



## Intro/Consent

### RESEARCH PURPOSE AND PROCEDURES

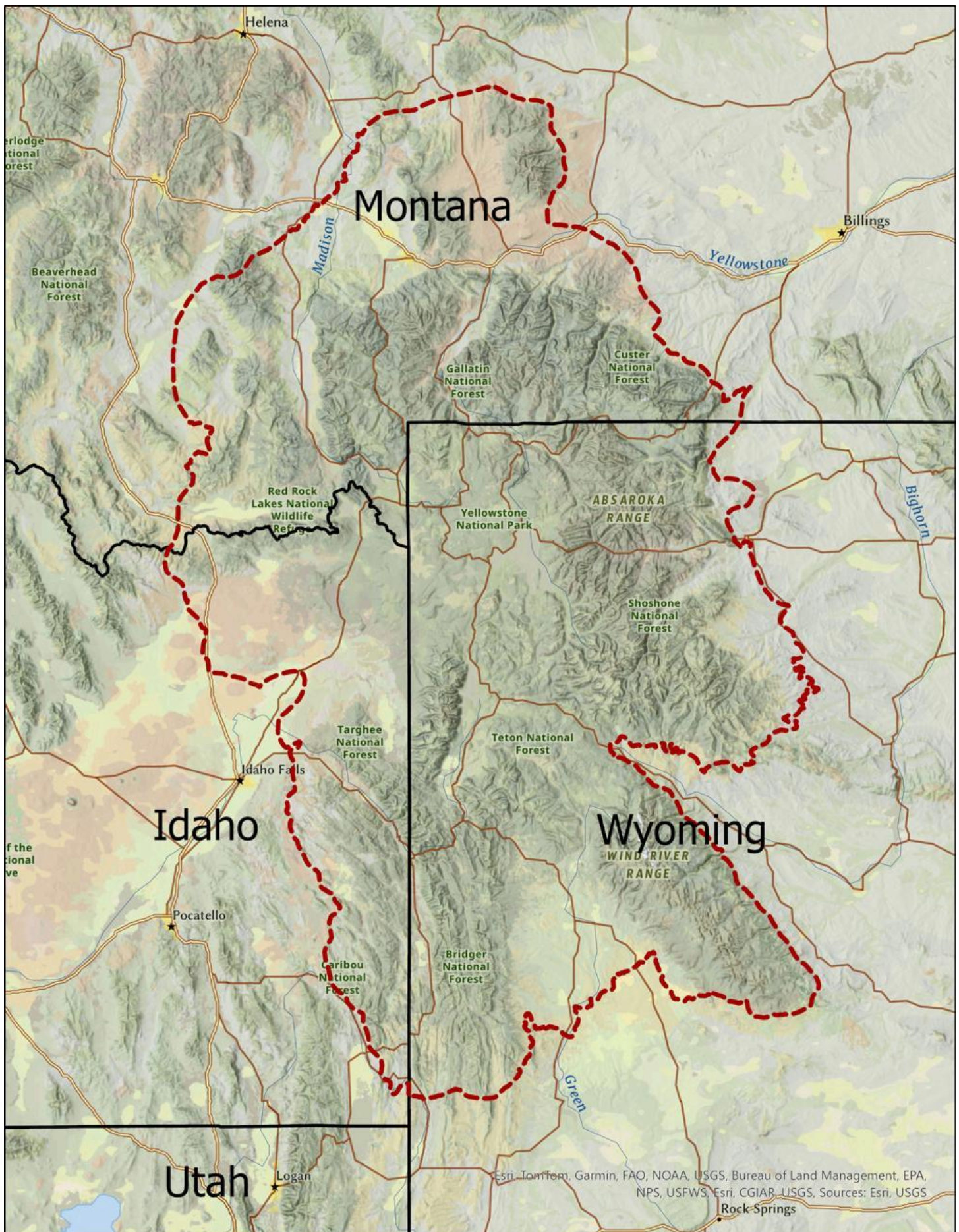
You are invited to take part in a survey on shed antler collection in the Greater Yellowstone Ecosystem (GYE), outlined in red on the map below. This research is being conducted by the GYE Antler Study, consisting of researchers at the **University of Wyoming** and the **Middleton Lab at UC Berkeley**, in collaboration with **The Buffalo Bill Center of the West**. The purpose of this study is to learn more about shed hunting and the sale of shed antlers collected from elk, moose, and deer in the GYE. The results of this survey will be made available to the general public.

If you agree to participate in this study, you will be asked to respond to a series of questions about your shed hunting activities and opinions. **The survey will take approximately 15 minutes to complete.**

### ELIGIBILITY

You are eligible to take this survey if:

1. You are over 18 years of age **AND**
2. You have collected shed antlers within the red boundary on the map:

**CONFIDENTIALITY**

This survey is anonymous, and no information will be collected to identify you as an individual.



## BENEFITS AND RISKS

Participants who complete the survey will be able to enter a drawing for **10 giftcards from \$25 to \$250 in value for the sports store or outfitter of their choice** by submitting their email through a separate Google Forms link at the end of the survey. This form will NOT be linked to your responses.

All contact information will be stored securely and only used for the distribution of gift cards and/or to contact participants volunteering to be interviewed. There are no foreseeable risks for participating in this research.

## RIGHTS

Participation in this research is completely voluntary. You have the right to decline to participate or to withdraw at any point in this study. **You may skip any questions you do not wish to answer.**

## QUESTIONS


This research is being led by Samantha (Sam) Maher, a PhD student, and is supervised by Dr. Arthur Middleton. You may contact the research team at [gyeantlerstudy@gmail.com](mailto:gyeantlerstudy@gmail.com) with any questions about the study. If you have any questions or concerns about your rights and treatment as a research subject, you may contact the office of UC Berkeley's Committee for the Protection of Human Subjects, at 510-642-7461 or [subjects@berkeley.edu](mailto:subjects@berkeley.edu).

**By selecting "I agree," you are consenting to the conditions described above.**

- ☐ I agree
- ☐ I disagree

Check the box below

☐ I'm not a robot

  
reCAPTCHA  
[Privacy](#) - [Terms](#)

## Repeat Criteria

Did you take this survey last year?

- ☐ Yes
- ☐ No

## Activities

### SHED ANTLER COLLECTION ACTIVITES

*In the questions below, you will be asked to provide numbers and values. Please provide your best estimate, but don't worry if you don't have exact values.*

In what year did you go shed hunting for the first time?

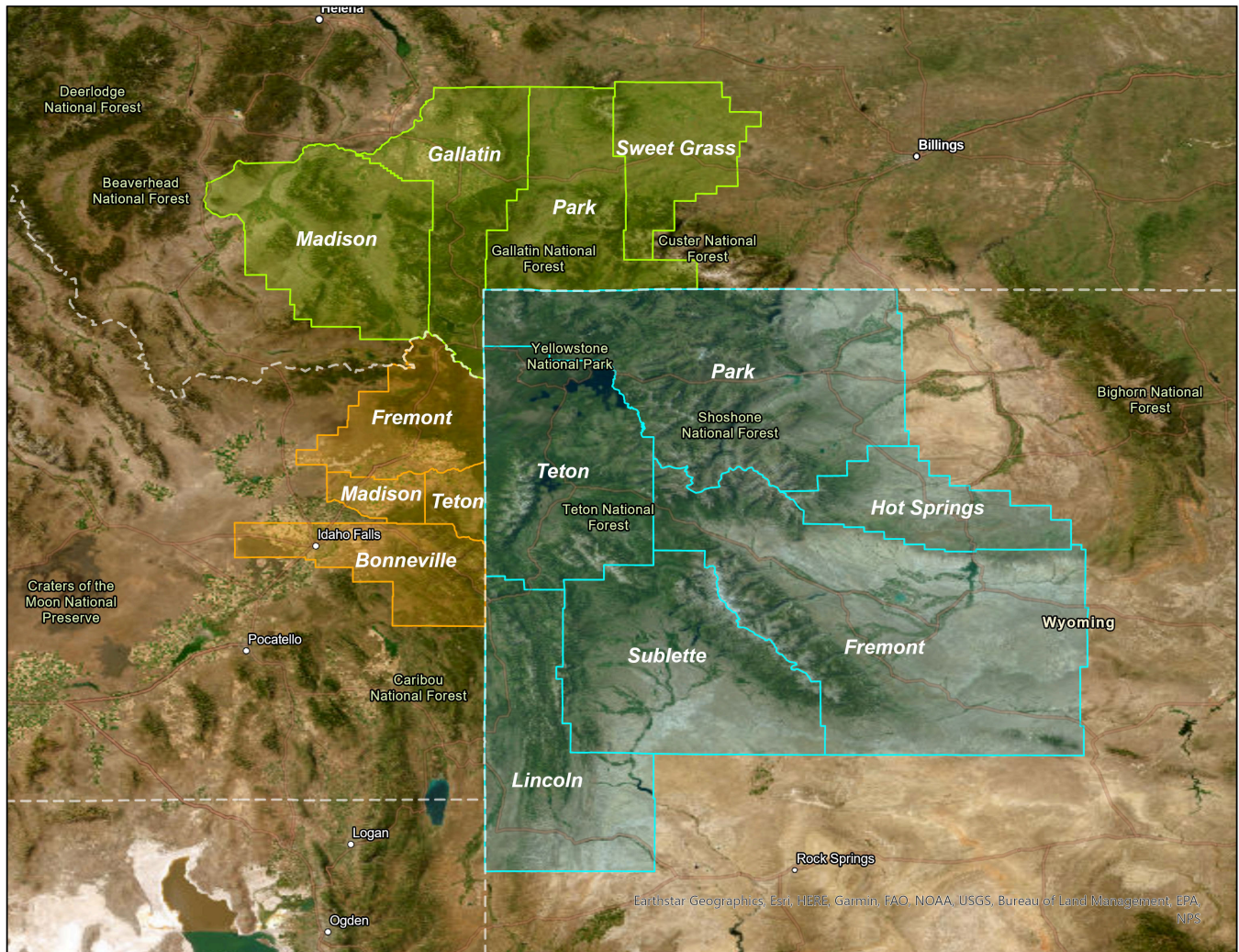
How did you first hear about shed hunting?

- ☐ I learned about it from friends or family.
- ☐ I learned about it on social media.
- ☐ I spend time outdoors and just happen to see shed antlers.
- ☐  Other

Are you a Wyoming resident?

- ☐ Yes
- ☐ No

In which of the following counties have you gone shed hunting? You may select multiple.

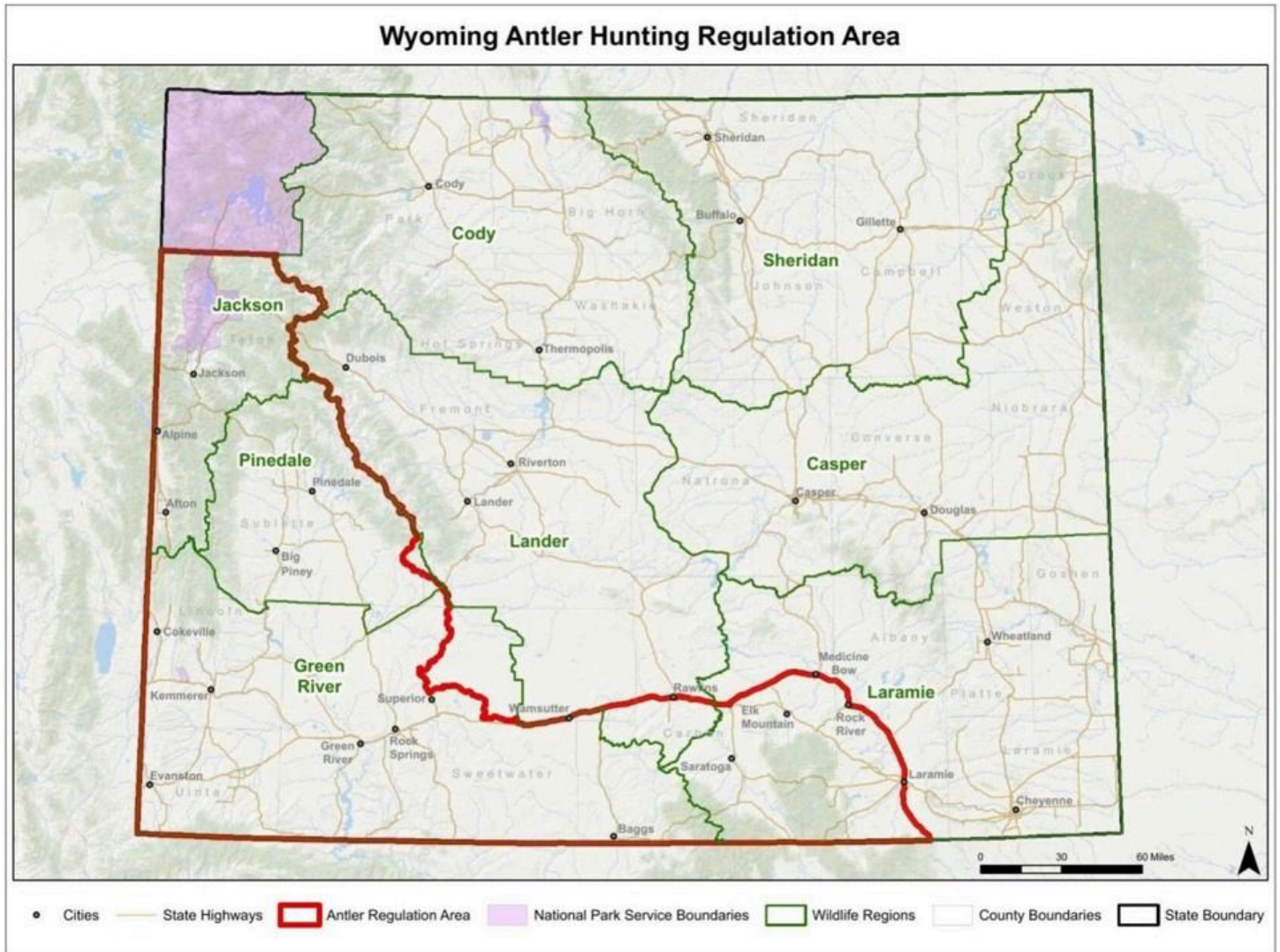


- ☐ Park County, WY
- ☐ Teton County, WY
- ☐ Sublette County, WY
- ☐ Fremont County, WY
- ☐ Hot Springs County, WY
- ☐ Lincoln County, WY
- ☐ Madison County, MT
- ☐ Gallatin County, MT
- ☐ Park County, MT
- ☐ Sweet Grass County, MT
- ☐ Fremont County, ID
- ☐ Teton County, ID
- ☐ Madison County, ID



☐ Bonneville, ID

Do you primarily collect antlers within or outside of the Antler Regulation Area (outlined in red)?



- ☐ Within the ARA (west side of divide)
- ☐ Outside of the ARA (east side of divide)
- ☐ About equally within and outside of the ARA
- ☐ I don't know
- ☐ I don't collect antlers in Wyoming.

In 2024, did you participate in the shed hunting season opener on May 1st in the Forest Service land around the National Elk Refuge in Jackson, WY?

- ☐ Yes

- ☐ No, but I have in prior years
- ☐ No, and I never have.

During which months do you collect shed antlers from each of the following? Select all that apply.

	Month											
	January	February	March	April	May	June	July	August	September	October	November	December
Elk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mule deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

During which month is the majority of your shed hunting activity for **elk**?

Have you ever taken time off work to collect sheds?

- ☐ Yes
- ☐ No

Which of the following apply to the majority of your shed hunting outings?

	Always	Usually	Sometimes	Rarely	Never
I bring a dog.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I search for sheds on horseback.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I search for sheds from a car or vehicle.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I search for sheds on foot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I search for sheds via snowmobile or ATV/UTV tracks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I search for sheds adjacent to feedgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I camp in the backcountry (pack in).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Always

Usually

Sometimes

Rarely

Never

I search for sheds using drones.

☐☐☐☐☐

Do you purchase gear specifically for shed hunting? Do not consider gear that you would have purchased anyway for another activity (e.g., hunting).

☐ Yes☐ No

Do you know roughly how much money you spent on shed hunting during your last season?

☐ Yes☐ No

How much money would you estimate you spent on the following categories as they relate to shed hunting?

Lodging

Travel (including fuel)

Apparel and Equipment

Other expenses

To what extent do you agree or disagree with the following statements about your motivation to shed hunt?

Click to write Label 1

Strongly disagree

Somewhat disagree

Neutral

Somewhat agree

Strongly agree

I shed hunt for the chance to earn money.

☐☐☐☐☐

I shed hunt to spend time outside in nature.

☐☐☐☐☐

I shed hunt to spend time with my friends/family.

☐☐☐☐☐

I shed hunt to get exercise.

☐☐☐☐☐



Click to write Label 1

Strongly  
disagreeSomewhat  
disagree

Neutral

Somewhat  
agreeStrongly  
agree

I shed hunt to collect  
antler material for  
personal use.

☐☐☐☐☐

What is greatest number of shed antlers you have found in a single outing? 1 matching set = 2 shed antlers.

How frequently do you shed hunt on the following types of land?

Always

Usually

Sometimes

Never

Not sure

Private

☐☐☐☐☐

Forest Service

☐☐☐☐☐

BLM

☐☐☐☐☐

State

☐☐☐☐☐

Which of the following do you personally use antlers for? Select all that apply.

☐

Pet chews

☐

Decor

☐

Medicinal products

☐

Artisanal products (e.g., knife handles, jewelry)

☐

Gifts for friends and family

Have you sold any shed antlers for profit?

☐

Yes

☐

No

Which year was your most profitable year?

About how much money (USD) did you earn that year?

Consider your most recent completed shed hunting season when answering the following questions.

In what year did you most recently go shed hunting in and around the Greater Yellowstone Ecosystem? Include 2024 **ONLY** if you are done collecting sheds for the year. Otherwise, use 2023.

Approximately how many shed hunting outings did you go on in that year (including elk, moose, and deer together)?

On average, for how many hours did you travel one-way (in hours) to reach a shed hunting site? (e.g., If you drive 3 hours each way to a site, you would put 3 here).

What is longest amount of time you travelled one-way (in hours) to reach a shed hunting site?

About how many individual antlers did you find in that year in total? Include all species.

How many total pounds of antler of all types would you estimate you found in that year?

Roughly what percent of these antlers came from elk in that year?

0 10 20 30 40 50 60 70 80 90 100

What percentage of the sheds you found did you sell for profit in that year?

0 10 20 30 40 50 60 70 80 90 100

Roughly what percentage of the your finds were brown? (Browns are defined as antlers dropped within the last year with minimal fading).

0 10 20 30 40 50 60 70 80 90 100

Brown

Approximately how much did you earn from antler sales in this year? If you do not sell shed antlers, put 0.

Would you consider this a “typical” year for your shed hunting?

- ☐ Yes
- ☐ No, it was better than usual
- ☐ No, it was worse than usual

Do you use social media (e.g., Facebook, YouTube, Instagram, TikTok) to view or create content about shed hunting?

- ☐ Yes
- ☐ No

Do the following statements apply to you?

	Yes	No
I follow content from shed hunting “influencers.”	<input type="radio"/>	<input type="radio"/>
I follow shed hunting content from friends and family.	<input type="radio"/>	<input type="radio"/>
I post or create my own shed hunting content on social media.	<input type="radio"/>	<input type="radio"/>



Yes

No

I use social media to market/sell the antlers I find.

☐
☐

I earn income from creating shed hunting related social media content.

☐
☐

Which social media platforms do you use for shed hunting content?

☐ YouTube

☐ Instagram

☐ Facebook

☐ TikTok

☐ Twitter

## Perceptions

What are your perceptions of the following trends in shed hunting and your experiences?

Select one option for each statement.

Increased

Remained the same

Decreased

Shed hunting's popularity over the last 10 years

☐
☐
☐

Shed hunting's popularity since the onset of COVID (last 4 years)

☐
☐
☐

The number of other shed hunters I encounter (since COVID)

☐
☐
☐

My interest in participating in shed hunting (since COVID)

☐
☐
☐

The ease with which I find shed antlers (since COVID)

☐
☐
☐

The privacy I keep around my shed hunting strategies or locations (since COVID)

☐
☐
☐

In what ways, if any, have you changed your activities to respond to the presence of other shed hunters?

- ☐ Shed hunted less often
- ☐ Shed hunted in different locations
- ☐ I have not changed my activities.
- ☐  Other

Select the word "Elk" below (this helps us catch bots):

- ☐ Moose
- ☐ Deer
- ☐ Elk
- ☐ Pronghorn

Indicate to what extent do you agree or disagree with the following statements about shed hunters

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
Most shed hunters engage in illegal activities to obtain a competitive advantage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most shed hunters trespass on private land.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most shed hunters stockpile antlers outside of the shed season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most shed hunters collect and remove antlers outside of the shed season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most shed hunters collect from no-take public areas (e.g., National Parks).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most shed hunters collect in winter closure areas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you or someone you know experienced conflict with the following groups while shed hunting?

	Yes	No
Other shed hunters	<input type="radio"/>	<input type="radio"/>
Landowners	<input type="radio"/>	<input type="radio"/>
Law enforcement	<input type="radio"/>	<input type="radio"/>

Complete the sentence: Shed hunting should have \_\_\_\_\_

- ☐ More regulation.
- ☐ The same amount of regulation as currently exists.
- ☐ Less regulation.
- ☐ No regulation.

To what extent do you agree with implementing the following shed hunting regulations?

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
More extensive season closures to protect wildlife in winter habitat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A license or fee for shed hunting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Taxes on antler sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More stringent enforcement of season closures and trespassing charges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special allowances for local shed hunters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following questions refer to the [bill passed by the WY State Legislature](#) last year that gives residents of Wyoming a 7-day head start on antler collection in parts of the state where there is shed hunting season and requires non-residents to carry a \$21.50 Conservation Stamp before June 30th.

Are you in favor of such a measure?

- ☐ Yes
- ☐ No



☐ Unsure

Did Wyoming's new legislation affect your decision to shed hunt in Wyoming this year?

- ☐ Yes, I would not have shed hunt otherwise, but now I am.
- ☐ Yes, I decided not to shed hunt in WYO.
- ☐ No, it did not affect my decision.

How have the following changed in relation to Wyoming's new shed hunting policies as they are described above?

	Increased	Remained the same	Decreased
How frequently I shed hunt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The geographic area in which I shed hunt " ("increased" means you expanded your activities to new areas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My enthusiasm for shed hunting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did you purchase a \$21.50 conservation stamp in order to shed hunt in Wyoming?

- ☐ Yes
- ☐ No

Where did you first hear about the conservation stamp being required for non-residents?  
(WGFD = Wyoming Game and Fish)

- ☐ WGFD Social media
- ☐ WGFD News Release
- ☐ WGFD Commission Meeting
- ☐ WGFD Website
- ☐ Newspaper Article
- ☐ Emailed Communications
- ☐ Radio
- ☐ Youtube
- ☐  Other

## Demographics

### DEMOGRAPHIC INFORMATION

You're almost done!

*The following are standard survey question collected to assess to what extent respondents are demographically representative of target populations.*

In what year were you born?

What is the zip code of your primary residence?

If you have a secondary residence, what is the zip code? Otherwise, you may leave this blank.

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Non-binary/Other

What is the highest level of school you have completed or the highest degree you have received?

- ☐ Some high school or less
- ☐ High school diploma or GED
- ☐ Some college, but no degree
- ☐ Associates or technical degree
- ☐ Bachelor's degree
- ☐ Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)

What is your race? Select all that apply.

- |   |   |
|---|---|
| <input type="checkbox"/> White or Caucasian                               | <input type="checkbox"/> Asian, Native Hawaiian or Other Pacific Islander |
| <input type="checkbox"/> Black or African American                        | <input type="checkbox"/> Hispanic, Latino or Spanish                      |
| <input type="checkbox"/> American Indian/Native American or Alaska Native | <input type="checkbox"/> Other  |
|   | <input type="text"/>  |

Please indicate the answer that includes your entire household income in (previous year) before taxes.

- ☐ Less than \$25,000
- ☐ \$25,000-\$49,999
- ☐ \$50,000-\$74,999
- ☐ \$75,000-\$99,999
- ☐ \$100,000-\$149,999
- ☐ \$150,000 or more
- ☐ Prefer not to say

Do you hunt big game?

- ☐ Yes
- ☐ No

## Follow Up

Last question!

How did you obtain the link or QR code for this survey?

- ☐ On a social media platform
- ☐ In person from a researcher
- ☐ From a flyer in a business
- ☐ From a flyer at a trailhead
- ☐ From a friend or acquaintance
- ☐ From a listserv/by email



☐  Other

**Ready to enter to win your prize? Please use [this link](#) to enter your email for a chance to win one of the following:**

- 1 X \$250 gift card
- 4 X \$50 gift cards
- 4 X \$25 gift cards

To your choice of sporting goods store (e.g. Rocky Mountain Discount Sports, Sunlight Sports, Cabela's). You are being asked to use this link to protect the anonymity of your answers.

If you wish, you may leave any last feedback on the study here:

## Repeats

Are you a Wyoming Resident?

- ☐ Yes
- ☐ No

Have you sold shed antlers for profit?

- ☐ Yes
- ☐ No

The following questions refer to the [bill passed by the WY State Legislature](#) last year that gives residents of Wyoming a 7-day head start on antler collection in parts of the state where there is shed hunting season and requires non-residents to carry a \$21.50 Conservation Stamp before June 30th.

Are you in favor of such a measure?

- ☐ Yes

- ☐ No
- ☐ Unsure

Did Wyoming's new legislation affect your decision to shed hunt in Wyoming this year?

- ☐ Yes, I would not have shed hunt otherwise, but now I am.
- ☐ Yes, I decided not to shed hunt in WYO.
- ☐ No, it did not affect my decision.

How have the following changed in relation to Wyoming's new shed hunting policies as they are described above?

	Increased	Remained the same	Decreased
How frequently I shed hunt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The geographic area in which I shed hunt " ("increased" means you expanded your activities to new areas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My enthusiasm for shed hunting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Did you purchase a \$21.50 conservation stamp in order to shed hunt in Wyoming?

- ☐ Yes
- ☐ No

Where did you first hear about the conservation stamp being required for non-residents?  
(WGFD = Wyoming Game and Fish)

- ☐ WGFD Social Media
- ☐ WGFD News Release
- ☐ WGFD Commission Meeting
- ☐ WGFD Website
- ☐ Newspaper Article
- ☐ Email Communications
- ☐ Radio
- ☐ Youtube

☐

Other

Powered by Qualtrics





# Maher et al. 2025 Appendix B

2025-01-16

## Overview

This appendix summarizes individual survey questions and responses for Maher et al. 2025: *Developing transferable management principles for scavenged wildlife resources*. It contains results from a survey of antler collectors (shed hunters) in Western Wyoming conducted in 2023 and 2024, before and after the state introduced new shed antler collection policies. The full manuscript with a description of the study design and implementation is available [INSERT LINK]. Not all questions in the survey were reported fully in the manuscript text and interested parties are encouraged to reach out to the author directly to request specific subsets of data. The full data set with personal identifying information redacted is available on Dryad: [INSERT LINK]

## User Group Characteristics and Activities

### Sample Sizes by Group

Survey results are summarized by group. See manuscript for full criteria on how each group was formed. There are three sets of binary groups, such that each respondent is assigned a residency status, a primary motivation, and a group based on whether their response was pre- or post-policy change.

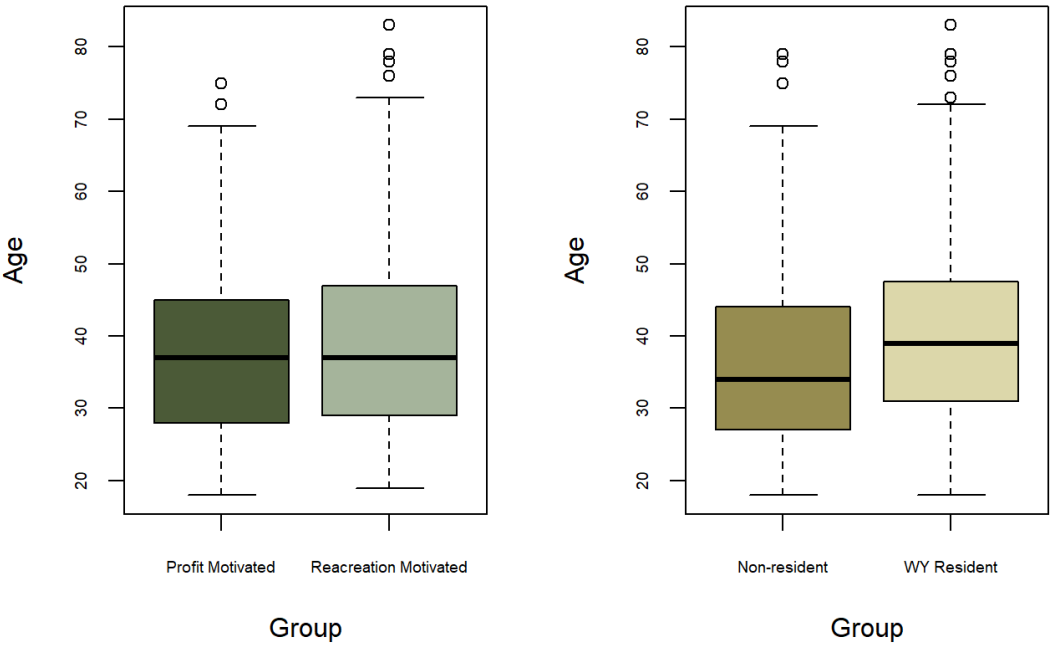
- All Respondents ('complete'): 318
- WY Residents: 200 (1a)
- Non-residents: 118 (1b)
- Recreational-motivated: 90 (2a)
- Profited-motivated: 228 (2b)
- 2023 Respondents: 171 (3a)
- 2024 Respondents: 147 (3b)

## User Group Characteristics

### Demographics

Age

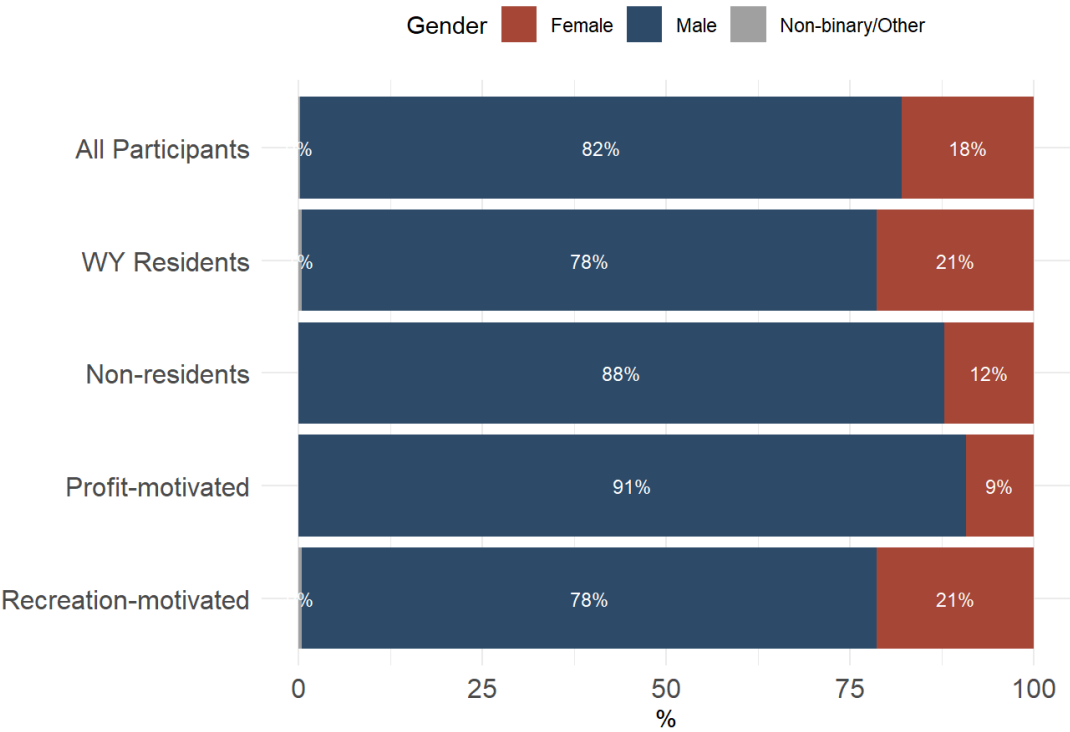
data_subset	group	count	mean	median	sd
age	resident_yes	192	40.61	39	13.96
age	resident_no	114	36.72	34	13.26
age	motive_profit	86	38.52	37	14.00
age	motive_rec	220	39.41	37	13.76
age	year_23	170	36.65	34	12.30
age	year_24	136	42.29	41	14.96
age	complete	306	39.16	37	13.81



Gender

What is your gender?

data_subset	group	Female	Male	Non-binary/Other
gender	resident_yes	21.35	78.12	0.52
gender	resident_no	12.17	87.83	
gender	motive_profit	9.20	90.80	
gender	motive_rec	21.36	78.18	0.45
gender	year_23	16.96	83.04	
gender	year_24	19.12	80.15	0.74
gender	complete	17.92	81.76	0.33



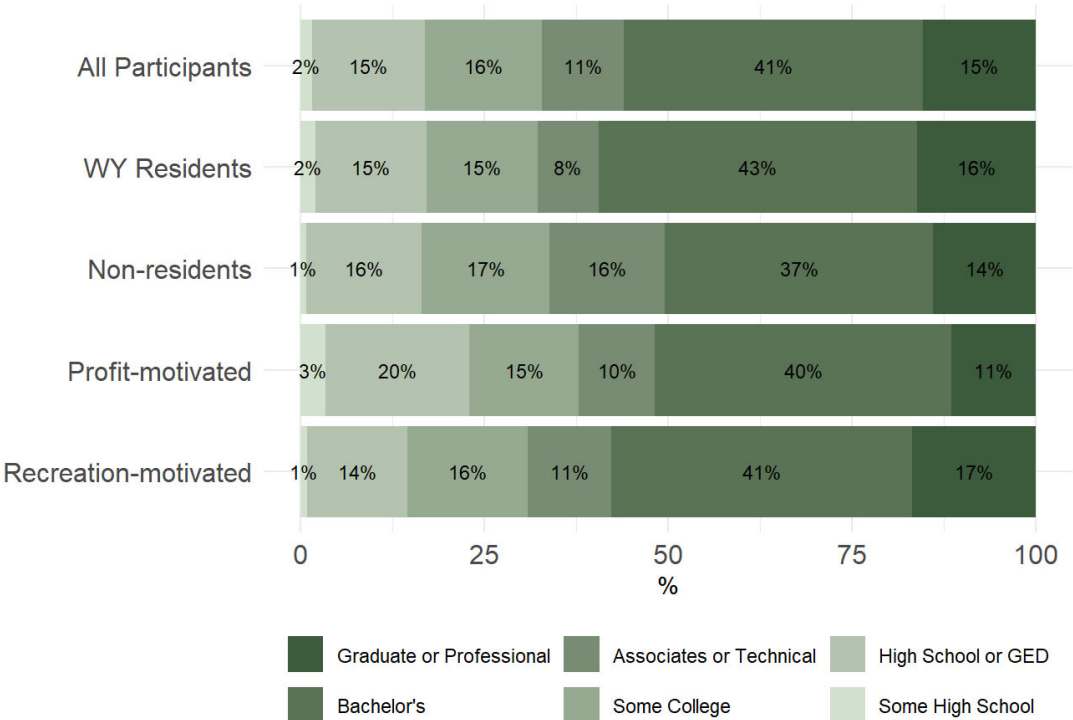
Race

What is your race? Select all that apply.

	White	Black	Latino	Native	Asian/Pacific Islander	Other
resident_yes	97.38	0.52	3.14	2.62	0.52	0.00
resident_no	95.65	0.00	5.22	1.74	0.00	4.35
motive_profit	95.40	0.00	10.34	4.60	0.00	1.15
motive_rec	97.26	0.46	1.37	1.37	0.46	1.83
year_23	97.66	0.58	4.68	1.17	0.58	1.75
year_24	95.56	0.00	2.96	3.70	0.00	1.48
complete	96.73	0.33	3.92	2.29	0.33	1.63

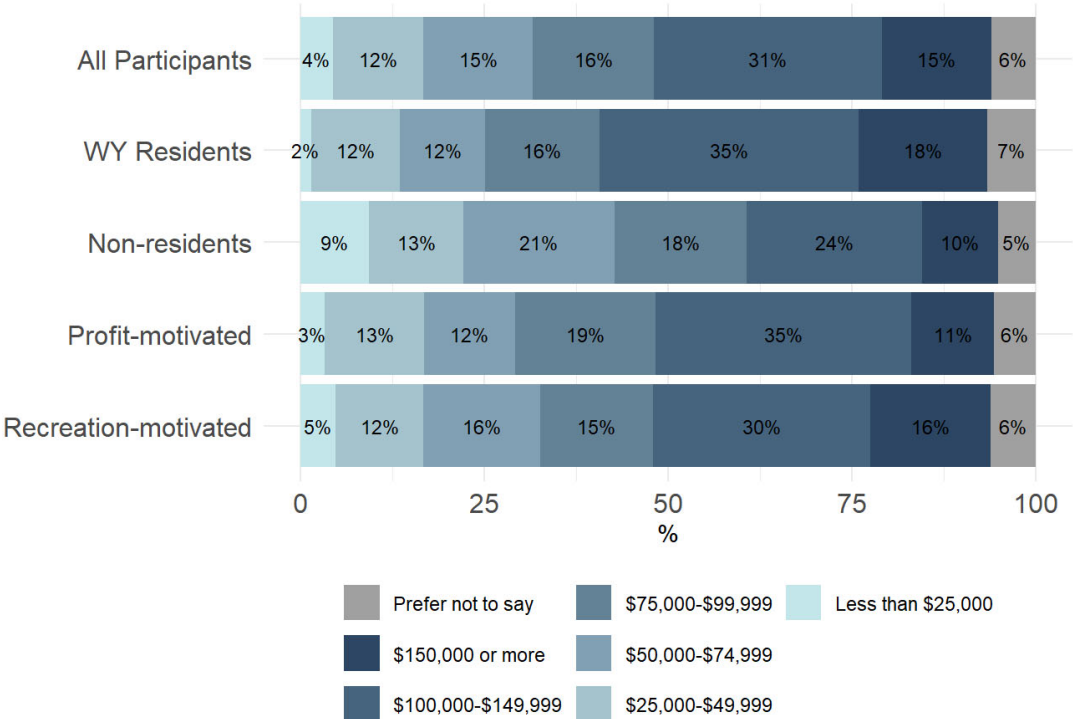
Education

What is the highest level of school you have completed or the highest degree you have received?



Income

Please indicate the answer that includes your entire household income in (previous year) before taxes.



Hunting

Do you hunt big game?

data_subset	group	Yes	No
big_game	resident_yes	88.94	11.06
big_game	resident_no	89.83	10.17
big_game	motive_profit	92.22	7.78
big_game	motive_rec	88.11	11.89
big_game	year_23	88.30	11.70
big_game	year_24	90.41	9.59
big_game	complete	89.27	10.73

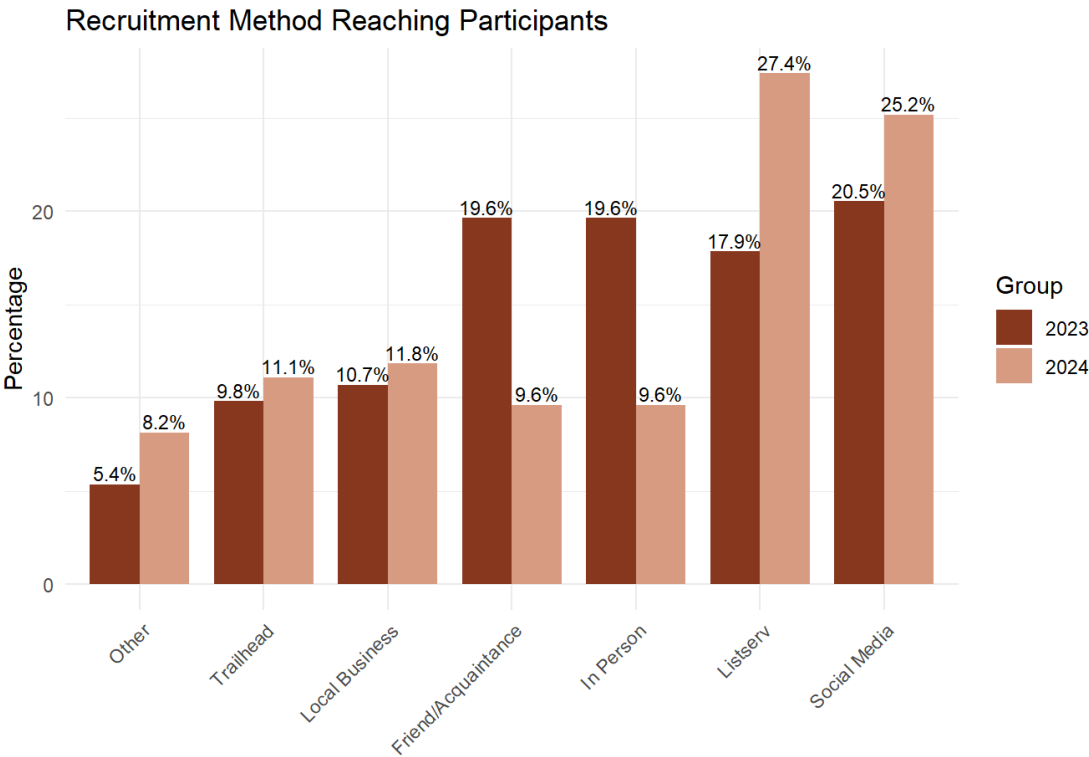
Recruitment

How did you obtain the link or QR code for this survey?

	Social Media	In Person	Local Business	Trailhead	Friend/Acquaintance	Listserv	Other
resident_yes	18.01	11.18	11.80	15.53	15.53	22.98	9.32
resident_no	32.56	19.77	10.47	1.16	11.63	23.26	2.33
motive_profit	26.32	21.05	7.02	5.26	14.04	26.32	5.26
motive_rec	22.11	12.11	12.63	12.11	14.21	22.11	7.37
year_23	20.54	19.64	10.71	9.82	19.64	17.86	5.36
year_24	25.19	9.63	11.85	11.11	9.63	27.41	8.15
complete	23.08	14.17	11.34	10.53	14.17	23.08	6.88

## Scale for fill is already present.  
## Adding another scale for fill, which will replace the existing scale.





## Summary of Activities

### Location

#### Counties

In which of the following counties have you gone shed hunting? You may select multiple.

county	% respondents active
Bonneville_ID	13.21
Fremont_ID	8.18
Madison_ID	5.66
Teton_ID	14.47
Gallatin_MT	12.26
Madison_MT	15.41
Park_MT	10.69
SweetGrass_MT	4.09
Fremont_WY	25.79
HotSprings_WY	11.01
Lincoln_WY	26.73
Park_WY	20.44

county	% respondents active
Sublette_WY	37.74
Teton_WY	51.57

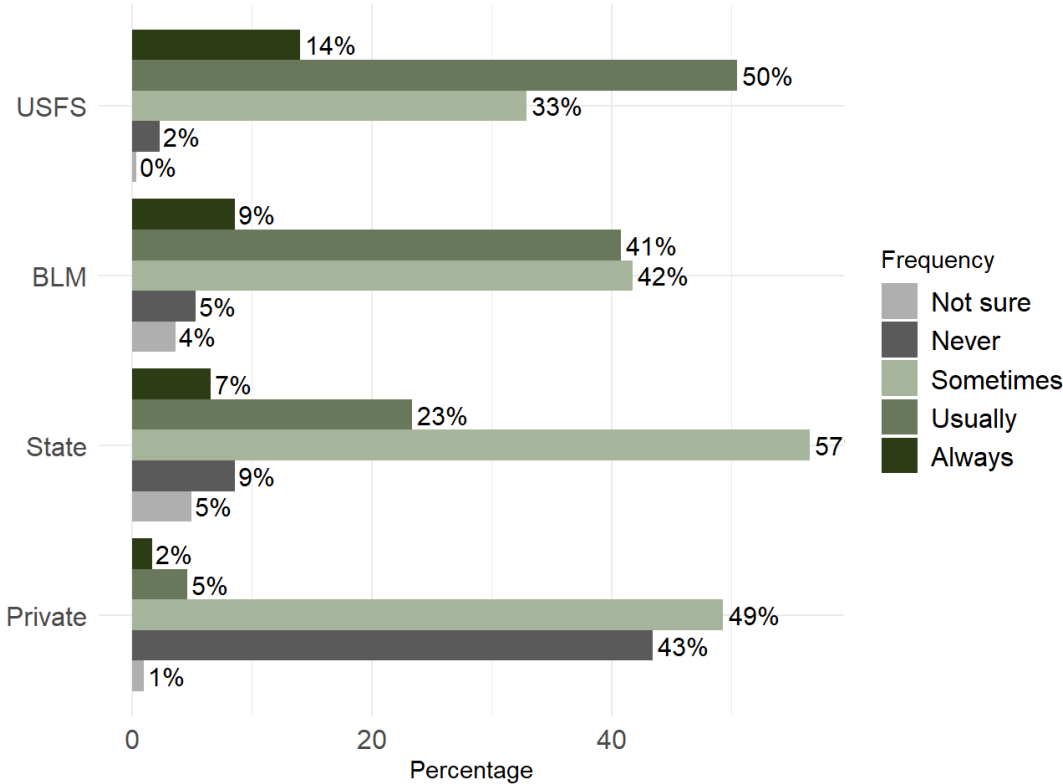
Antler Regulation Area

“Do you primarily collect antlers within or outside of the Antler Regulation Area?”

data_subset	group	Within the ARA (west side of divide)	Outside of the ARA (east side of divide)	About equally within and outside of the ARA	I don't know	I don't collect antlers in Wyoming.
within_ara	resident_yes	58.95	22.63	17.37	1.05	
within_ara	resident_no	33.62	16.38	17.24	4.31	28.45
within_ara	motive_profit	44.44	17.78	24.44	4.44	8.89
within_ara	motive_rec	51.39	21.30	14.35	1.39	11.57
within_ara	year_23	45.61	21.64	18.13	4.09	10.53
within_ara	year_24	54.07	18.52	16.30		11.11
within_ara	complete	49.35	20.26	17.32	2.29	10.78

Types of Land

How frequently do you shed hunt on the following types of land?



Jackson Opener

data_subset	group	No, but I have		
		Yes	in prior years	No, and I never have.
2023	resident_yes	14.68	29.36	55.96
2023	resident_no	45.45	14.77	39.77
2023	motive_profit	30.00	25.00	45.00
2023	motive_rec	27.74	21.90	50.36
2023	year_23	32.54	21.30	46.15
2023	year_24	3.57	32.14	64.29
2023	complete	28.43	22.84	48.73
2024	resident_yes	38.27	7.41	54.32
2024	resident_no	7.41	18.52	74.07
2024	motive_profit	28.57	14.29	57.14
2024	motive_rec	31.25	8.75	60.00
2024	year_24	30.56	10.19	59.26
2024	complete	30.56	10.19	59.26

Timing

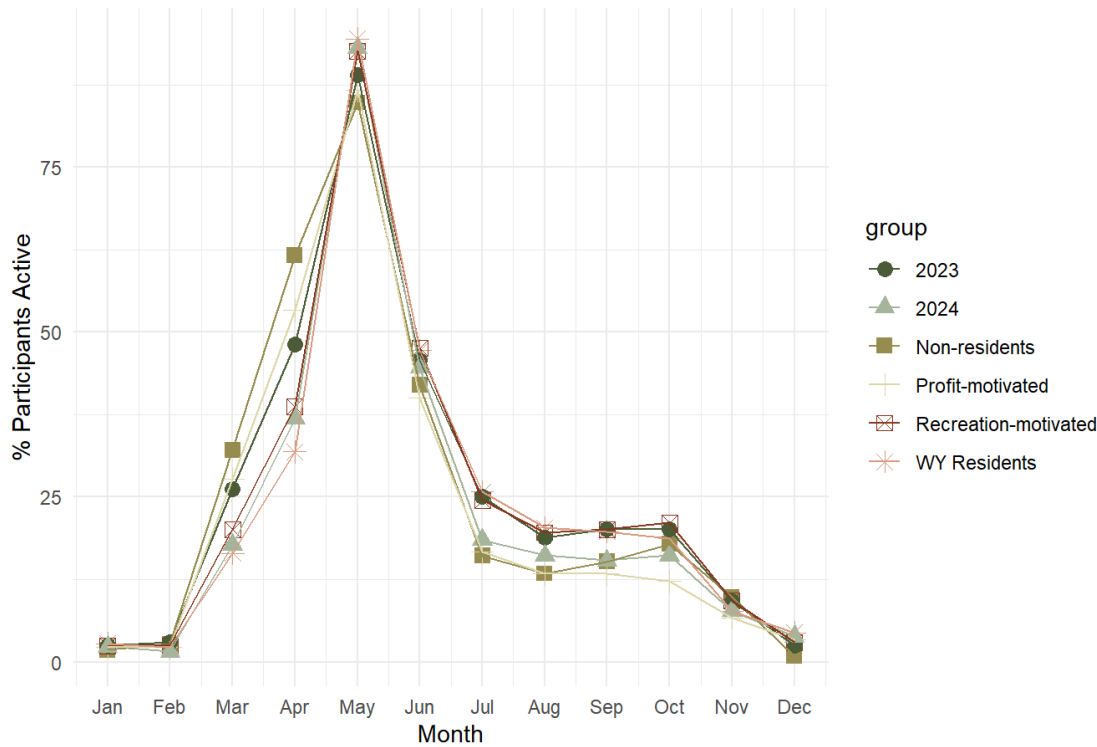
Elk Activity

During which month is the majority of your shed hunting activity for elk?

data_subset	group	February	March	April	May	June	July	August	September	October	November
majority_activity_elk	resident_yes		1.59	15.87	77.25	2.12	0.53	1.59	0.53		0.53
majority_activity_elk	resident_no	0.88	4.39	42.11	42.98	3.51	1.75		2.63	1.75	
majority_activity_elk	motive_profit	1.11	2.22	36.67	54.44	3.33	2.22				
majority_activity_elk	motive_rec		2.82	21.13	68.54	2.35	0.47	1.41	1.88	0.94	0.47
majority_activity_elk	year_23	0.59	3.55	29.59	57.99	2.96	1.18	1.18	1.78	0.59	0.59
majority_activity_elk	year_24		1.49	20.90	72.39	2.24	0.75	0.75	0.75	0.75	
majority_activity_elk	complete	0.33	2.64	25.74	64.36	2.64	0.99	0.99	1.32	0.66	0.33

Timeline of Activity

During which months do you collect shed antlers from each of the following? Select all that apply.



Strategies

How frequently are each of the following true when shed hunting?

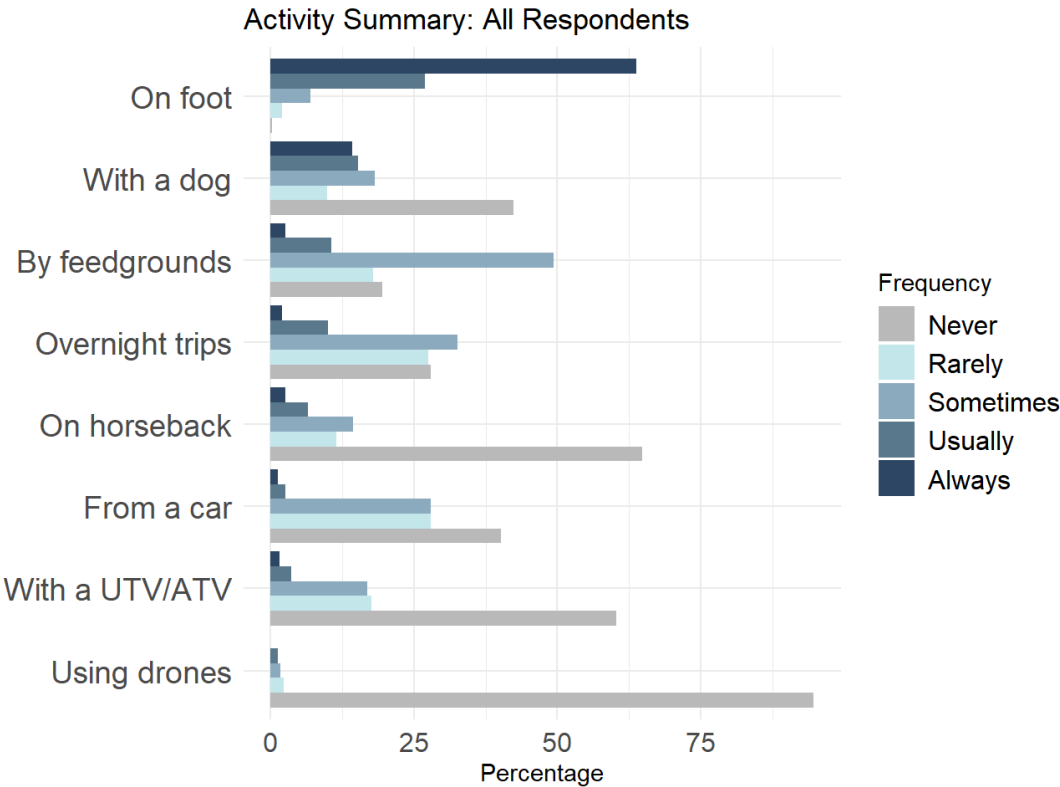
- I bring a dog.
- I search for sheds on horseback.
- I search for sheds from a car or vehicle.
- I search for sheds on foot.
- I search for sheds via snowmobile or ATV/UTV tracks.
- I search for sheds adjacent to feedgrounds.
- I camp in the backcountry (pack in).
- I search for sheds using drones.

data_subset	group	Never	Rarely	Sometimes	Usually	Always
activity_dog	resident_yes	41.49	7.98	19.15	15.96	15.43
activity_dog	resident_no	43.86	13.16	16.67	14.04	12.28
activity_dog	motive_profit	37.08	10.11	21.35	14.61	16.85
activity_dog	motive_rec	44.60	9.86	16.90	15.49	13.15
activity_dog	year_23	38.82	8.82	18.82	17.65	15.88
activity_dog	year_24	46.97	11.36	17.42	12.12	12.12
activity_dog	complete	42.38	9.93	18.21	15.23	14.24
activity_horse	resident_yes	62.11	12.11	15.26	7.89	2.63
activity_horse	resident_no	69.30	10.53	13.16	4.39	2.63
activity_horse	motive_profit	57.30	13.48	19.10	5.62	4.49

<b>data_subset</b>	<b>group</b>	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Usually</b>	<b>Always</b>
activity_horse	motive_rec	67.91	10.70	12.56	6.98	1.86
activity_horse	year_23	68.24	12.94	13.53	4.12	1.18
activity_horse	year_24	60.45	9.70	15.67	9.70	4.48
activity_horse	complete	64.80	11.51	14.47	6.58	2.63
activity_car	resident_yes	40.96	28.19	27.66	1.60	1.60
activity_car	resident_no	38.94	27.43	28.32	4.42	0.88
activity_car	motive_profit	32.58	25.84	33.71	3.37	4.49
activity_car	motive_rec	43.40	28.77	25.47	2.36	
activity_car	year_23	35.50	30.18	30.77	1.18	2.37
activity_car	year_24	46.21	25.00	24.24	4.55	
activity_car	complete	40.20	27.91	27.91	2.66	1.33
activity_foot	resident_yes		0.53	9.52	30.16	59.79
activity_foot	resident_no	0.87	4.35	2.61	21.74	70.43
activity_foot	motive_profit		5.56	7.78	31.11	55.56
activity_foot	motive_rec	0.47	0.47	6.54	25.23	67.29
activity_foot	year_23	0.59	3.53	3.53	30.59	61.76
activity_foot	year_24			11.19	22.39	66.42
activity_foot	complete	0.33	1.97	6.91	26.97	63.82
activity_utv	resident_yes	61.17	17.55	15.96	4.26	1.06
activity_utv	resident_no	58.77	17.54	18.42	2.63	2.63
activity_utv	motive_profit	43.33	21.11	27.78	4.44	3.33
activity_utv	motive_rec	67.45	16.04	12.26	3.30	0.94
activity_utv	year_23	57.40	20.12	17.75	2.96	1.78
activity_utv	year_24	63.91	14.29	15.79	4.51	1.50
activity_utv	complete	60.26	17.55	16.89	3.64	1.66
activity_feedgrounds	resident_yes	16.84	15.26	51.58	12.11	4.21
activity_feedgrounds	resident_no	24.11	22.32	45.54	8.04	
activity_feedgrounds	motive_profit	17.98	15.73	49.44	14.61	2.25
activity_feedgrounds	motive_rec	20.19	18.78	49.30	8.92	2.82
activity_feedgrounds	year_23	17.06	20.00	51.76	9.41	1.76



data_subset	group	Never	Rarely	Sometimes	Usually	Always
activity_feedgrounds	year_24	22.73	15.15	46.21	12.12	3.79
activity_feedgrounds	complete	19.54	17.88	49.34	10.60	2.65
activity_backcountry	resident_yes	33.51	28.72	28.19	7.98	1.60
activity_backcountry	resident_no	18.58	25.66	39.82	13.27	2.65
activity_backcountry	motive_profit	21.35	26.97	37.08	14.61	
activity_backcountry	motive_rec	30.66	27.83	30.66	8.02	2.83
activity_backcountry	year_23	24.26	28.40	34.32	10.06	2.96
activity_backcountry	year_24	32.58	26.52	30.30	9.85	0.76
activity_backcountry	complete	27.91	27.57	32.56	9.97	1.99
activity_drones	resident_yes	97.33	1.60	0.53	0.53	
activity_drones	resident_no	90.27	3.54	3.54	2.65	
activity_drones	motive_profit	87.64	6.74	1.12	4.49	
activity_drones	motive_rec	97.63	0.47	1.90		
activity_drones	year_23	92.31	2.96	2.37	2.37	
activity_drones	year_24	97.71	1.53	0.76		
activity_drones	complete	94.67	2.33	1.67	1.33	



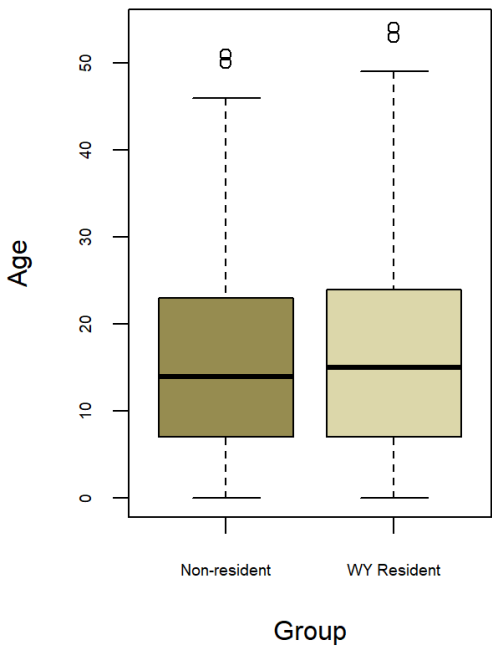
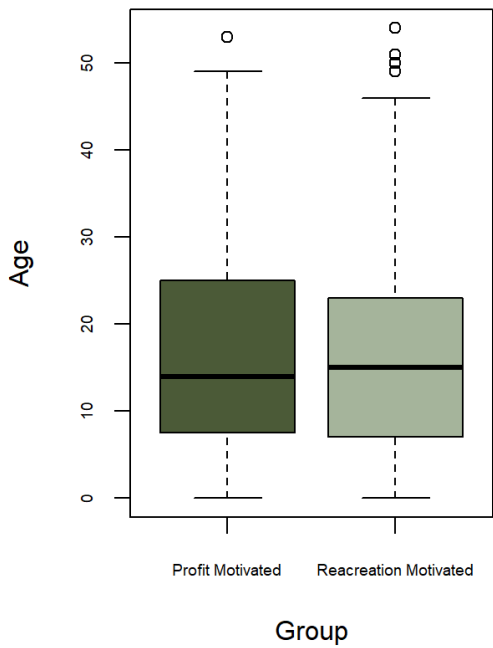
# Motivations and Values

## Experience

### Years Active

In what year did you go shed hunting for the first time?

data_subset	group	count	mean	median	sd
years_active	resident_yes	188	16.82	15	12.09
years_active	resident_no	112	16.59	14	12.03
years_active	motive_profit	87	17.79	14	12.00
years_active	motive_rec	213	16.30	15	12.07
years_active	year_23	169	15.75	14	10.63
years_active	year_24	131	18.01	16	13.61
years_active	complete	300	16.73	15	12.05



### Initial Involvement

How did you first hear about shed hunting?

- I learned about it from friends or family.
- I learned about it on social media.
- I spend time outdoors and just happen to see shed antlers.
- Other

	Friends/Family	Social Media	Time Outdoors	Other
resident_yes	85.94	0	17.97	17.19
resident_no	90.67	0	10.67	12.00
motive_profit	91.94	0	16.13	8.06
motive_rec	85.82	0	14.89	18.44
year_23	90.00	0	14.55	13.64
year_24	84.95	0	16.13	17.20
complete	87.68	0	15.27	15.27

Motivations

To what extent do you agree or disagree with the following statements about your motivation to shed hunt?

- I shed hunt for the chance to earn money.
- I shed hunt to spend time outside in nature.
- I shed hunt to spend time with my friends/family.
- I shed hunt to get exercise.
- I shed hunt to collect antler material for personal use.

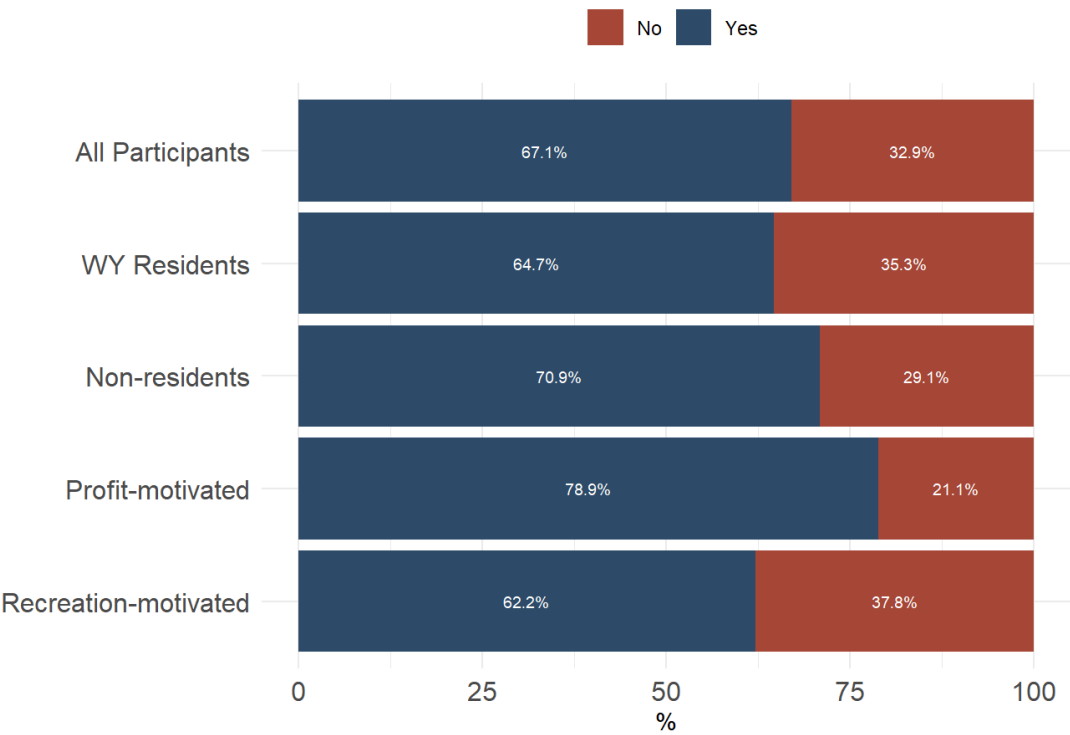
data_subset	group	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
motive_exercise	resident_yes	3.17	1.59	6.35	30.16	58.73
motive_exercise	resident_no	1.74	4.35	4.35	31.30	58.26
motive_exercise	motive_profit	4.49	4.49	6.74	26.97	57.30
motive_exercise	motive_rec	1.86	1.86	5.12	32.09	59.07
motive_exercise	year_23	2.92	4.09	2.92	32.75	57.31
motive_exercise	year_24	2.26	0.75	9.02	27.82	60.15
motive_exercise	complete	2.63	2.63	5.59	30.59	58.55
motive_friendsfam	resident_yes	4.76	3.17	11.11	28.57	52.38
motive_friendsfam	resident_no	2.61	5.22	15.65	30.43	46.09
motive_friendsfam	motive_profit	3.37	4.49	14.61	28.09	49.44
motive_friendsfam	motive_rec	4.19	3.72	12.09	29.77	50.23
motive_friendsfam	year_23	4.09	4.09	12.28	30.99	48.54
motive_friendsfam	year_24	3.76	3.76	13.53	27.07	51.88
motive_friendsfam	complete	3.95	3.95	12.83	29.28	50.00
motive_material	resident_yes	10.05	6.35	20.63	32.28	30.69
motive_material	resident_no	7.83	12.17	19.13	29.57	31.30

data_subset	group	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
motive_material	motive_profit	13.48	8.99	23.60	39.33	14.61
motive_material	motive_rec	7.44	8.37	18.60	27.91	37.67
motive_material	year_23	8.77	9.94	20.47	33.33	27.49
motive_material	year_24	9.77	6.77	19.55	28.57	35.34
motive_material	complete	9.21	8.55	20.07	31.25	30.92
motive_money	resident_yes	49.47	12.77	22.34	10.11	5.32
motive_money	resident_no	44.83	18.10	18.97	15.52	2.59
motive_money	motive_profit			53.33	34.44	12.22
motive_money	motive_rec	67.76	21.03	7.48	2.80	0.93
motive_money	year_23	45.88	17.65	18.24	14.71	3.53
motive_money	year_24	50.00	11.19	24.63	8.96	5.22
motive_money	complete	47.70	14.80	21.05	12.17	4.28
motive_nature	resident_yes	3.19	0.53	3.72	16.49	76.06
motive_nature	resident_no	1.72	1.72	4.31	12.07	80.17
motive_nature	motive_profit	3.41	1.14	9.09	14.77	71.59
motive_nature	motive_rec	2.31	0.93	1.85	14.81	80.09
motive_nature	year_23	2.94	1.18	4.12	12.94	78.82
motive_nature	year_24	2.24	0.75	3.73	17.16	76.12
motive_nature	complete	2.63	0.99	3.95	14.80	77.63

Effort

Time off Work

Have you ever taken time off work to collect sheds?



Number of Outings

How many shed hunting outings did you go on this past season?

data_subset	group	count	mean	median	sd
last_outings	resident_yes	185	6.38	4	6.60
last_outings	resident_no	113	11.67	6	14.44
last_outings	motive_profit	89	9.70	5	11.61
last_outings	motive_rec	209	7.83	5	10.11
last_outings	year_23	168	9.17	5	11.78
last_outings	year_24	130	7.38	4	8.77
last_outings	complete	298	8.39	5	10.59

Average Travel Time

On average, for how many hours did you travel one-way (in hours) to reach a shed hunting site?

data_subset	group	count	mean	median	sd
last_avg_travel	resident_yes	185	2.07	1	2.75
last_avg_travel	resident_no	113	3.87	3	3.87
last_avg_travel	motive_profit	89	2.75	2	2.77
last_avg_travel	motive_rec	209	2.75	2	3.55
last_avg_travel	year_23	168	2.98	2	3.72



data_subset	group	count	mean	median	sd
last_avg_travel	year_24	130	2.45	2	2.75
last_avg_travel	complete	298	2.75	2	3.34

Max Travel Time

What is longest amount of time you traveled one-way (in hours) to reach a shed hunting site?

data_subset	group	count	mean	median	sd
last_max_travel	resident_yes	186	2.80	2	2.88
last_max_travel	resident_no	114	6.25	5	5.11
last_max_travel	motive_profit	90	4.31	3	3.65
last_max_travel	motive_rec	210	4.02	3	4.45
last_max_travel	year_23	169	4.47	3	4.67
last_max_travel	year_24	131	3.64	3	3.51
last_max_travel	complete	300	4.11	3	4.22

Spending

Gear

Do you purchase gear specifically for shed hunting? Do not consider gear that you would have purchased anyway for another activity (e.g., hunting).

data_subset	group	Yes	No
purchased_gear	resident_yes	25.26	74.74
purchased_gear	resident_no	41.03	58.97
purchased_gear	motive_profit	42.22	57.78
purchased_gear	motive_rec	26.73	73.27
purchased_gear	year_23	35.09	64.91
purchased_gear	year_24	26.47	73.53
purchased_gear	complete	31.27	68.73

Spending by Category

How much money would you estimate you spent on the following categories as they relate to shed hunting?

- Lodging
- Travel
- Gear
- Other

data_subset	group	count	mean	median	sd
money_lodging	resident_yes	59	152.20	0.0	431.15

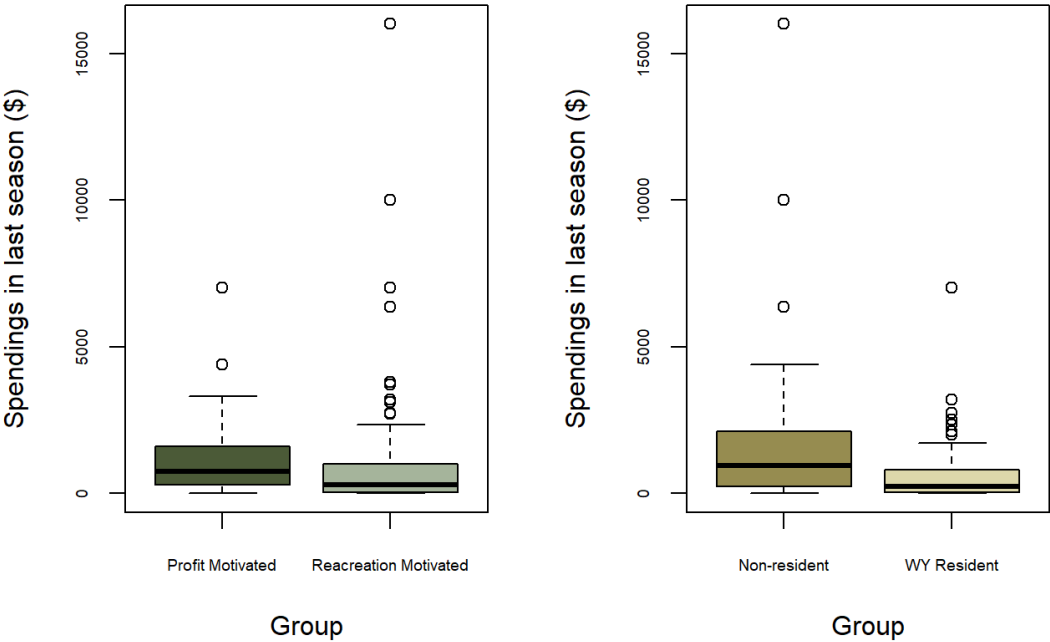
data_subset	group	count	mean	median	sd
money_lodging	resident_no	45	204.27	50.0	295.45
money_lodging	motive_profit	28	141.79	10.0	260.26
money_lodging	motive_rec	76	186.87	0.0	413.46
money_lodging	year_23	60	212.00	0.0	463.82
money_lodging	year_24	44	123.91	0.0	204.71
money_lodging	complete	104	174.73	0.0	377.67
money_travel	resident_yes	70	315.41	100.0	541.88
money_travel	resident_no	53	789.40	500.0	943.41
money_travel	motive_profit	35	675.37	500.0	885.02
money_travel	motive_rec	88	457.72	200.0	723.19
money_travel	year_23	67	580.52	300.0	863.36
money_travel	year_24	56	446.82	225.0	654.73
money_travel	complete	123	519.65	250.0	775.22
money_gear	resident_yes	62	213.87	7.5	493.06
money_gear	resident_no	46	618.33	200.0	1616.77
money_gear	motive_profit	32	354.06	200.0	435.87
money_gear	motive_rec	76	399.64	2.5	1320.81
money_gear	year_23	59	524.37	100.0	1482.84
money_gear	year_24	49	219.69	50.0	375.30
money_gear	complete	108	386.14	100.0	1130.61
money_other	resident_yes	52	156.63	22.5	287.67
money_other	resident_no	42	265.33	100.0	515.26
money_other	motive_profit	28	181.07	100.0	246.01
money_other	motive_rec	66	215.44	50.0	459.48
money_other	year_23	53	220.09	50.0	497.58
money_other	year_24	41	185.95	100.0	248.95
money_other	complete	94	205.20	100.0	406.67

Total Spendings

Money spent in total:

data_subset	group	count	mean	median	sd
money_all	resident_yes	76	690.32	237.5	1272.48

data_subset	group	count	mean	median	sd
money_all	resident_no	54	1678.09	950.0	2661.78
money_all	motive_profit	36	1222.44	750.0	1406.78
money_all	motive_rec	94	1053.97	300.0	2218.56
money_all	year_23	72	1308.58	450.0	2485.54
money_all	year_24	58	842.47	400.0	1200.44
money_all	complete	130	1100.62	400.0	2022.65

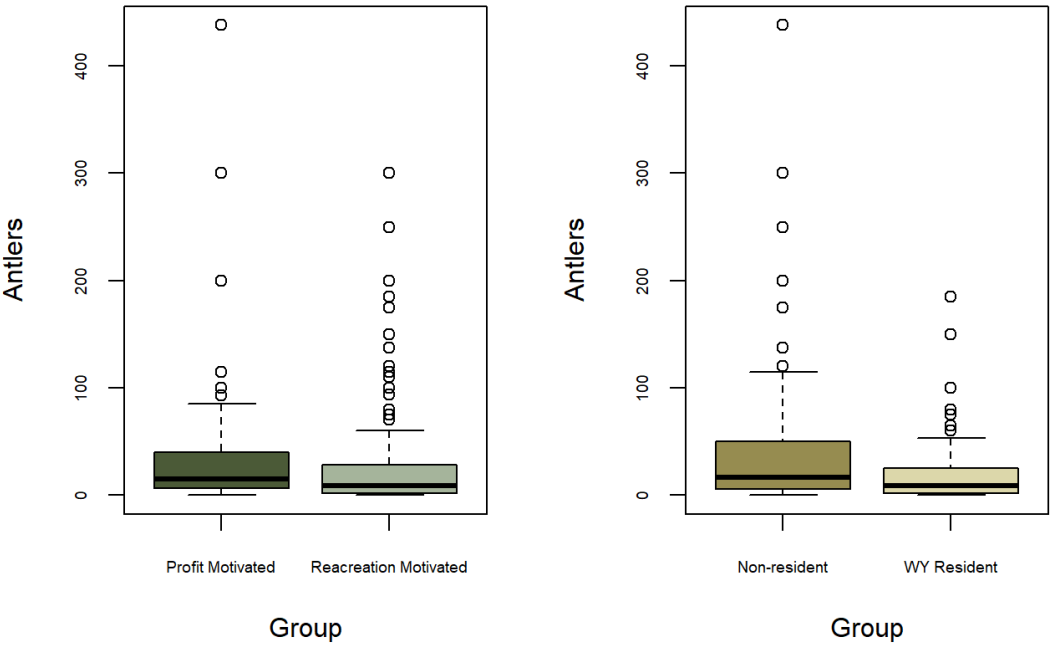


## Most Recent Season

### Number of Antlers Found

About how many individual antlers did you find last season year in total? Include all species.

data_subset	group	count	mean	median	sd
last_num_antlers	resident_yes	179	19.60	9.0	27.79
last_num_antlers	resident_no	108	46.38	16.5	72.55
last_num_antlers	motive_profit	83	38.90	15.0	65.90
last_num_antlers	motive_rec	204	25.93	9.0	43.43
last_num_antlers	year_23	161	32.06	10.0	56.78
last_num_antlers	year_24	126	26.63	10.0	42.99
last_num_antlers	complete	287	29.68	10.0	51.17



Pounds of Antlers Found

How many total pounds of antler of all types would you estimate you found last season?

data_subset	group	count	mean	median	sd
last_lbs_antlers	resident_yes	162	69.99	25	100.26
last_lbs_antlers	resident_no	98	134.05	40	225.50
last_lbs_antlers	motive_profit	79	143.73	50	229.98
last_lbs_antlers	motive_rec	181	72.49	20	115.40
last_lbs_antlers	year_23	144	102.24	30	192.67
last_lbs_antlers	year_24	116	84.08	30	113.13
last_lbs_antlers	complete	260	94.14	30	162.05

Percentage Elk

Roughly what percent of these antlers came from elk in that year?

data_subset	group	count	mean	median	sd
last_percent_elk	resident_yes	164	57.00	61	33.79
last_percent_elk	resident_no	107	53.31	56	33.44
last_percent_elk	motive_profit	87	62.49	70	29.45
last_percent_elk	motive_rec	184	52.26	50	35.04
last_percent_elk	year_23	155	53.60	50	33.26
last_percent_elk	year_24	116	58.14	68	34.10

data_subset	group	count	mean	median	sd
last_percent_elk	complete	271	55.54	60	33.64

Antler Grades

Roughly what percentage of your finds were brown? (Browns are defined as antlers dropped within the last year with minimal fading).  
Note: This data was only collected in 2024.

data_subset	group	count	mean	median	sd
last_perc_brown	resident_yes	70	69.34	76	28.85
last_perc_brown	resident_no	24	53.67	50	29.78
last_perc_brown	motive_profit	27	68.26	75	26.63
last_perc_brown	motive_rec	67	64.16	61	31.01
last_perc_brown	year_23	0			
last_perc_brown	year_24	94	65.34	70	29.74
last_perc_brown	complete	94	65.34	70	29.74

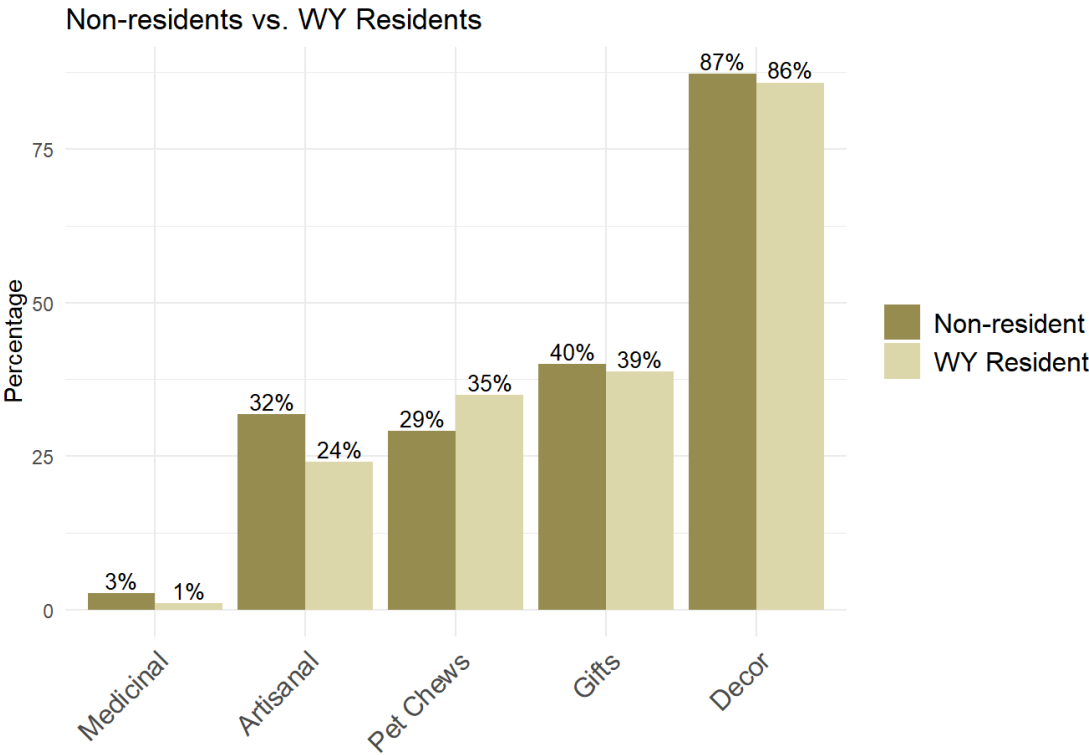
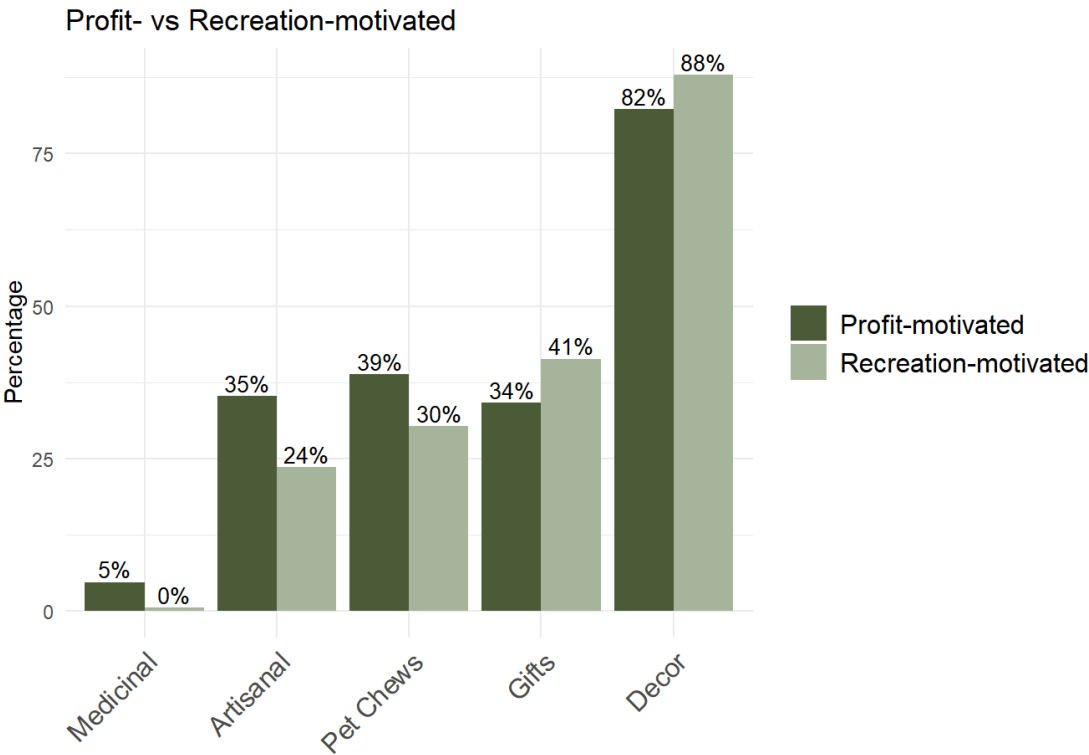
Use of Antler Material

By Category

Which of the following do you personally use antlers for? Select all that apply.

- Pet Chews
- Decor
- Medicinal Products
- Artisanal Products
- Gifts for Friends and Family

	use_petchews	use_decor	use_medicinal	use_artisanal	use_gifts
resident_yes	34.97	85.79	1.09	24.04	38.80
resident_no	29.09	87.27	2.73	31.82	40.00
motive_profit	38.82	82.35	4.71	35.29	34.12
motive_rec	30.29	87.98	0.48	23.56	41.35
year_23	35.98	86.59	2.44	30.49	40.85
year_24	28.68	86.05	0.78	22.48	37.21
complete	32.76	86.35	1.71	26.96	39.25



# Commercial Use of Antlers

## Profitability

### Proportion of Participants Engaged in Commercial Trade

Have you sold any shed antlers for profit? Note: The “motive” category was defined using this variable.

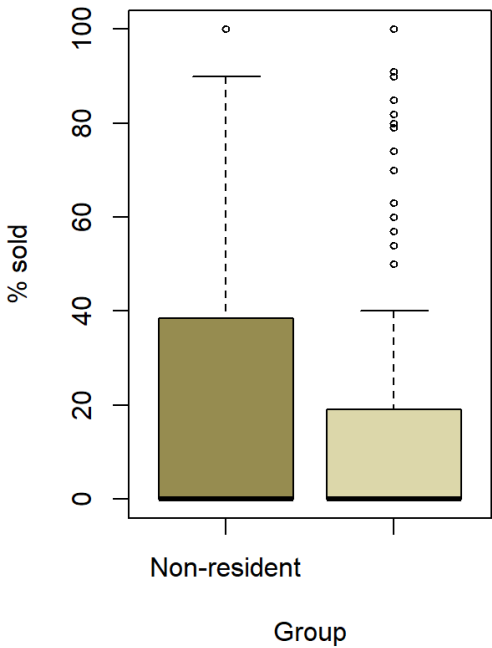
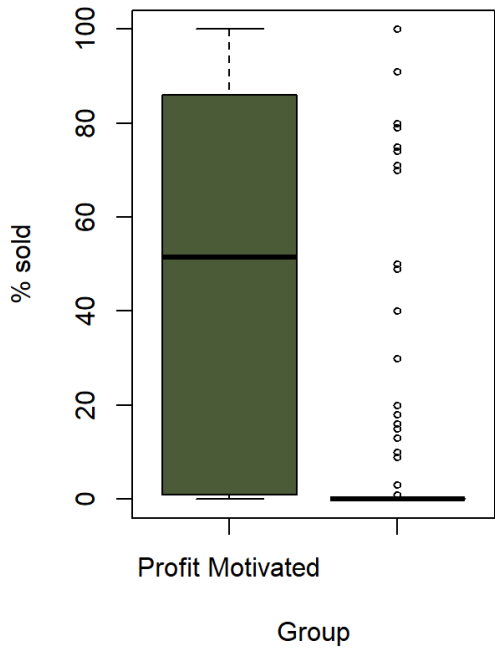


data_subset	group	Yes	No
for_profit	resident_yes	49.00	51.00
for_profit	resident_no	48.72	51.28
for_profit	motive_profit	93.33	6.67
for_profit	motive_rec	31.28	68.72
for_profit	year_23	51.76	48.24
for_profit	year_24	45.58	54.42
for_profit	complete	48.90	51.10

Proportion of Antlers Sold

What percentage of the sheds you found did you sell for profit in your last season?

data_subset	group	count	mean	median	sd
last_percent_profit	resident_yes	178	18.88	0.0	33.86
last_percent_profit	resident_no	112	19.66	0.0	32.41
last_percent_profit	motive_profit	84	47.71	51.5	38.42
last_percent_profit	motive_rec	206	7.54	0.0	22.17
last_percent_profit	year_23	163	21.17	0.0	34.72
last_percent_profit	year_24	127	16.62	0.0	31.21
last_percent_profit	complete	290	19.18	0.0	33.25

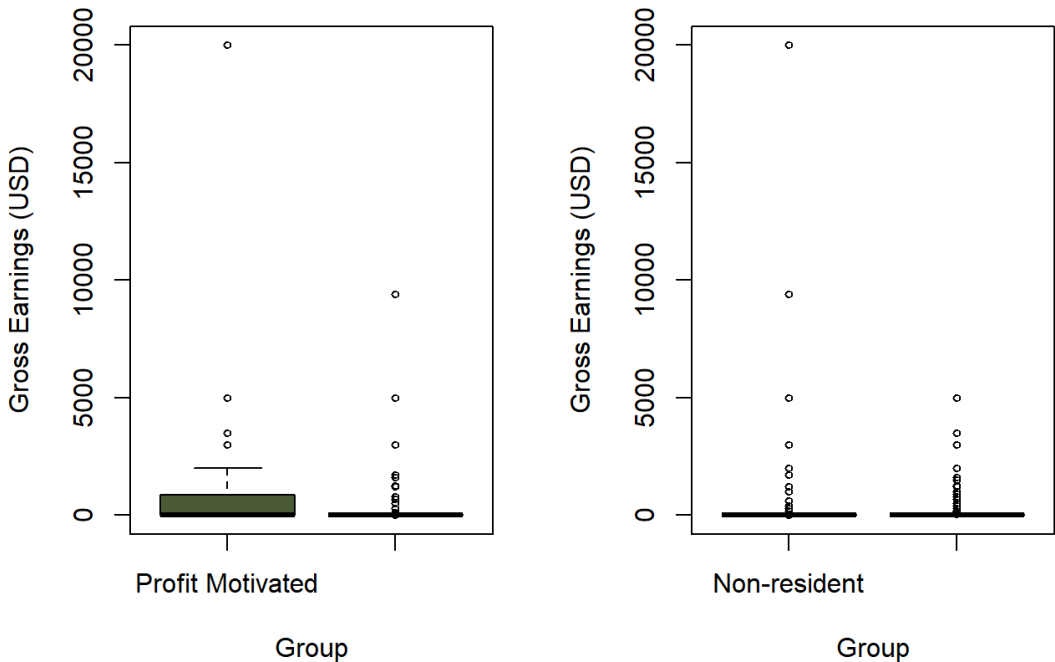


# Earnings from last Season

## Gross Earnings

Approximately how much did you earn (USD) from antler sales [in your most recent season]?

data_subset	group	count	mean	median	sd
last_tot_earnings	resident_yes	177	266.15	0	766.61
last_tot_earnings	resident_no	108	503.44	0	2237.07
last_tot_earnings	motive_profit	80	865.71	0	2434.76
last_tot_earnings	motive_rec	205	157.18	0	844.49
last_tot_earnings	year_23	161	354.80	0	1716.00
last_tot_earnings	year_24	124	357.72	0	1180.96
last_tot_earnings	complete	285	356.07	0	1504.33

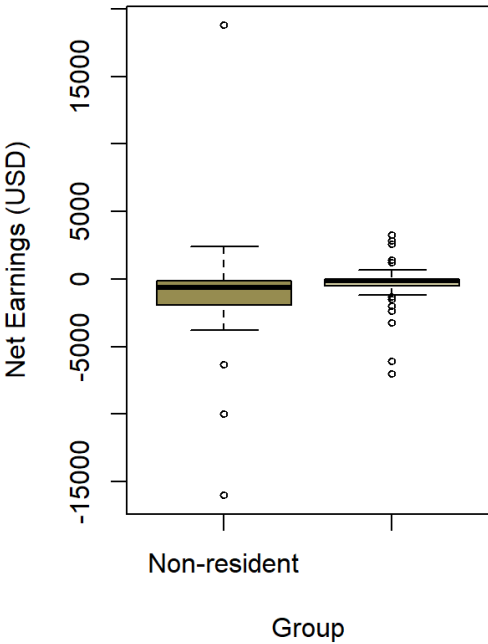
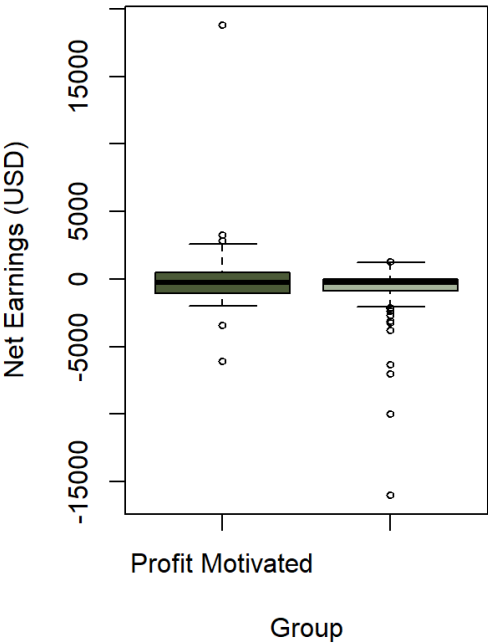


## Net Earnings

Net earnings for last season (gross earnings minus total spent).

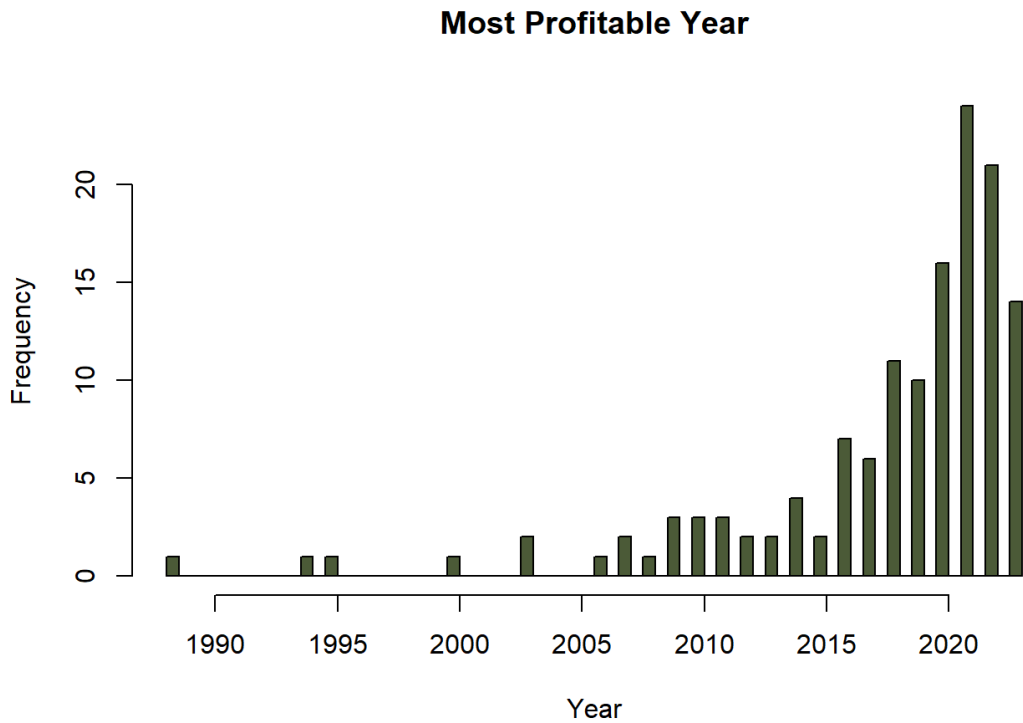
data_subset	group	count	mean	median	sd
net_earnings	resident_yes	75	-293.52	-100.0	1422.96
net_earnings	resident_no	51	-1031.29	-650.0	3984.75
net_earnings	motive_profit	35	295.69	-250.0	3677.17
net_earnings	motive_rec	91	-933.62	-230.0	2266.51
net_earnings	year_23	70	-772.91	-162.5	3484.09

data_subset	group	count	mean	median	sd
net_earnings	year_24	56	-366.18	-300.0	1461.90
net_earnings	complete	126	-592.14	-240.0	2771.67



Maximum Earnings  
Most Profitable Year

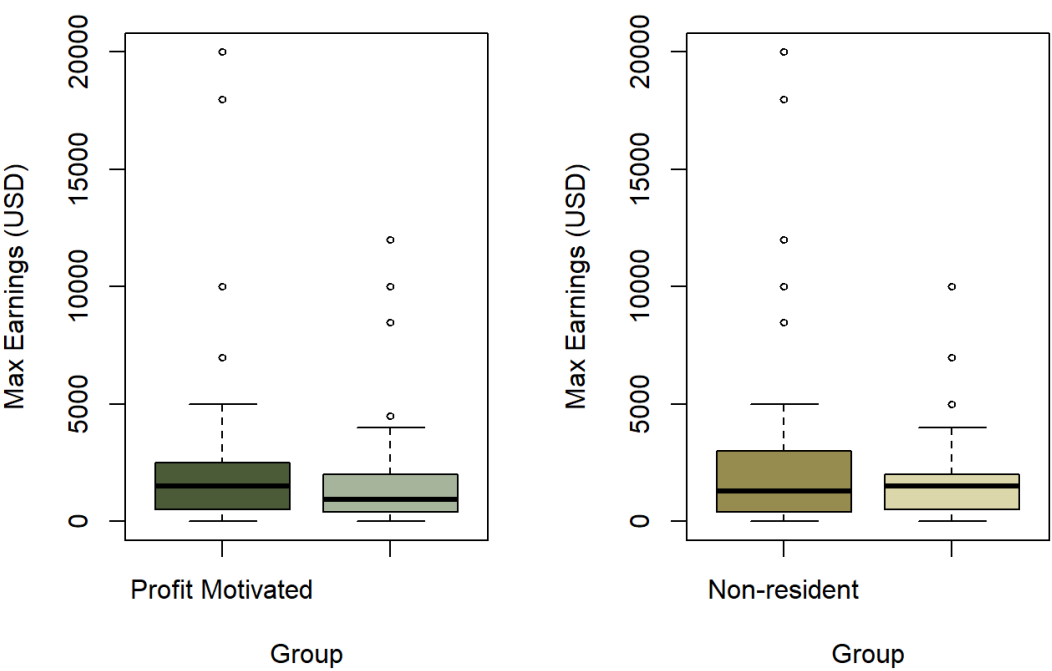
Which year was your most profitable year?



### Earnings that Year

About how much money (USD) did you earn that year?

data_subset	group	count	mean	median	sd
max_earnings	resident_yes	73	1621.71	1500	1643.24
max_earnings	resident_no	46	3093.89	1300	4665.27
max_earnings	motive_profit	73	2297.32	1500	3431.93
max_earnings	motive_rec	46	2021.72	950	2924.30
max_earnings	year_23	74	2238.56	1350	3641.18
max_earnings	year_24	45	2112.22	1500	2461.94
max_earnings	complete	119	2190.79	1500	3235.12



Social Media

Engagement with Social Media

Do you use social media (e.g., Facebook, YouTube, Instagram, TikTok) to view or create content about shed hunting?

data_subset	group	Yes	No
social_media	resident_yes	27.89	72.11
social_media	resident_no	47.01	52.99
social_media	motive_profit	38.89	61.11
social_media	motive_rec	33.64	66.36
social_media	year_23	36.26	63.74
social_media	year_24	33.82	66.18
social_media	complete	35.18	64.82

Type of Engagement

Do the following statements apply to you?

- I follow content from shed hunting “influencers.”
- I follow shed hunting content from friends and family.
- I post or create my own shed hunting content on social media.
- I use social media to market/sell the antlers I find.
- I earn income from creating shed hunting related social media content.

data_subset	group	Yes	No
social_influencers	resident_yes	66.04	33.96

<b>data_subset</b>	<b>group</b>	<b>Yes</b>	<b>No</b>
social_influencers	resident_no	85.45	14.55
social_influencers	motive_profit	71.43	28.57
social_influencers	motive_rec	78.08	21.92
social_influencers	year_23	80.65	19.35
social_influencers	year_24	69.57	30.43
social_influencers	complete	75.93	24.07
social_friendsfam	resident_yes	79.25	20.75
social_friendsfam	resident_no	83.33	16.67
social_friendsfam	motive_profit	79.41	20.59
social_friendsfam	motive_rec	82.19	17.81
social_friendsfam	year_23	75.41	24.59
social_friendsfam	year_24	89.13	10.87
social_friendsfam	complete	81.31	18.69
social_createcontent	resident_yes	56.60	43.40
social_createcontent	resident_no	63.64	36.36
social_createcontent	motive_profit	54.29	45.71
social_createcontent	motive_rec	63.01	36.99
social_createcontent	year_23	59.68	40.32
social_createcontent	year_24	60.87	39.13
social_createcontent	complete	60.19	39.81
social_marketing	resident_yes	7.55	92.45
social_marketing	resident_no	9.09	90.91
social_marketing	motive_profit	20.00	80.00
social_marketing	motive_rec	2.74	97.26
social_marketing	year_23	9.68	90.32
social_marketing	year_24	6.52	93.48
social_marketing	complete	8.33	91.67
social_earnincome	resident_yes	5.66	94.34
social_earnincome	resident_no	12.73	87.27
social_earnincome	motive_profit	20.00	80.00

data_subset	group	Yes	No
social_earnincome	motive_rec	4.11	95.89
social_earnincome	year_23	9.68	90.32
social_earnincome	year_24	8.70	91.30
social_earnincome	complete	9.26	90.74

Platform

Which social media platforms do you use for shed hunting content?

- Instagram
- Facebook
- TikTok
- Twitter
- Youtube

data_subset	group	Yes	No
social_instagram	resident_yes	66.04	33.96
social_instagram	resident_no	83.64	16.36
social_instagram	motive_profit	77.14	22.86
social_instagram	motive_rec	73.97	26.03
social_instagram	year_23	85.48	14.52
social_instagram	year_24	60.87	39.13
social_instagram	complete	75.00	25.00
social_facebook	resident_yes	60.38	39.62
social_facebook	resident_no	52.73	47.27
social_facebook	motive_profit	51.43	48.57
social_facebook	motive_rec	58.90	41.10
social_facebook	year_23	51.61	48.39
social_facebook	year_24	63.04	36.96
social_facebook	complete	56.48	43.52
social_tiktok	resident_yes	18.87	81.13
social_tiktok	resident_no	20.00	80.00
social_tiktok	motive_profit	28.57	71.43
social_tiktok	motive_rec	15.07	84.93
social_tiktok	year_23	19.35	80.65
social_tiktok	year_24	19.57	80.43
social_tiktok	complete	19.44	80.56

data_subset	group	Yes	No
social_twitter	resident_yes		100.00
social_twitter	resident_no	3.64	96.36
social_twitter	motive_profit	2.86	97.14
social_twitter	motive_rec	1.37	98.63
social_twitter	year_23		100.00
social_twitter	year_24	4.35	95.65
social_twitter	complete	1.85	98.15
social_youtube	resident_yes	32.08	67.92
social_youtube	resident_no	43.64	56.36
social_youtube	motive_profit	31.43	68.57
social_youtube	motive_rec	41.10	58.90
social_youtube	year_23	40.32	59.68
social_youtube	year_24	34.78	65.22
social_youtube	complete	37.96	62.04

# Evidence of Congestion Externalities

## Perceptions of Trends in Congestion

What are your perceptions of the following trends in shed hunting and your experiences? Select one option for each statement.

- Shed hunting’s popularity over the last 10 years
- Shed hunting’s popularity since the onset of COVID (last 4 years)
- The number of other shed hunters I encounter (since COVID)
- My interest in participating in shed hunting (since COVID)
- The ease with which I find shed antlers (since COVID)
- The privacy I keep around my shed hunting strategies or locations (since COVID)

data_subset	group	Decreased	Increased	Remained the same
trend_10yr	resident_yes	0.53	96.32	3.16
trend_10yr	resident_no		95.73	4.27
trend_10yr	motive_profit		95.56	4.44
trend_10yr	motive_rec	0.46	96.31	3.23
trend_10yr	year_23		95.91	4.09
trend_10yr	year_24	0.74	96.32	2.94
trend_10yr	complete	0.33	96.09	3.58



<b>data_subset</b>	<b>group</b>	<b>Decreased</b>	<b>Increased</b>	<b>Remained the same</b>
trend_covid	resident_yes	1.58	85.26	13.16
trend_covid	resident_no	3.42	81.20	15.38
trend_covid	motive_profit	4.44	81.11	14.44
trend_covid	motive_rec	1.38	84.79	13.82
trend_covid	year_23	3.51	79.53	16.96
trend_covid	year_24	0.74	88.97	10.29
trend_covid	complete	2.28	83.71	14.01
trend_other_shedhunters	resident_yes	2.63	80.53	16.84
trend_other_shedhunters	resident_no	4.27	77.78	17.95
trend_other_shedhunters	motive_profit	1.11	83.33	15.56
trend_other_shedhunters	motive_rec	4.15	77.88	17.97
trend_other_shedhunters	year_23	2.34	80.12	17.54
trend_other_shedhunters	year_24	4.41	78.68	16.91
trend_other_shedhunters	complete	3.26	79.48	17.26
trend_covid_myinterest	resident_yes	28.95	19.47	51.58
trend_covid_myinterest	resident_no	23.08	27.35	49.57
trend_covid_myinterest	motive_profit	30.00	22.22	47.78
trend_covid_myinterest	motive_rec	25.35	22.58	52.07
trend_covid_myinterest	year_23	29.24	21.05	49.71
trend_covid_myinterest	year_24	23.53	24.26	52.21
trend_covid_myinterest	complete	26.71	22.48	50.81
trend_covid_easefinding	resident_yes	52.38	6.35	41.27
trend_covid_easefinding	resident_no	54.70	12.82	32.48
trend_covid_easefinding	motive_profit	51.11	10.00	38.89
trend_covid_easefinding	motive_rec	54.17	8.33	37.50
trend_covid_easefinding	year_23	48.82	10.59	40.59
trend_covid_easefinding	year_24	58.82	6.62	34.56
trend_covid_easefinding	complete	53.27	8.82	37.91
trend_myprivacy	resident_yes	7.98	34.04	57.98
trend_myprivacy	resident_no	8.55	56.41	35.04

data_subset	group	Decreased	Increased	Remained the same
trend_myprivacy	motive_profit	10.00	51.11	38.89
trend_myprivacy	motive_rec	7.44	39.07	53.49
trend_myprivacy	year_23	8.24	47.65	44.12
trend_myprivacy	year_24	8.15	36.30	55.56
trend_myprivacy	complete	8.20	42.62	49.18

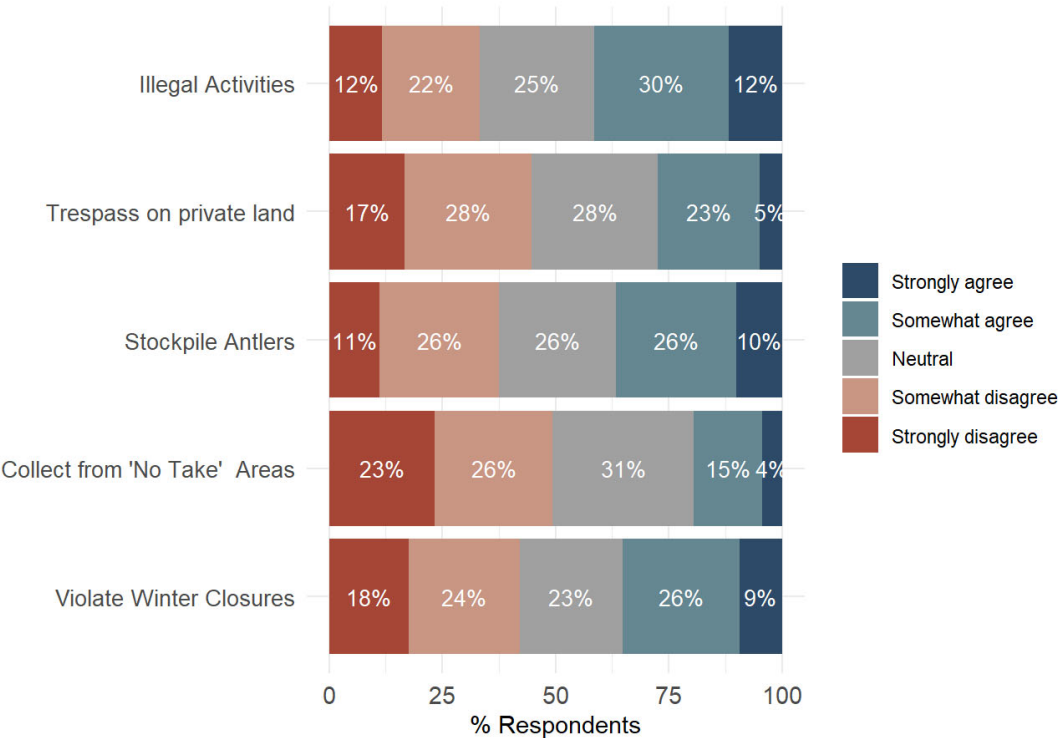
Illegal Activities

Indicate to what extent do you agree or disagree with the following statements about shed hunters:

- Most shed hunters engage in illegal activities to obtain a competitive advantage.
- Most shed hunters trespass on private land.
- Most shed hunters stockpile antlers outside of the shed season.
- Most shed hunters collect and remove antlers outside of the shed season.
- Most shed hunters collect from no-take public areas (e.g., National Parks).
- Most shed hunters collect in winter closure areas.

data_subset	group	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
illegal_activities	resident_yes	9.52	26.98	22.75	28.57	12.17
illegal_activities	resident_no	15.38	12.82	29.06	31.62	11.11
illegal_activities	motive_profit	10.00	15.56	24.44	40.00	10.00
illegal_activities	motive_rec	12.50	24.07	25.46	25.46	12.50
illegal_activities	year_23	12.94	20.59	25.88	31.76	8.82
illegal_activities	year_24	10.29	22.79	24.26	27.21	15.44
illegal_activities	complete	11.76	21.57	25.16	29.74	11.76
trespass_private	resident_yes	14.29	30.69	30.16	20.63	4.23
trespass_private	resident_no	20.51	23.93	23.93	25.64	5.98
trespass_private	motive_profit	11.11	30.00	24.44	31.11	3.33
trespass_private	motive_rec	18.98	27.31	29.17	18.98	5.56
trespass_private	year_23	18.24	28.24	27.65	22.94	2.94
trespass_private	year_24	14.71	27.94	27.94	22.06	7.35
trespass_private	complete	16.67	28.10	27.78	22.55	4.90
stockpile_outside_season	resident_yes	11.64	26.46	25.93	23.81	12.17
stockpile_outside_season	resident_no	10.26	26.50	25.64	30.77	6.84
stockpile_outside_season	motive_profit	7.78	31.11	20.00	34.44	6.67
stockpile_outside_season	motive_rec	12.50	24.54	28.24	23.15	11.57

<b>data_subset</b>	<b>group</b>	<b>Strongly disagree</b>	<b>Somewhat disagree</b>	<b>Neutral</b>	<b>Somewhat agree</b>	<b>Strongly agree</b>
stockpile_outside_season	year_23	12.94	30.00	27.06	23.53	6.47
stockpile_outside_season	year_24	8.82	22.06	24.26	30.15	14.71
stockpile_outside_season	complete	11.11	26.47	25.82	26.47	10.13
collect_outside_season	resident_yes	12.23	26.60	20.21	27.66	13.30
collect_outside_season	resident_no	11.11	19.66	29.91	29.91	9.40
collect_outside_season	motive_profit	7.78	21.11	21.11	42.22	7.78
collect_outside_season	motive_rec	13.49	25.12	25.12	22.79	13.49
collect_outside_season	year_23	12.94	25.88	22.94	30.59	7.65
collect_outside_season	year_24	10.37	21.48	25.19	25.93	17.04
collect_outside_season	complete	11.80	23.93	23.93	28.52	11.80
notake_publicareas	resident_yes	23.53	23.53	32.09	18.72	2.14
notake_publicareas	resident_no	23.08	29.91	29.91	9.40	7.69
notake_publicareas	motive_profit	13.33	31.11	32.22	21.11	2.22
notake_publicareas	motive_rec	27.57	23.83	30.84	12.62	5.14
notake_publicareas	year_23	26.04	24.85	30.77	16.57	1.78
notake_publicareas	year_24	20.00	27.41	31.85	13.33	7.41
notake_publicareas	complete	23.36	25.99	31.25	15.13	4.28
violate_winter_closures	resident_yes	17.84	22.70	22.16	27.57	9.73
violate_winter_closures	resident_no	17.09	27.35	23.93	23.08	8.55
violate_winter_closures	motive_profit	12.36	22.47	22.47	35.96	6.74
violate_winter_closures	motive_rec	19.72	25.35	23.00	21.60	10.33
violate_winter_closures	year_23	20.71	25.44	21.30	24.85	7.69
violate_winter_closures	year_24	13.53	23.31	24.81	27.07	11.28
violate_winter_closures	complete	17.55	24.50	22.85	25.83	9.27



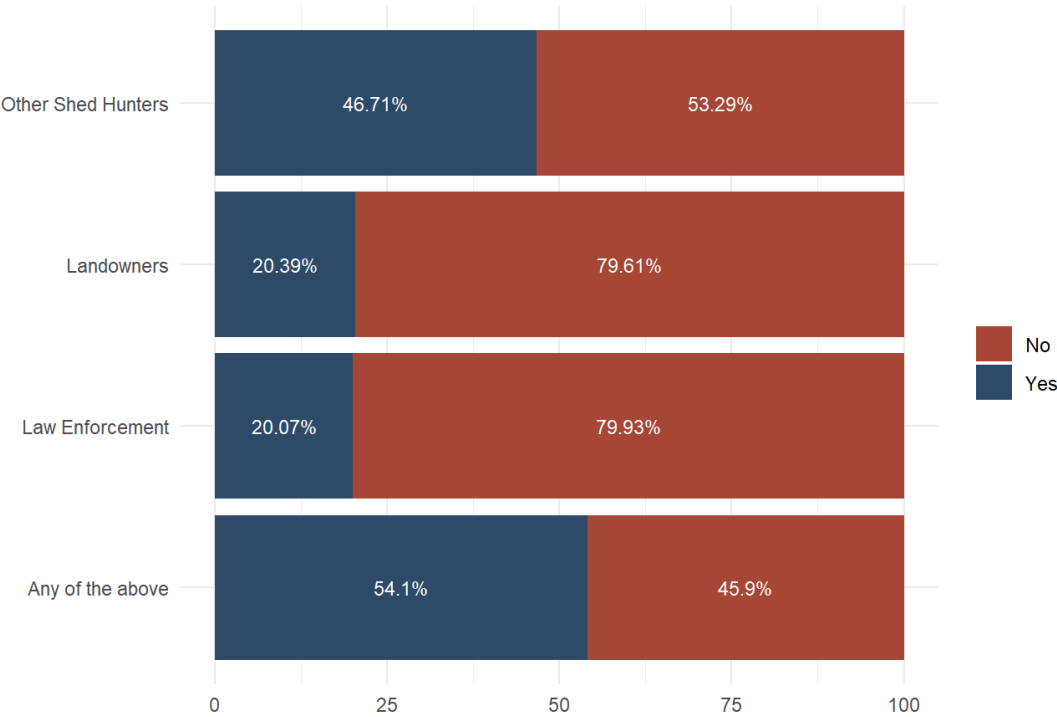
Conflict

Have you or someone you know experienced conflict with the following groups while shed hunting?

- Other shed hunters
- Landowners
- Law enforcement

data_subset	group	No	Yes
conflict_other_shedhunters	resident_yes	52.66	47.34
conflict_other_shedhunters	resident_no	54.31	45.69
conflict_other_shedhunters	motive_profit	39.77	60.23
conflict_other_shedhunters	motive_rec	58.80	41.20
conflict_other_shedhunters	year_23	54.71	45.29
conflict_other_shedhunters	year_24	51.49	48.51
conflict_other_shedhunters	complete	53.29	46.71
conflict_landowners	resident_yes	80.75	19.25
conflict_landowners	resident_no	77.78	22.22
conflict_landowners	motive_profit	75.00	25.00
conflict_landowners	motive_rec	81.48	18.52
conflict_landowners	year_23	77.78	22.22
conflict_landowners	year_24	81.95	18.05

data_subset	group	No	Yes
conflict_landowners	complete	79.61	20.39
conflictLaw_enforcemet	resident_yes	83.42	16.58
conflictLaw_enforcemet	resident_no	74.36	25.64
conflictLaw_enforcemet	motive_profit	66.29	33.71
conflictLaw_enforcemet	motive_rec	85.58	14.42
conflictLaw_enforcemet	year_23	78.95	21.05
conflictLaw_enforcemet	year_24	81.20	18.80
conflictLaw_enforcemet	complete	79.93	20.07
conflict_all	resident_yes	47.62	52.38
conflict_all	resident_no	43.10	56.90
conflict_all	motive_profit	34.83	65.17
conflict_all	motive_rec	50.46	49.54
conflict_all	year_23	45.88	54.12
conflict_all	year_24	45.93	54.07
conflict_all	complete	45.90	54.10

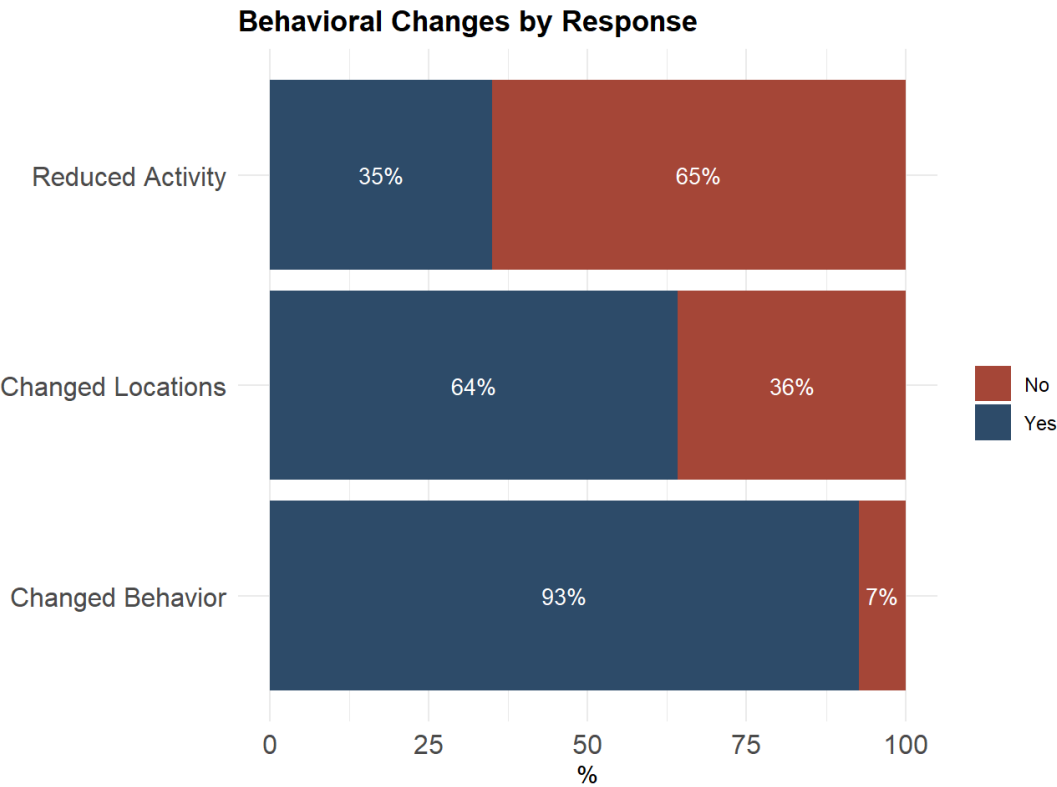


Changes in Behavior in Response to Congestion

In what ways, if any, have you changed your activities to respond to the presence of other shed hunters?

- Shed hunted less often.
- Shed hunted in different locations.
- Have changed activities in any way.

	Reduced Activity	Changed Locations	Changed Behavior
resident_yes	39.63	62.80	93.90
resident_no	28.18	66.36	90.91
motive_profit	34.57	61.73	95.06
motive_rec	35.23	65.28	91.71
year_23	32.75	61.40	90.06
year_24	38.83	68.93	97.09
complete	35.04	64.23	92.70



# Management

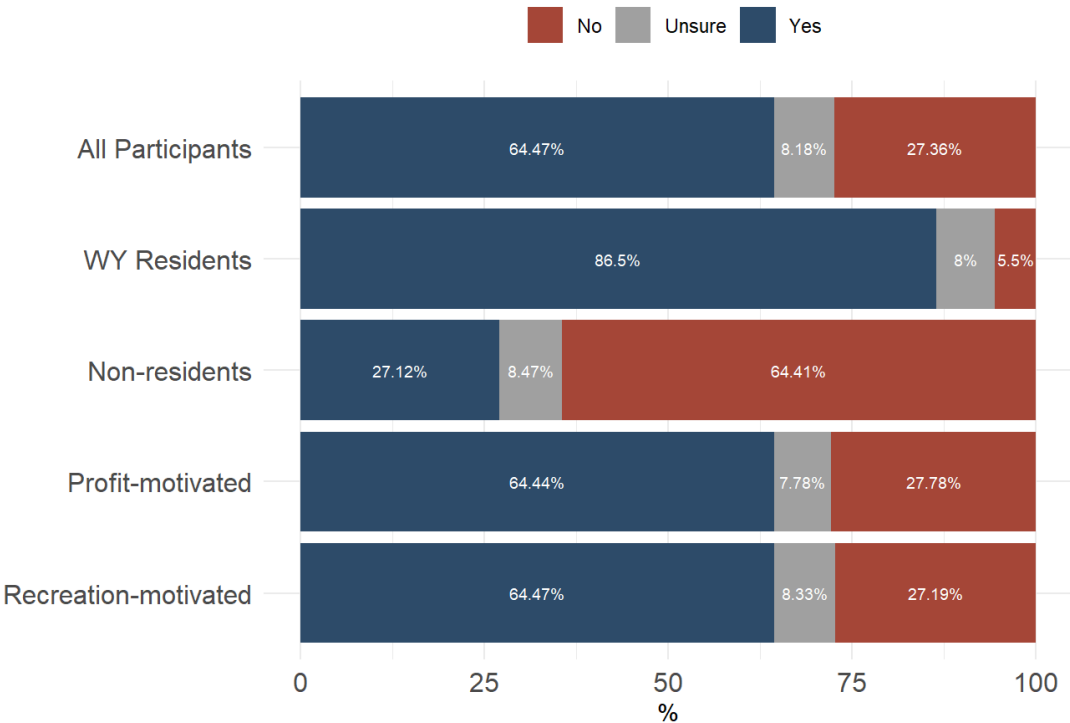
## Perceptions of New Policies

### Support of New Laws

The following question refer to the bill passed by the WY State Legislature in 2023 that gives residents of Wyoming a 7-day head start on antler collection in parts of the state where there is shed hunting season and requires non-residents to carry a \$21.50 Conservation Stamp before June 30th.

Are you in favor of such a measure?

data_subset	group	Yes	No	Unsure
support_new_laws	resident_yes	86.50	5.50	8.00
support_new_laws	resident_no	27.12	64.41	8.47
support_new_laws	motive_profit	64.44	27.78	7.78
support_new_laws	motive_rec	64.47	27.19	8.33
support_new_laws	year_23	53.80	36.84	9.36
support_new_laws	year_24	76.87	16.33	6.80
support_new_laws	complete	64.47	27.36	8.18



Post Policy Change (2024 Only)

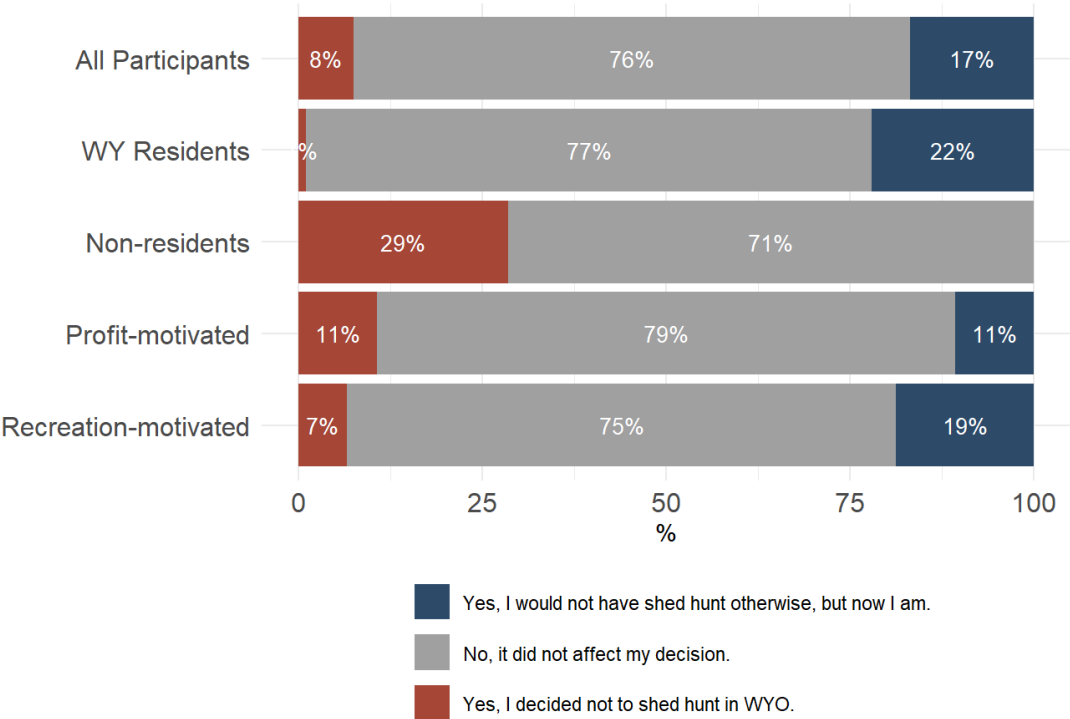
Decision to Participate

Did Wyoming’s new legislation affect your decision to shed hunt in Wyoming this year?

- Yes, I would not have shed hunt otherwise, but now I am.
- Yes, I decided not to shed hunt in WYO.
- No, it did not affect my decision.

data_subset	group	Yes, I would not have shed hunt otherwise, but now I am.	Yes, I decided not to shed hunt in WYO.	No, it did not affect my decision.
newlaw_participation	resident_yes	21.98	1.10	76.92
newlaw_participation	resident_no		28.57	71.43

data_subset	group	Yes, I would not have shed hunt otherwise, but now I am.	Yes, I decided not to shed hunt in WYO.	No, it did not affect my decision.
newlaw_participation	motive_profit	10.71	10.71	78.57
newlaw_participation	motive_rec	18.68	6.59	74.73
newlaw_participation	year_24	16.81	7.56	75.63
newlaw_participation	complete	16.81	7.56	75.63



Behavior Changes

How have the following changed in relation to Wyoming’s new shed hunting policies as they are described above?

- How frequently I shed hunt.
- The geographic area in which I shed hunt (“increased” means you expanded your activities to new areas).
- My enthusiasm for shed hunting

data_subset	group	Decreased	Increased	Remained the same
newlaw_frequency	resident_yes	4.40	29.67	65.93
newlaw_frequency	resident_no	22.22	3.70	74.07
newlaw_frequency	motive_profit	10.71	21.43	67.86
newlaw_frequency	motive_rec	7.78	24.44	67.78
newlaw_frequency	year_24	8.47	23.73	67.80
newlaw_frequency	complete	8.47	23.73	67.80



data_subset	group	Decreased	Increased	Remained the same
newlaw_location	resident_yes		38.46	61.54
newlaw_location	resident_no	3.70	33.33	62.96
newlaw_location	motive_profit	3.57	25.00	71.43
newlaw_location	motive_rec		41.11	58.89
newlaw_location	year_24	0.85	37.29	61.86
newlaw_location	complete	0.85	37.29	61.86
newlaw_enthusiasm	resident_yes	4.49	44.94	50.56
newlaw_enthusiasm	resident_no	29.63	7.41	62.96
newlaw_enthusiasm	motive_profit	7.41	29.63	62.96
newlaw_enthusiasm	motive_rec	11.24	38.20	50.56
newlaw_enthusiasm	year_24	10.34	36.21	53.45
newlaw_enthusiasm	complete	10.34	36.21	53.45

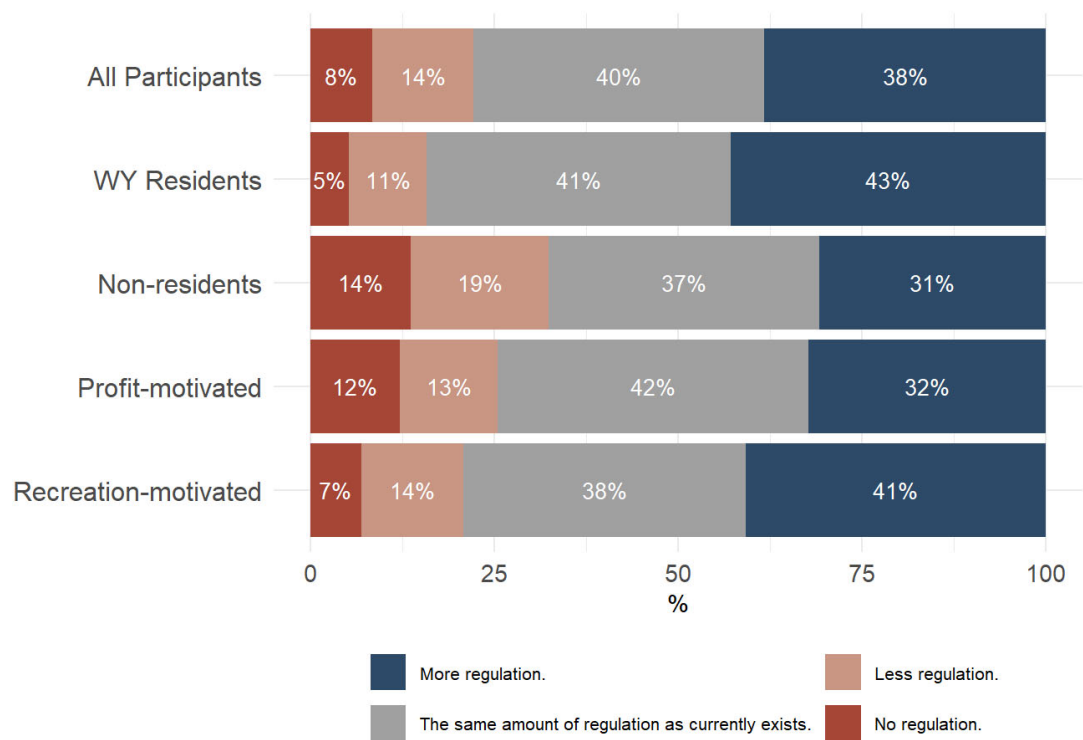
# Preferences for Diffrent Management Approaches

## Level of Regulation Preferred

Complete the sentence: Shed hunting should have \_\_\_\_\_.

- More regulation.
- The same amount of regulation as currently exists.
- Less regulation.
- No regulation.

data_subset	group	No regulation.	Less regulation.	The same amount of regulation as currently exists.	More regulation.
regulation_level	resident_yes	5.29	10.58	41.27	42.86
regulation_level	resident_no	13.68	18.80	36.75	30.77
regulation_level	motive_profit	12.22	13.33	42.22	32.22
regulation_level	motive_rec	6.94	13.89	38.43	40.74
regulation_level	year_23	8.19	14.62	36.26	40.94
regulation_level	year_24	8.89	12.59	43.70	34.81
regulation_level	complete	8.50	13.73	39.54	38.24



## Policy Instruments

To what extent do you agree with implementing the following shed hunting regulations?

- A license or fee for shed hunting.
- Taxes on antler sales.
- More stringent enforcement of season closures and trespassing charges.
- Special allowances for local shed hunters.
- More extensive season closures to protect wildlife in winter habitat.

data_subset	group	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
tools_license	resident_yes	29.63	13.23	12.70	19.05	25.40
tools_license	resident_no	50.86	6.90	11.21	12.93	18.10
tools_license	motive_profit	31.11	10.00	11.11	18.89	28.89
tools_license	motive_rec	40.47	11.16	12.56	15.81	20.00
tools_license	year_23	33.92	11.11	12.28	19.30	23.39
tools_license	year_24	42.54	10.45	11.94	13.43	21.64
tools_license	complete	37.70	10.82	12.13	16.72	22.62
tools_taxes	resident_yes	37.04	13.23	18.52	15.34	15.87
tools_taxes	resident_no	46.09	8.70	18.26	13.04	13.91
tools_taxes	motive_profit	46.67	16.67	15.56	10.00	11.11
tools_taxes	motive_rec	37.85	9.35	19.63	16.36	16.82

data_subset	group	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
tools_taxes	year_23	34.12	11.76	20.59	15.29	18.24
tools_taxes	year_24	48.51	11.19	15.67	13.43	11.19
tools_taxes	complete	40.46	11.51	18.42	14.47	15.13
tools_enforcement	resident_yes	5.88	5.35	11.23	19.79	57.75
tools_enforcement	resident_no	13.68	6.84	10.26	18.80	50.43
tools_enforcement	motive_profit	8.99	5.62	7.87	20.22	57.30
tools_enforcement	motive_rec	8.84	6.05	12.09	19.07	53.95
tools_enforcement	year_23	6.43	5.26	12.28	20.47	55.56
tools_enforcement	year_24	12.03	6.77	9.02	18.05	54.14
tools_enforcement	complete	8.88	5.92	10.86	19.41	54.93
tools_local_preference	resident_yes	8.51	4.79	18.09	27.13	41.49
tools_local_preference	resident_no	39.66	6.90	21.55	15.52	16.38
tools_local_preference	motive_profit	20.22	5.62	20.22	19.10	34.83
tools_local_preference	motive_rec	20.47	5.58	19.07	24.19	30.70
tools_local_preference	year_23	23.39	6.43	23.98	23.39	22.81
tools_local_preference	year_24	16.54	4.51	13.53	21.80	43.61
tools_local_preference	complete	20.39	5.59	19.41	22.70	31.91
tools_seasons_closures	resident_yes	10.05	15.87	16.40	30.69	26.98
tools_seasons_closures	resident_no	14.53	16.24	19.66	26.50	23.08
tools_seasons_closures	motive_profit	11.11	8.89	23.33	25.56	31.11
tools_seasons_closures	motive_rec	12.04	18.98	15.28	30.56	23.15
tools_seasons_closures	year_23	9.94	16.37	17.54	32.75	23.39
tools_seasons_closures	year_24	14.07	15.56	17.78	24.44	28.15
tools_seasons_closures	complete	11.76	16.01	17.65	29.08	25.49