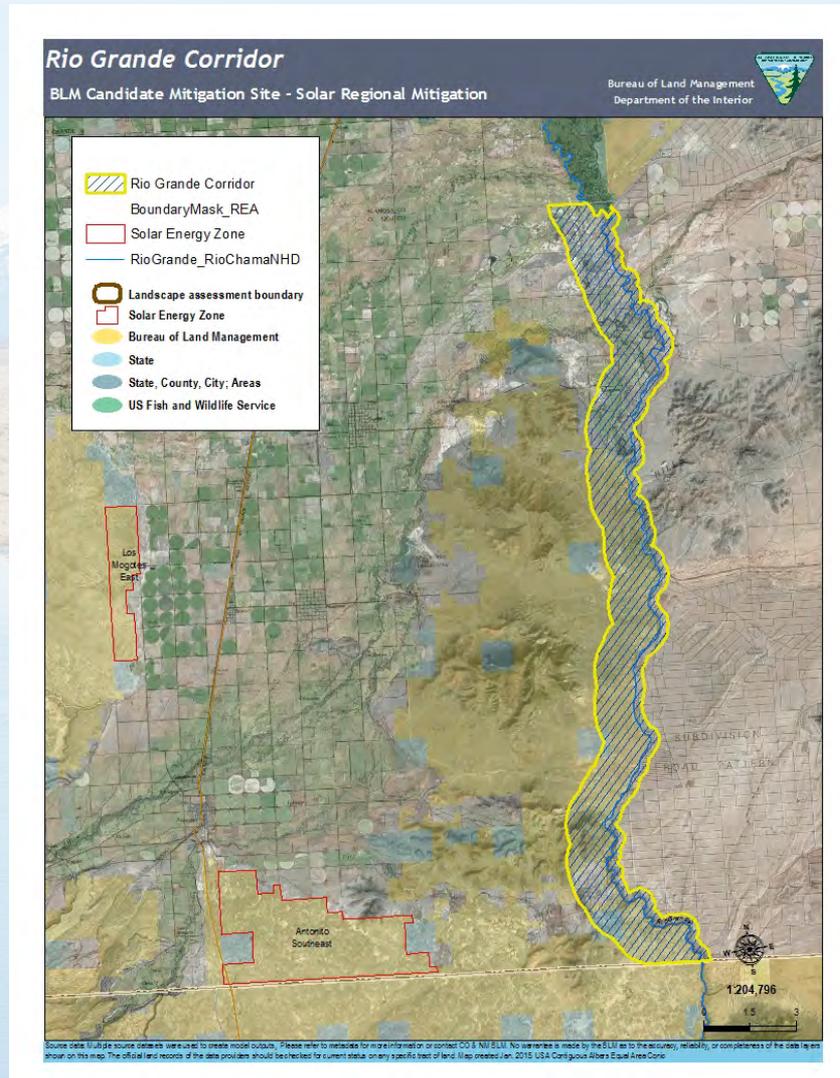


# Rio Grande Corridor

## SEZ Regional Mitigation Site

Sue Swift-Miller  
Wetlands Biologist  
Bureau of Land Management  
San Luis Valley Field Office  
May 14, 2015

# Site Location - Rio Grande Corridor



# Site Description - Rio Grande Corridor

- The *Rio Grande Corridor* mitigation site includes desert winterfat shrub-grassland habitat, shares soils, hydrology similar with Antonito SE & Los Mogotes E SEZ within and adjacent Rio Grande Natural Area.
- Cultural landscape is characterized by human occupation preceding Spanish settlement by 1,000's of years continuing through settlement of the overlapping Conejos Land Grant from the 1830's to 1860's.
- The area supports pronghorn and mule deer herds that occupy both Antonito SE & Los Mogotes E SEZ's, Gunnison's Prairie Dog-Burrowing Owl-populations, migrating shorebird-water bird flyways, and occupied Golden Eagle habitat residually impacted by SEZ development

# Site Description

- Rio Grande Corridor site includes desert shrub-grassland along Rio Grande River Corridor
  - Includes lands in natural area
  - High-Moderately High landscape condition in REA assessment model
  - 15-20 miles to Los Mogotes E SEZ
  - 6-24 miles to Antonito SE SEZ
- Candidate Mitigation Site Extent: ~29,995 acres
  - 15,208 BLM acres
  - 13,567 Private acres
  - 1,043 County Land acres
  - 175 FWS acres
- Residual Impacts offset and/or Resources Protected:
  - Pronghorn & mule deer habitat, Big game movement corridor, Connectivity
  - BLM Sensitive Species Habitat: Gunnison's Prairie Dog, Mtn Plover, Swift Fox; Raptors, Golden Eagle; migratory birds shorebirds/waterbirds
  - High visual Resource Value, Raptor
  - Hydrology & Soils
  - Potentially Eligible Cultural Features

# Proposed Goals - Objectives

- See Draft BLM Goals & Objectives Handout for Goals 1-3, 7-9

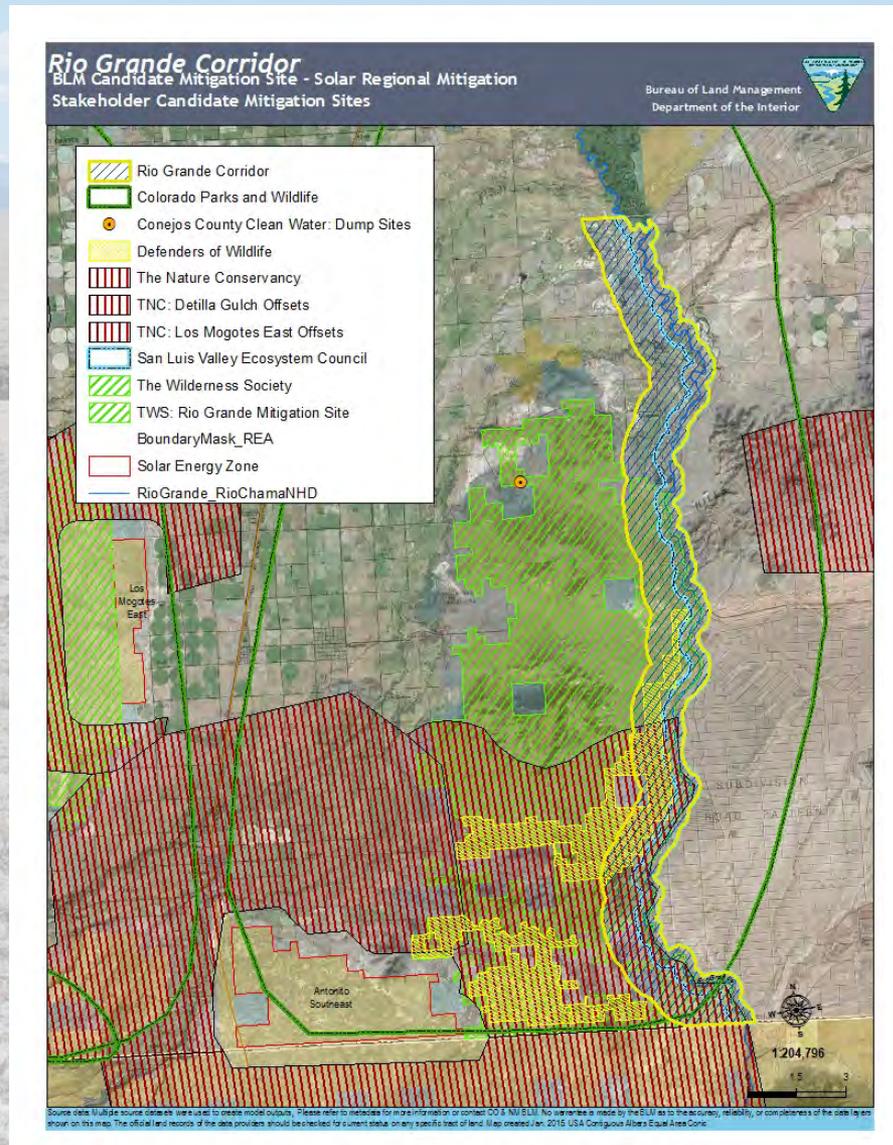
# Proposed Mitigation Actions (Measures)

- Increase land use compliance through staffing increases
- Build & maintain river exclosures
- Install wildlife-friendly fencing
- Acquire 0.10 cfs of Conejos river winter flows/acre of SEZ development
- Establish in-stream flows in the Rio Grande
- Conduct Stream rehabilitation/water quality/sediment/erosion projects
- Conservation ROW easement/buffer of Critical Habitat
- Acquisition of Alamosa Marshes (adjacent to ANWR- 20,000 acres)
- Easement, trade, and/or acquisition of De Vargas Crossing & private lands bordering Rio Grande

# Site Scoring Criteria

- ***Effectiveness-Additionality*** –
  - Expands Natural Area riparian corridor protection to additional focus on desert shrub-grassland uplands habitat
  - Uncertainty with federal funds for augmentation water purchase & land purchase
- ***Feasibility-***
  - Wildlife friendly fencing considered relatively easy but high uncertainty with water augmentation measures
  - 1 yr for wildlife friendly fencing ; 20 yrs for increased in-stream flows
- ***Durability***
  - Long-term in-stream flow would have long timeframe impacts
  - Very high conservation outcomes assuming riverine corridor protections
- ***Risk***
  - Constraints: willing water sellers; Rio Grande Corridor subdivisions & increased recreation

# Overlapping Stakeholder Site Locations Rio Grande Corridor

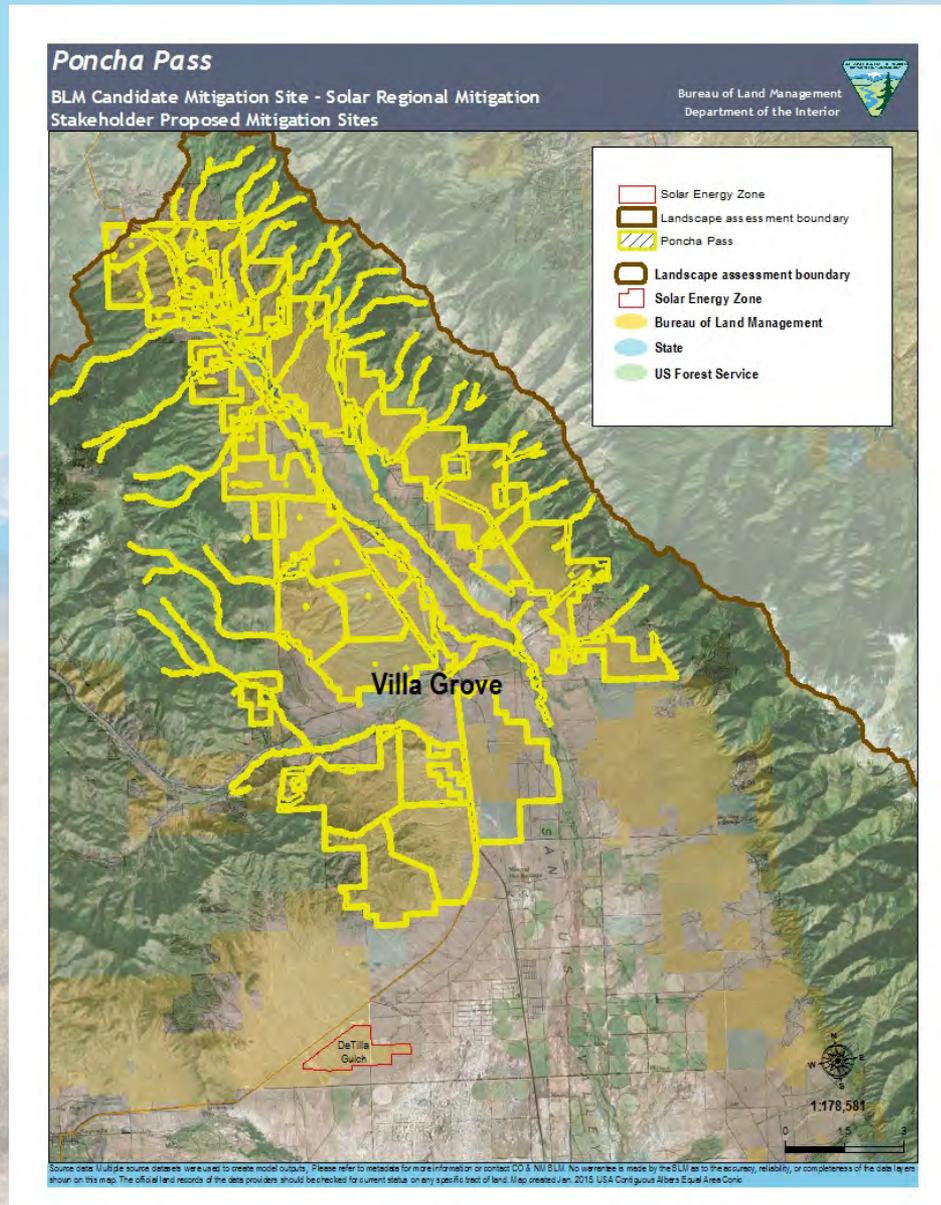


# Poncha Pass

## SEZ Regional Mitigation Site

**Joel Humphries**  
**Wildlife Biologist**  
**Bureau of Land Management**  
**San Luis Valley Field Office**  
**May 14, 2015**

# Site Location – Poncha Pass



# Site Description - Poncha Pass

- The *Poncha Pass* mitigation site includes desert winterfat shrub-grassland habitat, shares soils , hydrology similar to the De Tilla
- The area supports pronghorn & mule deer herds that occupy De Tilla Gulch SEZ's, Gunnison's Prairie Dog-Burrowing Owl-populations, migrating shorebird-water bird flyways, and occupied Golden Eagle habitat residually impacted by SEZ development

# Site Description

- **Poncha Pass site includes desert shrub-grassland similar to De Tilla Gulch SEZ**
  - High-Moderately High landscape condition in REA assessment model
  - 2-20 miles to DeTilla SEZ
- **Candidate Mitigation Site Extent: ~17,335 total acres**
  - 7,353 BLM acres
  - 5,750 Private Acres
  - 136 County Lands Acres
  - 72 State Wildlife acres
  - 3,781 US Forest Service acres
- **Residual Impacts Offset and/or Resources Protected:**
  - Pronghorn corridor
  - Mexican Free-tailed bat colony forage area
  - Gunnison Prairie dog colonies
  - Mountain Plover and Migratory bird flyways
  - Big game migration corridor
  - Gunnison Sage Grouse occupied habitat
  - Lynx linkage area

# Proposed Goals - Objectives

- See Draft BLM Goals & Objectives Handout for Goals 1-3, 8

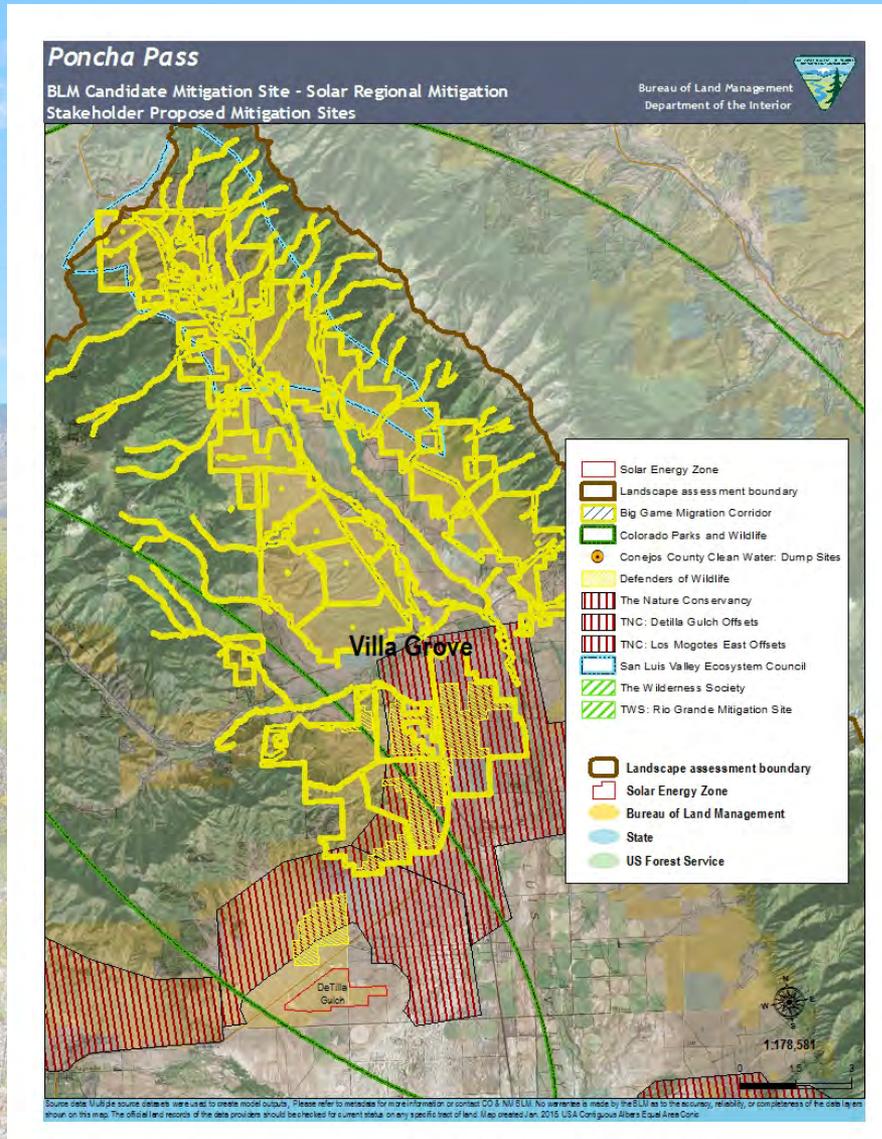
# Proposed Mitigation Actions (Measures)

- **Install wildlife friendly fence at 2.5 miles of fence removed per 100 acres SEZ developed for big game habitat and movement**
- **Develop wildlife water enhancements such as stock tanks and/or spring enhancements**
- **Establish mitigation and/or conservation banks**
- **Land acquisition and or easements**
- **Riparian and upland habitat restoration**
- **Install avian collision deterrents or fences and power lines and/or bury power lines.**

# Site Scoring Criteria

- **Effectiveness-Additionality** –
  - Removal or modification of fences would aid big game migration
  - Water improvement projects would mitigate impacts to migratory bird
  - New wildlife improvements
- **Feasibility-**
  - The majority of the sites are on federal lands and there would likely be public support for water improvement projects on private lands.
  - With proper funding, fence conversions could likely occur on private lands
- **Durability**
  - Durability would be high assuming secure funding to allow required maintenance for wildlife fencing following installation
- **Risk**
  - Increased rural residential development and population
  - Increasing recreation uses and potential increase in including fencing possibly not limited to wildlife friendly fencing
  - Complexity with fence removal and transmission line burials are very complex

# Overlapping Stakeholder Site Locations Poncha Pass



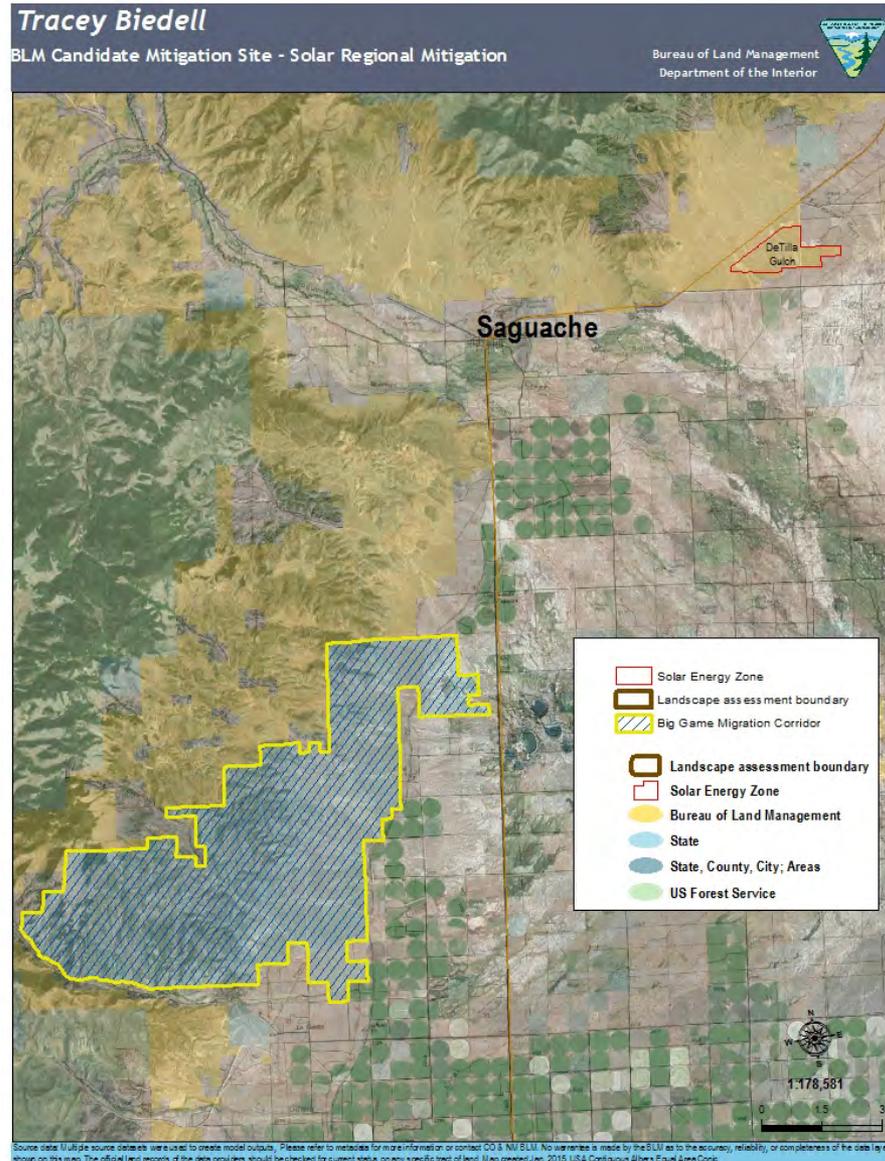
# Tracy Beidell

## SEZ Regional Mitigation Site



**Paul Minow**  
Fire Management Specialist  
Bureau of Land Management  
San Luis Valley Field Office  
May 14, 2015

# Site Location – Tracy Biedell



# Site Description - Tracy Biedell

- The *Tracy Biedell* mitigation site is State Land, transferred to Colorado as part of the creation of the Great Sand Dunes NP and Baca Wildlife Refuge and includes desert shrub-grassland habitat, shares soils , hydrology similar De Tilla Gulch SEZ.
- Tracy Bidell includes segments of the West Fork Old Spanish Trail likely eligible for protections under the National historic Preservation Act
- The area supports pronghorn, elk, and mule deer herds , Gunnison's Prairie Dog that occupy DeTilla Gulch SEZ's,, as well as Burrowing Owl & Mountain Plover habitat, migrating shorebird-water bird flyways, and occupied Golden Eagle habitat residually impacted by SEZ development

# Site Description – resources protected

- Tracy Biedell site includes nexus desert shrub-grassland and pronghorn assemblage offset habitat
  - High-Moderately High landscape condition in REA assessment model
  - 10-12 miles to DeTilla Gulch SEZ
  - 62 miles to Antonito SE SEZ
- **Candidate Mitigation Site Extent:** ~ 28,832 total acres
  - 4,039 County Land acres
  - 24,793 State Trust acres
- **Residual Impacts offset and/or Resources Protected:**
  - West Fork of the Old Spanish Trail.
  - Pronghorn , elk, and mule deer winter range habitat and connectivity
  - Mexican free tailed bat habitat
  - Golden Eagle, raptor and migratory bird flyways
  - Geologic formations

# Proposed Goals - Objectives

- See Draft BLM Goals & Objectives Handout for Goals 1-3, 8-9





## Proposed Mitigation Actions (Measures)

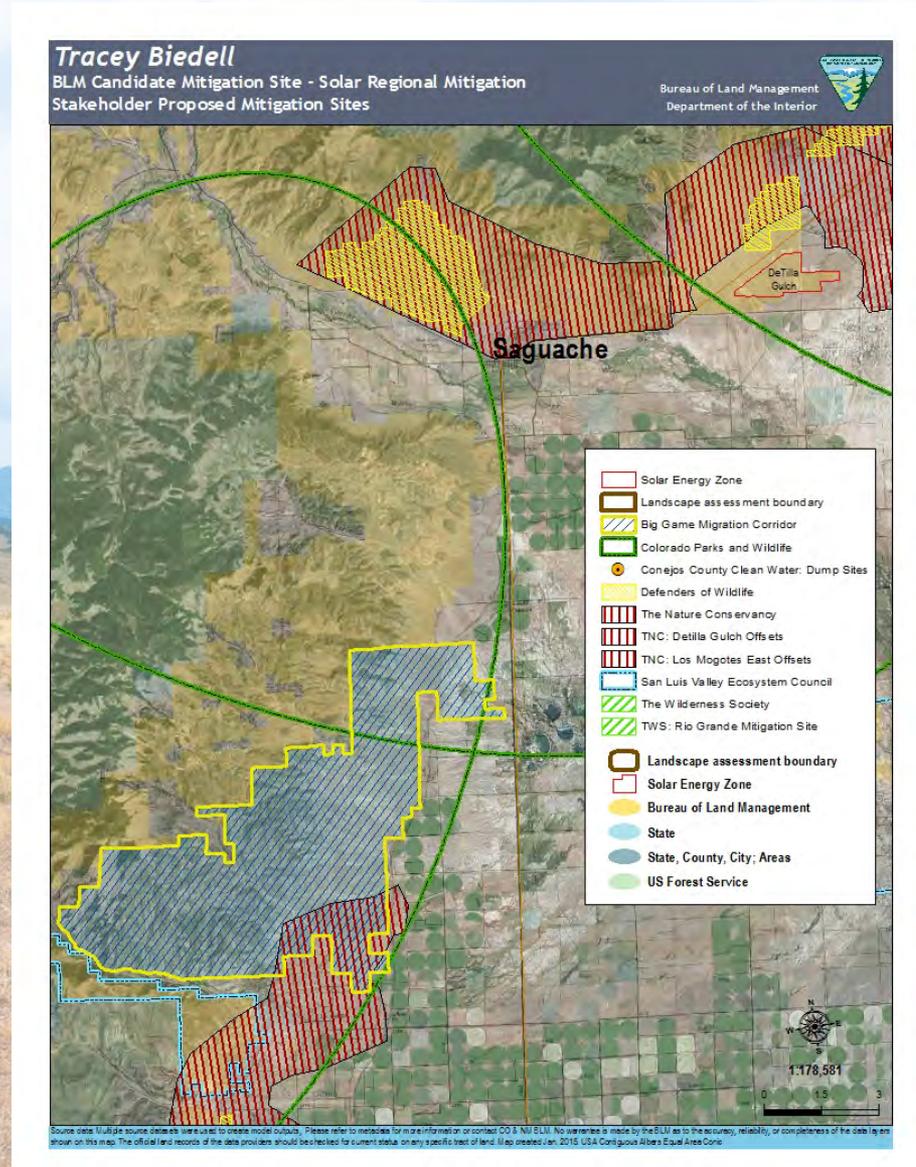
- Negotiate BLM-State of Colorado for habitat exchange and/or mitigation bank and stewardship agreement for pronghorn and BLM Sensitive Species species
- Install wildlife friendly fence at 2.5 miles of fence removed per 100 acres SEZ developed for big game habitat and movement improvements
- Install wildlife water enhancements such as stock tanks and spring enhancements
- Augment law enforcement capabilities to increase Travel Management Plan compliance.
- Rehabilitate Travel Management Plan-unauthorized routes by ripping and reseeding and installing erosion control structures

# Site Scoring Criteria

- **Effectiveness-Additionality :**
  - Close fit with DeTilla Gulch SEZ residual impacts
  - Pronghorn & big game and Special Species habitat; Protection of West Fork Old Spanish Trail; Maintain Visual resources VRM class 2
  - Would be additional to existing BLM-CSLB stewardship agreement
- **Feasibility:**
  - Some challenge based on uncertainty in State priority and future stewardship agreement status between BLM State Land Board
- **Durability:**
  - Assuming a legally binding agreement with State Land Board for duration of SEZ impact, 50-75 years (native plant recovery)
- **Risk:**
  - Priorities and Procedural constraints with State Land Board;
  - Effective level of grazing management and land health standards
  - Active mining and potential mining expansion in area

# Overlapping Stakeholder Site Locations

## Tracy Biedell

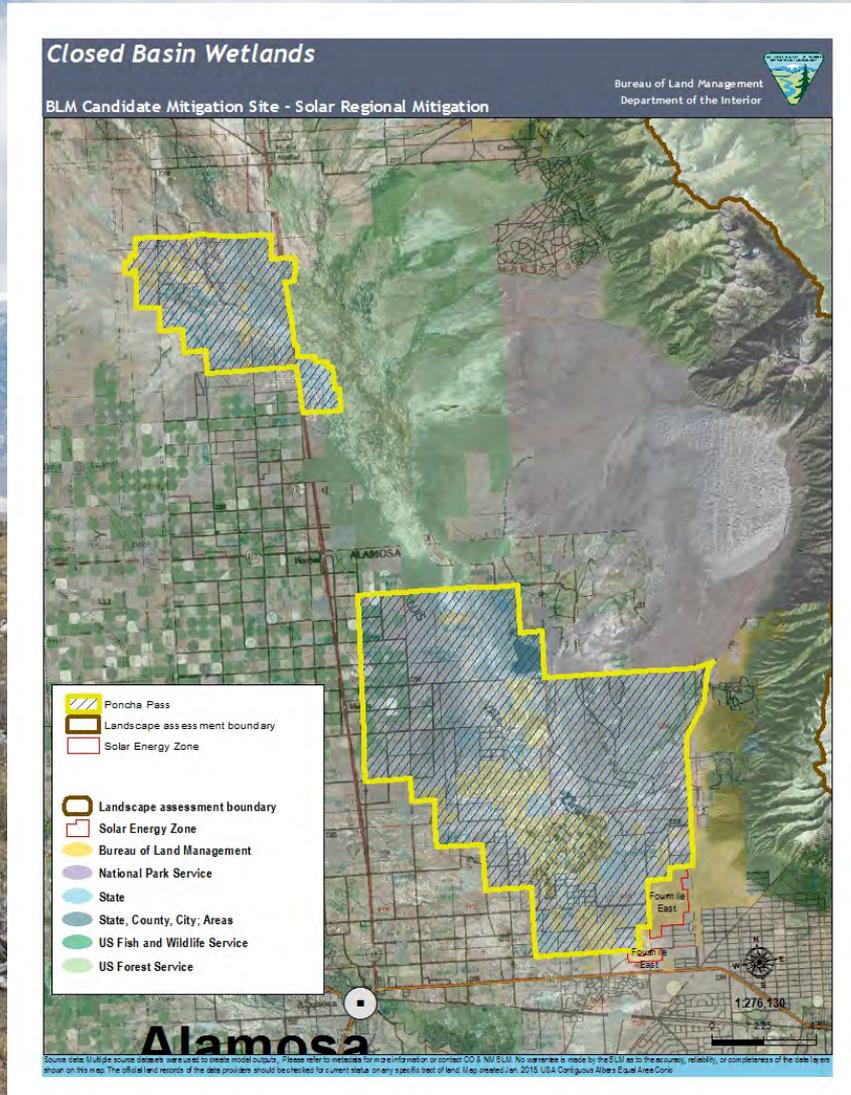


# Closed Basin Wetlands

## SEZ Regional Mitigation Site

**Sue Swift-Miller**  
**Wetlands Biologist**  
**Bureau of Land Management**  
**San Luis Valley Field Office**  
**May 14, 2015**

# Site Location – Closed Basin Wetlands



# Site Description - Closed Basin Wetlands

- The *Closed Basin Wetlands* mitigation site includes nationally significant wetlands, shorebird & water bird breeding grounds, as well as desert shrub-grassland habitat adjacent to the Great Sand Dunes NP and Baca Wildlife Refuge .
- Cultural landscape is characterized by human occupation among the most ancient nomadic lands documented in North America preceding Spanish settlement by 1,000's of years continuing through settlement of the overlapping Mexican era Land Grants from the 1830's to 1860's
- The area supports pronghorn, elk, and mule deer herds , Gunnison's Prairie Dog similar to DeTilla Gulch, Antonito, and Los Mogotes SEZ's, as well as Burrowing Owl & Mountain Plover habitat, migrating shorebird-water bird flyways, and occupied Golden Eagle habitat residually impacted by SEZ development

# Site Description

- **Candidate Mitigation Site Extent:** 122,762 acres
  - 19,564 BLM acres
  - 85,813 Private acres
  - 9,724 County Land acres
  - 4,386 State Trust Lands acres
  - 1,286 State Park Land acres
  - 1,989 State Wildlife Area acre
- **Residual Impacts offset and/or Resources Protected :**
  - Blanca Wetlands ACEC, migratory birds, shorebirds, bats
  - Ground water recharge
  - Grassland habitat, Pronghorn, Big game, terrestrial mammals
  - Refuge, Special Status Species, Threatened and Endangered species
  - Visual and Cultural resources including the East Fork Old Spanish Trail

# Proposed Goals - Objectives

- See Draft BLM Goals & Objectives Handout for Goals 1-4, 7-9



# Proposed Mitigation Actions (Measures)

- Replace desert shrub -grassland wildlife habitat through land acquisition (willing sellers- LWCF)
- Offset lake effect impacts through land/water acquisition of emergent habitats (willing sellers- LWCF)
- Acquire augmentation water for Blanca Wetlands wells, to protect wetlands habitat
- Re-drill Blanca Wetlands wells to produce adjudicated flows to create more wetlands
- Construct infrastructure improvements (i.e. ditches, dykes, headgates, etc), to maximize wetlands habitats by maximizing existing water rights/ water use efficiencies
- Replace or offset groundwater recharge area lost due to solar development
- Enhance/protect OST/NHT/culturally significant areas and provide additional educational/interpretative opportunities
- Install wildlife friendly fence or remove ineffective and/or unneeded fencing
- Augment land use compliance monitoring and enforcement capabilities

# Site Scoring Criteria

- **Feasibility:**
  - There are known willing sellers for land and water rights acquisitions or if Federal/LWCF funding will be available
- **Effectiveness-Additionality :**
  - Enhances protection of Migratory Birds/wetland dependent species, big game habitat/terrestrial species
  - Rectifies loss of grassland and shrubland by replacement
  - Enhances protection of Special Status Species, Soils & Hydrology, air & water quality
  - Maintains wetlands reducing dust
  - Recharge of aquifer
  - Enhances recreational opportunities for local populations
  - Protects visual resources and night sky by reduced development risk
  - Protection of a culturally significant area
- **Durability:**
  - Site located entirely within an existing ACEC
- **Risk:**
  - Climate change, significant change in land tenure or status

# Overlapping Stakeholder Site Locations Closed Basin Wetlands

