



# Tennessee Wild Turkey Management Program Status Report

TN-NWTF State Board Meeting  
January 20, 2024

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# New Turkey (& Deer) Management Approach

- Adaptive Harvest Management – “AHM”
  - More objective & data-driven
  - Prioritizes mgmt. objectives based on stakeholder values
  - Applied at a UNIT scale
- Phase I – New turkey (& deer) management units
  - Biologically/ecologically based
  - Scaled for effective management



The map shows the following counties in each region:

- West:** LAMER, OBION, WEAKLY, HENRY, DYER, GIBSON, CARROL, SAUNDERDALE, CROCKETT, TIPTON, HENRI, MADISON, HENDERSON, CHESTER, DECATUR, SHELBY, FAYETTE, and BUNN.
- Central:** STEWART, MONTGOMERY, ROBERTSON, SUMNER, MACON, CLAY, PUCKETT, SCOTT, CAMPBELL, CLAIBORNE, HANCOCK, SULLIVAN, JOHNSON, HAWKINS, WASHINGTON, CARTER, HAMBLIN, GREENE, UNICOI, COCKE, BEVIER, BLOUNT, ROANE, CUMBERLAND, WHITE, PUTNAM, JACKSON, OVERTON, FENTRESS, MORGAN, ANDERSON, KNOX, JEFFERSON, DEKALB, SMITH, WILSON, DAVIDSON, CHEATHAM, HOUSTON, DICKSON, HUMPHREYS, BENTON, WILLIAMSON, RUTHERFORD, CANNON, VAN BUREN, WARREN, MAURY, HUMAN, PERRY, LEWIS, MAURIE, BEDFORD, COFFEY, GRUNDY, SEQUATCHIE, MARSHALL, MOORE, LINCOLN, FRANKLIN, MARION, HAMILTON, BRADLEY, and POLK.
- Southeast:** (This region is empty in the provided image).
- Northeast:** (This region is empty in the provided image).

The logo of the Tennessee Wildlife Resources Agency is a circular emblem. It features a brown bear in the upper half and a blue fish in the lower half, both set against a green background. The words "TENNESSEE" and "WILDLIFE RESOURCES" are written in white capital letters across the top and middle, respectively. The word "AGENCY" is written in white capital letters across the bottom. The entire emblem is surrounded by a yellow border with a black and white checkered pattern.

# New Turkey (& Deer) Management Approach

- Phase II – Develop an adaptive management framework
  - Value-based objectives
  - Acceptable suite of regulation packages
  - Identify regulation package that best meets objectives



# Turkey Management Objectives

- Maximize the abundance of turkeys in appropriate habitat
- Maximize management within budget
- Maximize stakeholder satisfaction



# Turkey Package Highlights - 4 Packages

- **Start date:** Saturday closest to April 7 (April 4 - April 10)
- **Season length:** 6 weeks in Liberal Package to 3 weeks in Restricted
- **Bag limit:** 3 bearded birds in Liberal to 1 bearded bird in Restricted
- **Jake Harvest and Fall Season**
  - No clear consensus from public; No biological impacts
  - Focused on opportunity and reduced complexity
- **Jake Harvest:** Allowed; except Restricted Package
- **Fall Season:** Open; except Restricted Package
  - 1 bearded turkey statewide; 6 weeks archery, 2 weeks shotgun



# Turkey Season Packages

Package	Start Date	Season Length	Spring Bag Limit	Jakes Allowed	Fall Season
<b>1. Restrictive</b>	Saturday closest to April 7	3 weeks	1 bearded turkey	Youth Only	Closed
<b>2. Conservative</b>	Saturday closest to April 7	4 weeks	1 bearded turkey	Yes	Open*
<b>3. Moderate</b>		6 weeks	2 bearded turkeys		
<b>4. Liberal</b>		6 weeks	3 bearded turkeys		

\* Fall Season Framework:

**Archery**  
6 weeks

**Gun**  
2 weeks

**Fall Bag Limit**  
1 bearded turkey statewide



Objectives



**How predicted impacts meet objectives**



**Predict harvest and impacts to population for all packages**



Regulation packages



# Example Turkey “Tool”

		Harvest per unit effort (population index)												
		LowHigh												
Poult per Hen	Low	R	R	R	R	R	R	R	C	C	C	C	C	C
		R	R	R	R	R	R	C	C	C	C	C	C	M
		R	R	R	R	R	C	C	C	C	C	C	C	M
		R	R	R	C	C	C	C	C	C	M	M	M	L
		R	R	R	C	C	C	C	M	M	M	M	M	L
		R	R	C	C	C	M	M	M	M	M	M	M	L
		R	C	C	C	M	M	M	M	M	M	M	M	L
		C	C	C	M	M	M	M	M	M	M	M	M	L
	High	M	M	M	M	M	L	L	L	L	L	L	L	L
		M	M	M	L	L	L	L	L	L	L	L	L	L
		M	M	L	L	L	L	L	L	L	L	L	L	L
		M	L	L	L	L	L	L	L	L	L	L	L	L
		L	L	L	L	L	L	L	L	L	L	L	L	L
		L	L	L	L	L	L	L	L	L	L	L	L	L
		L	L	L	L	L	L	L	L	L	L	L	L	L
		L	L	L	L	L	L	L	L	L	L	L	L	L

This package best meets objectives.

1. Maximize turkey abundance
2. Maximize mgmt. within budget
3. Hunter Satisfaction/opportunity

Objectives

How predicted impacts meet objectives

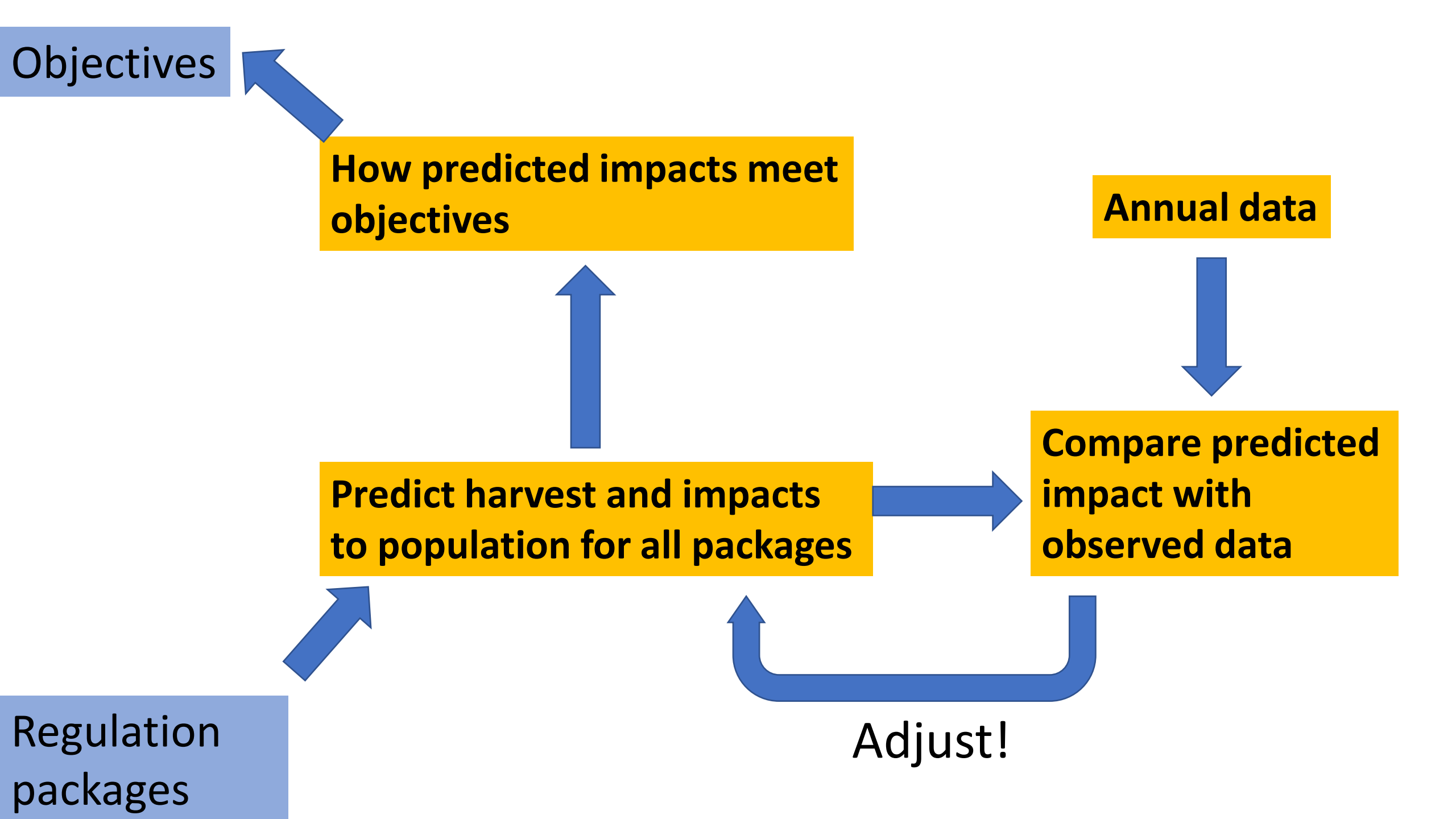
Annual data

Predict harvest and impacts to population for all packages

Compare predicted impact with observed data

Regulation packages

Adjust!



# Adjusting over time – Duck example

Bpop (millions)	Ponds (millions)													
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	
4.50	C	C	C	C	C	C	C	C	C	C	C	C	C	
4.75	R	R	R	R	R	R	R	R	R	R	R	R	R	
5.00	R	R	R	R	R	R	R	R	R	R	R	R	R	
5.25	R	R	R	R	Restrictive				R	R	R	R	R	
5.50	R	R	R	R	R	R	R	R	R	R	R	R	R	
5.75	R	R	R	R	R	R	R	R	R	R	R	R	R	
6.00	R	R	R	R	R	R	R	R	R	R	R	R	R	
6.25	R	R	R	R	R	R	R	R	R	R	R	R	R	
6.50	R	R	R	R	R	R	R	R	R	R	M	L	L	
6.75	R	R	R	R	R	R	R	M	L	L	L	L	L	
7.00	R	R	R	R	M	L	L	L	L	L	L	L	L	
7.25	R	R	M	L	L	L	L	L	L	L	L	L	L	
7.50	L	L	L	L	L	L	L	L	L	L	L	L	L	
7.75	L	L	L	L	L	Liberal			L	L	L	L	L	
8.00	L	L	L	L	L	Liberal			L	L	L	L	L	
8.25	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.50	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.75	L	L	L	L	L	L	L	L	L	L	L	L	L	



Bpop (millions)	Ponds (millions)													
	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	
4.50	R	R	Restrictive				R	R	R	R	M	M	M	
4.75	R	R	R	R	R	R	R	M	M	M	L	L	L	
5.00	R	R	R	R	M	M	M	L	L	L	L	L	L	
5.25	M	M	M	M	L	L	L	L	L	L	L	L	L	
5.50	M	L	L	L	L	L	L	L	L	L	L	L	L	
5.75	L	L	L	L	L	L	L	L	L	L	L	L	L	
6.00	L	L	L	L	L	L	L	L	L	L	L	L	L	
6.25	L	L	L	L	L	L	L	L	L	L	L	L	L	
6.50	L	L	L	L	L	L	L	L	L	L	L	L	L	
6.75	L	L	L	L	L	L	L	L	L	L	L	L	L	
7.00	L	L	L	L	L	L	L	L	L	L	L	L	L	
7.25	L	L	L	L	L	L	Liberal				L	L	L	
7.50	L	L	L	L	L	L	L	L	L	L	L	L	L	
7.75	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.00	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.25	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.50	L	L	L	L	L	L	L	L	L	L	L	L	L	
8.75	L	L	L	L	L	L	L	L	L	L	L	L	L	



Tennessee Wildlife Resources Agency

*To protect, preserve, and manage fish and wildlife for the benefit of Tennesseans*

# Next Steps for AHM

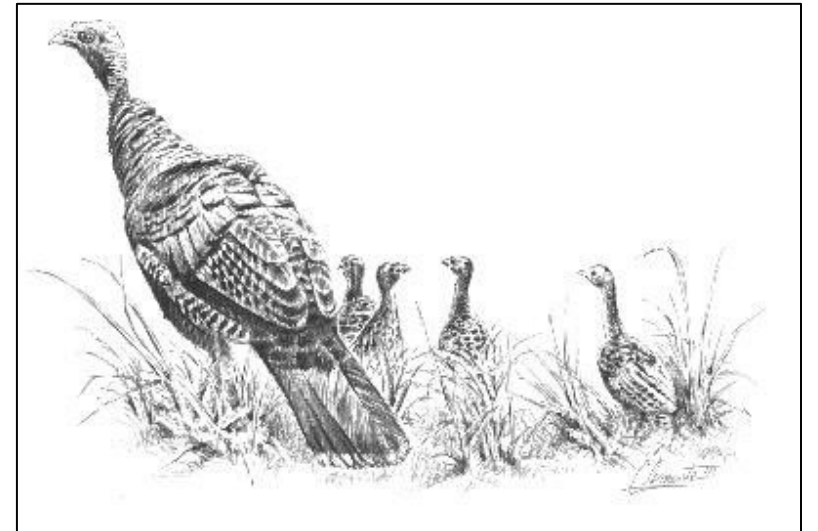
- TTU and TWRA finish and review models
- Add annual data
- Use “Decision tool” for each unit to determine season
- Season recommendations previewed in March 2024



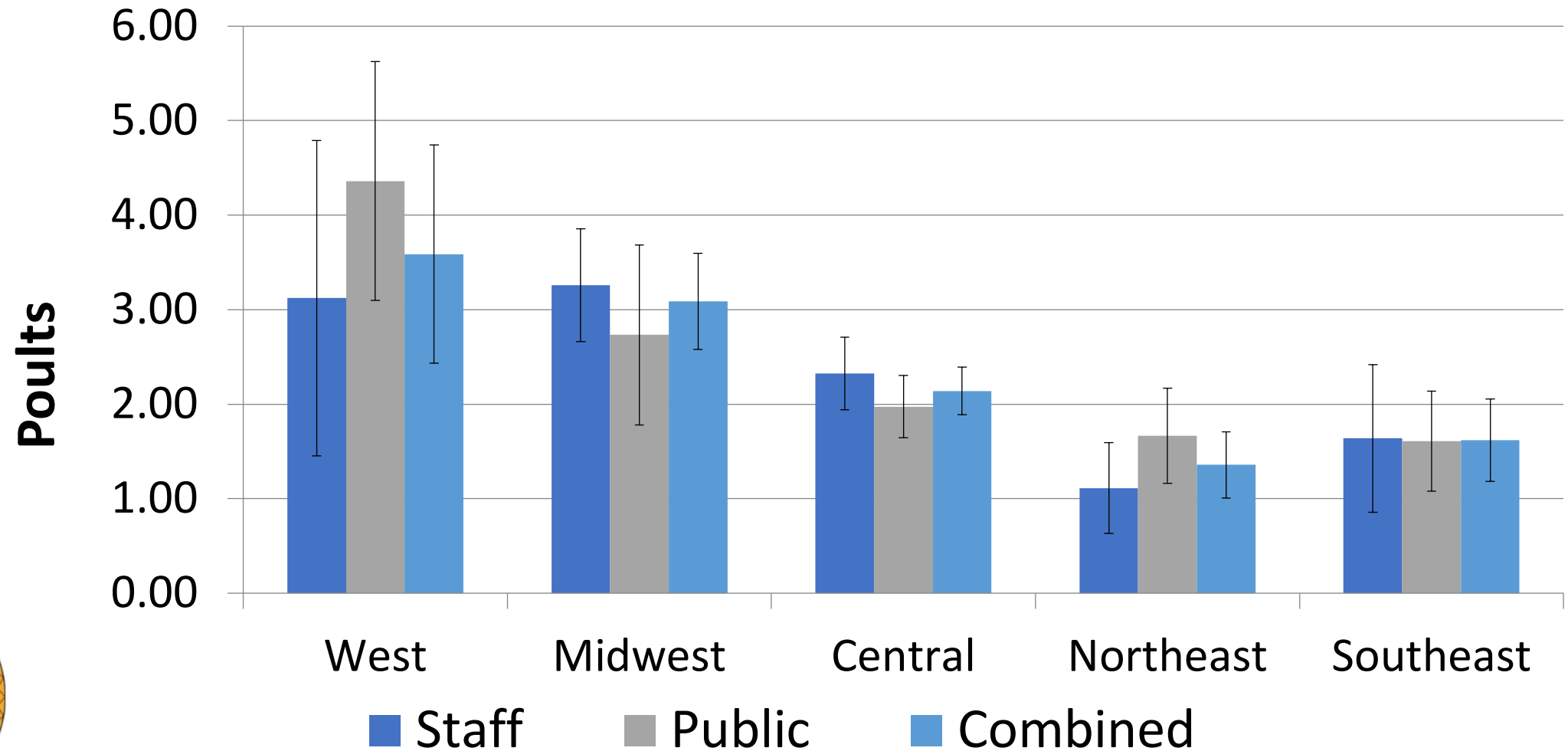
# 2023 Summer Wild Turkey Survey

- Public participation down
  - ~742 unique public observers (vs 2,786 in 2022)
  - 1,333 observations (vs 4,217 in 2022)
  - From 92 counties
- Staff
  - ~158 unique observers
  - 1,331 observations
  - From 85 counties
- Estimates\* quite similar

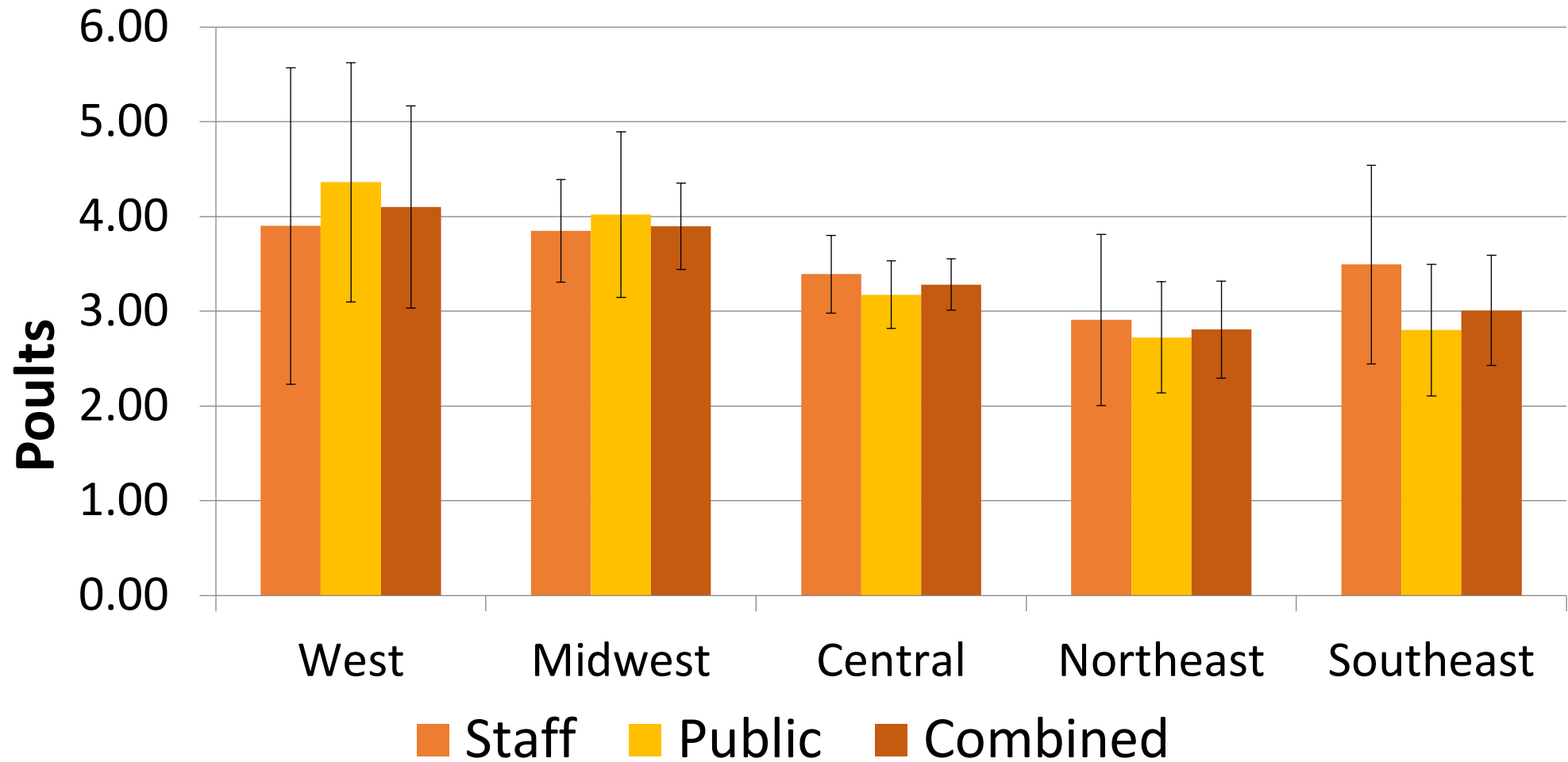
\*Based on new calculation method



# Regional PPH Ratio, 2023



# Regional PPB Ratio, 2023



# 2023 Statewide Wild Turkey Productivity

- Overall not a great year; some areas good
  - 2.1 PPH\*
  - 3.3 poults per brood\*
  - 59% of hens with broods
- Big regional disparity
  - West TN particularly good
  - Northeast TN quite low



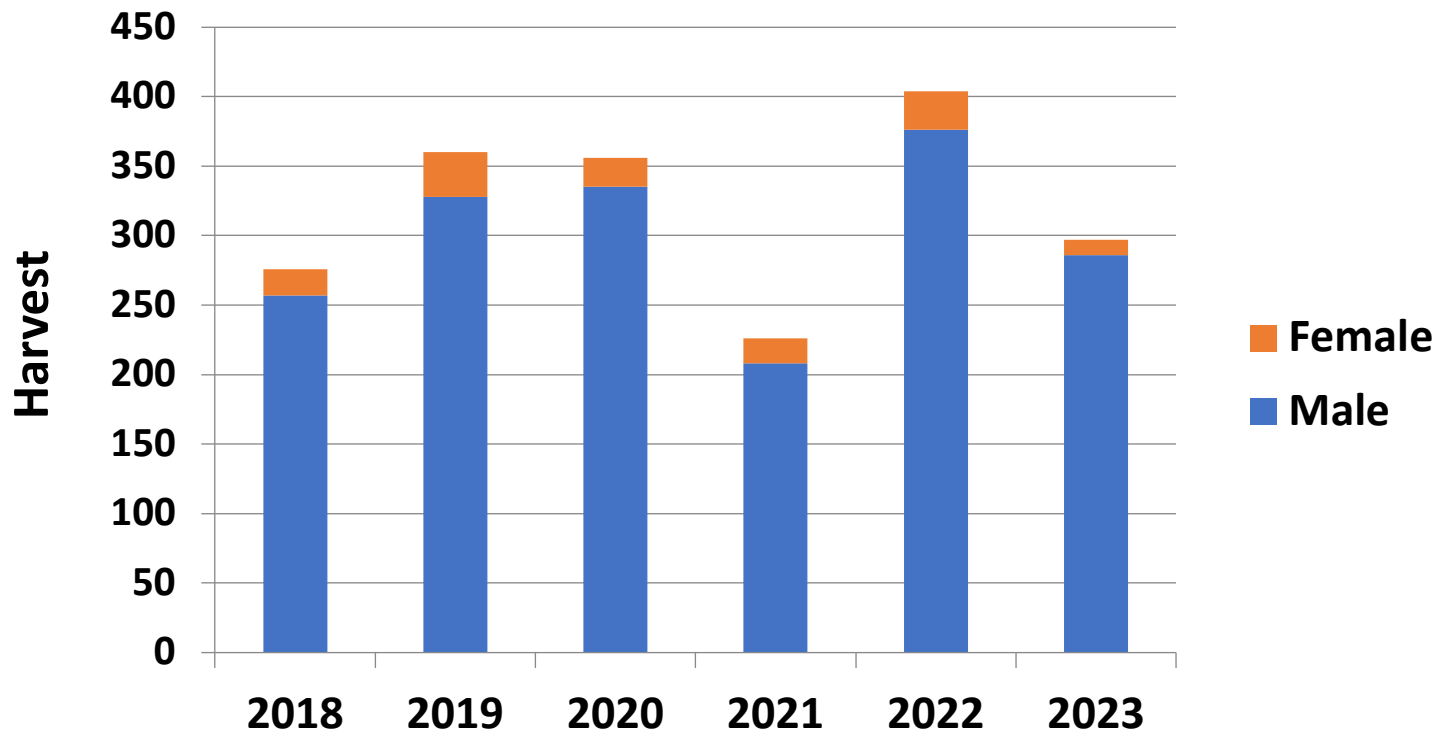
\*Based on new calculation method





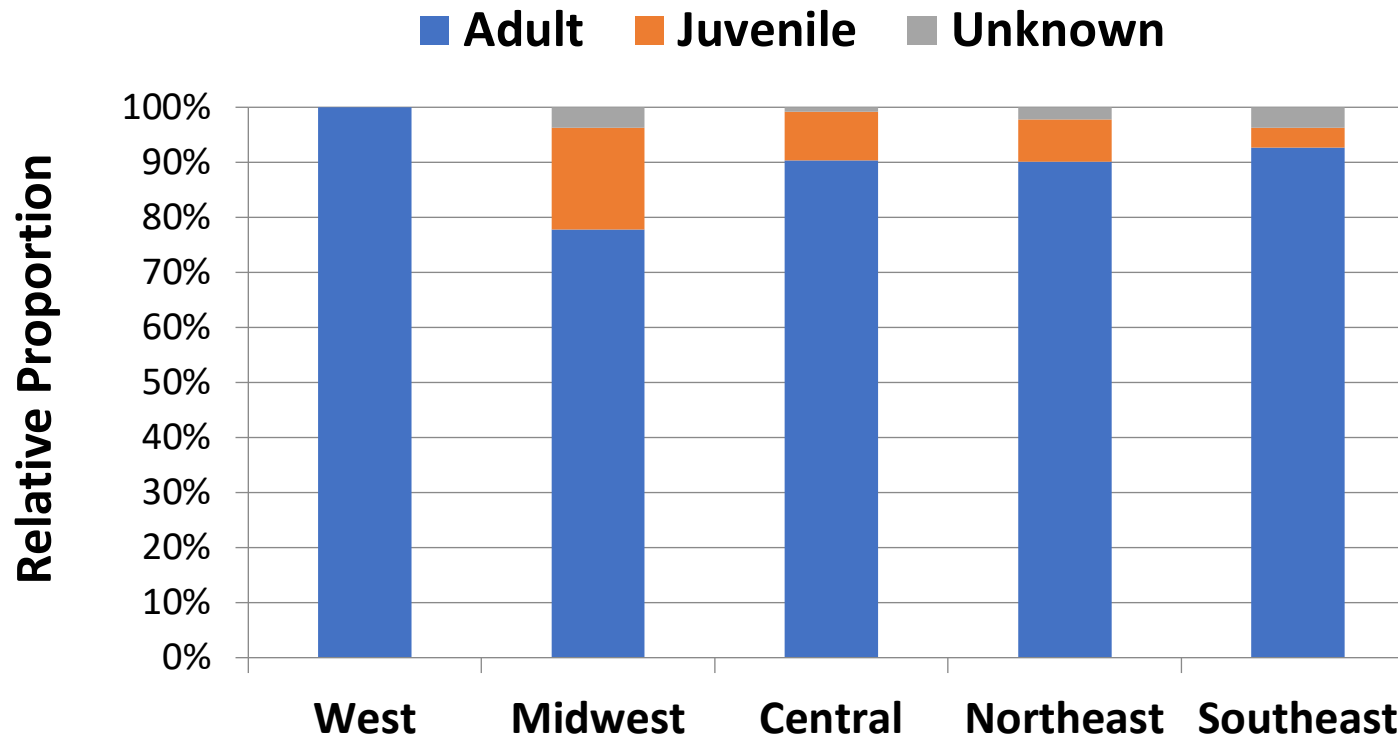
# Fall Turkey Harvest 2023

- 297 birds; down 26% from 2022
- Only 11 (3%) hens



# Fall Turkey Harvest 2023

- Jakes were 8% of gobbler harvest

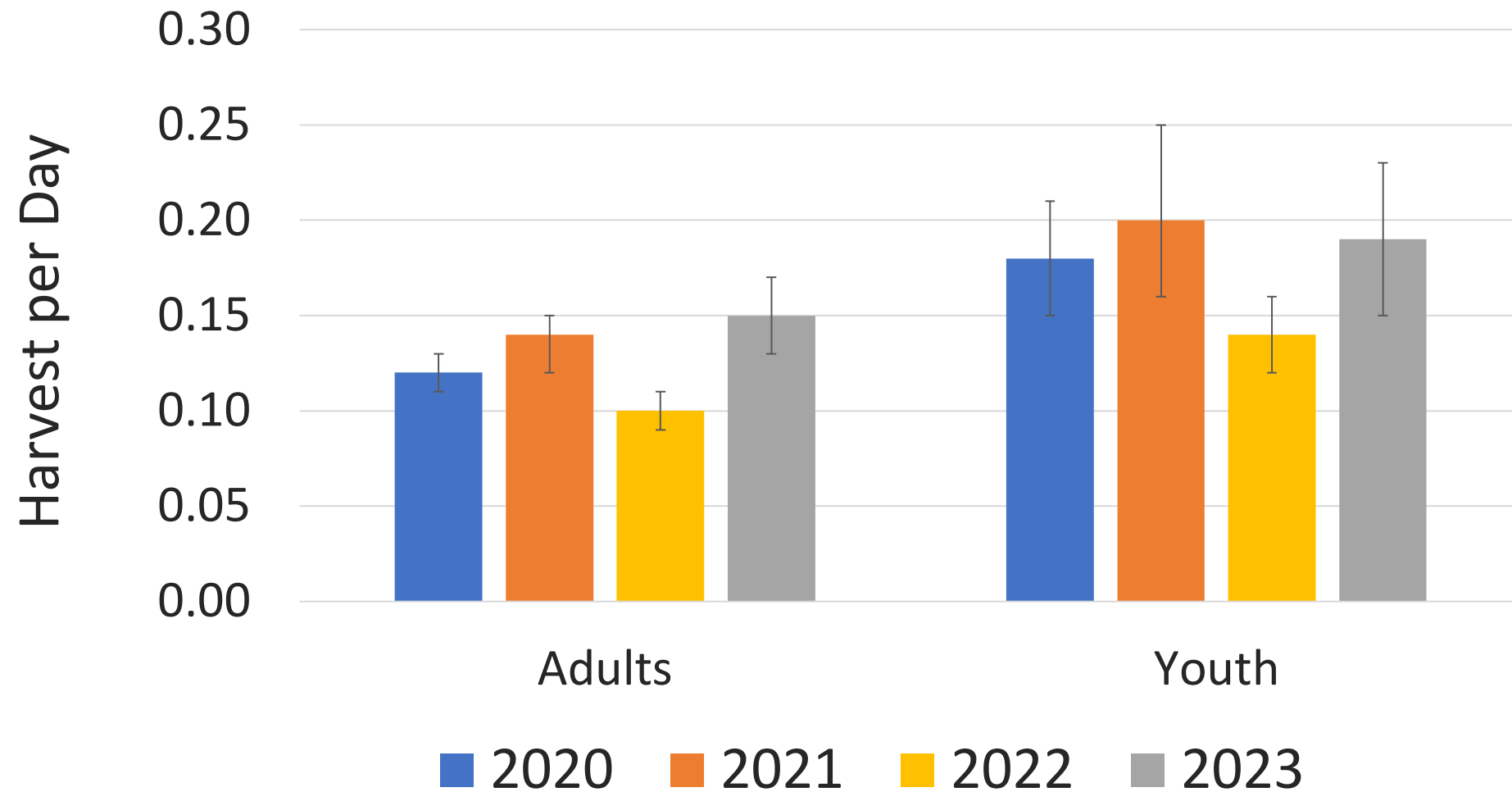


# Post-season Hunter Harvest Survey, 2023

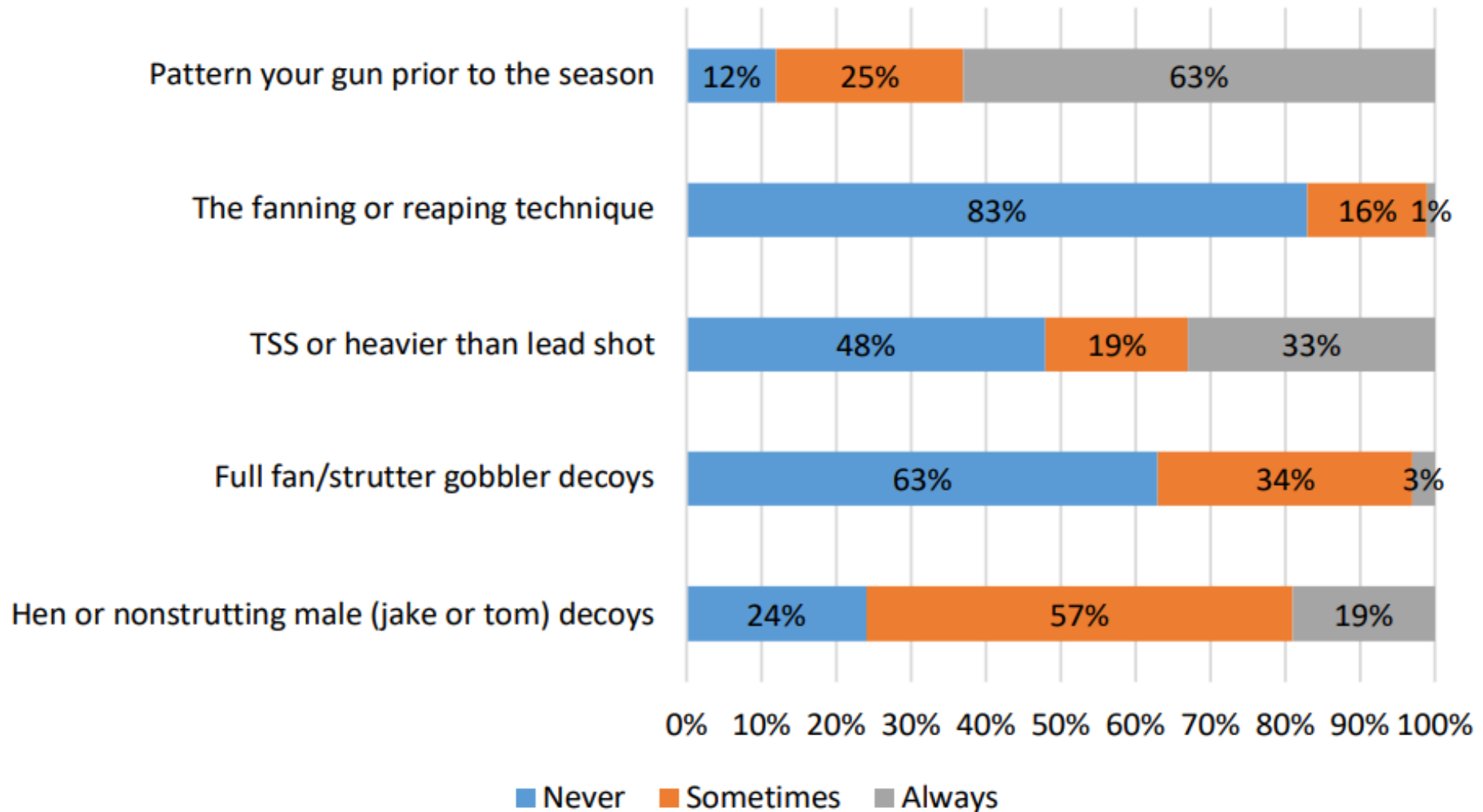
- 4,045 responses
- Overall, 52% of adults and 41% of youth harvested  $\geq 1$  turkey
- Average days afield down from prior years
  - Days afield averaged 7.8 (adults) and 4.3 (youth)
- Harvest rate increased considerably
  - 0.15 birds/day for adult hunters; 0.19 for youth
- >50% perceive turkey populations as stable or increasing



# Harvest Rate, 2020-2023



# Post-season Hunter Harvest Survey – Use of Various Techniques and Technologies



# Post-season Hunter Harvest Survey – Other New Questions

- Gauge of shotgun used most often – 12-ga (82%)
- Farthest distance feel comfortable shooting
  - 43 yds on average (40-50 yards most commonly reported)
- Satisfaction with the *timing* of the season
  - 33% satisfied; 47% dissatisfied; 21% indifferent



# Middle TN Wild Turkey Research Project



- Investigation of season timing impacts completed
  - Found no effect on **reproduction**
  - Effects on **hunting** mixed
    - Improved hunting success
    - Less gobbling heard
- Investigating whether reproductive rates are density related
- One more year for looking at connection between predator abundance and survival (turkeys and nests)





Questions