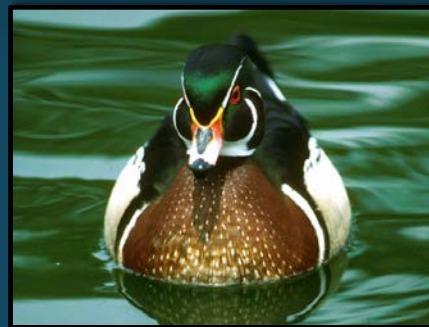


National Public Survey Results for NABCI



Ashley Dayer, Emily Wilkins, Holly Miller, Andy Raedke,
David Fulton, Howie Harshaw & Rudy Schuster

Survey topics

- Participation in and attitudes toward waterfowl and wetlands-based activities
- Awareness of wetlands and concern for loss of wetlands ecosystem services
- Engagement in conservation behaviors
- Preferred communication channels and sources

Nature and Wetlands Survey

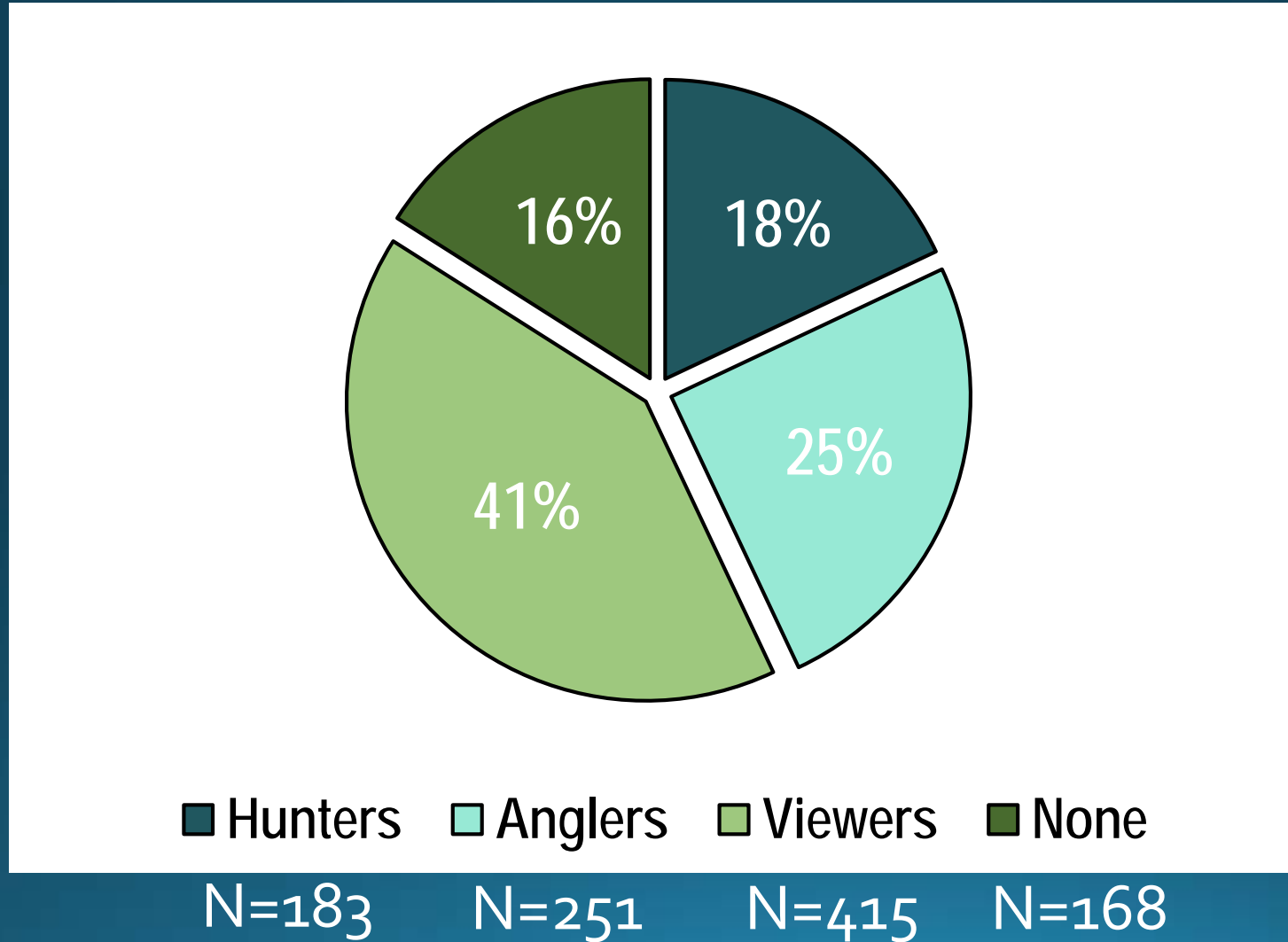


Methods

- Mail-out survey, January-March 2017
- 5,000 U.S. addresses
- 1030 surveys returned, 559 not deliverable
- 23.4% response

- Nonresponse survey (n = 275) & comparison Census & the National Survey of Fishing, Hunting, and Wildlife Associated Recreation
 - Data weighted by gender & age
 - Possible selection bias for wildlife-minded participants

Wildlife-related recreation groups

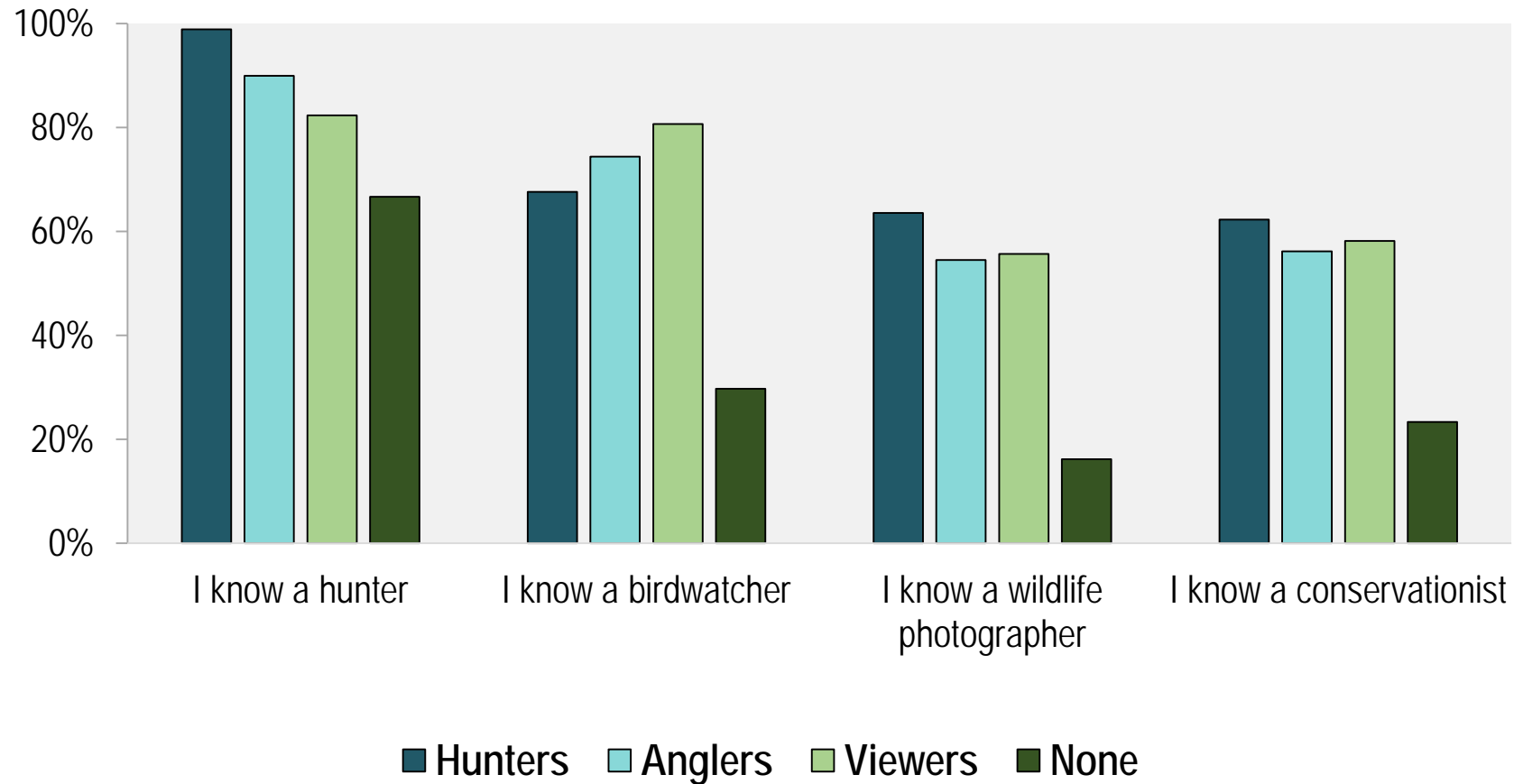


Lesson 1: Hunting

- Many people hold **negative attitudes** toward hunting, even though they know hunters.
- Attempting to recruit them as hunters unlikely to be effective.



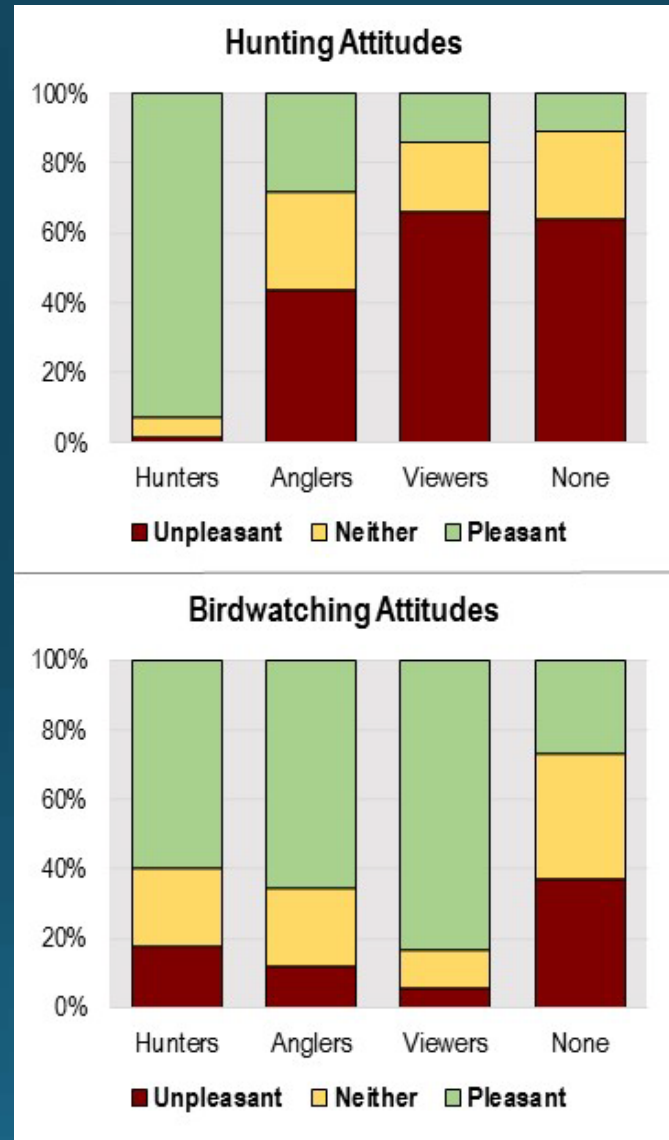
Social networks



$\chi^2=76.41$, Cramer's $V=0.276$ | $\chi^2=146.97$, Cramer's $V=0.384$ | $\chi^2=96.45$, Cramer's $V=0.312$ | $\chi^2=70.23$, Cramer's $V=0.266$. For all items $p<0.001$ and $df = 3$.

Items adapted from Harshaw & Tindall (2005)

Hunting & birdwatching attitudes



Lesson 2: Wildlife recreation & conservation

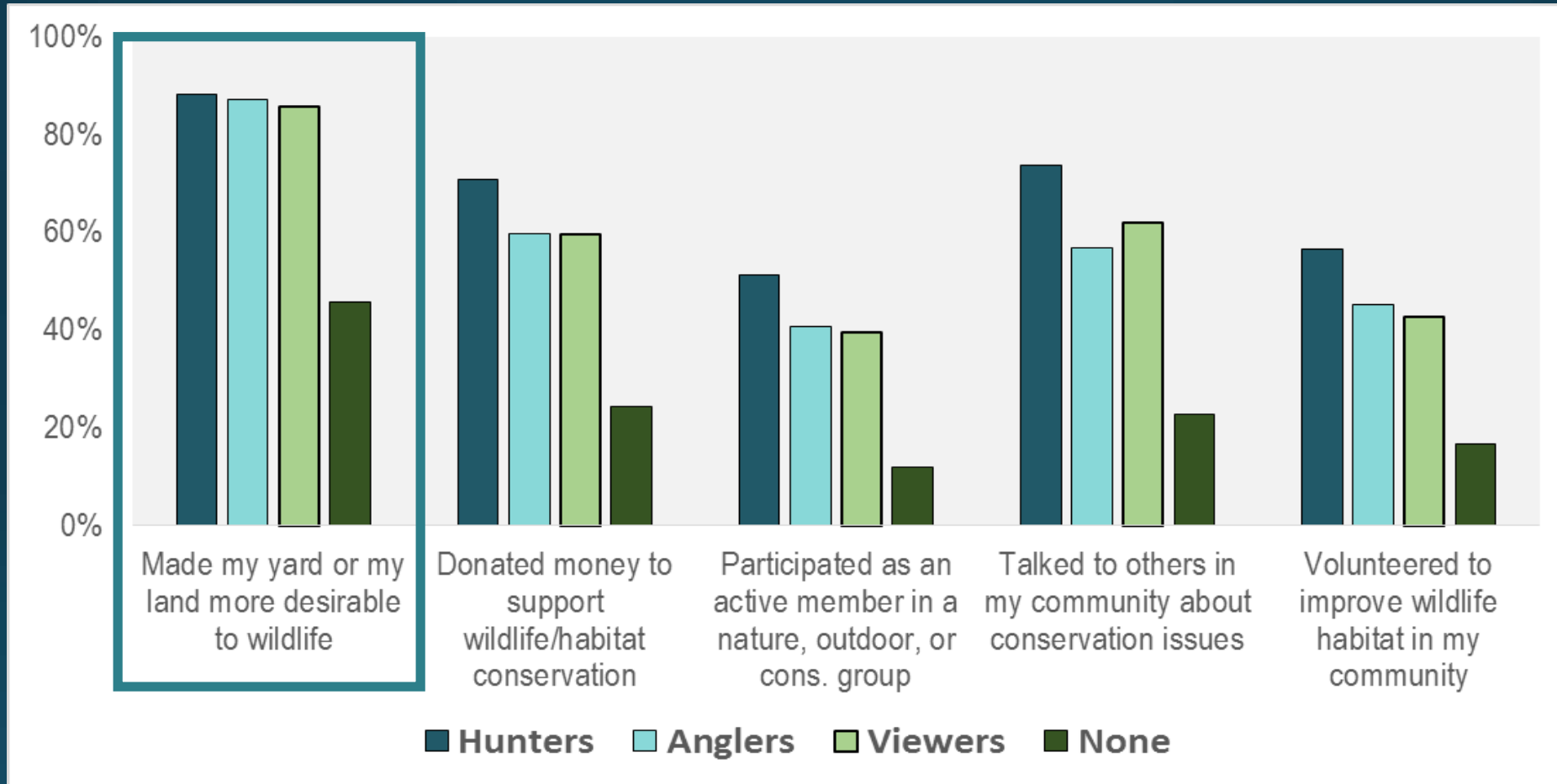
- All types of wildlife recreationists are **engaged in conservation** behaviors.
- This is less so the case for wetlands/waterfowl specific behaviors.



General conservation behavior

A NABCI Goal!

Percent who participated in the last 12 months

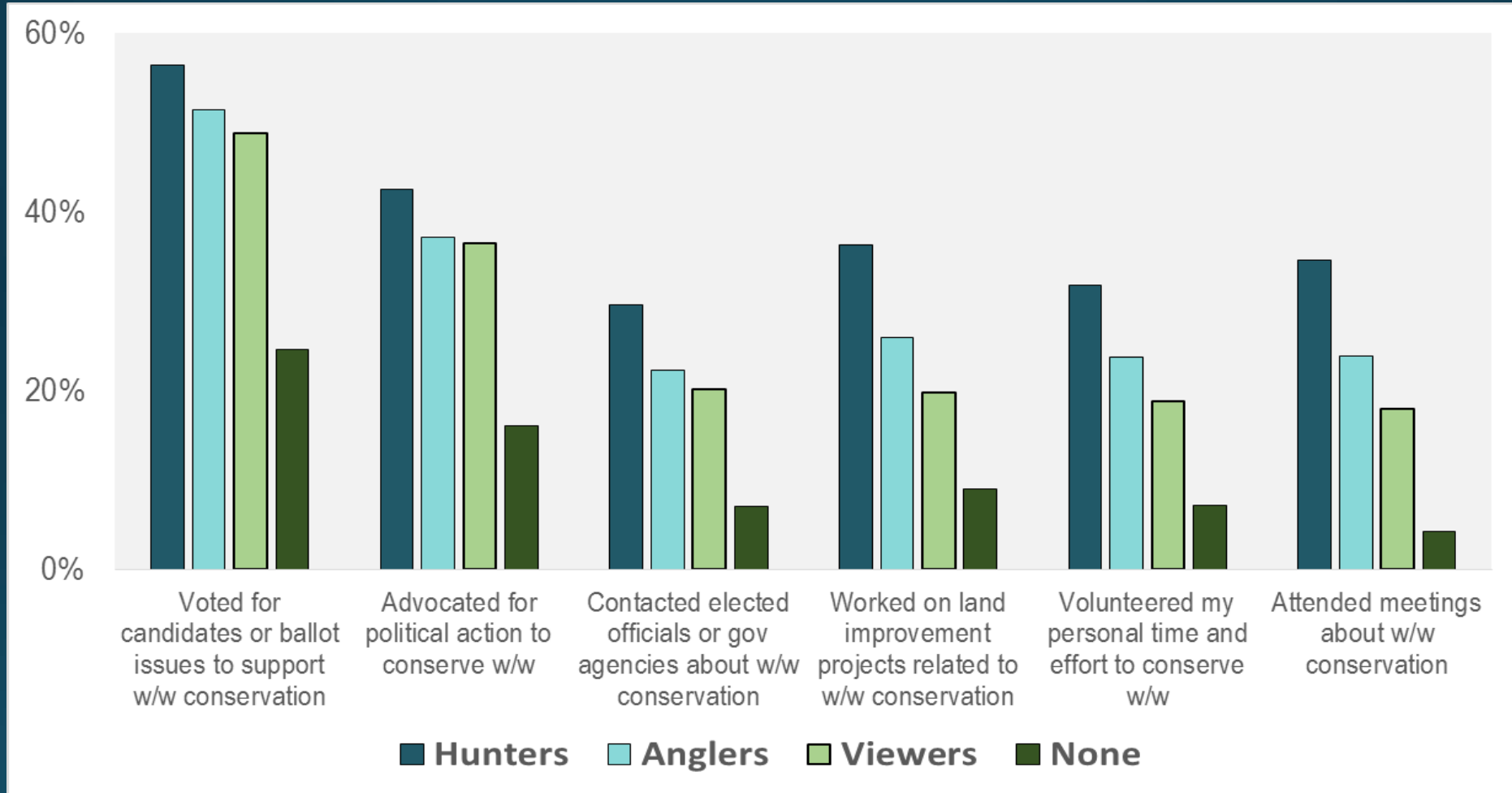


$\chi^2=117.98$, Cramer's $V=0.342$ | $\chi^2=53.52$, Cramer's $V=0.230$ | $\chi^2=42.17$, Cramer's $V=0.205$ | $\chi^2=67.58$, Cramer's $V=0.259$ | $\chi^2=34.58$, Cramer's $V=0.185$. For all items $p < 0.001$ and $df = 3$.

Items adapted from Cooper et al. (2015)

Wetlands/waterfowl conservation behavior

Percent who participated in the last 12 months

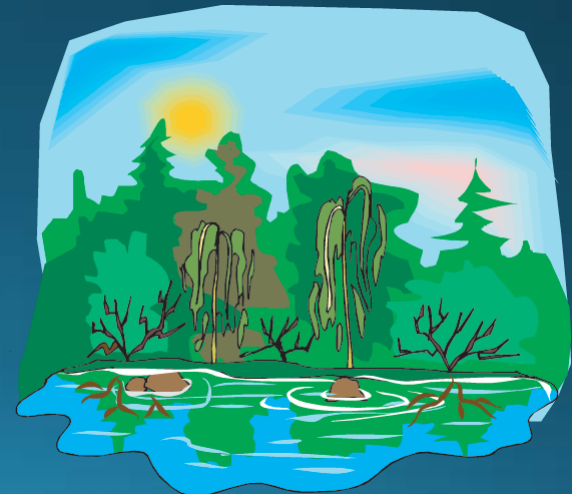


$\chi^2=33.10$, Cramer's $V=0.182$ | $\chi^2=21.03$, Cramer's $V=0.145$ | $\chi^2=11.24$, Cramer's $V=0.106$ | $\chi^2=35.71$, Cramer's $V=0.188$ | $\chi^2=26.02$, Cramer's $V=0.161$ | $\chi^2=27.53$, Cramer's $V=0.165$. For all items $p < 0.001$ and $df = 3$.

Items adapted from Cooper et al. (2015)

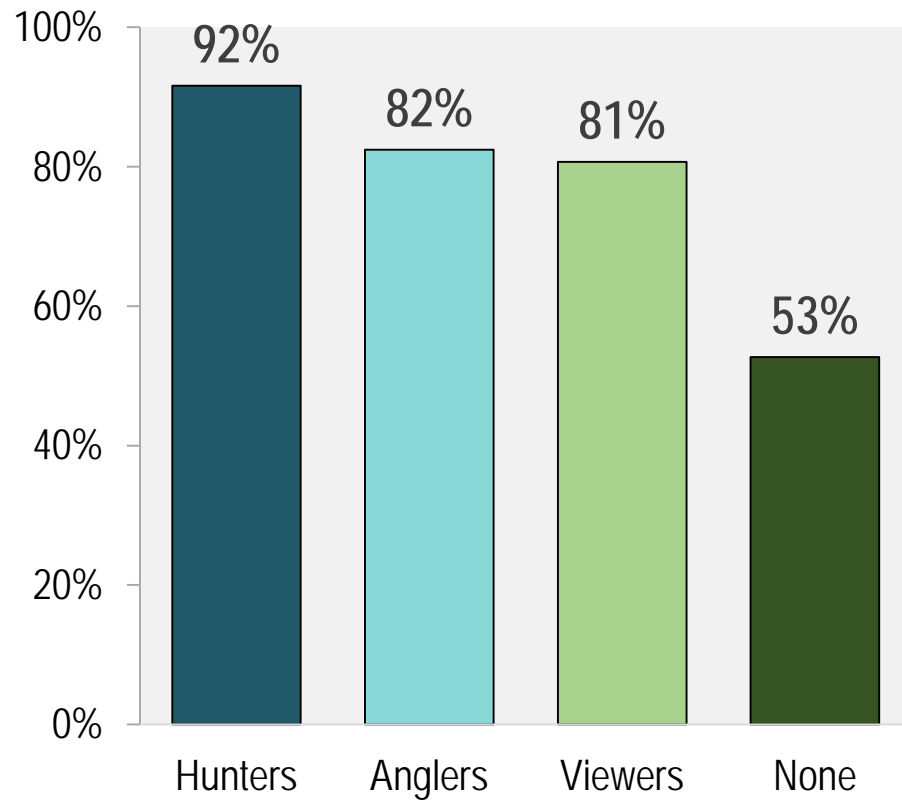
Lesson 3: Wetlands & waterfowl

- Recreationists **aware** of wetlands though, and do **visit them** much more than non-recreationists.
- More people prefer hummers & hawks to ducks.



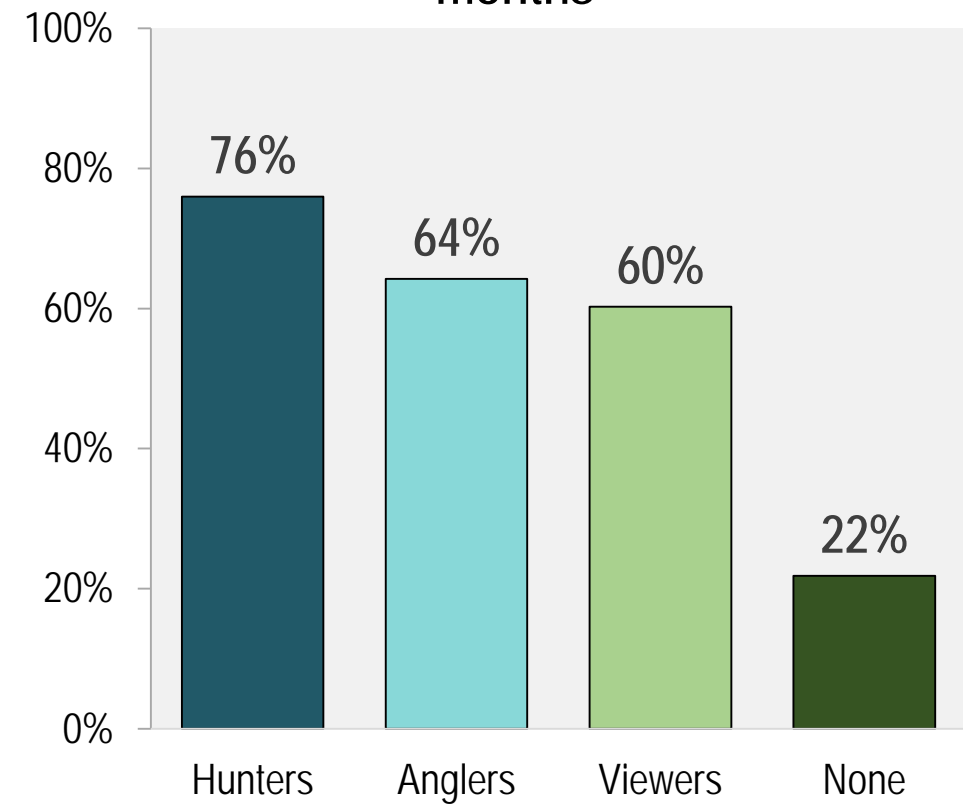
Wetlands awareness & visitation

I know of wetlands in my community



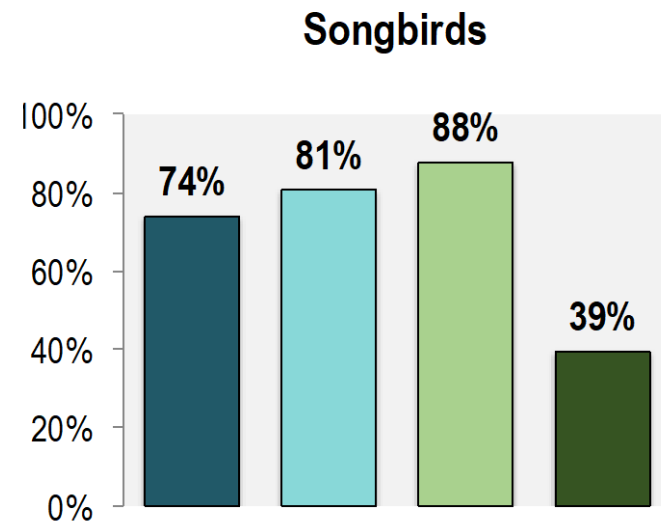
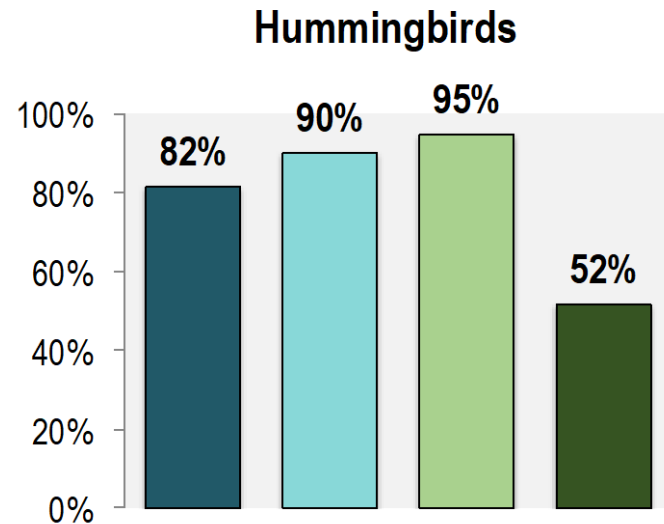
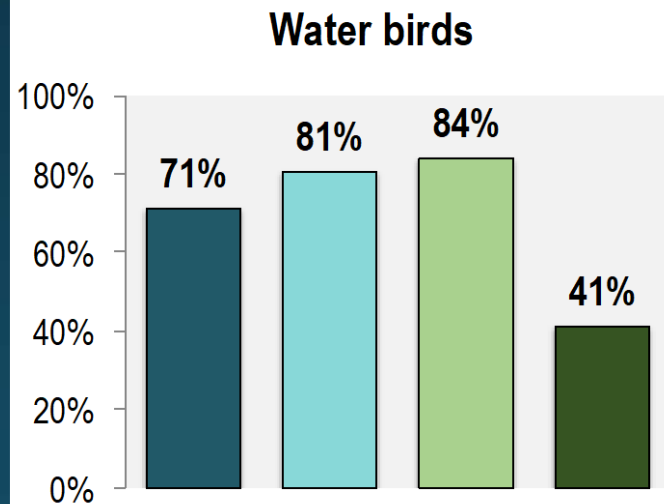
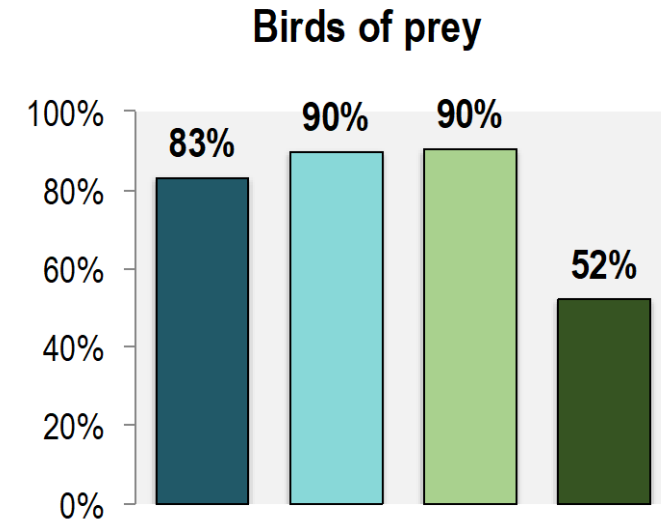
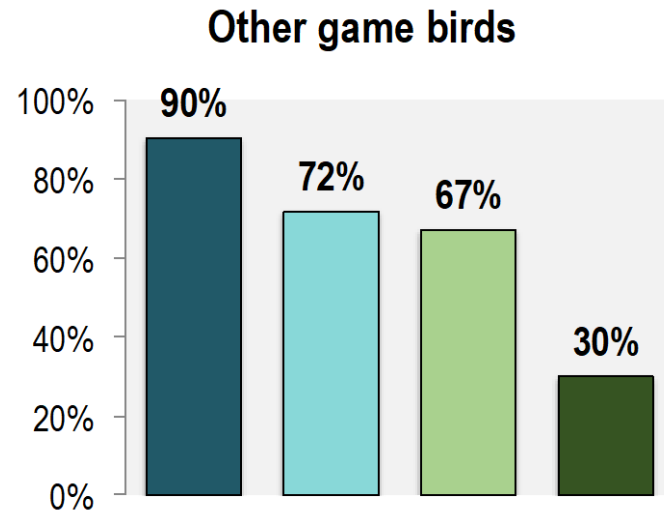
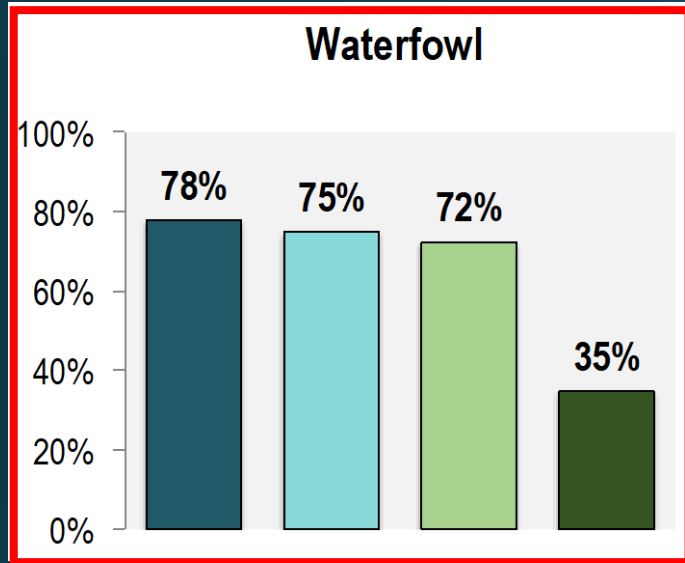
$\chi^2=95.56$, 3 df, $p<0.001$, Cramer's $V=0.219$

I have visited wetlands in the last 12 months



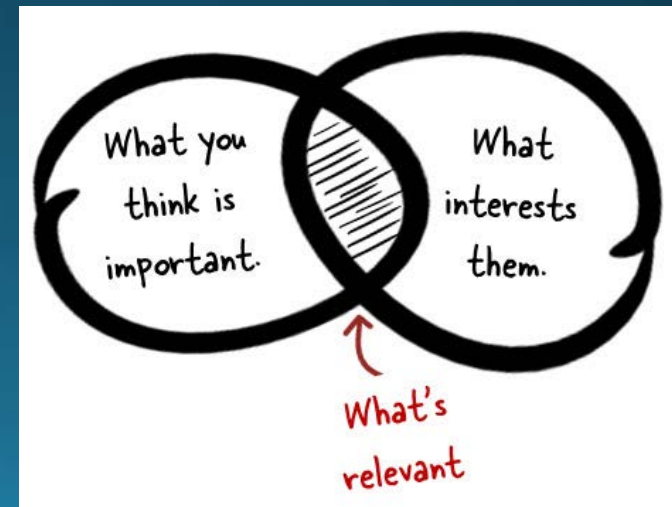
$\chi^2=116.90$, 3 df, $p<0.001$, Cramer's $V=0.343$

Preferred birds (very or somewhat prefer to see)



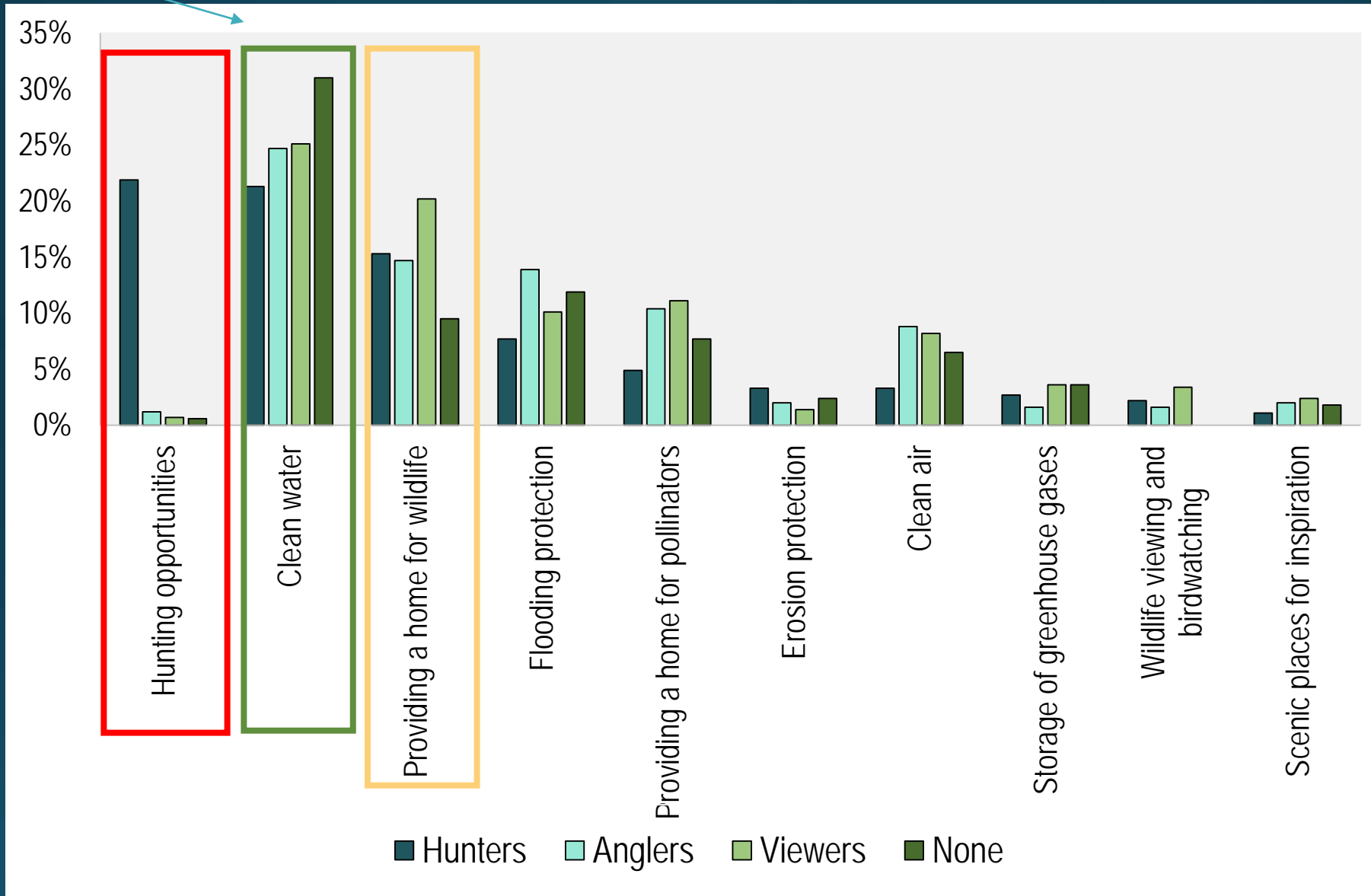
Lesson 4: Ecosystem service loss

- People might be engaged by a focus on the **loss of ecosystem services**.
- But only hunters care about a possible loss of hunting.



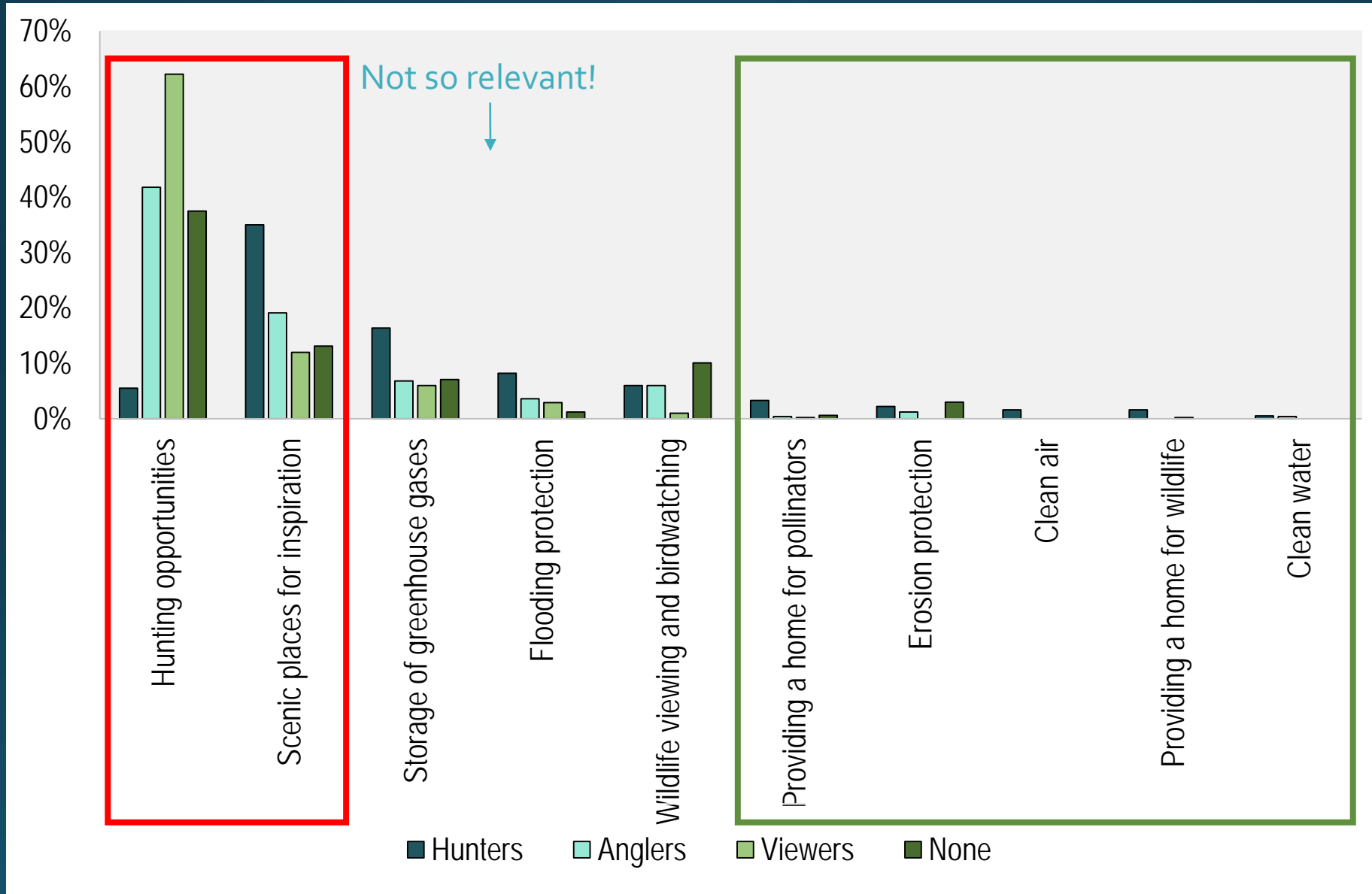
Relevance!!

Ecosystem services: Most concerned



$\chi^2=193.69, 30 \text{ df}, p<0.001, \text{Cramer's } V=0.252$

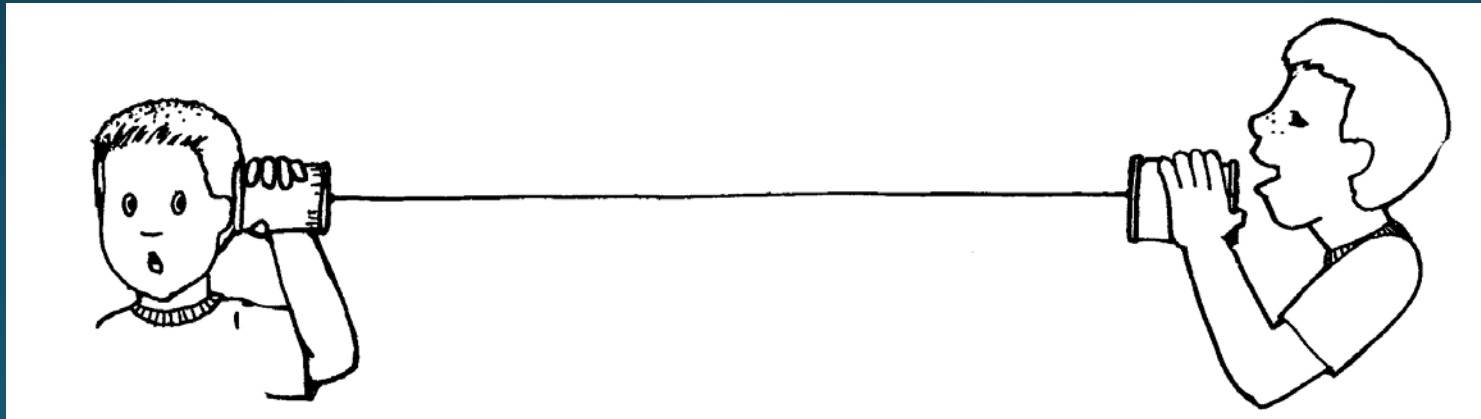
Ecosystem services: Least concerned



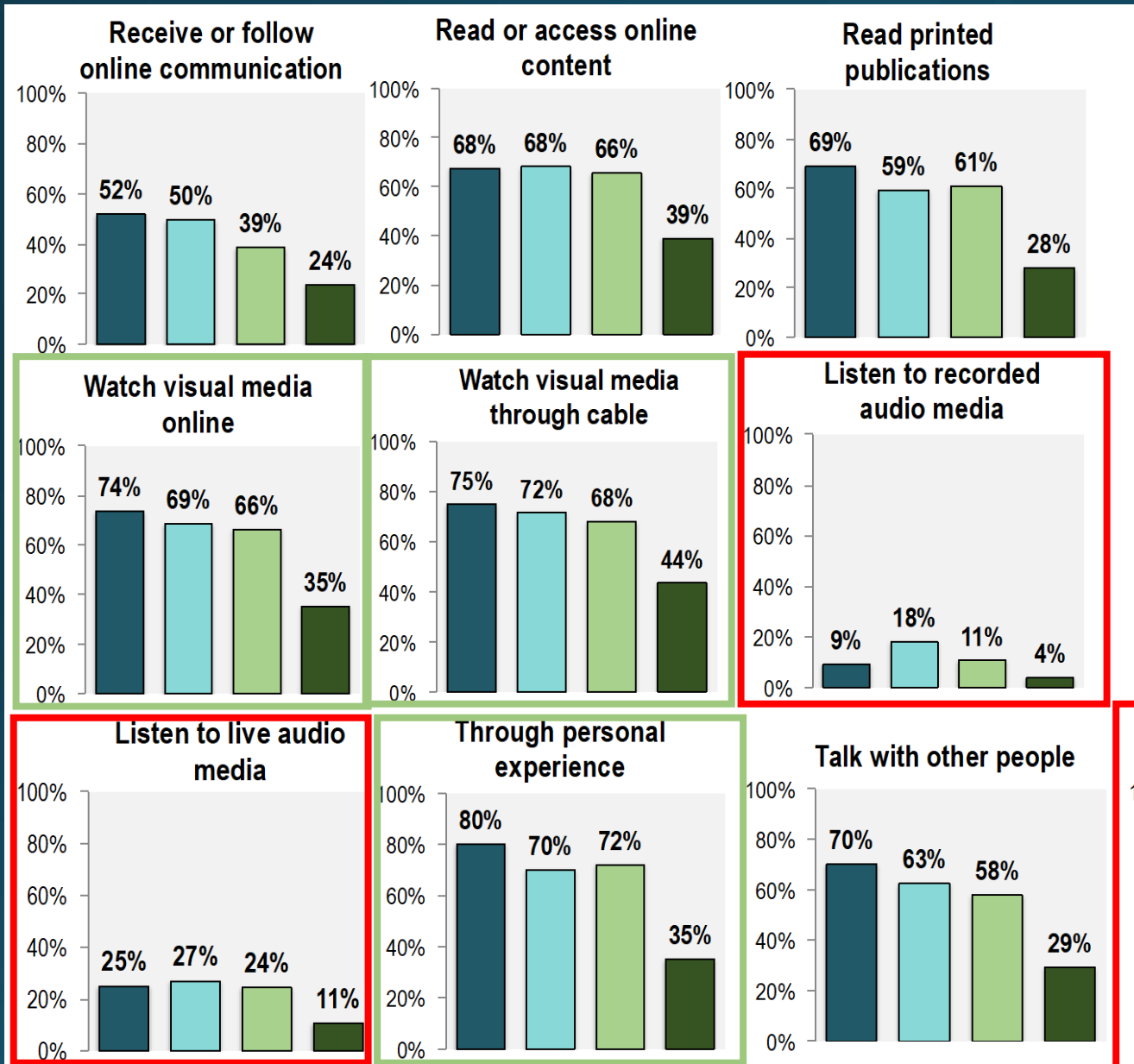
$\chi^2=253.34$, 30 df, $p<0.001$, Cramer's V=0.288

Lesson 5: Communications approach

- Reach out to people through personal experiences, the web, and cable.
- The messenger is ideally friends and family or scientific organizations/universities.



Channels of information on conservation issues



Percent that somewhat or very prefers each information channel

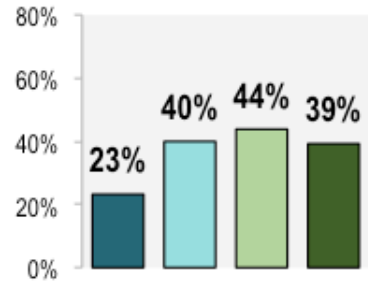


Trust in sources

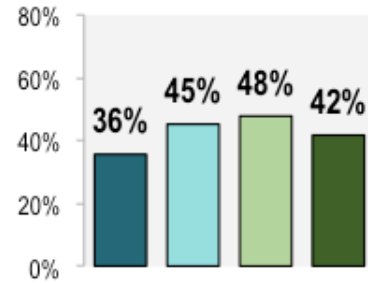
Percent that trust each source either a lot or completely



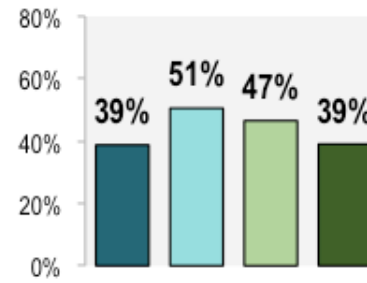
Federal government



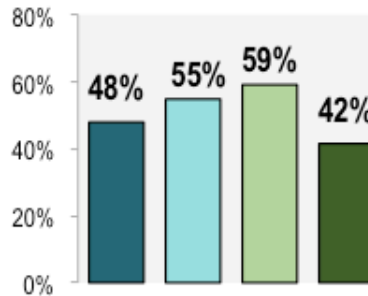
State government



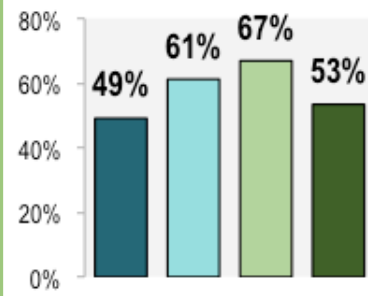
Local government



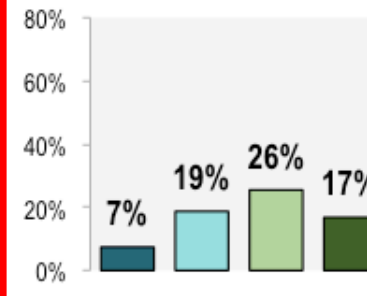
Conservation groups



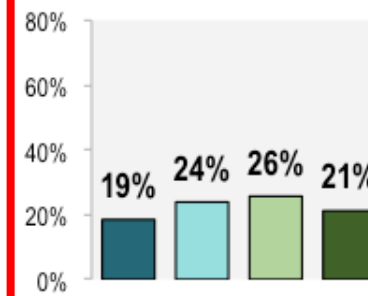
Universities/educational organizations



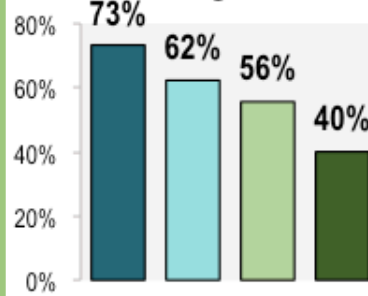
National media/news



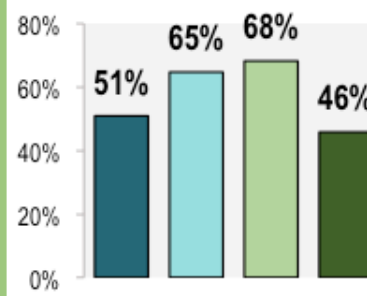
Local media/news



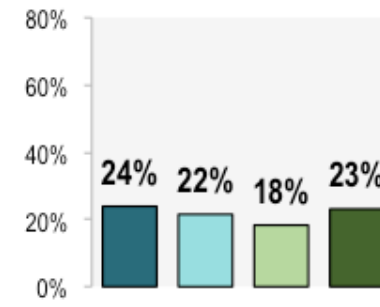
Friends, family, neighbors, colleagues



Scientific organizations

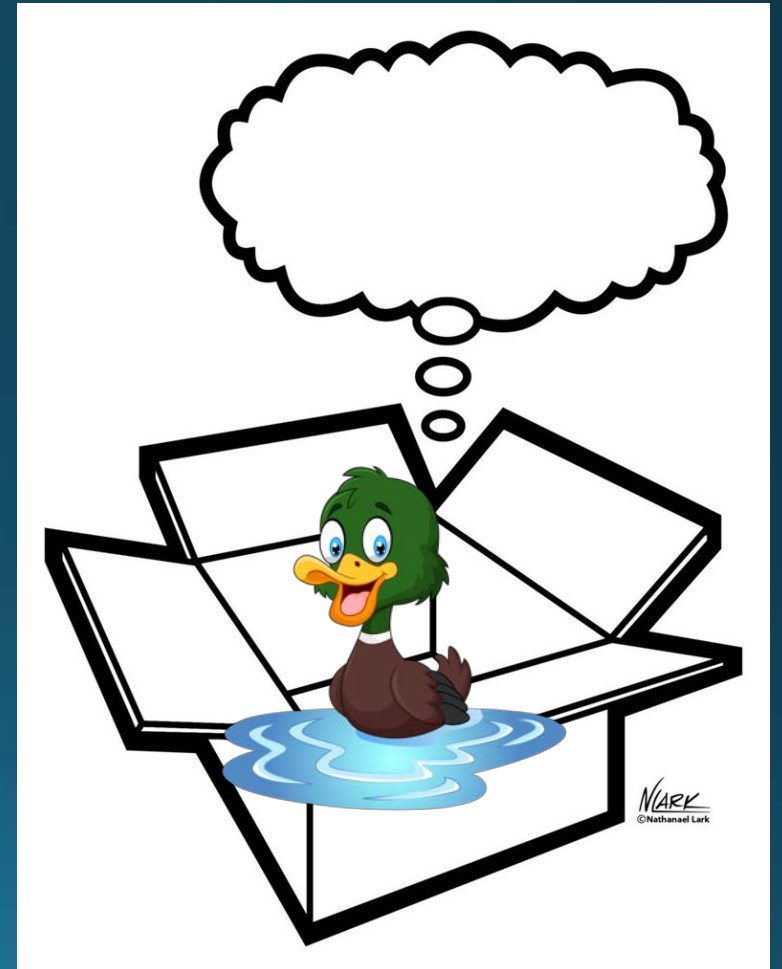


Religious organizations



The Take Home Message

- Value in a unified voice to engage the public in wetland conservation issues.
 - Are universities missing?
- Focus on wildlife recreationists, even if a general viewer.
- Think outside of the wetland/waterfowl box.
- (And there's a constituency for backyard habitat!)

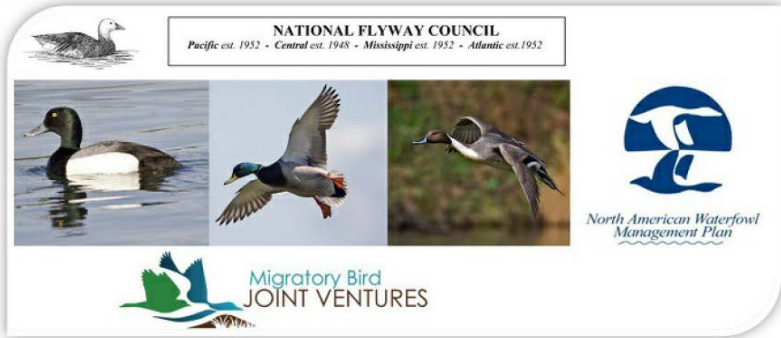


For Discussion...

- How could this information be used by your organization (or NABCI)?
- How could you help disseminate these results within your organization and networks?

More to be learned....

NATIONAL SURVEY OF WATERFOWL HUNTERS



- Coming soon from the NAWMP Human Dimensions Working Group & NABCI Human Dimensions Subcommittee

NORTH AMERICAN BIRDWATCHING SURVEY



An Invitation





Human Dimensions Working Group – Public Engagement Team

Acknowledgements



United States

- National Flyway Council and member states in Atlantic, Mississippi, Central and Pacific Flyways
- U.S. Geological Survey
- Migratory Bird Joint Ventures
- U.S. Fish and Wildlife Service
- Ducks Unlimited
- Association of Fish and Wildlife Agencies
- NABCI
- Cornell Lab of Ornithology

Canada

- Wildlife Habitat Canada
- Environment & Climate Change Canada
- Canadian Wildlife Service
- Ducks Unlimited Canada
- Governments of Ontario and New Brunswick
- University of Alberta
- Joint Ventures
- Flyway Representatives

Data weighting

	Category	Sample	Census
Census region	Northeast	19.7%	17.5%
	Midwest	27.7%	21.1%
	South	31.1%	37.7%
	West	21.6%	23.7%
Gender	Male	65.1%	49.2%
	Female	34.9%	50.8%
Age	18-44 (% of adults)	21.4%	48.1%
	45-65 (% of adults)	45.8%	34.7%
	65+ (% of adults)	32.7%	17.2%
Education	High school degree or less	17.4%	41.1%
	Some college or AA	30.3%	26.4%
	Bachelor's degree	26.8%	20.5%
	Graduate degree	25.5%	12.0%
Ethnicity	Hispanic	5.6%	17.1%
	Not Hispanic	94.4%	82.9%
Race	American Indian/Alaskan	1.3%	0.8%
	Asian	3.9%	5.1%
	Black	5.0%	12.6%
	Hawaiian/Pacific Islander	0.2%	0.2%
	White	86.1%	73.6%
	Other alone	N/A	4.7%
	Two or more	3.2%	3.0%

	Male	Female
Age: 18-44	1.952	2.550
Age: 45-64	0.563	1.095
Age: 65 +	0.343	1.097

Margin of error:
3.35
Confidence level:
95%