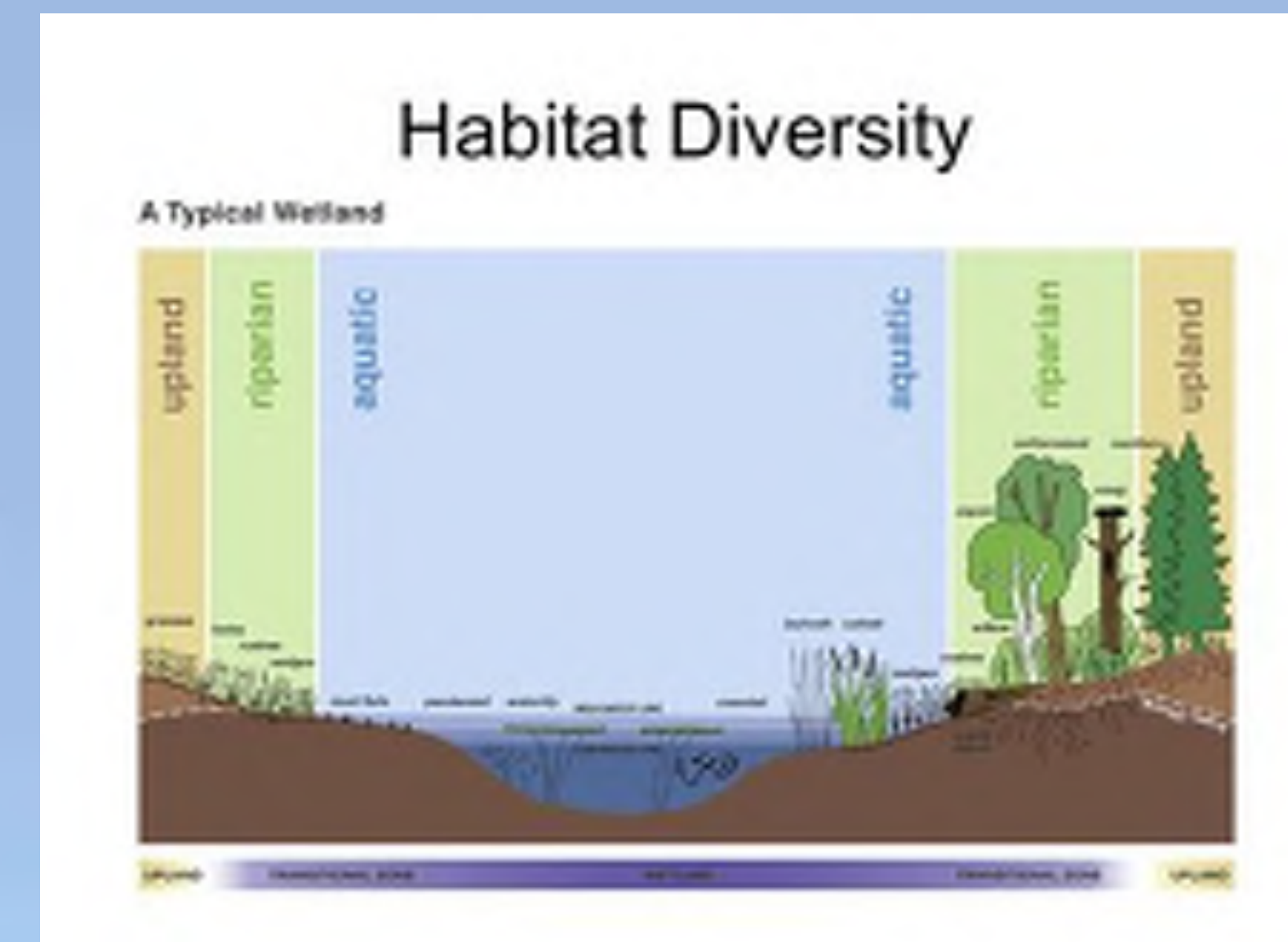
Native Plants and Animals

Currently: An ecologically altered and static ecosystem

- No ecological succession from natural flooding disturbance.
- No natural surface water, deeper groundwater than historical.
- No soil nutrient input from natural flooding.
- Non-native, invasive species common in new static environments.
- Static environments not suitable for many former native species.

Plant and animal species diversity and ecosystem stability are functions of habitat and food web diversity

The Rio Grande floodplain was a series of multiple new and old river channels, sand bars, and horizontal bands of different stages of ecological succession, each with different species (reference environmental conditions).



Historically a dynamic disturbance regime with various stages of ecological succession, multiple habitat types and high species diversity. Management will be needed to restore elements of habitat and species diversity. Restoration goals may target historic reference habitat conditions, but on a static landscape, along with some farm crops for winter waterfowl food and open habitats.

Example of horizontal and vertical vegetation structure providing habitat diversity for birds

Example of an ecologically planned farm that integrates native vegetation patches with various crops to increase ecological diversity



Candelaria Nature Preserve

The Candelaria Nature Preserve Resource Management Plan: What Would You Recommend?

We propose an ecological approach of increased habitat diversity to enhance the native wildlife of the preserve.

- **Potential Ecological/Education/Recreation Goals:**

1. Restore and maintain some Rio Grande floodplain native habitats, along with some wildlife crop fields to produce food for winter waterfowl; the combination of some restored floodplain habitats along with some wildlife crop farmland should enhance overall ecological diversity.
2. Provide outdoor public environmental education, citizen science and ecological recreation opportunities.
3. Enhance the environmental diversity and landscape size of the Rio Grande Nature Center State Park/Candelaria Nature Preserve complex.
4. Provide additional landscape-scale habitats as components of the Middle Rio Grande Basin wildlife refuge system (Bosque del Apache, Valle del Oro, Whitfield Wildlife Conservation Area, Ladd S. Gordon Waterfowl Complex), to enhance a greater regional habitat array for winter migrating waterfowl, especially sandhill cranes and summer migratory and resident wildlife species.

- **Environmental Constraints**

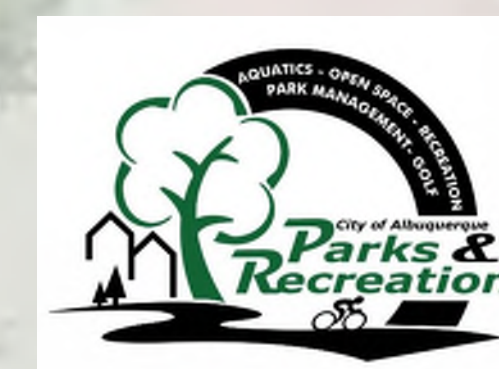
1. A human altered ecosystem now disconnected from the Rio Grande and repeat natural flooding disturbance processes.
2. Current landscape now level farm fields.
2. Lack of natural surface water and deep (10-feet below surface) groundwater, and water right limitations.
3. Human-caused climate change; regional warming, drying, less available water now and even more so in the near future.

- **Financial Constraints**

1. Limited and static funding from the City of Albuquerque.
2. Need to obtain outside funding for restoration and management operations (The Land and Water Conservation Fund).
3. Need to comply with requirements of the Land and Water Conservation Fund to obtain more funding; no commercial farming and need to provide reasonable public access.



Please direct any additional comments to:
candelariafeedback@cabq.gov



Proposed Public Access Goals

(Derived from stakeholder interviews)



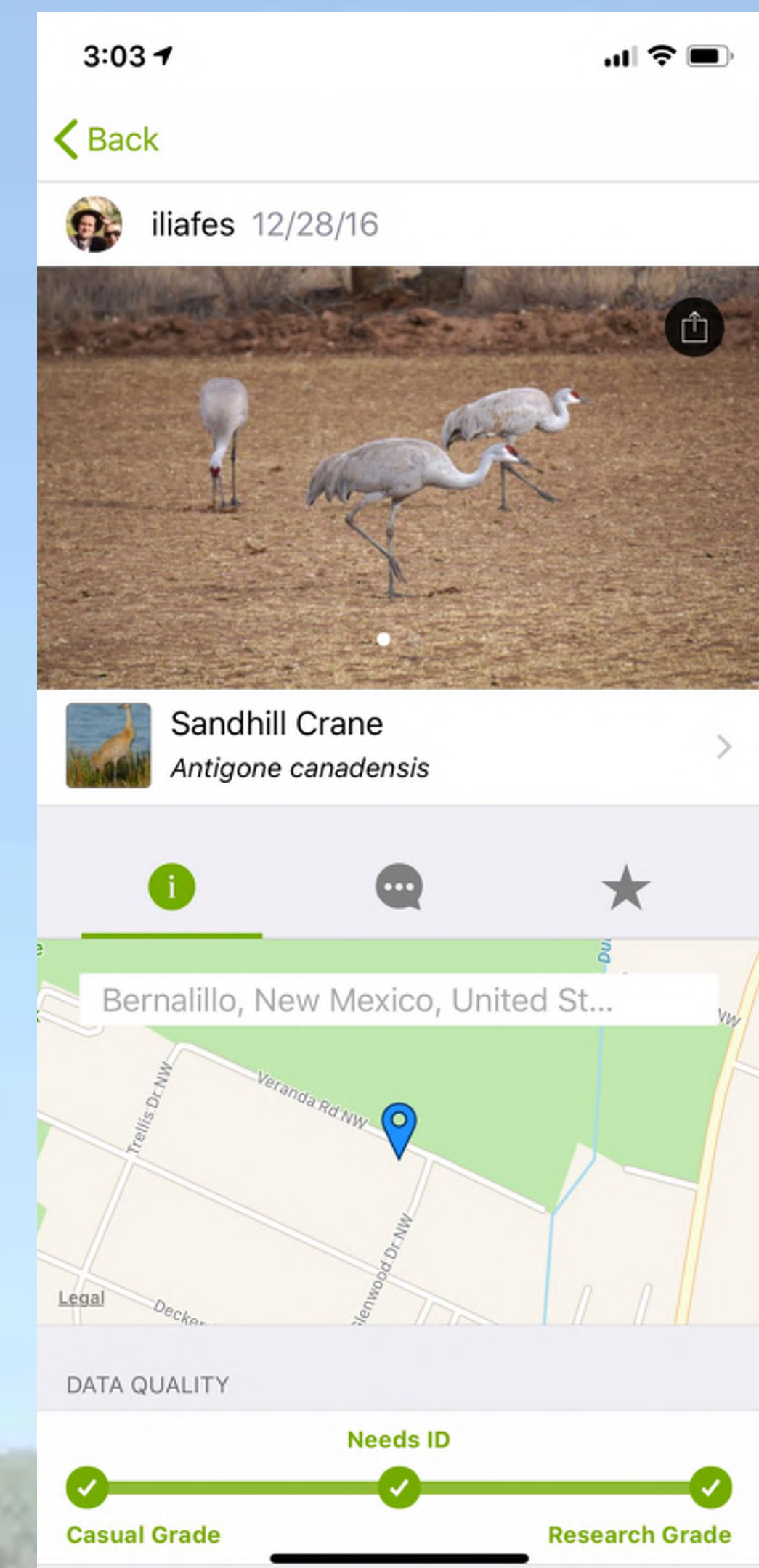
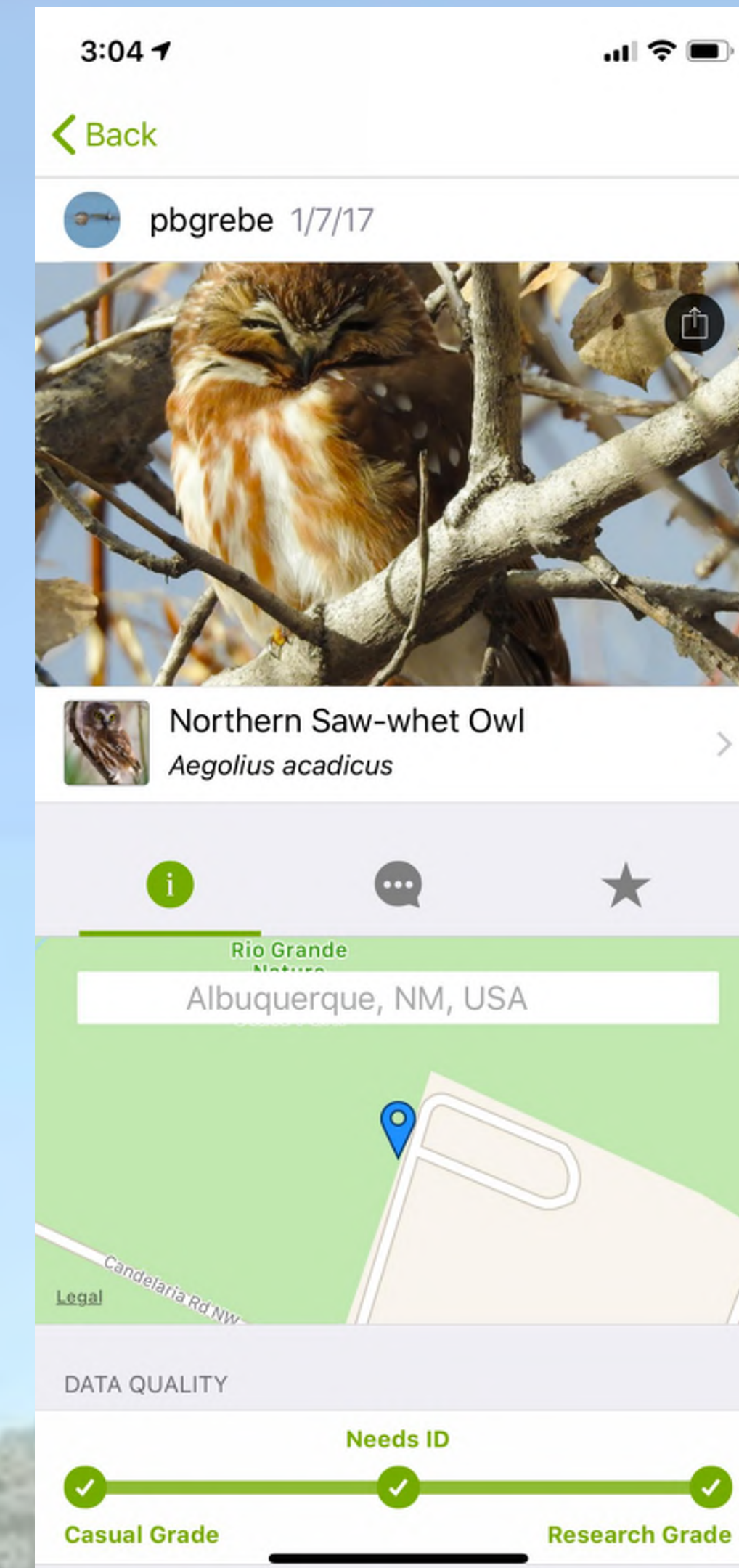
Provide visual access to the CNP and minimize physical access.
Public- access via guide/tour
Farmer access- unrestricted
Volunteer access- coordinated with nesting seasons



Proposed Ecosystem Goals

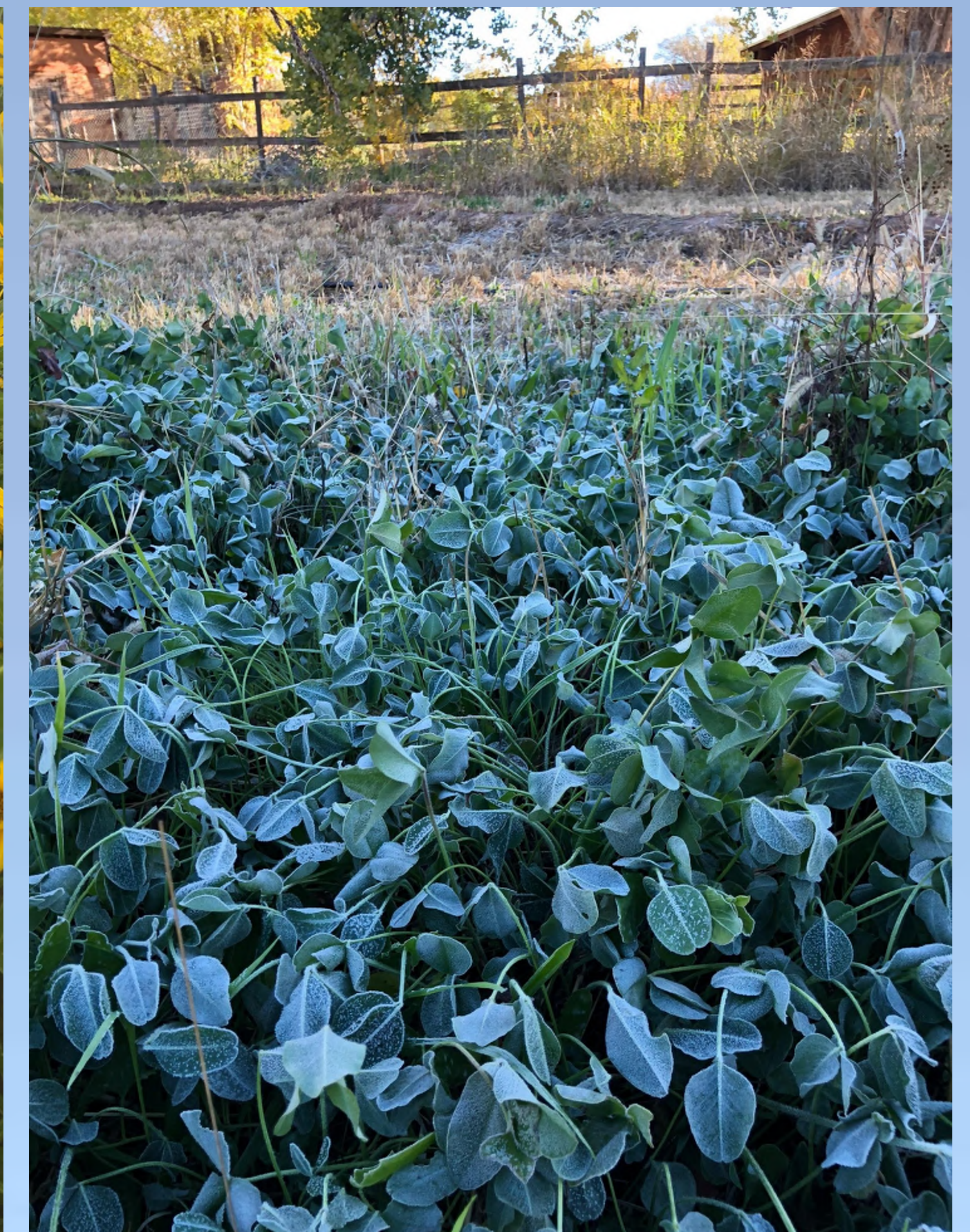
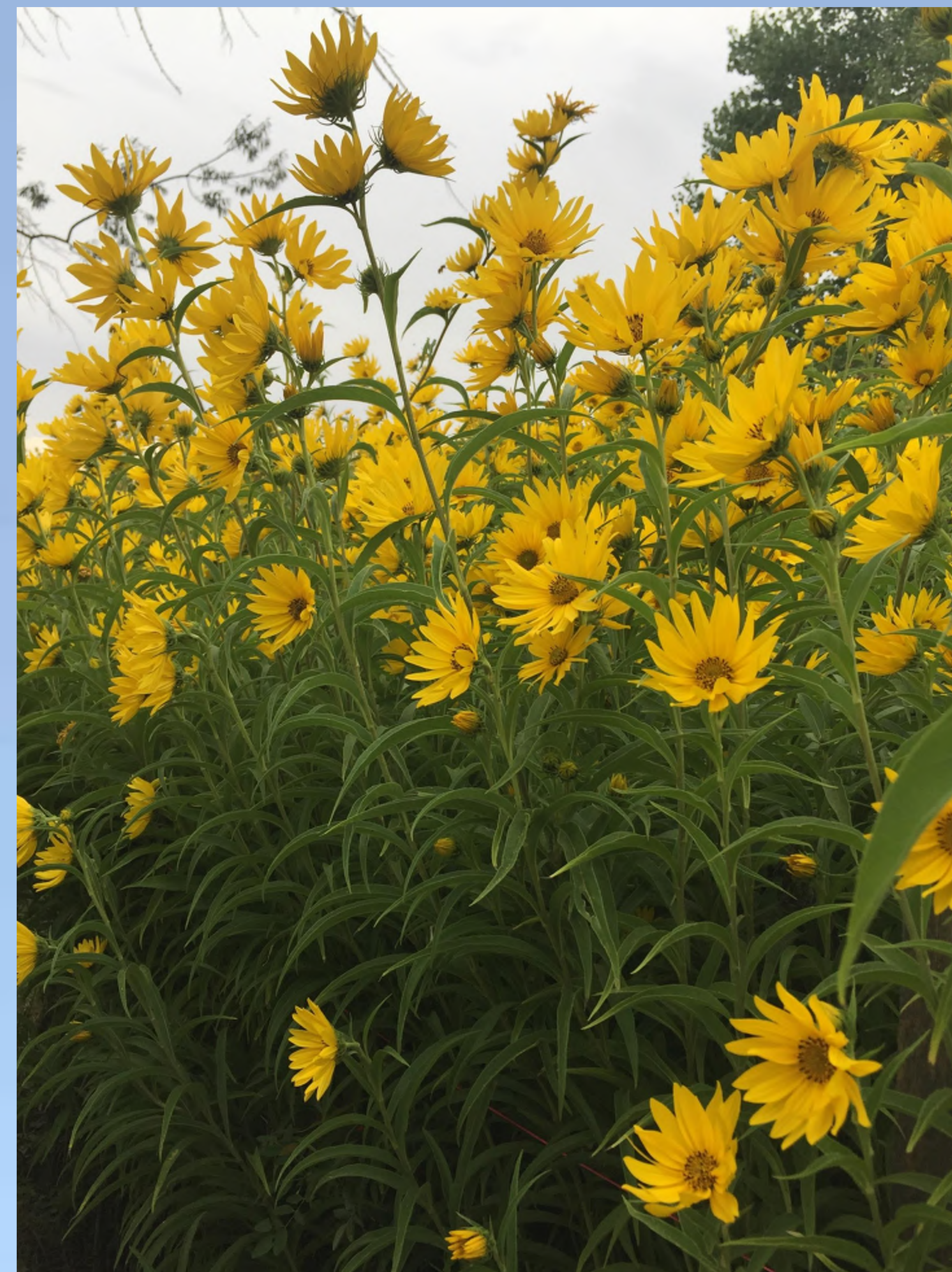
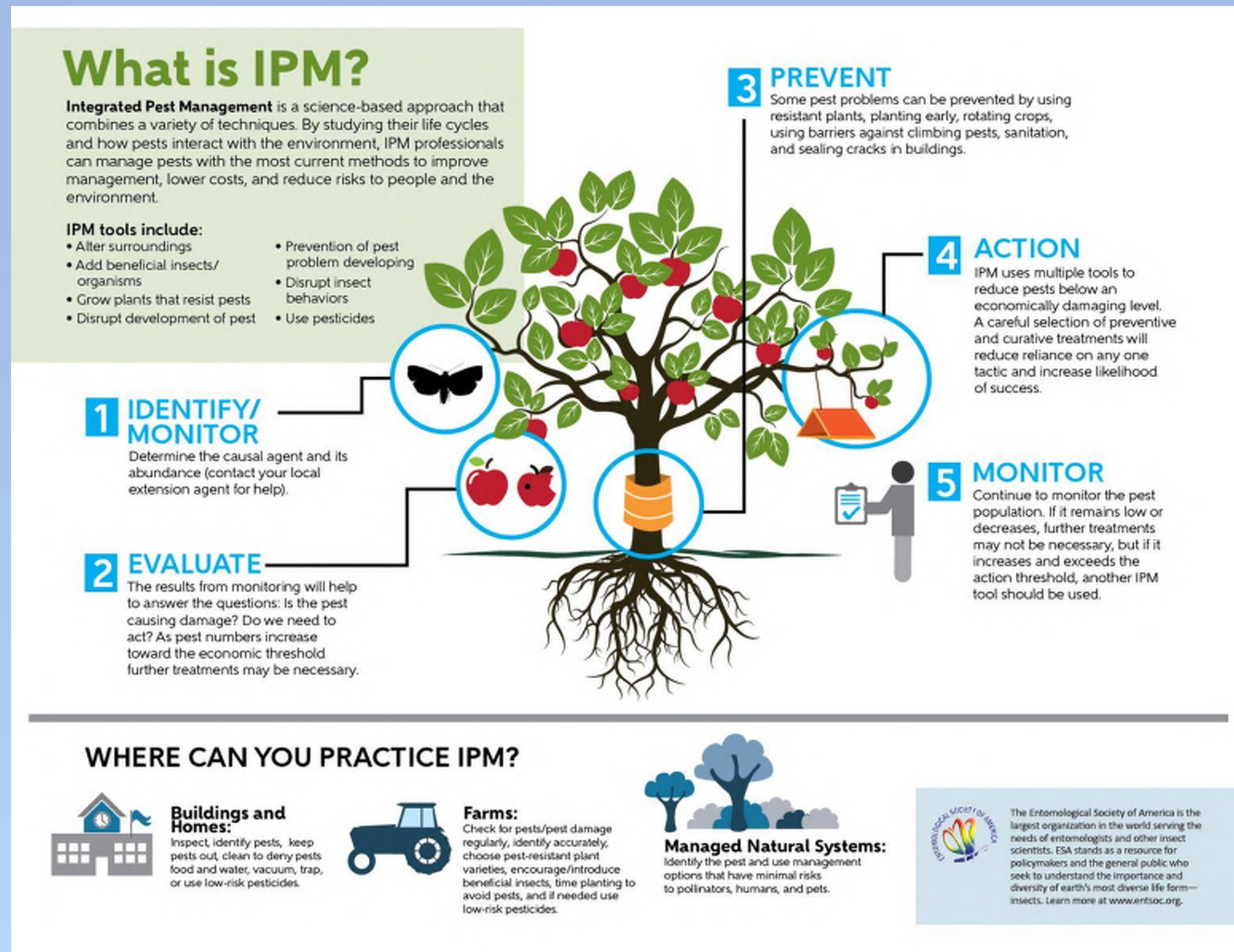
(Derived from stakeholder interviews)

- Adaptive management- Ecological interactions and monitoring informs ongoing management and operations.
- Restore and maintain Rio Grande floodplain native habitats, species, and biological diversity, similar to historic Rio Grande floodplain reference conditions, along with some artificial crop fields to produce food for winter waterfowl.
- Provide additional landscape-scale habitats as components of the Middle Rio Grande Basin wildlife refuge system (Bosque del Apache, Valle del Oro, Whitfield Wildlife Conservation Area, Ladd S. Gordon Waterfowl Complex), to enhance a greater regional habitat array for winter migrating waterfowl, especially sandhill cranes and summer migrant and resident wildlife species.
- Initiate citizen science monitoring programs- iNaturalist, Nature's Notebook and others



Proposed Farming Goals

(Derived from stakeholder interviews)



- Cropping- Organic, no GMO's, use of cover crops, prioritize perennial cropping, and limit use of fertilizers
- Soil improvements- use no till farming practices
- Invasive Species – control methods include prescribed grazing, integrated pest management practices and mechanical removal
- Encourage public education about wildlife and traditional/innovative agriculture



Proposed Operations and Management Goals

(Derived from stakeholder interviews)

- Ecosystem science guides the management and operation of the open space
- Operate the Candelaria Nature Preserve within the limits of LWCF regulatory obligations and existing and future CABQ Open Space Division resources (i.e. staff, budget, volunteers, etc...)



Next Steps

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Thank You!

Visit the Candelaria Nature Preserve website to keep up on new information at:

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

And direct comments to:

[**candelariafeedback@cabq.gov**](mailto:candelariafeedback@cabq.gov)



Public Input Session

