

Bald Eagle Update



Photo by © Wayne Lewis/CPW

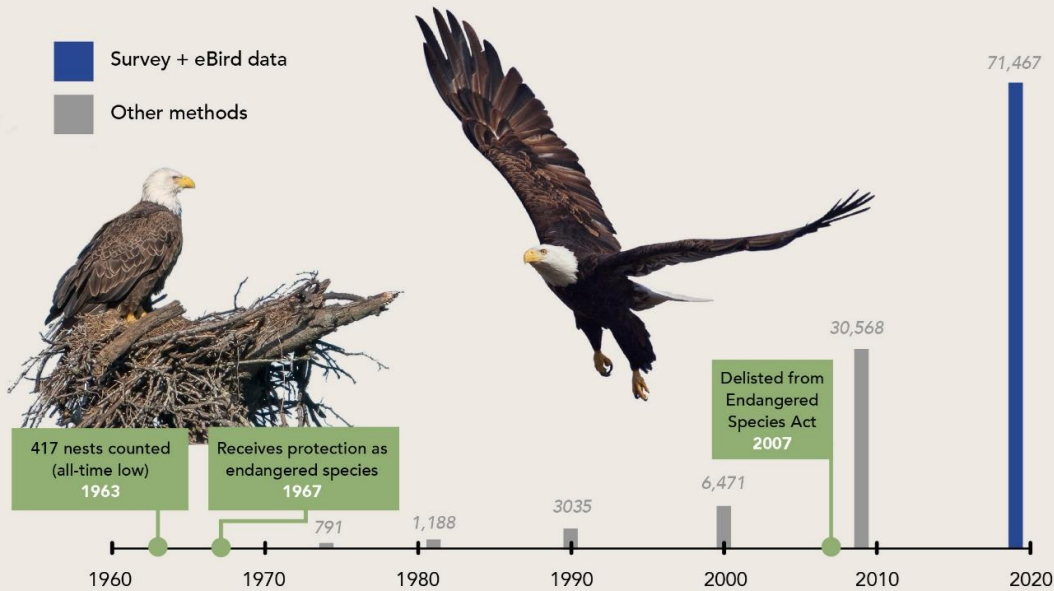


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Shannon Schaller, NE Region Deputy Regional Manager
Reesa Yale Conrey, Avian Researcher

Status of Bald Eagles and Regulations

Number of nests with breeding pairs



Infographic by Cornell Lab of Ornithology

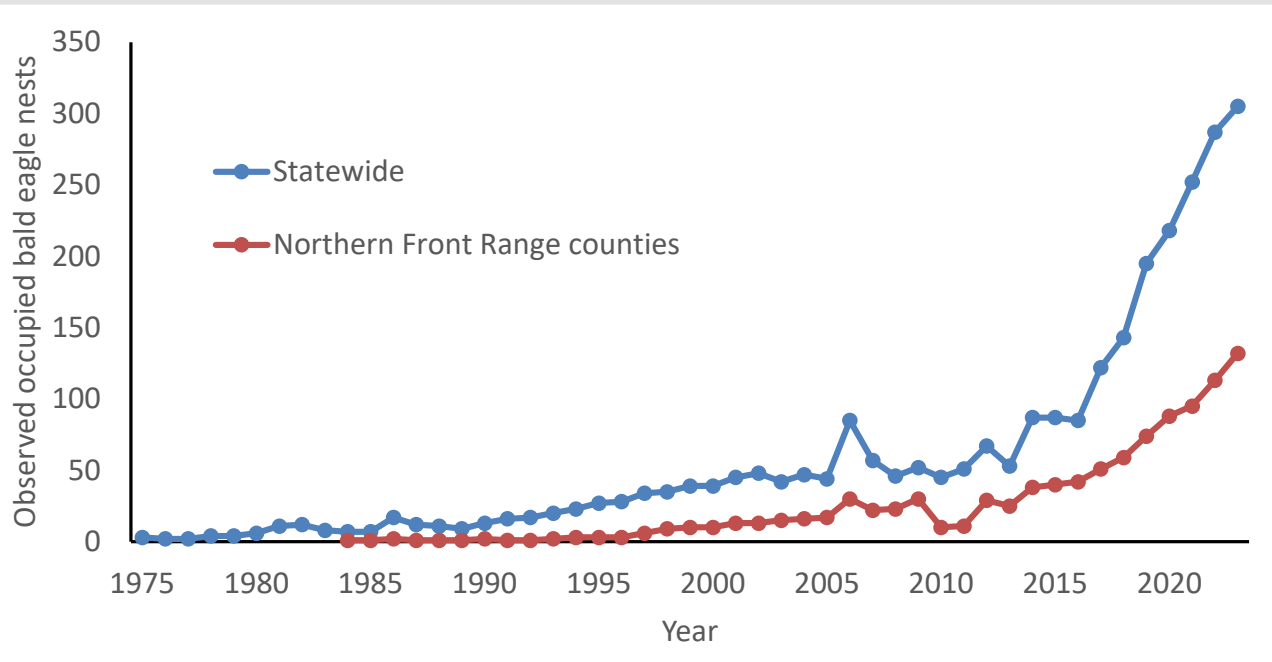
Photos: Bald Eagle on nest by Bill Wood/Macauley Library; Bald Eagle in flight by Eric Heisey/Macauley Library

- Protected by Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act
- Populations have recovered since ban of DDT
- USFWS (not CPW) has the authority to regulate “take”, grant permits, & issue fines



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Bald Eagle Nest Monitoring



- Statewide database
 - Nest protocols updated 2020
- Aerial and ground data
- Partner nest data
- Substantially more bald eagle nests in the state and NE Region

The number of observed occupied bald eagle nests from 1975-2023



Land Use Commenting

- **CPW is a *recommending* agency**
 - Avoid, minimize, and mitigate impacts to wildlife
 - Nests and wintering roosts on high priority habitat list
 - Other regulatory agencies can adopt CPW recommendations
- **Primary authority for regulation is US Fish & Wildlife Service**

James Jacobs



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Recommended Nest Buffers and Restrictions

- **Buffer Zones**

- No *new* surface occupancy (infrastructure) within ¼ mile (year-round)
- No human activities or encroachment within ½ mile **(Dec 1 - July 31)**
- Buffers are halved in highly developed areas w/ > 10 daily occupied facilities

- **Seasonal Restrictions-Winter Roost**

- No human activities or disturbance from **November 15-March 15**
 - ¼ mile when no direct line of sight
 - ½ mile when direct line of sight



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Front Range Bald Eagle Research

CO Parks and Wildlife:

- Reesa Yale Conrey, Avian Research
- Miranda Middleton, CO State Univ.
- Jim Gammonley, Avian Research
- Terrestrial & Regional staff

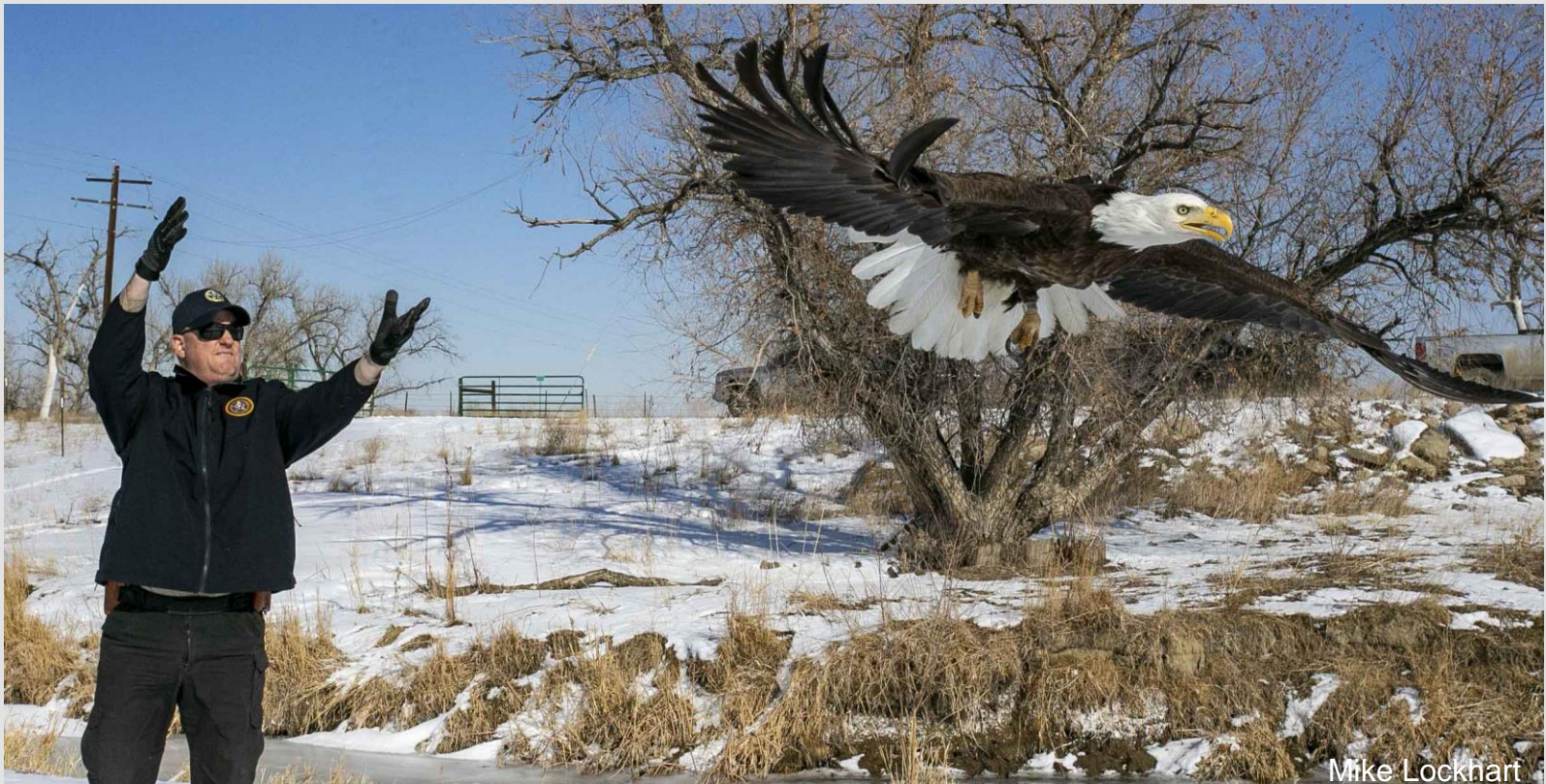
Bird Conservancy of Rockies Bald Eagle Watch:

- Matt Smith, Avian Ecologist
- Bruce Snyder, BEW Contractor
- Jan Snyder, BEW Contractor



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Research Objective



Assess bald eagle demography, habitat use, and land use impacts in a rapidly changing human-dominated landscape



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Research Methods

- Estimate breeding success
 - nest observations
- Quantify land use impacts and disturbance
 - nest observations, spatial analysis
- Analyze home range, habitat use, and movement
 - transmitters: rural vs. urban sites
- Inform conservation and land management
 - social media, press releases, presentations, publications



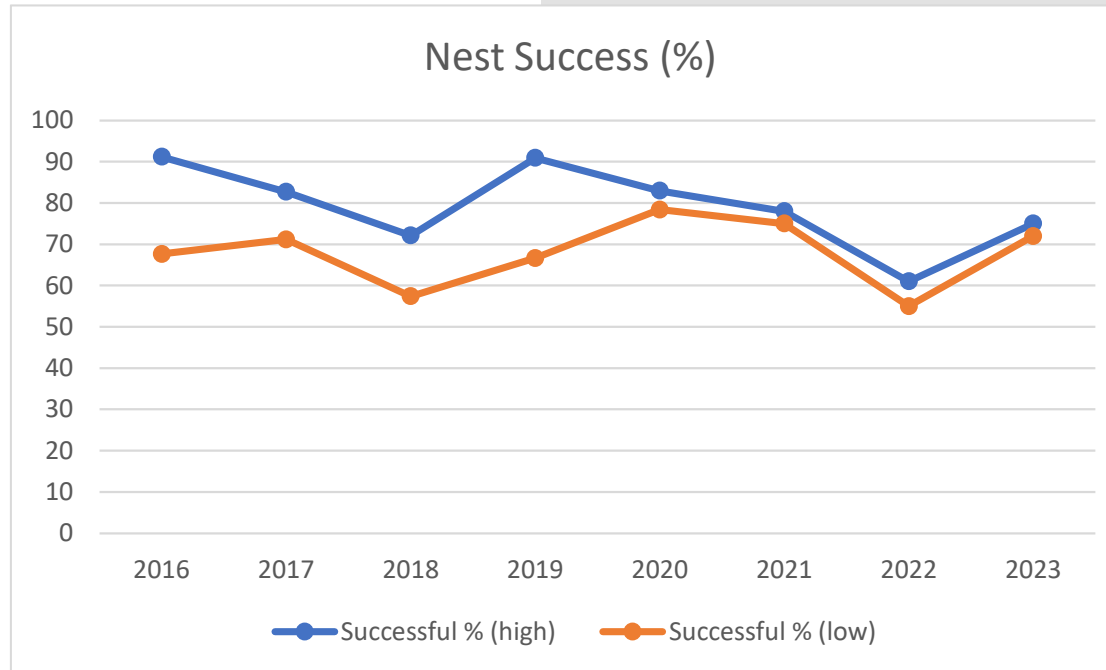
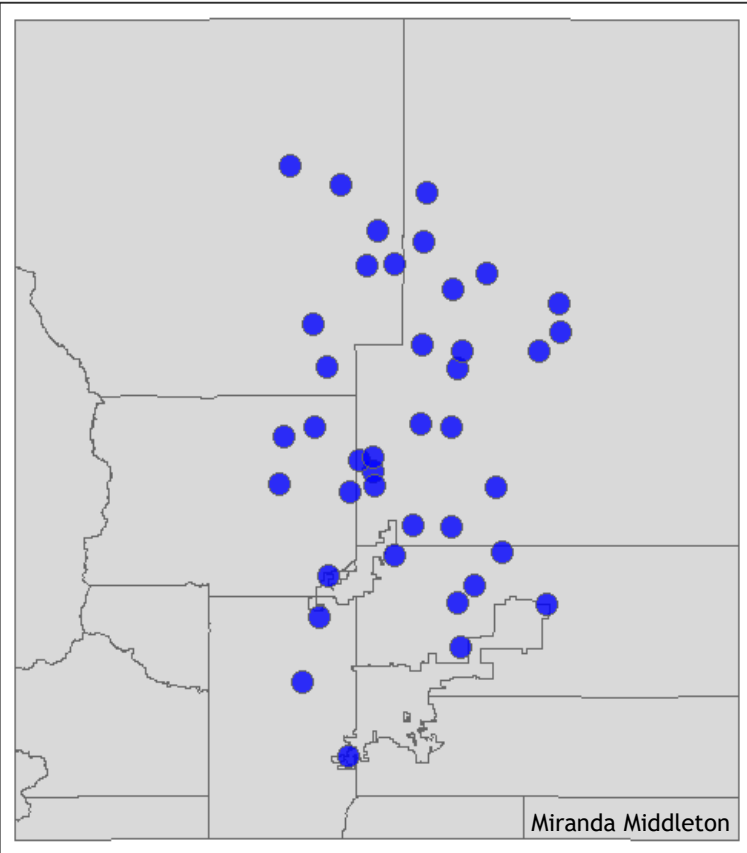
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Northern Front Range Bald Eagle Nests

2016



- Derived from > 3000 staff, volunteer, and partner observations per year



Land Use and Disturbance

- Observations: human activity, nest disturbance, and infrastructure
 - Observers record human activity and infrastructure
 - Observers note eagle response (including “none”)
- Spatial analysis: land use & cover
 - Energy: oil & gas, solar, wind
 - Transmission lines
 - Roads & trails
 - Residential & commercial



Mike Lockhart



Miranda Middleton



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Tagged Eagles



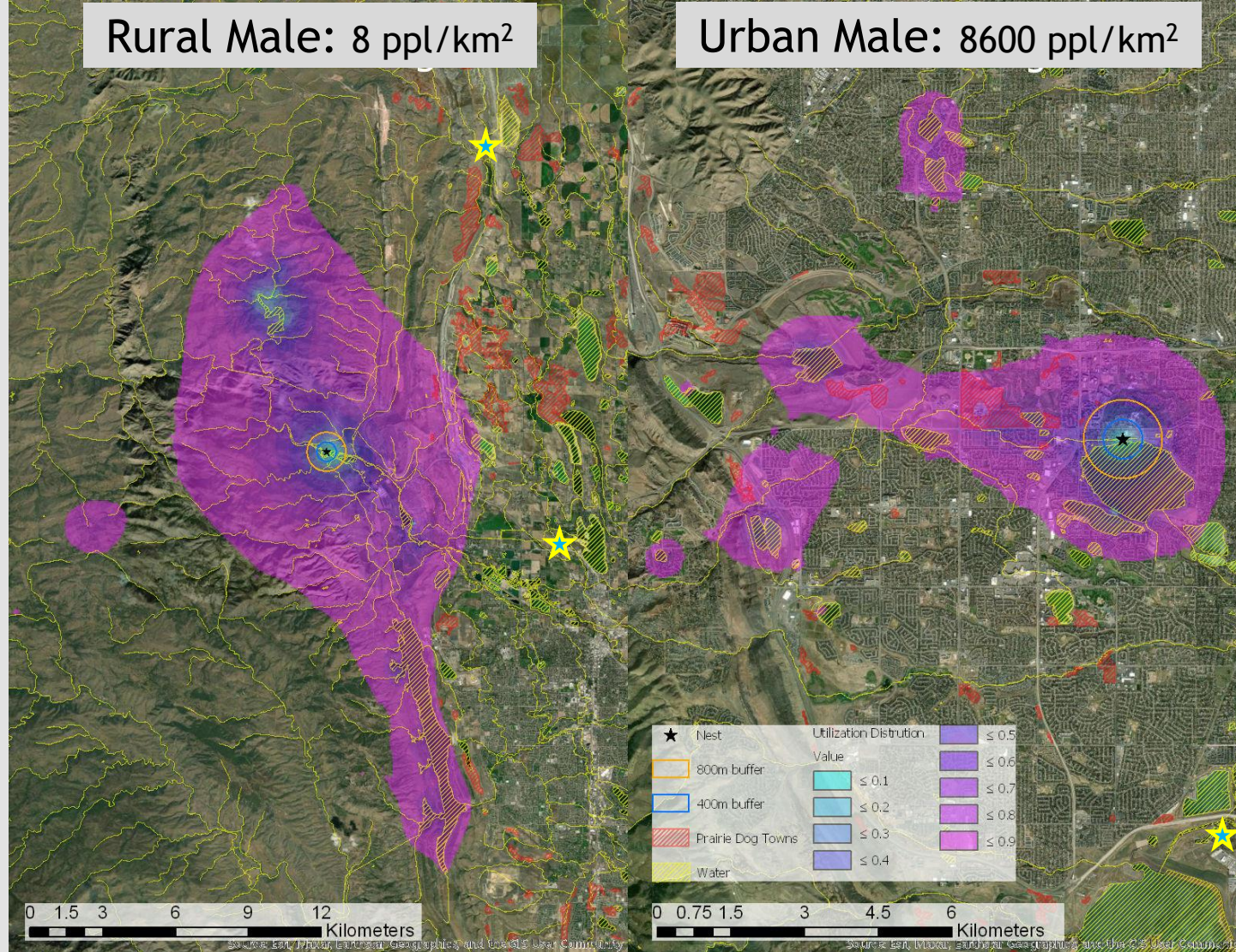
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- GPS/GSM transmitters are solar-powered
- Locations transmitted daily via cell network, fixes every 4 sec - 1 hour
- 39 eagles tagged
 - 32 adults, 7 juveniles
 - Data range: 15 - 1124 days
 - Mortalities due to electrocution, vehicle strike, lead, West Nile Virus, HPAI (influenza), and unknown causes



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Breeding Adult Home Range: Nestling Period

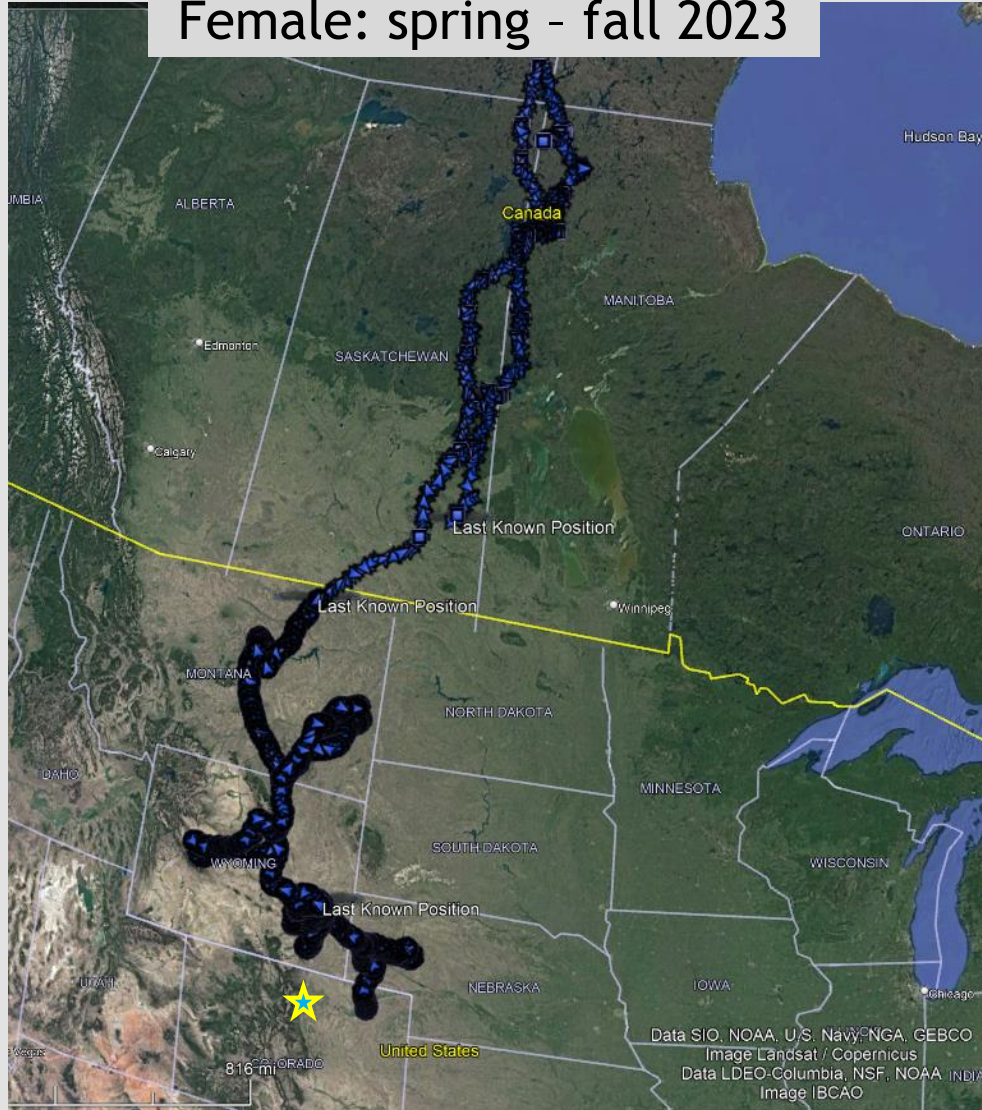


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Non-breeding 1st Year Movements

Female: spring - fall 2023



Male: spring - fall 2022



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Highlights



- Territorial adults are mainly resident year-round
 - Hiatus of days to weeks after nesting season ends
 - Huge variation in home range size among birds and between seasons
- Adult mortality and territory loss as nest numbers increase
 - Of tagged bird mortalities thus far, mean time to death ~7 months
 - Several males have left or lost territories
- HPAI: low adult mortality but ~20% drop in 2022 nest success



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Partners and Collaborators

- **Bird Conservancy of the Rockies**
- **Many volunteers (CPW & BCR)**
- Mike Lockhart, Contractor
- Denver Audubon: Lois Webster Fund
- Cities: Aurora, Fort Collins, Loveland, Longmont
- Counties: Larimer, Adams
- Federal: USFWS, APHIS, Bureau of Reclamation
- Coors, Denver Water, Xcel
- **Private landowners**



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