

2023 Migratory Game Bird Status and Season Recommendations



NEW JERSEY DIVISION OF
Fish and Wildlife

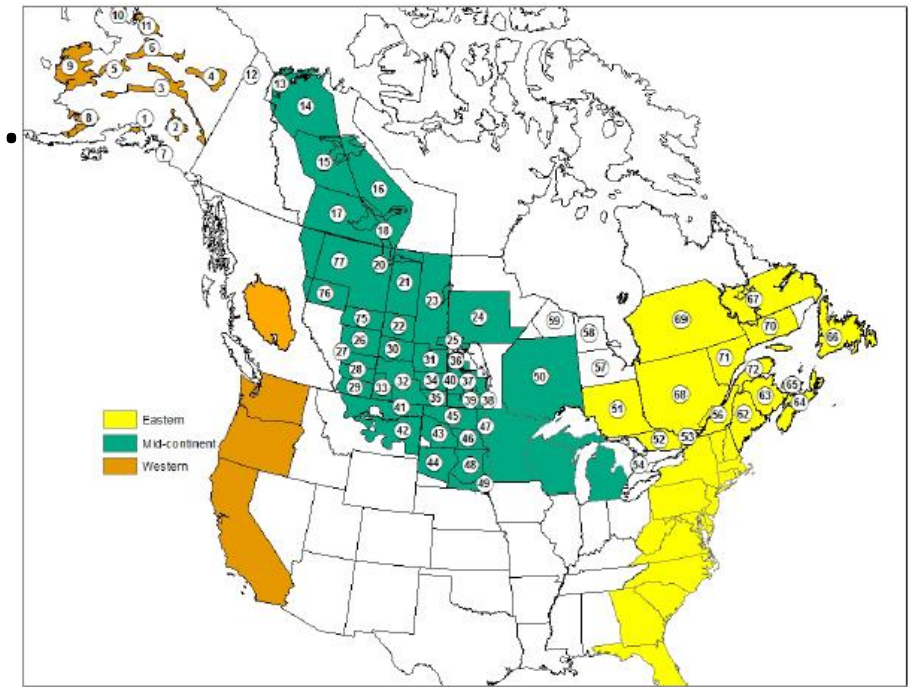


Duck Population Status



Brief History of Duck Harvest Management U.S.

- <1990 Annual “disagreement & debate” between flyways & USFWS over duck harvest management
- Circa 1990 “Midcontinent” mallard status drive duck harvest management in US
- 1995: AHM formally adopted nationwide; based on mid-continent mallards
- 1997 Atlantic Flyway duck harvest uses AHM “Eastern” Mallards
- 2010 Pacific Flyway duck harvest uses AHM “Western” Mallards
- 2019 Atlantic Flyway changes to “Multi-Stock” harvest management

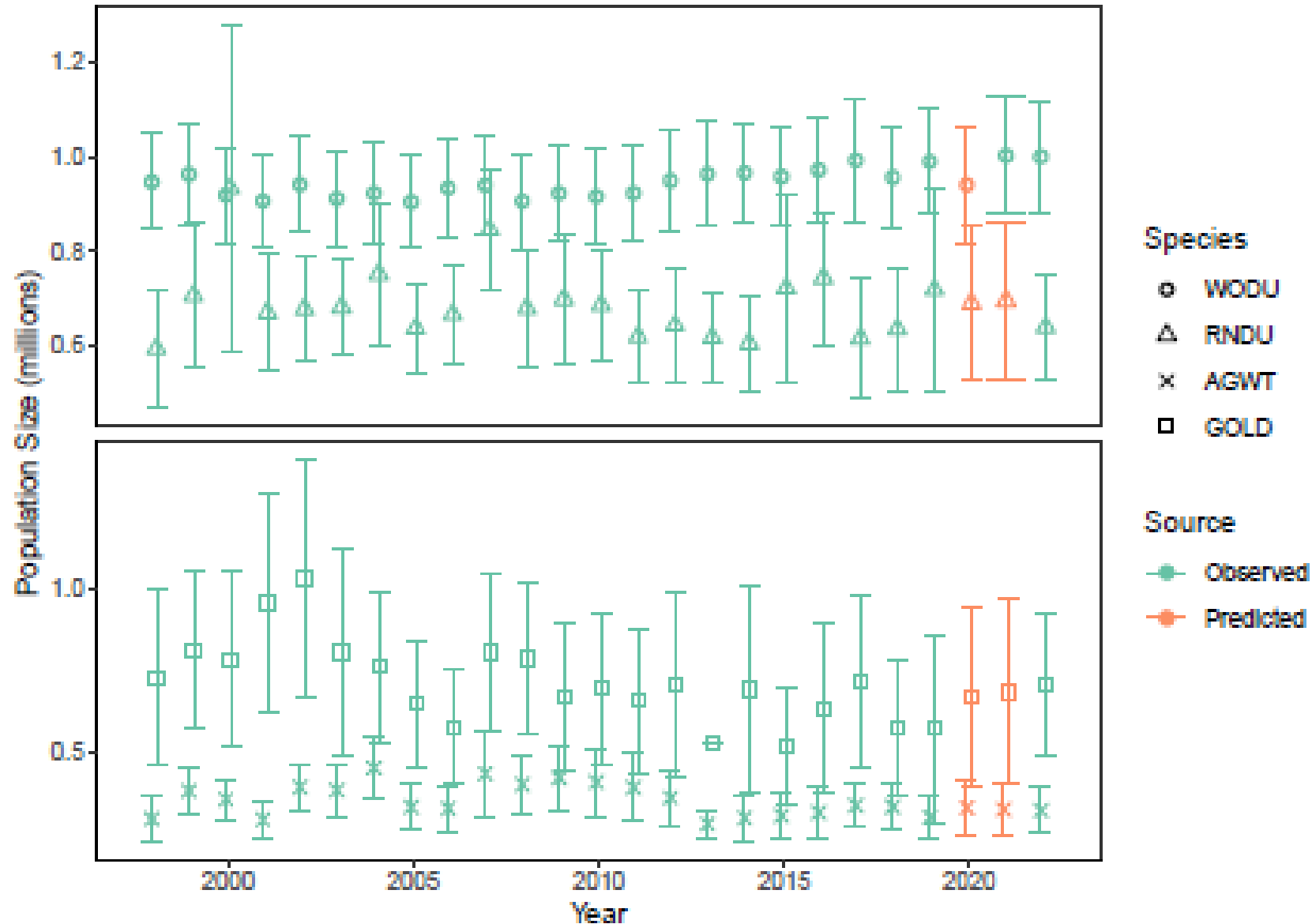


“Multi-stock” AHM duck harvest management: Atlantic Flyway

- 4 species: ~50% Atlantic Flyway harvest
- Represent wide-range of species life histories
- Expansive breeding and wintering distribution

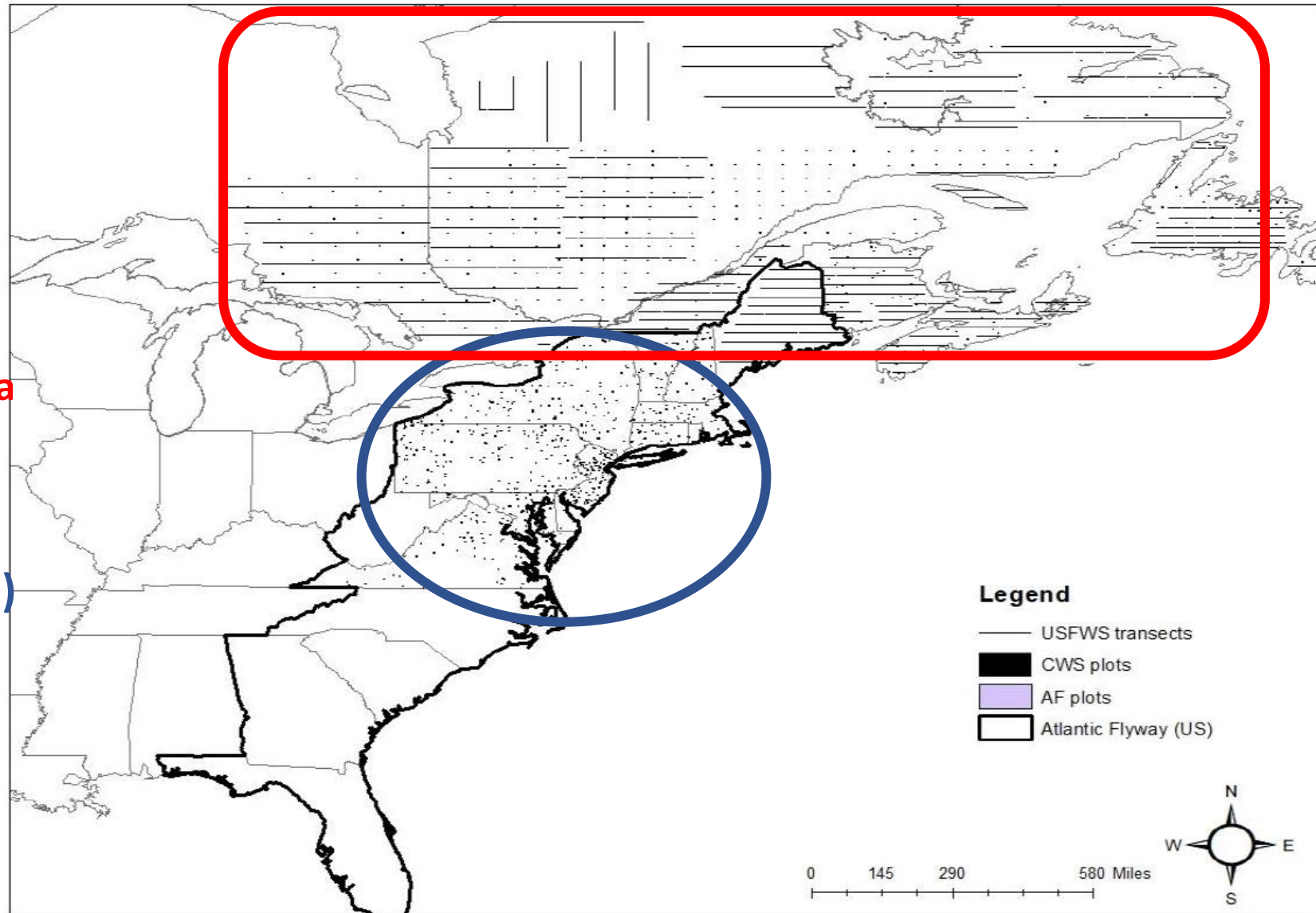


Population estimates: AF Multi-Stock Species



Status Eastern Mallards

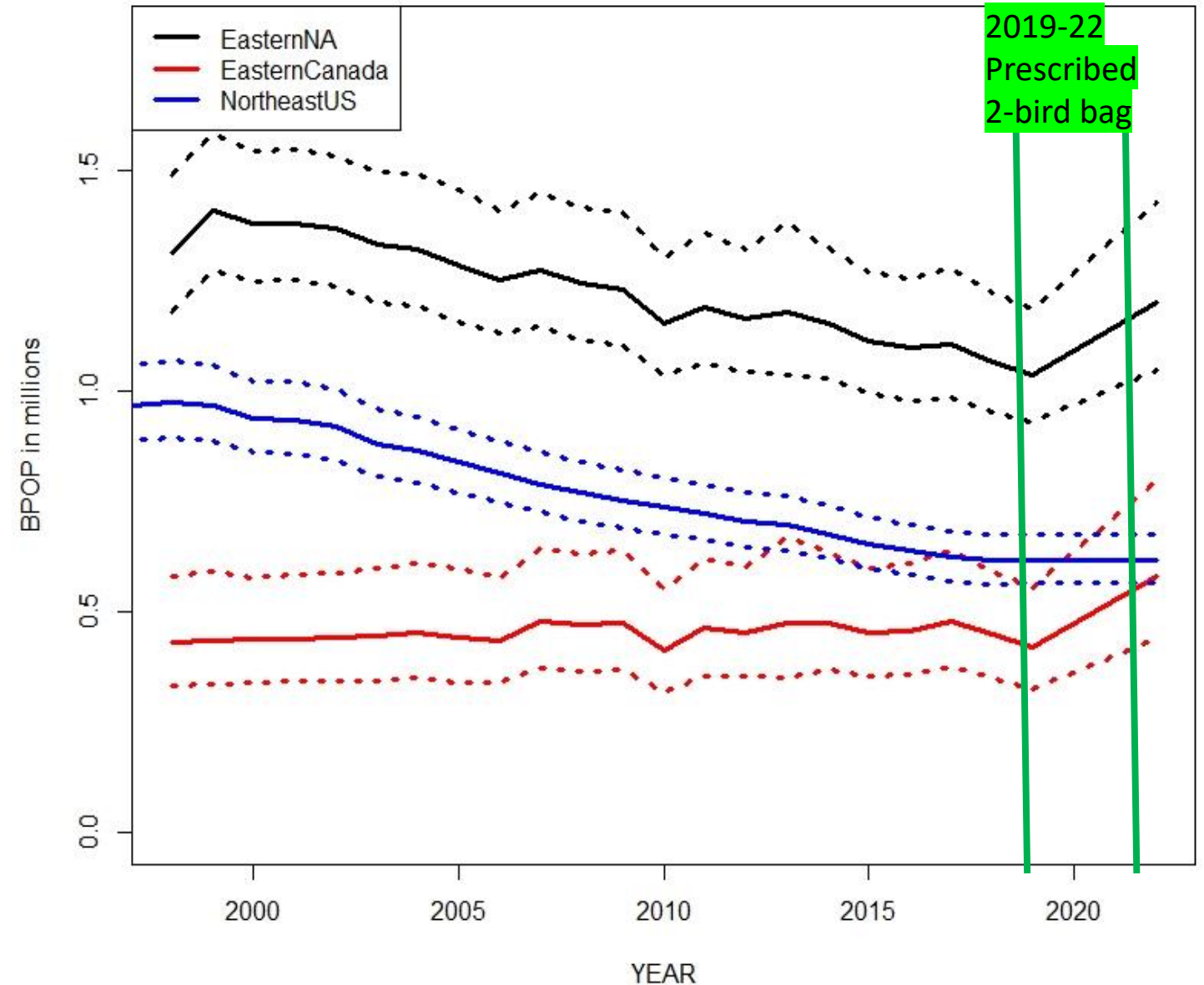
- Breeding ground surveys used measure status
- “Eastern Canada” = Maine + Canada suite of aerial surveys
- “Northeast” = NH to VA (ground)



Status Eastern Mallards

- Range-wide decline driven by Northeast US mallards
- 38% decline from 1998-2019 in the Northeast US
- Decline ~1% per year
- Stable population Eastern Canada

Mallard population, millions



2023: Move “prescribed” to IPM-driven Eastern Mallard Harvest Strategy

Objectives:

1. Sustain eastern mallard population that meets legal mandates and provides everyone opportunity to see mallards
2. Maximize harvest opportunity in-concert with hunter desires
 - minimize closed seasons
 - maximize average season length
 - maximize population size
 - minimize frequency regulatory changes

IPM: Bag Limits and Pop Size

- 2022 Breeding population = 1.2 million
- Slight increase since 2019 (no surveys 2020, 2021)
- Return to liberal mallard bag limit (4; 2 F)
- Simulations suggest Atl. Flyway liberal bag limit ~80% of time

BPOP	Bag limit, previous year			
	Closed	1	2	4
<150	0	0	0	0
200	1	1	1	1
250	1	1	1	1
300	1	1	1	1
350	1	1	1	1
400	1	1	1	1
450	1	1	1	1
500	1	1	1	1
550	2	2	1	1
600	2	2	2	2
650	2	2	2	2
700	2	2	2	2
750	2	2	2	2
800	2	2	2	2
850	4	2	2	2
900	4	4	2	2
950	4	4	4	2
1000	4	4	4	4
1050	4	4	4	4
1100	4	4	4	4
1150	4	4	4	4
1200	4	4	4	4
1250	4	4	4	4
>1300	4	4	4	4

What does this mean for duck seasons for 2023?

- Multi-Stock Optimal Policy: Liberal 60/6 duck season; spp restrictions
- Mallard bag limit goes from 2 birds to 4 birds throughout Atlantic Flyway





$$\Delta Z_{lm} = - \frac{(Z_{lk} - Z_{lp})(Z_{km} - Z_{pm})}{Z_{th,kp} - j \frac{d}{y_b}} \quad (1)$$

$$j \frac{d}{y_b} = \frac{(Z_{lk} - Z_{lp})(Z_{km} - Z_{pm})}{\Delta Z_{lm}} \quad (2)$$

⊗ + $Z_{th,kp}$

Don't have to be mechanical engineer

- Correct fuel
- Tuned for efficiency
- ***Need to work within limitations***
- Correct implements

Canada Goose Populations: Atlantic Flyway



ATLANTIC FLYWAY CANADA GOOSE HUNTING ZONES

Canada Goose Zones based on preponderant
fall-wintering population

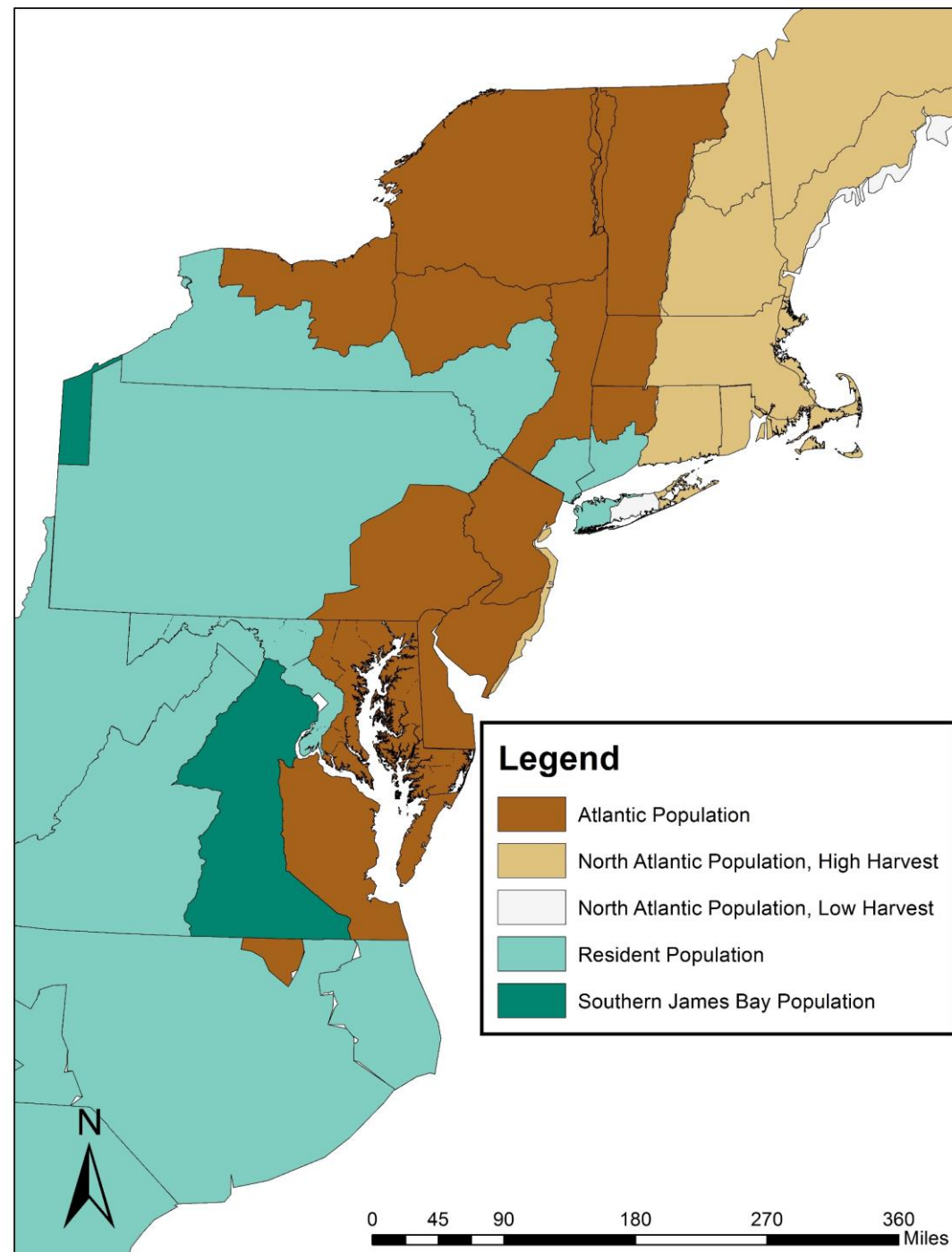
- Banding data
- Telemetry data

2023 Regulations (days/bag)

RP Zones: liberal (80/5) seasons

NAP Zones: moderate (60/2 or 70/3)
seasons

AP Zones: moderate 45 day/3 (Mid-Atl & NE) or
45/2 (Chesapeake) seasons



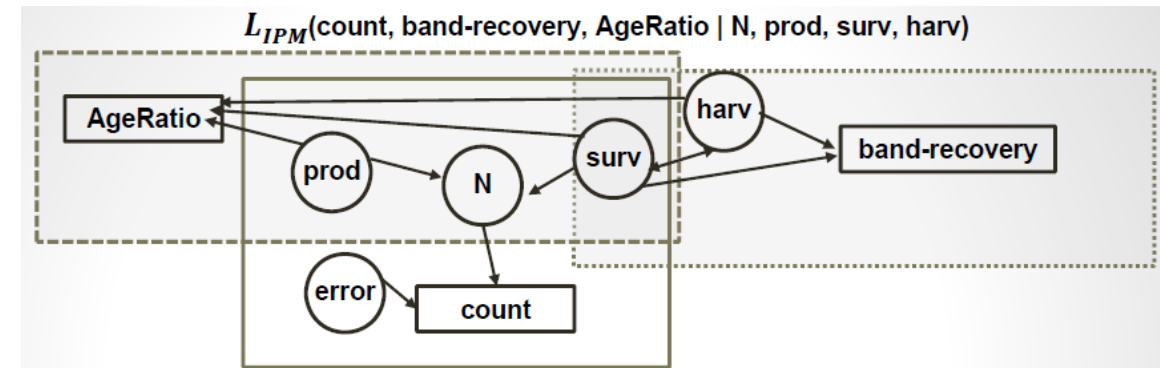
A large flock of Canada geese is captured in flight against a clear, bright blue sky. The geese are arranged in a loose V-formation, with many birds in various stages of wing beats. Their dark brown wings and lighter brown bodies are clearly visible. The text "Status of Atlantic Population (AP) Canada Geese" is overlaid in the center in a bold, yellow, sans-serif font.

Status of Atlantic Population (AP) Canada Geese

2021: AP Canada Goose Integrated Population Model Adopted

IPM: Link various parts survey data into joint-likelihood estimator rather than use data sets independently

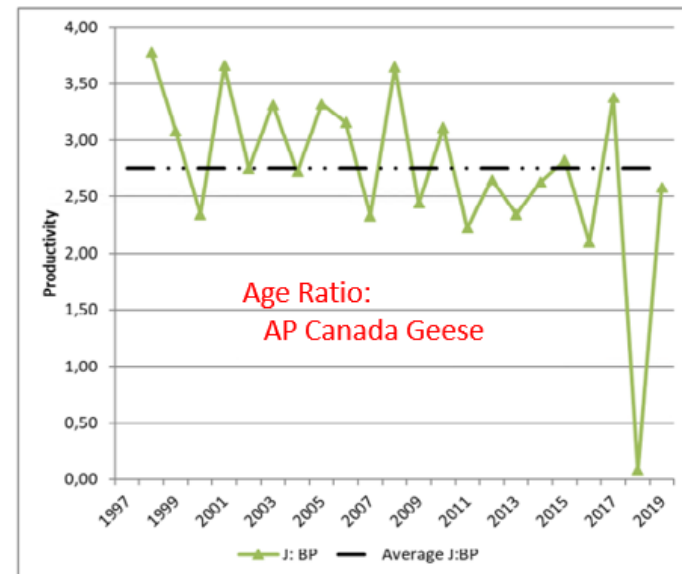
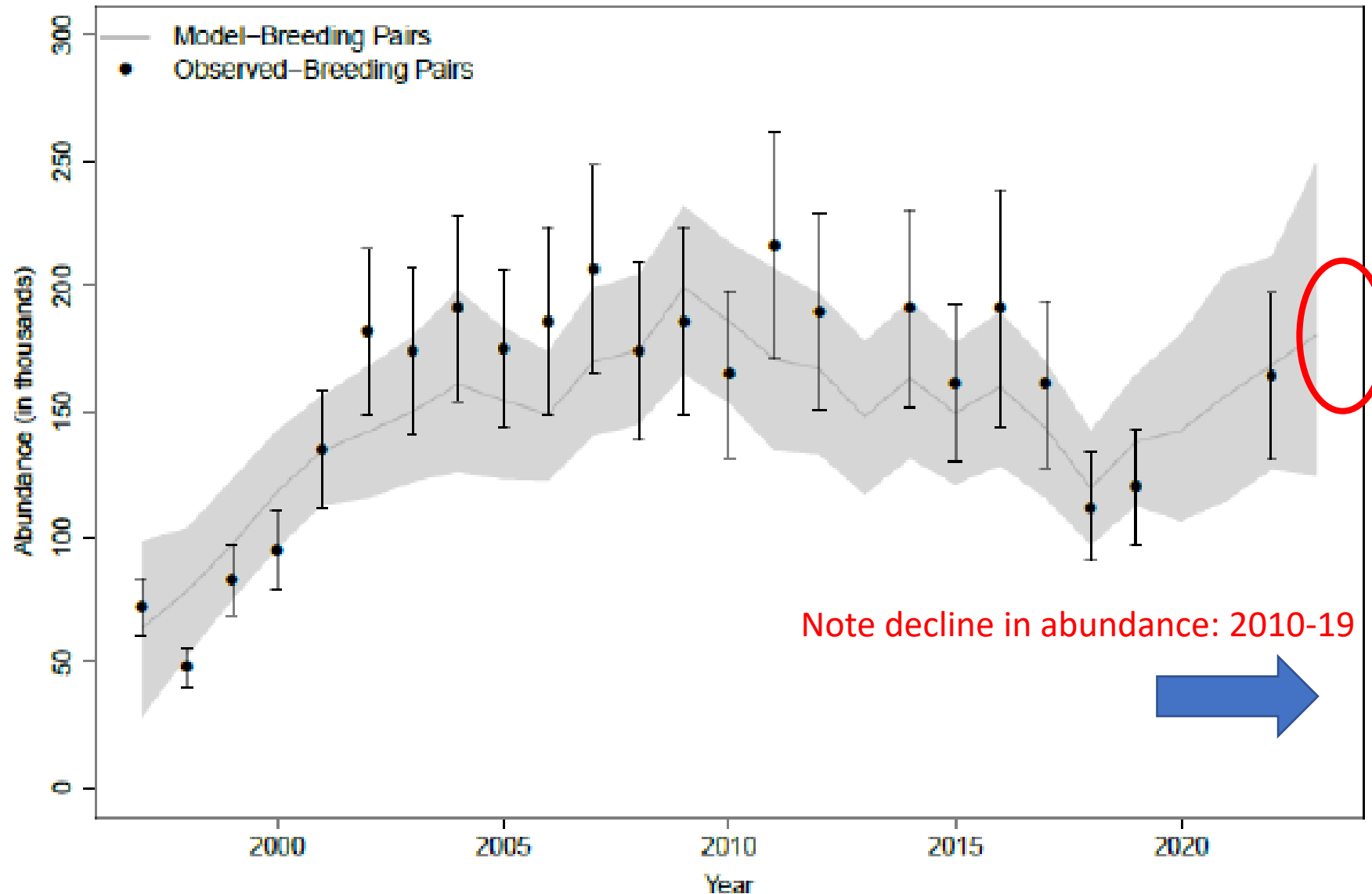
- Parameter estimates inform each other
- Can deal “holes” in data
- Incorporates uncertainty
- IPMs can predict *future* population size



Data sources in IPM

- Adult survival (banding data)
- Adult harvest rate (banding data)
- Spring conditions temp & snow northern Quebec (predicts age ratio)
- Age ratio of young:adults banding (serves as IPM ‘verification’ following weather prediction)
- Bpop Pairs (serves as IPM ‘verification’ following previous year prediction)

AP Integrated Population Model, 1997-2023



Metrics of AP Canada Goose Harvest Strategy

Population Prediction (Pairs)	Harvest Package	Target Adult Harvest Rate	Packages for Chesapeake Region AP Areas Days/Bag	Packages for Mid-Atlantic and New England Region AP Areas Days/Bag
> 160,000	Liberal	7%	45/2	45/3
$\leq 160,00$ and $> 125,000$	Moderate	5%	30/2	30/3
$\leq 125,000$ and $\geq 60,000$	Restrictive	3%	30/1	30/1
< 60,000	Closed	0%	Closed	Closed

What does this mean for 2023?

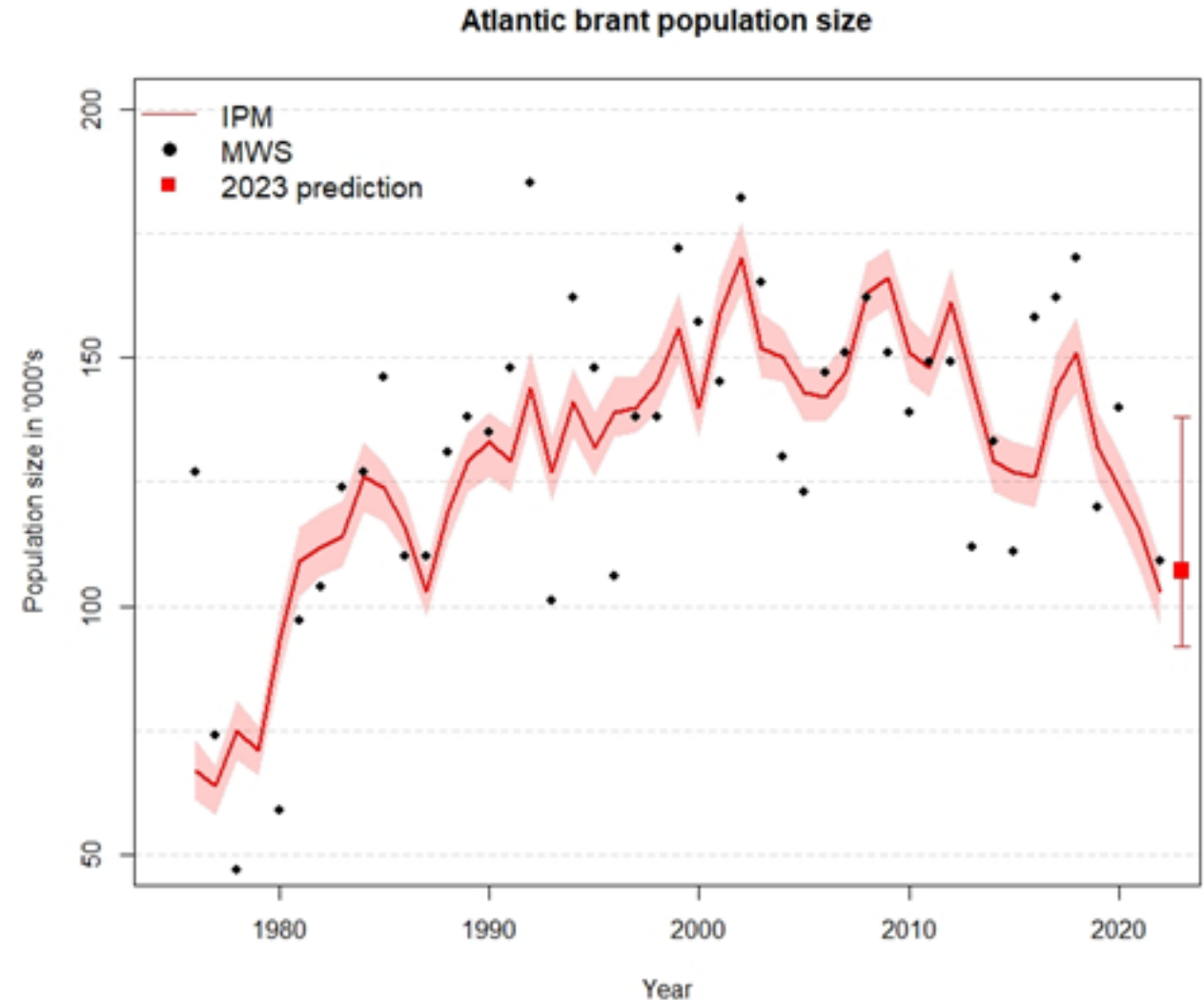
- Mid-Atlantic & New England AP Zones: liberalized to 45/3
- New Jersey
 - Regular Season AP Areas (North and South Zones): 45/3
 - Regular Season NAP Areas (Coastal Zone): remains 60/2 concurrent with duck season
 - September and “Special Winter” seasons: no change
- Chesapeake states (MD, DE, VA): 45/2
- AP Zones in Quebec and Ontario still in reduced bag limit

Status Atlantic Brant



Atlantic brant harvest regulation 2023

- Atlantic Flyway adopted IPM-based Atlantic brant harvest strategy 2021
- 2023 IPM prediction: **107,000** brant
 - 115,000 is “cut point” for 30/1 season
 - Lowest IPM estimate >30 years
- 30 days, 1 bird bag; 50/2 last year



Percent young Atlantic brant in fall flight



Year	Atl. Brant	Year	Atl. Brant
1976	8.9	2000	25.1
1977	29.5	2001	24.7
1978	5.9	2002	6.9
1979	41.0	2003	17.2
1980	33.7	2004	13.1
1981	21.3	2005	15.0
1982	23.5	2006	24.2
1983	32.3	2007	31.1
1984	21.3	2008	21.1
1985	15.8	2009	9.4
1986	3.7	2010	13.2
1987	26.5	2011	25.2
1988	26.4	2012	6.5
1989	21.0	2013	3.7
1990	10.9	2014	9.5
1991	24.5	2015	9.2
1992	2.2	2016	24.7
1993	21.2	2017	17.8
1994	10.2	2018	1.5
1995	21.6	2019	10.5
1996	15.3	2020	11.2
1997	17.5	2021	7.4
1998	24.1	2022	8.6
1999	1.5		

Mean fall flight
17% young

=5-10% "Poor"

<5% "Bust"

What about global warming, especially in Arctic?

This should be good for arctic breeding geese, right?



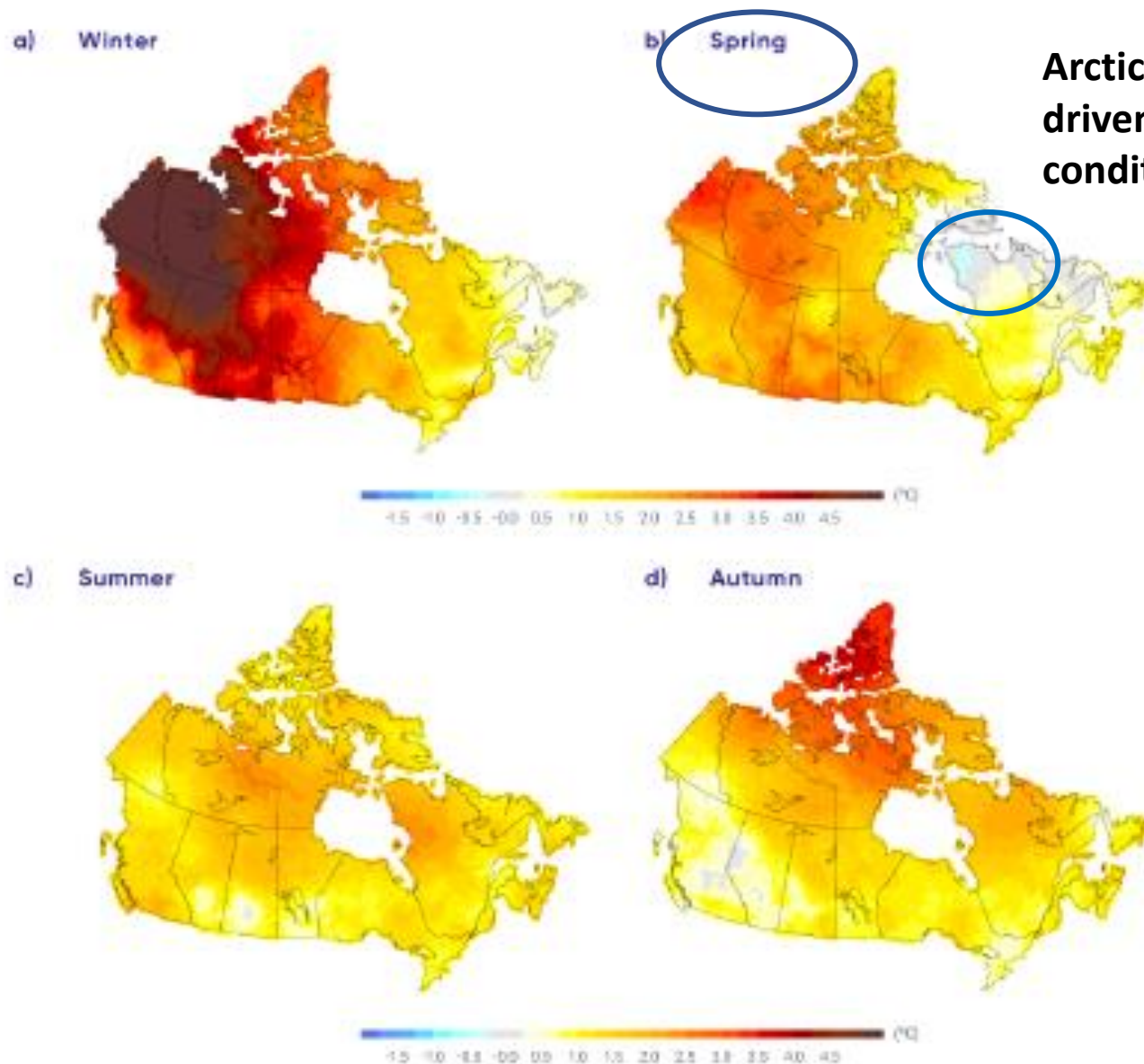
a) 1948–2016



b) 1948–2016



What about global warming, especially in Arctic?



Questions on status updates before 2023-24 recommendations?



ANNUAL PROCESS: MIGRATORY BIRD REGULATIONS

- States participate through 4 (*Atlantic*) Flyway Councils
 - Councils make recommendations to USFWS on hunting seasons
- US FWS annually promulgate **framework regulations** input from staff and Flyway Councils
 - Bag limits, season length, earliest opening and latest closing dates
- States choose within these frameworks.
State regulations can be more restrictive, but not more liberal, than federal frameworks

PROVISION FOR PUBLIC COMMENT: published annually in **Federal Register** 50 CFR Part 20

- ***Preliminary Rule:*** Intent to have hunting seasons and any harvest strategy changes
- ***Proposed Rule:*** Season dates, bag limits, framework dates published

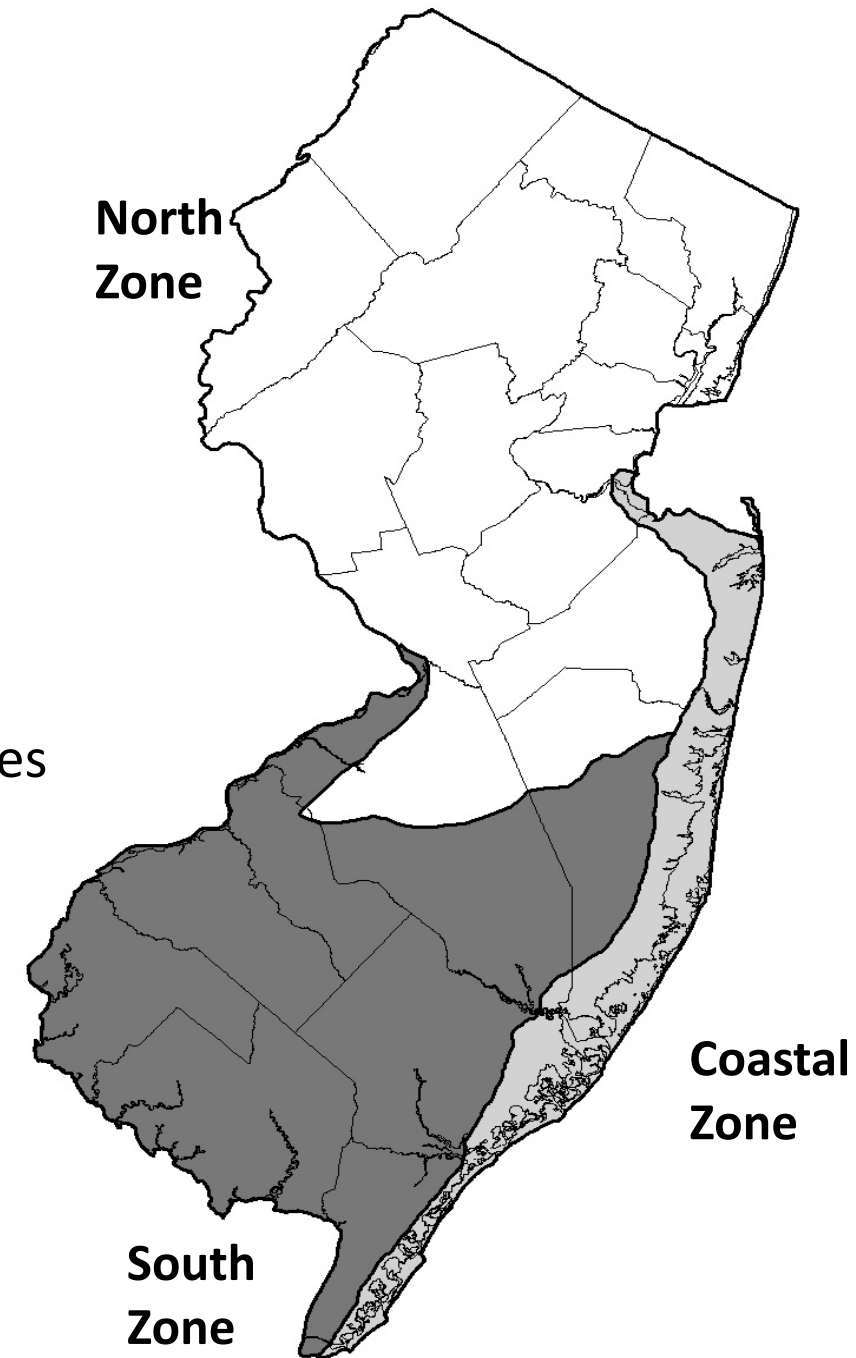
ROLE TODAY TO PRESENT:

- **Recommended 2023-24 dates following consult with NJ Migratory Bird Committee**
- **Council will need to take action (vote) today on season dates/bag limits**

New Jersey Waterfowl Zones

Different:

- Habitat types
- Duck species
- Migration chronologies
- Allows for staggered season dates



2023-24 PRIMARY SEASONS

NORTH ZONE

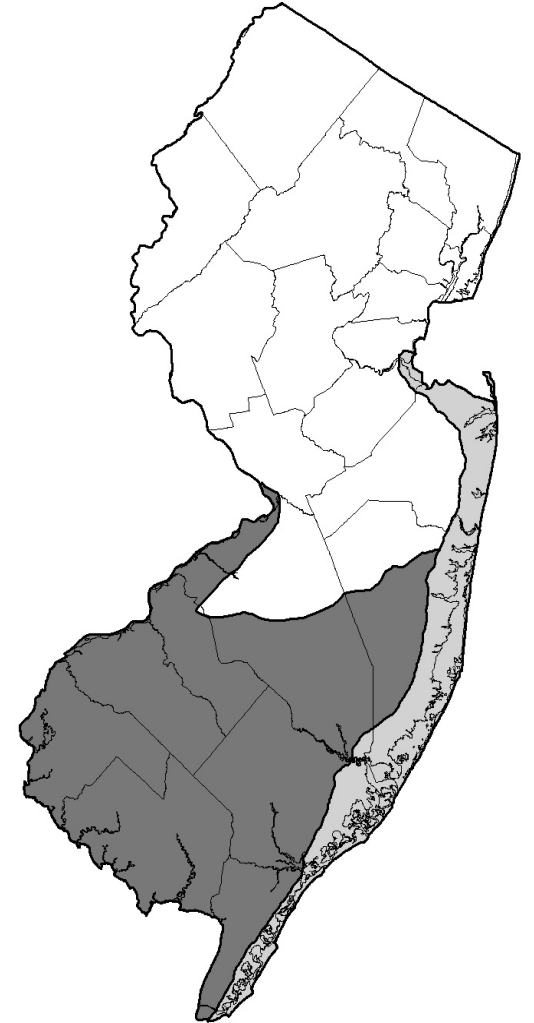
Ducks:	Oct. 14 – Oct. 21	Nov. 11 – Jan. 11
Brant:	Nov. 11 – Nov. 25	Dec. 23 – Jan. 11
Canada Goose:	Nov. 18 – Nov. 25	Dec. 16 – Jan. 29

SOUTH ZONE

Ducks:	Oct. 21 – Oct. 28	Nov. 18 – Jan. 18
Brant:	Oct. 21 – Oct. 28	Nov. 18 – Dec. 14
Canada Goose:	Nov. 18 – Nov. 25	Dec. 16 – Jan. 29

COASTAL ZONE

Ducks & C. Goose:	Nov. 9 – Nov. 11	Nov. 23 – Jan. 27
Brant:	Nov. 23 – Dec. 2	Dec. 14 – Jan. 6



Youth and Veterans/Active Military Days

Youth Waterfowl Days

North Zone: Oct. 7

South Zone: Oct. 14

Coastal Zone: Oct. 28

Veterans/Active Military Day

Statewide: Nov. 4

“Joint” Youth and Veterans/Active Military Day

Statewide: Feb. 3

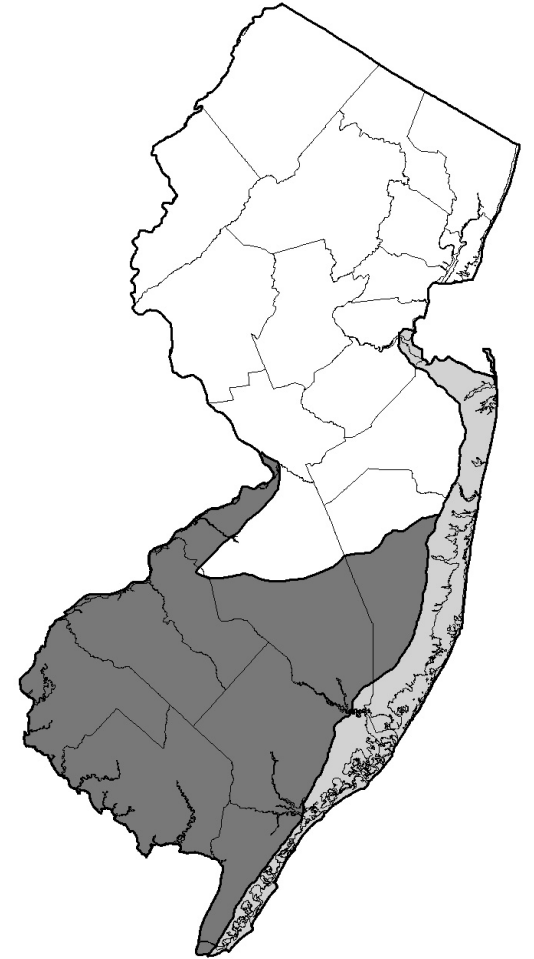


Table 1. New Jersey Duck Seasons: All Zones, 2023-24

 = Ducks  = Youth Only Day  = Youth & Veterans/Active Military  = Veterans/Active Military Only Day  = Holidays

[illegible][illegible]

		February						
		R	F	S	S	M	T	W
		1	2	3	4	5	6	7
North Zone								
South Zone								
Coastal Zone								

82 different "standard" hunting days from 60-day season

11 Saturdays in each zone

15 different Saturdays for hunters willing to cross zones

Canada Goose

September Season (Statewide)

Sept. 1 - Sept. 30

Bag limit: 15 Canada geese

Special Winter Season (Two Distinct Zones)

Jan. 30 – Feb. 15

Bag limit: 5 singly or in aggregate to include cackling and white-fronted geese

Light Geese

Regular Season

Statewide: Oct. 17 – Feb. 15

Bag limit: 25 in aggregate to include snow geese and Ross's geese

Conservation Order

Statewide: Feb. 16 – Apr. 6

Bag limit: None; includes snow geese and Ross's geese

WEBLESS SPECIES

Woodcock

**North Zone: Oct. 14 – Oct. 28
Oct. 31 – Nov. 25**

**South Zone: Nov. 11 – Dec. 2
Dec. 14 – Jan. 2**

Rails and Gallinule

Sept. 1 – Nov. 21

Snipe

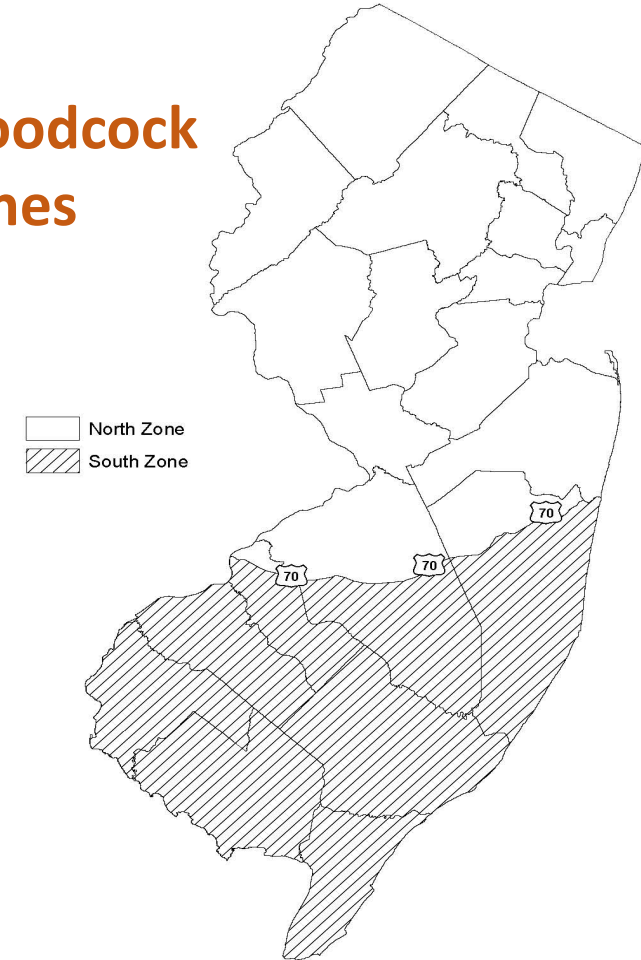
Sept. 9 – Jan. 11

Crows (Mon., Thur., Fri., & Sat.)

Aug. 14 – Dec. 2; Dec. 11 – Mar. 16

Mourning dove, king rail, sandhill crane: Closed

Woodcock Zones



Potential restrictions on nonresident waterfowl hunters in NJ

New Jersey State Duck Stamp sales, NJ vs nonresident														
Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Resident	10,758	10,300	10,117	10,448	11,200	11,593	10,729	10,399	10,361	10,254	9,695	10,672	10,128	9,738
Nonresident	1,468	1,353	1,434	1,541	1,671	1,720	1,674	1,596	1,777	1,821	1,763	1,839	1,973	1,977
Total	12,226	11,653	11,551	11,989	12,871	13,313	12,403	11,995	12,138	12,075	11,458	12,511	12,101	11,715
% Resident	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.85	0.85	0.85	0.85	0.84	0.83

Standard profile of state of residency of NJ nonresident duck stamp buyers

State	Percent
PA	60%
NY & DE	20%
Everyone else	20%

- **Slowly increasing proportion of nonresidents**
- **~30% increase in nonresident waterfowl hunters**
- **Mostly after mid-January in Coastal Zone**



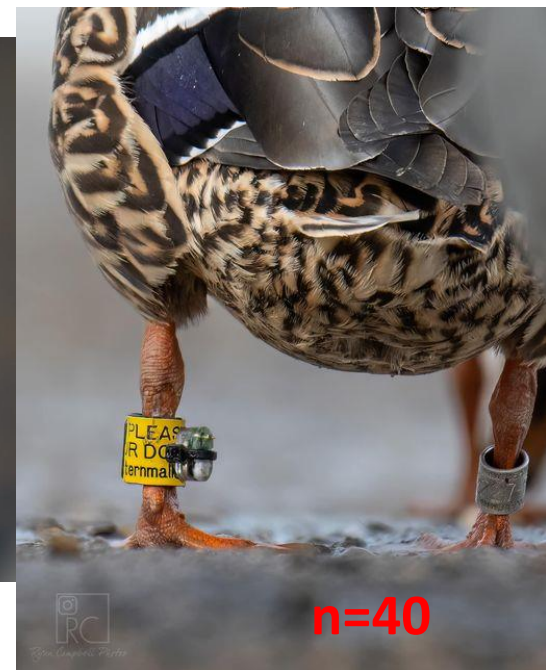
Potential restrictions on nonresident waterfowl hunters in NJ

- Exacerbated past several years by short (30-day) Canada goose season that ended early January
- Migratory bird resource: “shared” among states
- Only 3 states (ND, SD, AR) who limit nonresidents
- Nonresidents pay more license/state duck stamp
- Risk of “retribution” from effected states on NJ nonresidents hunting their state



License/Permit for Waterfowl Hunting Guides

- Good discussion but no clear consensus. Most not opposed idea unless there was inability to enforce requirements guide permit requirement
- Discussed pros and cons with safety being primary concern and consideration
- No consensus on whether guide permit should/would/could extend beyond waterfowl hunting (eg: deer/turkey), or even fishing



Winter 2023

\$90,000 electronic trackers

NJFW: \$18,000

Date Stamp

Date: 2022-04-01

Brant movements 2022



Questions?

