General Public Survey Results

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Emily Wilkins and Holly Miller
USGS Fort Collins Science Center
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
Background

- Mail-out survey, January-March 2017
- 5,000 U.S. addresses
- Up to 4 mailings per person
  - Survey, reminder postcard, replacement, non-response
- 1030 surveys returned, 559 not deliverable
- 23.4% response
## Data weighting

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

### Male vs Female

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: 18-44</td>
<td>1.952</td>
<td>2.550</td>
</tr>
<tr>
<td>Age: 45-64</td>
<td>0.563</td>
<td>1.095</td>
</tr>
<tr>
<td>Age: 65+</td>
<td>0.343</td>
<td>1.097</td>
</tr>
</tbody>
</table>

Margin of error: 3.35
Confidence level: 95%
Activity participation

Compared to 2011 National Survey of Fishing, Hunting, and Wildlife Associated Recreation

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sample participation rates</th>
<th>2011 participation rates (FWS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewing/feeding/photographing birds</td>
<td>58.3%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Viewing/photographing any wildlife</td>
<td>68.7%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Fishing</td>
<td>39.1%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Hunting waterfowl</td>
<td>5.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Hunting other game</td>
<td>16.2%</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

Compared to 2011 National Survey of Fishing, Hunting, and Wildlife Associated Recreation

n=966-987
Wildlife-related recreation groups

- Hunters: 16% (N=183)
- Anglers: 18% (N=251)
- Viewers: 25% (N=415)
- None: 41% (N=168)
I know a hunter, I know a birdwatcher, I know a wildlife photographer, I know a conservationist

\[ \chi^2 = 76.41, \text{ Cramer's V} = 0.276 \]
\[ \chi^2 = 146.97, \text{ Cramer's V} = 0.384 \]
\[ \chi^2 = 96.45, \text{ Cramer's V} = 0.312 \]
\[ \chi^2 = 70.23, \text{ Cramer's V} = 0.266. \]

For all items \( p < 0.001 \) and \( df = 3 \).

Items adapted from Harshaw & Tindall (2005)
Hunting/birdwatching attitudes

**Hunting Attitudes**
- Hunters
- Anglers
- Viewers
- None
- Pleasant
- Neither
- Unpleasant

**Birdwatching Attitudes**
- Hunters
- Anglers
- Viewers
- None
- Interesting
- Neither
- Boring
**Preferred birds (very or somewhat prefer to see)**

<table>
<thead>
<tr>
<th>Birds of Prey</th>
<th>Waterfowl</th>
<th>Other Game Birds</th>
<th>Hummingbirds</th>
<th>Songbirds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunters</td>
<td>Anglers</td>
<td>Viewers</td>
<td>None</td>
<td>Hunters</td>
</tr>
<tr>
<td>83%</td>
<td>90%</td>
<td>90%</td>
<td>52%</td>
<td>78%</td>
</tr>
<tr>
<td>74%</td>
<td>81%</td>
<td>88%</td>
<td>39%</td>
<td>81%</td>
</tr>
</tbody>
</table>
General conservation behavior

Percent who participated in the last 12 months

\[ \chi^2 = 117.98, \text{ Cramer's V} = 0.342 \]

\[ \chi^2 = 53.52, \text{ Cramer's V} = 0.230 \]

\[ \chi^2 = 42.17, \text{ Cramer's V} = 0.205 \]

\[ \chi^2 = 67.58, \text{ Cramer's V} = 0.259 \]

\[ \chi^2 = 34.58, \text{ Cramer's V} = 0.185 \]

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

χ² = 33.10, Cramer's V = 0.182 | χ² = 21.03, Cramer's V = 0.145 | χ² = 11.24, Cramer's V = 0.106 | χ² = 35.71, Cramer's V = 0.188 | χ² = 26.02, Cramer's V = 0.161 | χ² = 27.53, Cramer's V = 0.165. For all items p < 0.001 and df = 3.

Items adapted from Cooper et al. (2015)
Wetlands awareness

χ²=95.56, 3 df, p<0.001, Cramer’s V=0.219

χ²=116.90, 3 df, p<0.001, Cramer’s V=0.343
Wetlands ecosystem services

Percent that would be somewhat or very concerned about various ecosystem services being reduced due to a loss in wetlands.
Ecosystem services: Most concerned

- Hunting opportunities
- Clean water
- Providing a home for wildlife
- Flooding protection
- Providing a home for pollinators
- Erosion protection
- Clean air
- Storage of greenhouse gases
- Wildlife viewing and birdwatching
- Scenic places for inspiration

χ²=193.69, 30 df, p<0.001, Cramer’s V=0.252
Ecosystem services: Least concerned

χ²=253.34, 30 df, p<0.001, Cramer’s V=0.288
Channels of information on conservation issues

Percent that somewhat or very prefers each information channel

- Receive or follow online communication: 52% Hunters, 50% Anglers, 39% Viewers, 24% None
- Read or access online content: 68% Hunters, 68% Anglers, 66% Viewers, 39% None
- Read printed publications: 69% Hunters, 59% Anglers, 61% Viewers, 28% None
- Watch visual media online: 74% Hunters, 69% Anglers, 66% Viewers, 35% None
- Watch visual media through cable: 75% Hunters, 72% Anglers, 68% Viewers, 44% None
- Listen to recorded audio media: 9% Hunters, 18% Anglers, 11% Viewers, 4% None
- Listen to live audio media: 25% Hunters, 27% Anglers, 24% Viewers, 11% None
- Through personal experience: 80% Hunters, 70% Anglers, 72% Viewers, 35% None
- Talk with other people: 70% Hunters, 63% Anglers, 58% Viewers, 29% None
- Attend educational opportunities: 23% Hunters, 22% Anglers, 21% Viewers, 8% None
Trust in sources

Percent that trust each source either a lot or completely

- Federal government:
  - Hunters: 23%
  - Anglers: 40%
  - Viewers: 44%
  - None: 39%

- State government:
  - Hunters: 36%
  - Anglers: 45%
  - Viewers: 48%
  - None: 42%

- Local government:
  - Hunters: 39%
  - Anglers: 51%
  - Viewers: 47%
  - None: 39%

- Conservation groups:
  - Hunters: 48%
  - Anglers: 55%
  - Viewers: 59%
  - None: 42%

- Universities/educational organizations:
  - Hunters: 49%
  - Anglers: 61%
  - Viewers: 67%
  - None: 53%

- National media/news:
  - Hunters: 7%
  - Anglers: 19%
  - Viewers: 26%
  - None: 17%

- Local media/news:
  - Hunters: 19%
  - Anglers: 24%
  - Viewers: 26%
  - None: 21%

- Friends, family, neighbors, colleagues:
  - Hunters: 73%
  - Anglers: 62%
  - Viewers: 56%
  - None: 40%

- Scientific organizations:
  - Hunters: 51%
  - Anglers: 65%
  - Viewers: 68%
  - None: 46%

- Religious organizations:
  - Hunters: 24%
  - Anglers: 22%
  - Viewers: 18%
  - None: 23%
Implications

• Promoting wetlands-related activities and general wildlife/habitat conservation projects may help to bring more people to these areas.

• Many people have negative attitudes toward hunting and/or are not interested in participating, so attempting to recruit them as hunters may not be effective. However, given how many people across all groups knew a hunter and the relatively high levels of trust people had in their friends/family, hunters may be effective ambassadors for promoting waterfowl and wetlands conservation.

• Messages which focus on the broad environmental benefits of wetlands and on many different species, not just waterfowl, may resonate best with the general public.

• Online visual media produced in conjunction with scientific organizations and universities may be the most effective in communicating with the public.