

Waterfowl Conservation and Management in Nebraska

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Migratory Game Bird Program Manager

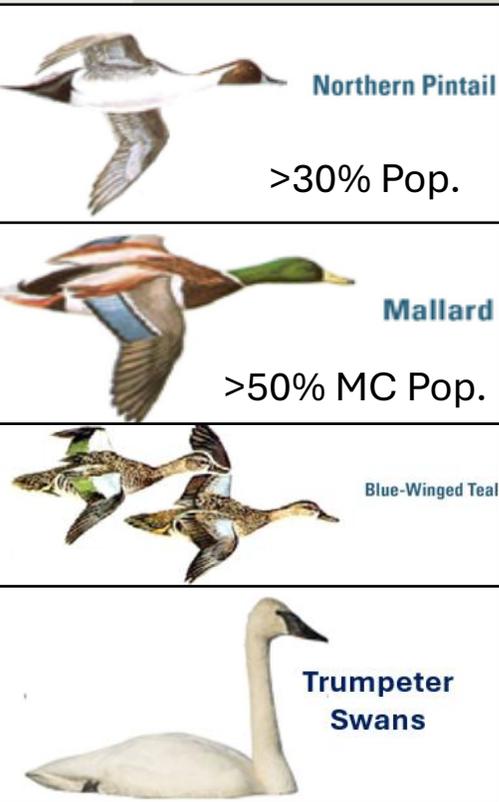


RWBJV Info Seminar 2026

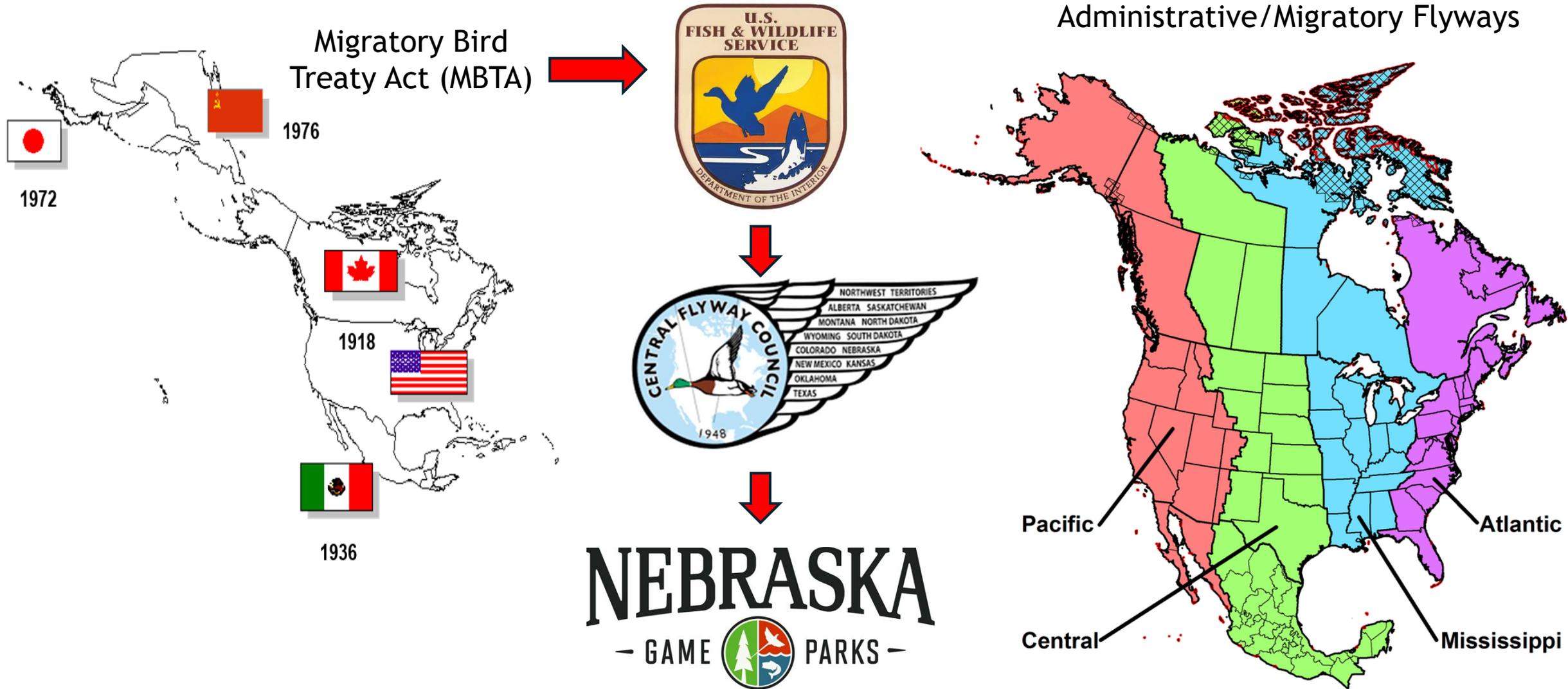
Outline

1. Importance of Nebraska for Waterfowl
2. How NGPC sets Waterfowl Seasons
3. Two-tier Hunting Regulations
4. Greater White-fronted Geese
5. Future of Waterfowl Management

Importance of Nebraska for Waterfowl



How Are Waterfowl Seasons Set?

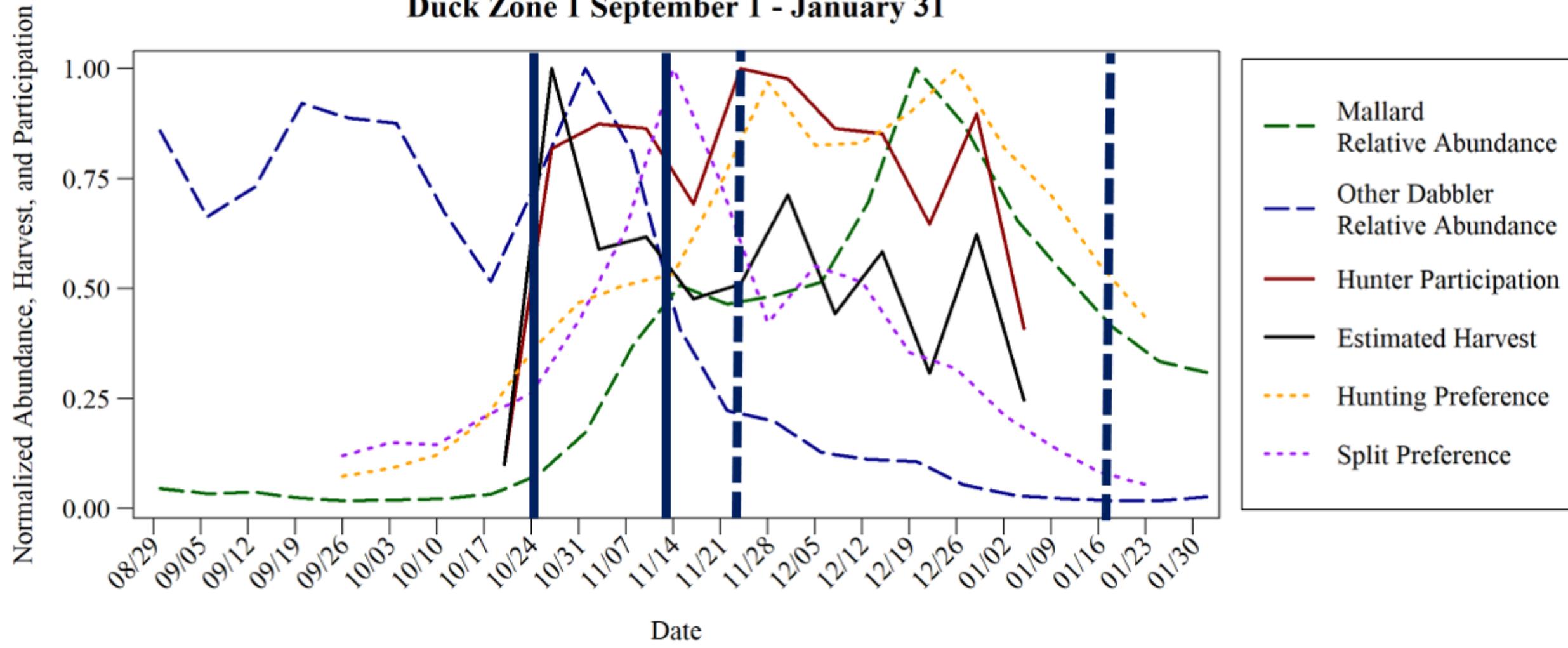


How Are Waterfowl Seasons Set?

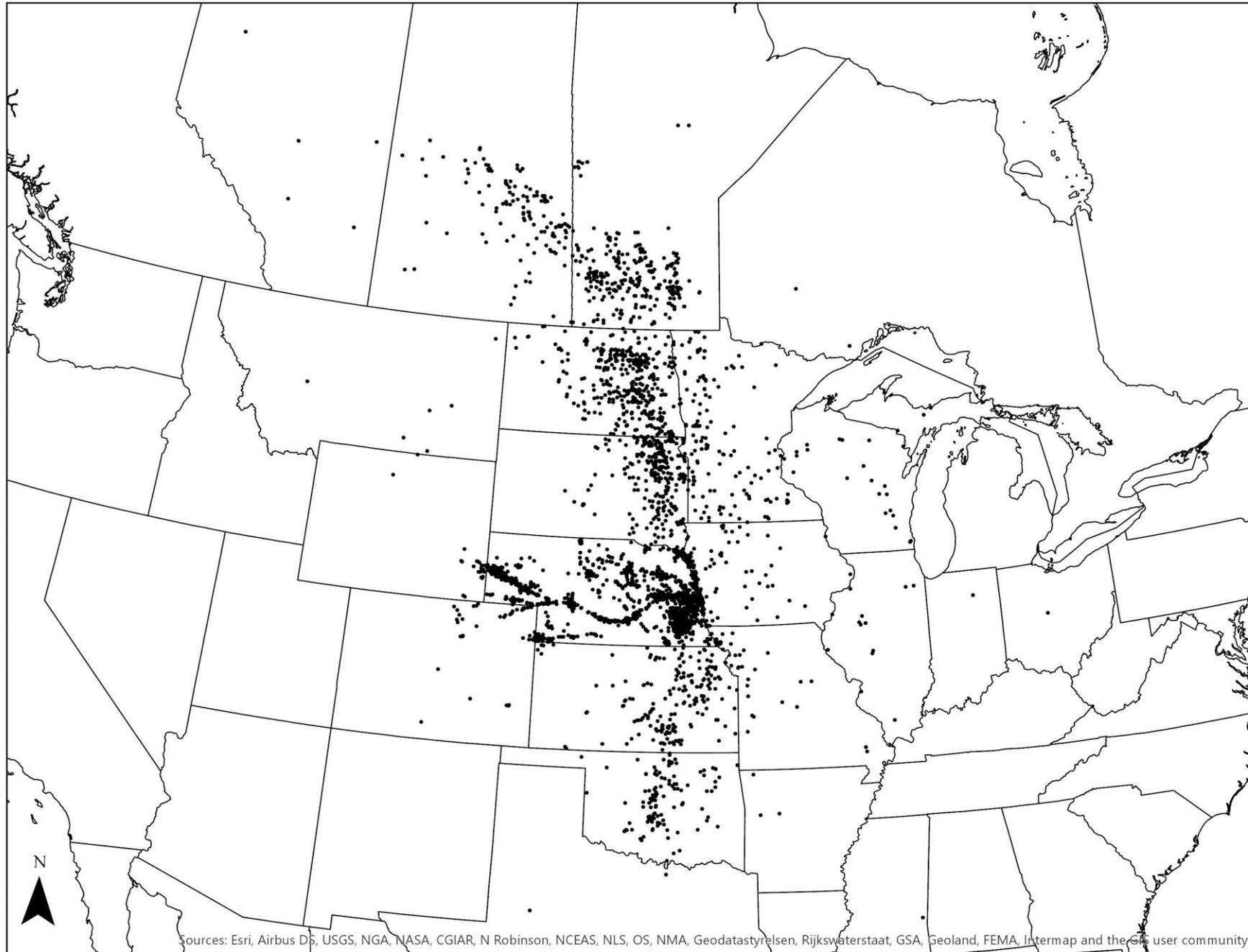
Staff Recommendations

1. Hunter Harvest
2. Hunter Participation
3. Hunter Preferences
4. Migration Chronology

**Relative Weekly Duck Abundance, Harvest, and Hunter Participation in Nebraska
Duck Zone 1 September 1 - January 31**



Harvest Recoveries of Canada Geese Banded in Nebraska, 2010-2020



Two-tiered Hunting Regulations

Objective: increase duck hunter R3 (recruitment, retention & reactivation) without having an impact on waterfowl populations

- Detailed measures of success developed with other flyways and FWS

Graduate Students: Ava Britton & Maddy Vasquez



Tier I

Current bag limit of 6 ducks/day,
with sex-specific and species
restrictions.

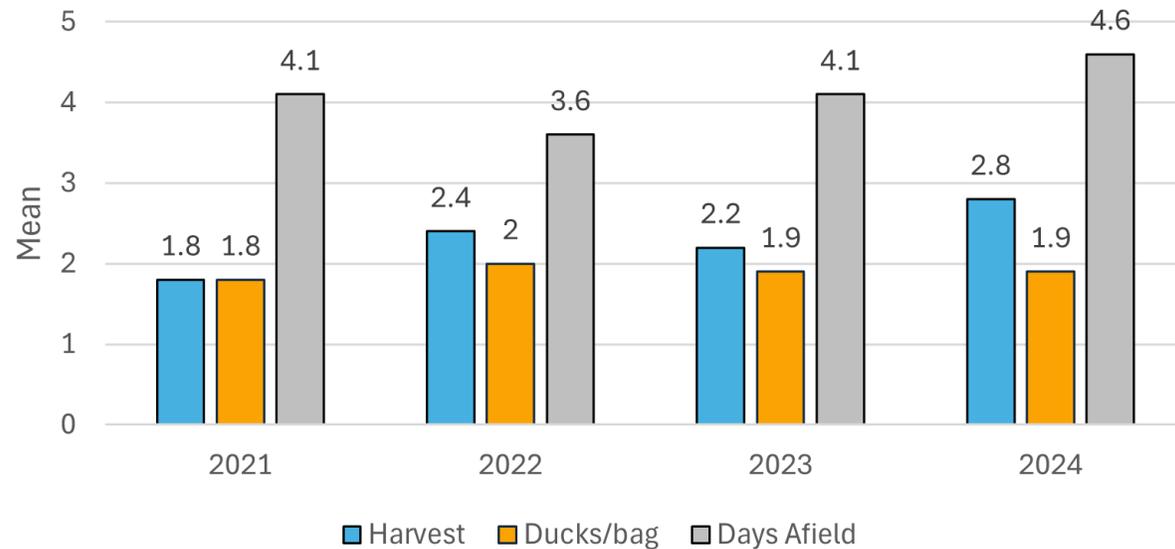
OR

Tier II

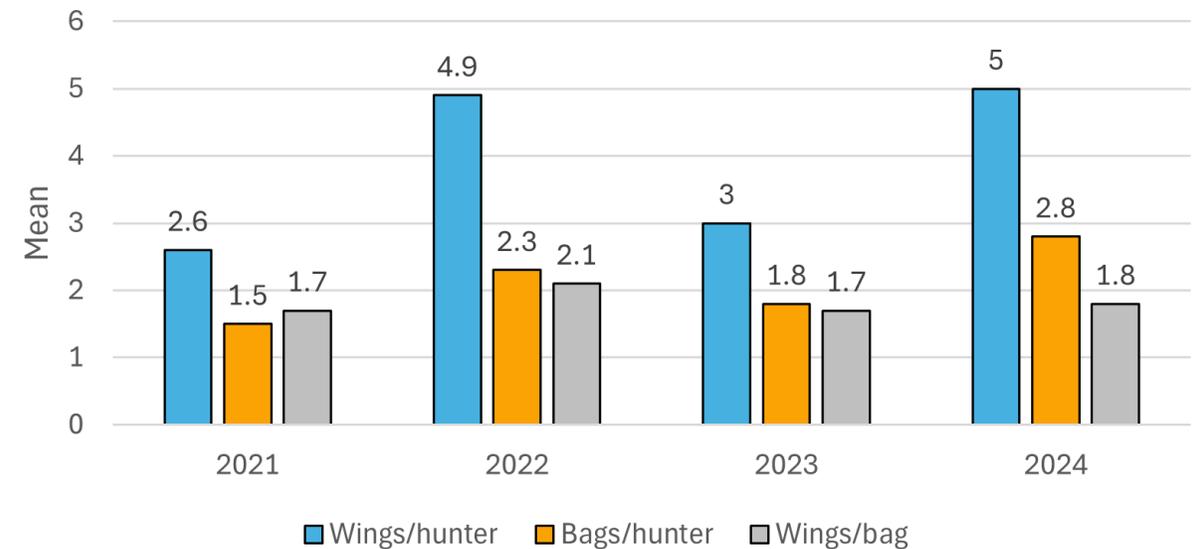
Daily bag limit of 3 ducks/day,
with no sex-specific or species
restrictions.

Two-tiered Hunting Regulations

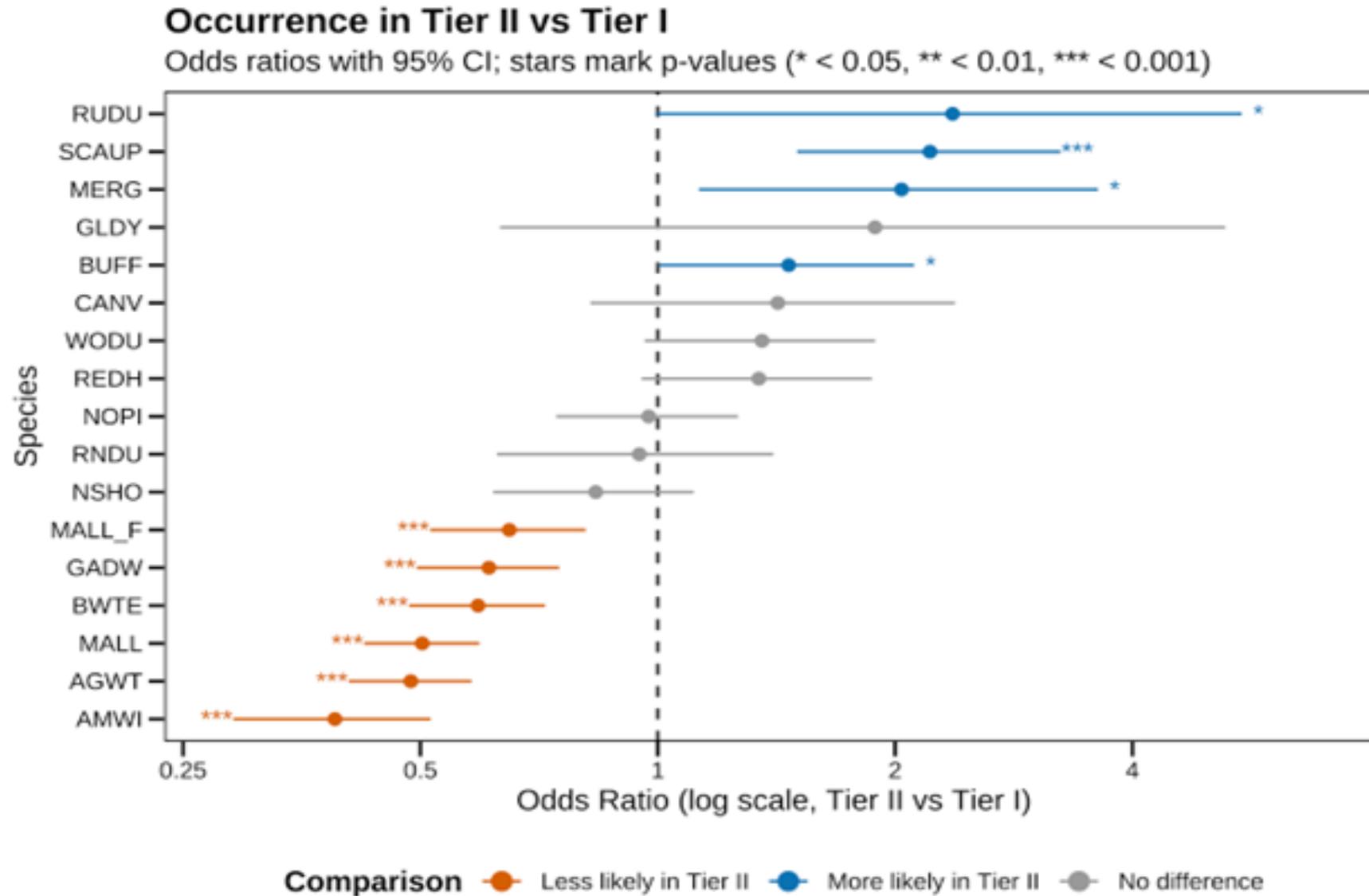
Nebraska Harvest Diary Results
2021 - 2024



Nebraska Parts Collection Survey Results
2021 - 2024



Two-tiered Hunting Regulations



R3 Estimates

Relatively high recruitment and retention rates, lower reactivation.

Consistently higher recruitment rates than Tier 1

Lower retention rates for Tier 2, which is to be expected

High churn rate for both tiers, higher for Tier 2

| State | Year | Tier | Recruitment | Reactivation | Retention | Churn |
|-------|------|---------|---------------|--------------|---------------|---------------|
| NE | 2021 | Tier I | 8063 (29.4%) | 1154 (4.2%) | 14537 (47.4%) | 0 (0%) |
| NE | 2021 | Tier II | 1210 (36.6%) | 151 (4.6%) | 0 (0.0%) | 0 (0%) |
| NE | 2022 | Tier I | 7840 (29.4%) | 1291 (4.8%) | 13301 (48.6%) | 13149 (48.0%) |
| NE | 2022 | Tier II | 1169 (32.4%) | 197 (5.5%) | 808 (24.5%) | 1793 (54.3%) |
| NE | 2023 | Tier I | 8953 (31.3%) | 1852 (6.5%) | 12732 (47.8%) | 13006 (48.8%) |
| NE | 2023 | Tier II | 1484 (35.4%) | 300 (7.1%) | 891 (24.7%) | 1895 (52.6%) |
| NE | 2024 | Tier I | 12402 (43.1%) | 1949 (6.8%) | 10013 (35.0%) | 18037 (63.0%) |
| NE | 2024 | Tier II | 1775 (43.9%) | 303 (7.5%) | 782 (18.6%) | 2741 (65.3%) |
| SD | 2021 | Tier I | 6891 (22.2%) | 956 (3.1%) | 19403 (59.3%) | 0 (0%) |
| SD | 2021 | Tier II | 440 (50.6%) | 23 (2.6%) | 0 (0%) | 0 (0%) |
| SD | 2022 | Tier I | 8158 (27.3%) | 1096 (3.7%) | 17109 (55.1%) | 13240 (42.6%) |
| SD | 2022 | Tier II | 590 (34.0%) | 78 (4.5%) | 150 (17.3%) | 476 (54.8%) |
| SD | 2023 | Tier I | 8060 (26.3%) | 1277 (4.2%) | 16829 (56.3%) | 12445 (41.6%) |
| SD | 2023 | Tier II | 784 (36.1%) | 109 (5.0%) | 343 (19.8%) | 853 (49.2%) |
| SD | 2024 | Tier I | 5126 (19.6%) | 1448 (5.5%) | 15276 (49.8%) | 14910 (48.6%) |
| SD | 2024 | Tier II | 646 (34.8%) | 113 (6.1%) | 372 (17.1%) | 1131 (52.0%) |

Two-tiered Hunting Regulations

| State | Year | ΔN Tier I | ΔN Tier II | ΔN total | λ | Contrib Tier I ($\lambda-1$) | Contrib Tier II ($\lambda-1$) |
|-------|------|-------------------|--------------------|------------------|-----------|--------------------------------|---------------------------------|
| NE | 2021 | -- | -- | -- | -- | -- | -- |
| | 2022 | -734 | 303 | -431 | 0.986 | -0.024 | 0.010 |
| | 2023 | 1,989 | 592 | 2,581 | 1.085 | 0.066 | 0.019 |
| | 2024 | 140 | -157 | -17 | 0.999 | 0.004 | -0.005 |
| SD | 2021 | -- | -- | -- | -- | -- | -- |
| | 2022 | -1,153 | 866 | -287 | 0.991 | -0.036 | 0.027 |
| | 2023 | 781 | 438 | 1,219 | 1.039 | 0.025 | 0.014 |
| | 2024 | -4,504 | -316 | -4,820 | 0.853 | -0.137 | -0.010 |

Greater White-fronted Geese

- As of the late 1980s, 90% of the mid-continent population of white-fronts depend on the Rainwater Basin during spring migration (Benning 1987)
- More recent spring waterfowl surveys conducted by the RWBJV and USFWS indicate a significant decline in white-front occupancy of the RWB (Drahota, 2015; Varner, 2022)
- Notable shifts in wintering distributions (VonBank et al. 2021)
- The RWB has undergone significant land-use alterations over the last half century largely due to expanding agricultural practices resulting in fewer and poorer quality wetlands for migratory birds (Bishop and Vrtiska 2008, LaGrange 2022).



Greater White-fronted Geese

State Specific Objectives

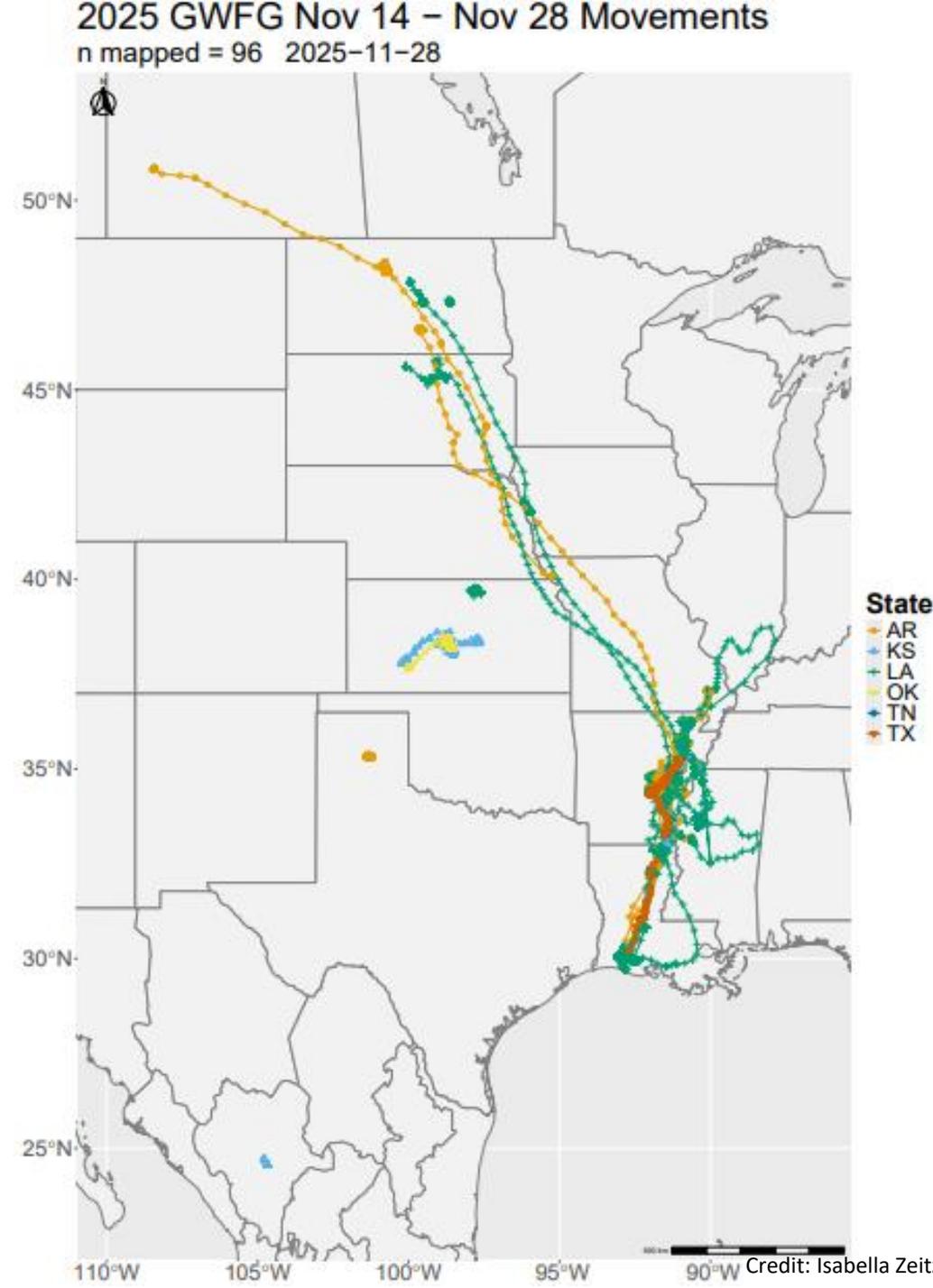
1. Examine migration routes and chronology, and winter dispersal patterns of greater white-fronted geese that stage in Nebraska.
2. Examine greater white-fronted geese fall and spring stop-over locations and duration, habitat use, and land use.
3. Determine activity budgets (time feeding, roosting, etc.) by seasonal use and habitat type.
4. Define breeding affiliations of midcontinent greater white-fronted geese that stage and winter in Nebraska.

Graduate Students: Isabella Zeitz & Nadia Swanson



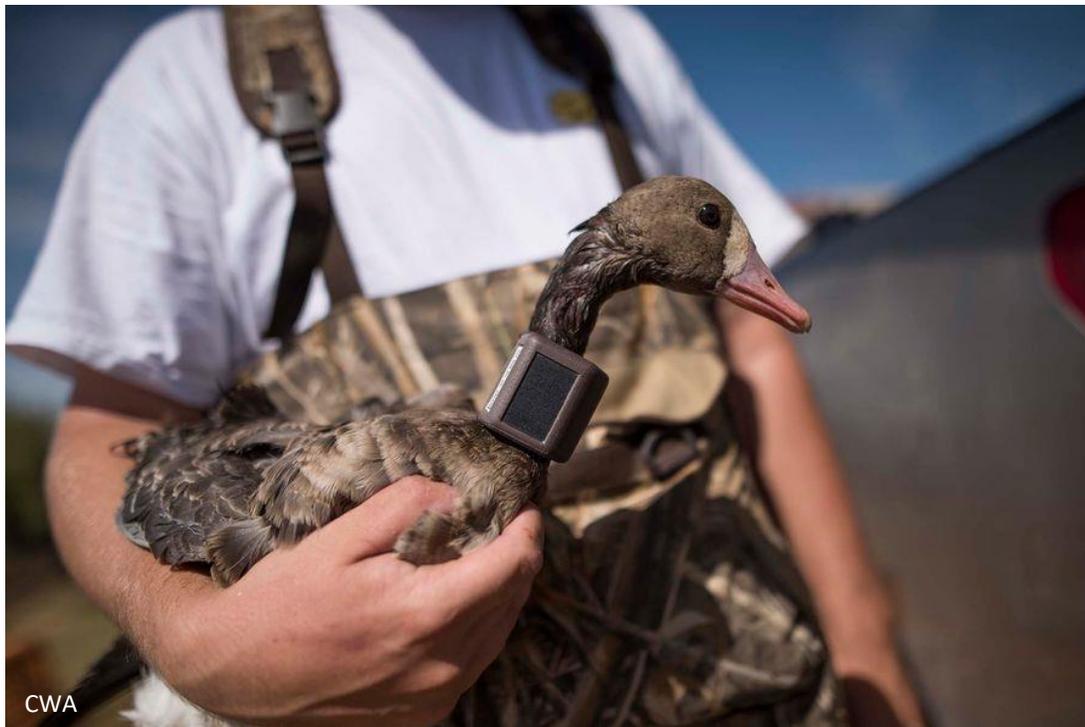
Preliminary White-front Research Results

- Primary migration route seems (more so in the fall) to be in eastern Nebraska & along the Missouri River (both CF & MF marked birds)
- Very few birds are stopping over in Nebraska during the fall. If they do, it is only for a couple of days. Longer stopover durations in spring (~ week).
- All marked birds are south of Nebraska by early December.
- Likely need to increase our sample by capturing NE birds using the RWB.



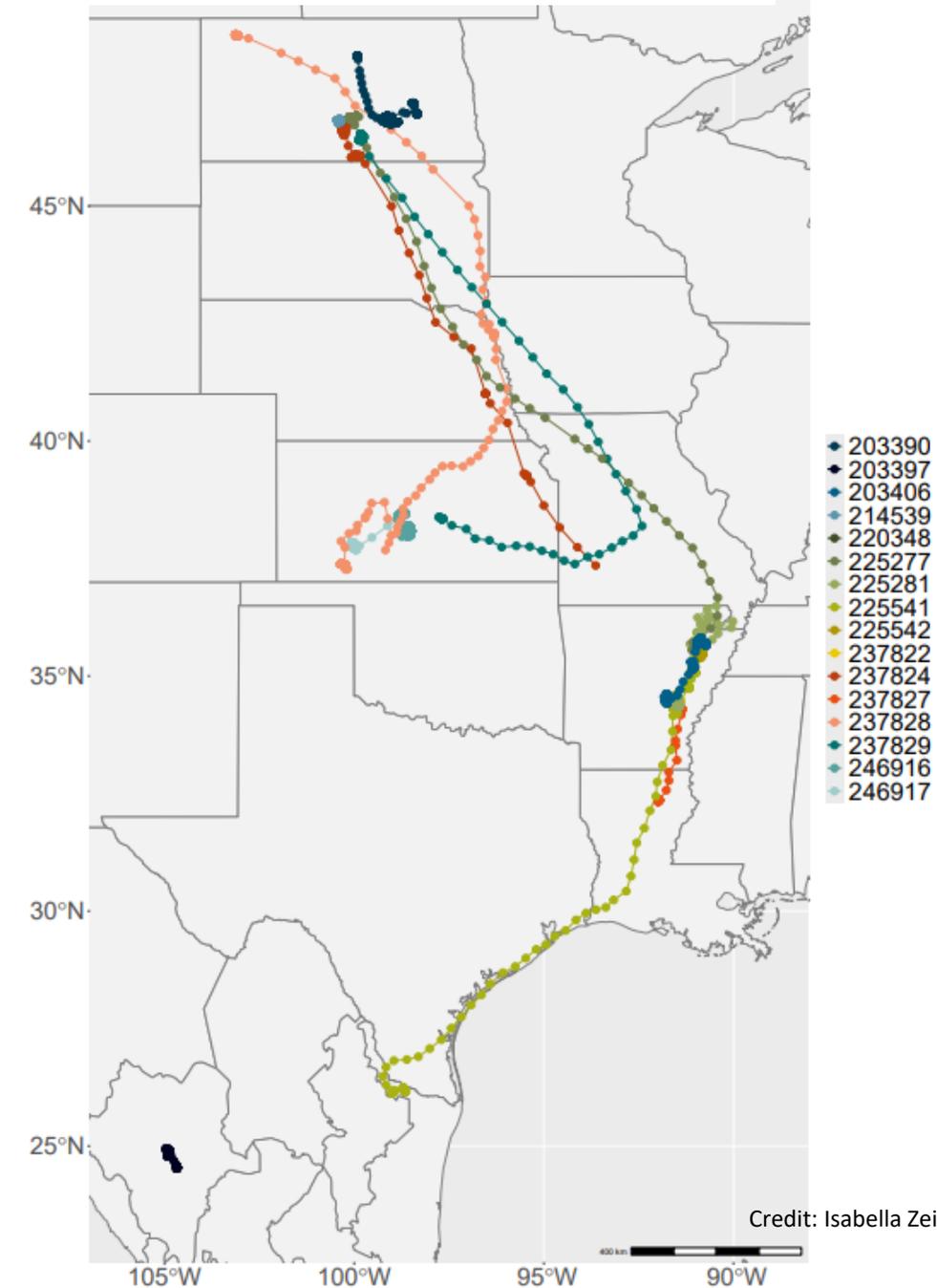
Preliminary White-front Research Results

- Cheyenne Bottoms (KS) marked white-fronts rarely using Rainwater Basin in Fall
 - Drought & lack of water across landscape??



CWA

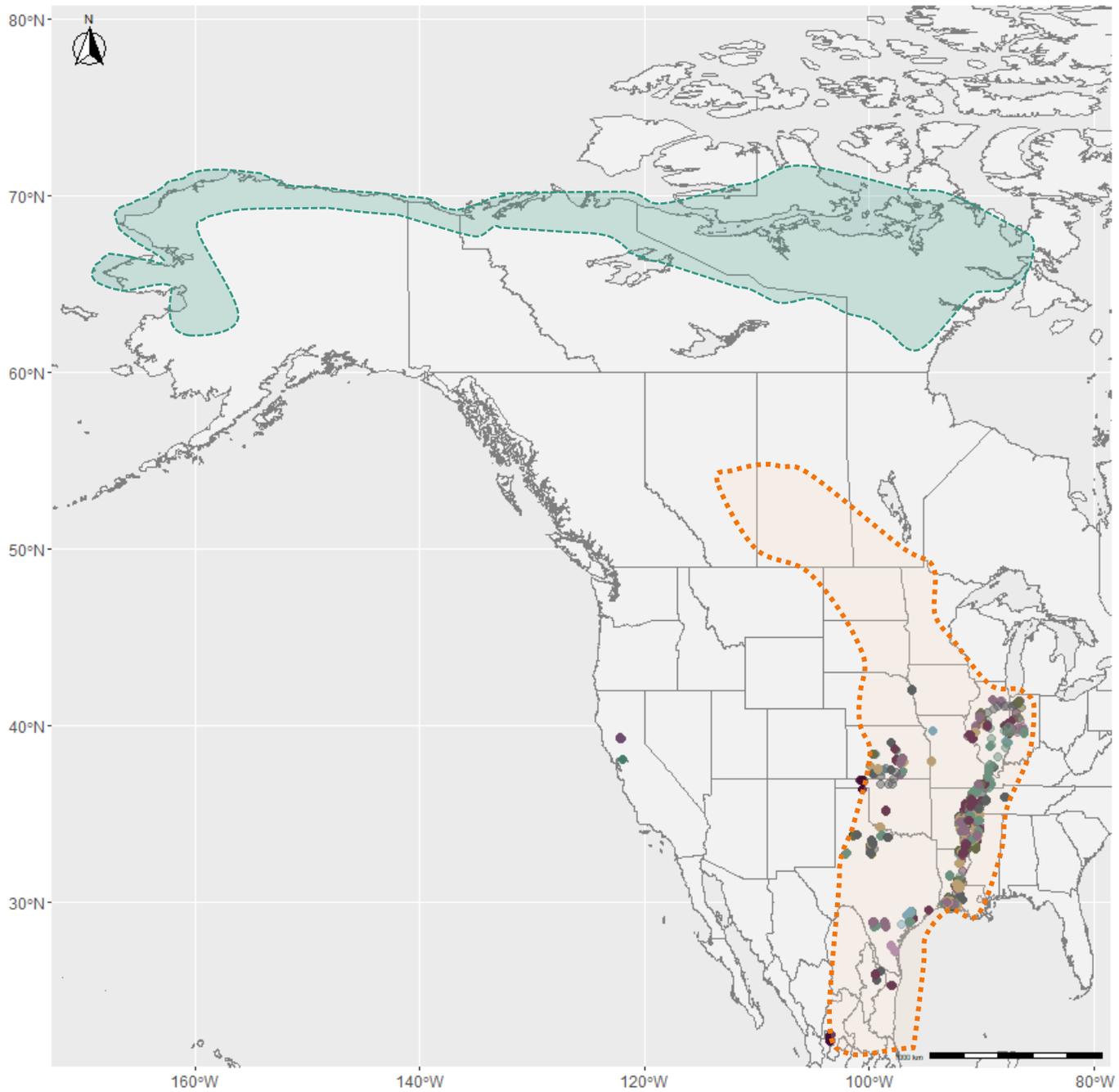
Kansas GWFG Movements Oct 31 – Nov 14



Credit: Isabella Zeitz

Date: Jan 01
n mapped = 750, Map created on: 2025-04-22

 = Breeding Region
 = Non-breeding Region



- Year
- 2017
 - 2018
 - 2019
 - 2020
 - 2021
 - 2022
 - 2023
 - 2024
 - 2025

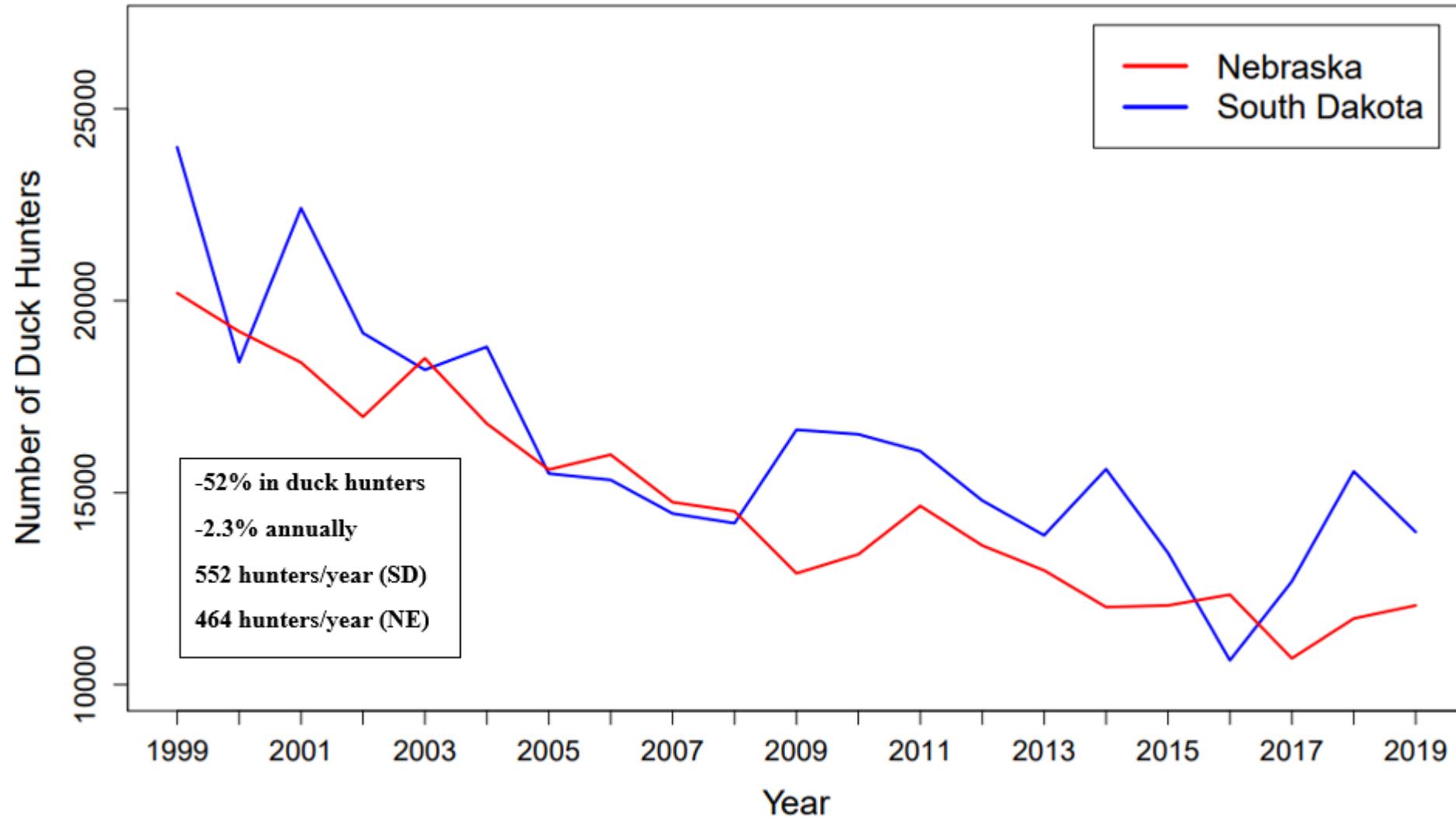
Credit: Isabella Zeitz

Other Projects Ongoing

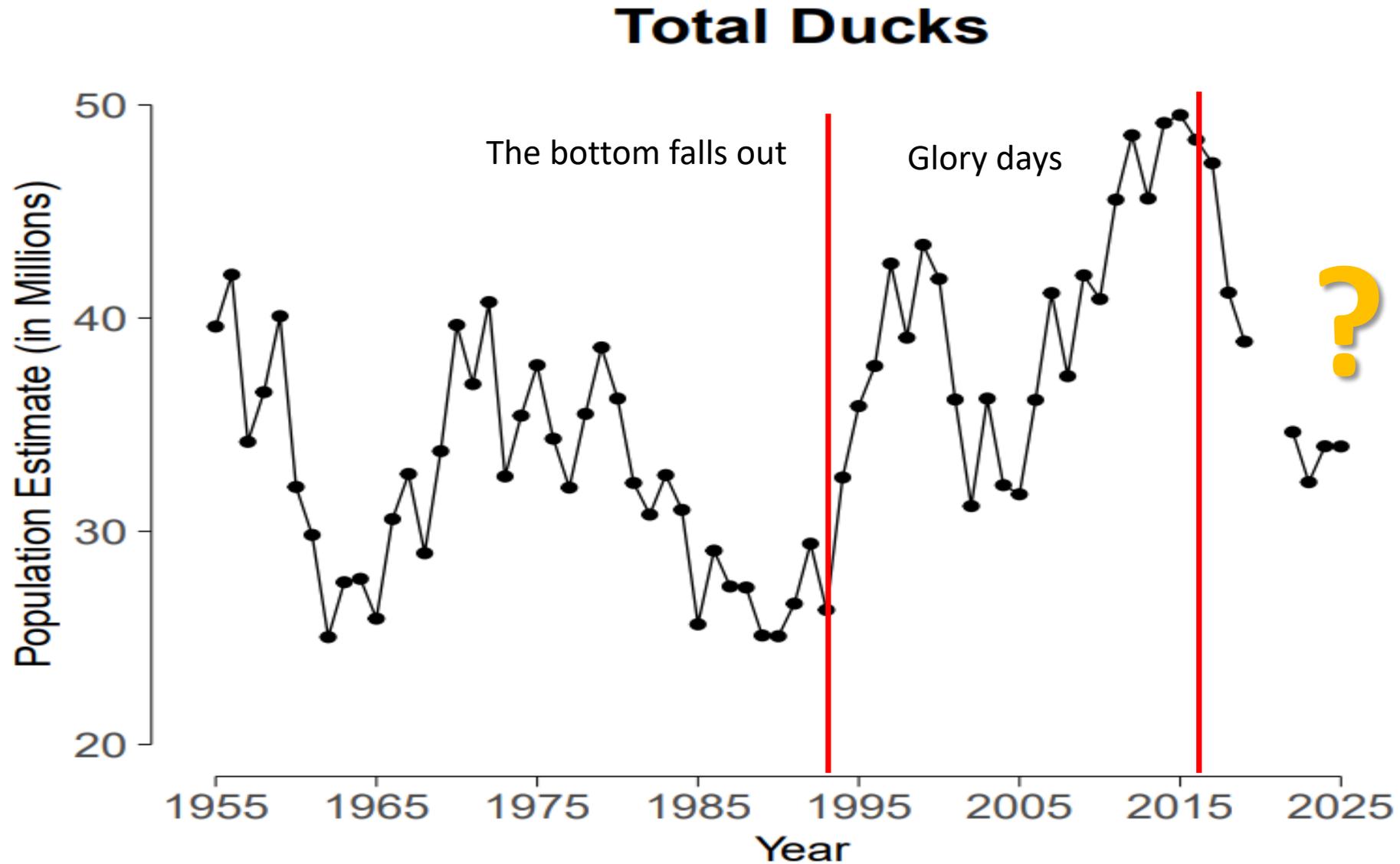
- Cackling goose movement ecology
- Harvest derivation
- Trumpeter swans breeding in NE (genetic diversity and dispersal)
- Light goose declines (MC pop; Karrak Lake/Anderson Bay)
- Two-tier regulations phase two
- Waterfowl hunter participation drivers (w/ Ducks Unlimited)
- Continuation of resident Canada goose monitoring efforts
- **More to come!**

Future of Waterfowl Management

Number of Duck Hunters in Nebraska and South Dakota



Future of Waterfowl Management



- It is estimated that the U.S. has lost 50% of its wetlands since 2009 (USFWS 2024).
- Grassland loss across the Great Plains is nearly 70%, with 1.6 million acres lost in just 2021 (World Wildlife Fund 2023).



BREAKING THE PRAIRIE

Neatly plowed farmlands in North Dakota encroach on seasonal prairie potholes, vital habitat for waterfowl and other wildlife.

Questions?

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Nebraskaland

INSPIRING OUTDOOR ADVENTURE SINCE 1926

NOVEMBER 2024



INSIDE

Waterfowl Zones Explained • Deer Antler Crafts
Nebraska's Best Running Trails • Nebraska's WWI Flying Ace
Fishing for Rainbows • Shooting Shadows • The Primordial Pouch