Learning About People to Better Manage Wildlife

Rainwater Basin Joint Venture 23rd Annual Informational Seminar

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Values of wildlife: Recreation

- 101.6 million Americans participated in hunting, fishing or wildlife viewing
- $156.3 billion spent on those activities
Values of wildlife: Education

- Developing cognitive skills in kids
- Environmentally informed citizens
- Citizen science
- Undergraduate and Graduate students
Values of wildlife: Aesthetics

- Appreciate seeing wildlife in the natural environment
- Symbols
- Artwork, decorations, films
Values of wildlife: Biological

- Functional role of wildlife in natural communities
- Pollination, seed dispersal, nutrient cycling, predation
Values of wildlife: Sociocultural

- Hunting and fishing traditions
  - broad family/community involvement
- Opening weekend celebrations and tournaments
Values of wildlife: Commercial

- Regional economy benefits from expenditures
- Employment to guides
- Economic benefit to landowners who lease land
Human dimensions is ...
Human dimensions is ...

- How people *value* wildlife
Human dimensions is ...

- How people *value* wildlife
- How people affect and are affected by wildlife
Human dimensions is ...

- How people *value* wildlife
- How people affect and are affected by wildlife
- How people want wildlife to be managed
Human dimensions is ...

• How people *value* wildlife

• How people affect and are affected by wildlife

• How people want wildlife to be managed

• How people affect or are affected by wildlife management decisions
Conservation Science

Interdisciplinary

Classic

Applied
Environmental Psychology is the way in which people’s thoughts, feelings, and behaviors are influenced by their environment
Environmental Psychology is the way in which people’s thoughts, feelings, and behaviors are influenced by their environment

- Cognitive approaches
- Motivational approaches
- Satisfaction theory
Environmental Sociology – is concerned with what people do as members of a group or when interacting with one another in the context of the environment
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- Prediction of social behavior
- Patterns of regularity in social life
- Social context
Ecological Economics – describes and measures how society meets competing demands among limited resources in the general context of the environment
Ecological Economics – describes and measures how society meets competing demands among limited resources in the general context of the environment

1. Consumptive use

2. Subsistence use

3. Non-consumptive use

4. Existence values

5. Option values
Collecting information
Collecting information
Projects I am involved in
Projects I am involved in

- Barriers to elk hunting in Nebraska
Projects I am involved in

- Barriers to elk hunting in Nebraska
- Motivations of small game hunters
Projects I am involved in

- Barriers to elk hunting in Nebraska
- Motivations of small game hunters
- Satisfaction of hunting in Nebraska
Projects I am involved in

- Barriers to elk hunting in Nebraska
- Motivations of small game hunters
- Satisfaction of hunting in Nebraska
- Barriers to waterfowl hunting
Projects I am involved in

- Barriers to elk hunting in Nebraska
- Motivations of small game hunters
- Satisfaction of hunting in Nebraska
- Barriers to waterfowl hunting
- Mining of sportsperson database
Number of hunters and anglers

![Graph showing the number of annual permit holders from 2010 to 2016. The graph indicates fluctuations in the number of permit holders over the years, with a peak in 2012 and a steady increase from 2014 onwards.]
Mean number of permits per person

Female
- Deer
- Fall Turkey
- Spring Turkey

Male
- Deer

Age distribution of Sportspersons

- Deer
- Fish
- Hunt Fish Combo
- Waterfowl Stamp

Activity groupings
Activity groupings
Activity groupings

Female

<table>
<thead>
<tr>
<th>Activity</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Turkey</td>
<td>0.11</td>
</tr>
<tr>
<td>Small Game</td>
<td>0.31</td>
</tr>
<tr>
<td>Fish</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Deer given this
# Activity groupings

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th></th>
<th></th>
<th>Male</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>0.11</td>
<td>0.02</td>
<td>0.14</td>
<td>0.25</td>
<td>0.11</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Turkey</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Small</strong></td>
<td>0.31</td>
<td>0.09</td>
<td>0.55</td>
<td>0.66</td>
<td>0.42</td>
<td>0.83</td>
</tr>
<tr>
<td><strong>Game</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td>0.5</td>
<td>0.76</td>
<td>0.69</td>
<td>0.69</td>
<td>0.79</td>
<td>0.81</td>
</tr>
<tr>
<td><strong>Deer</strong></td>
<td>0.09</td>
<td>0.46</td>
<td>0.65</td>
<td>0.29</td>
<td>0.52</td>
<td>0.78</td>
</tr>
</tbody>
</table>

The table represents the probability of having different activities given this activity. The values range from 0.2 to 0.8, with higher values indicating a higher probability.
Turnover among hunters
Tracking waterfowl hunters

- Duck: 74%
- Small game: 36%
- Deer: 14%
- S. Turkey: 15%
- Fish-hunt Combo: 14%
- Other Combo: 5%
- Fish: 29%
- Inactive: 9%

31 / 47
Tracking waterfowl hunters

- Duck: 74%
- Small game
- Deer
- S. Turkey
- Fish-hunt Combo
- Other Combo
- Fish
- Inactive: 9%
- 32 / 47
Tracking waterfowl hunters

Duck

Small game
Deer
S. Turkey
Fish-hunt Combo
Other Combo
Fish

Inactive

74%
36%
14%
15%
14%
5%
29%
1%
Tracking waterfowl hunters

- Duck: 74%
- Small game: 4%
- Deer: 36%
- S. Turkey: 14%
- Fish-hunt Combo: 15%
- Other Combo: 14%
- Fish: 5%
- Inactive: 29%

Diagram showing the tracking of waterfowl hunters with percentages for each category.
Tracking waterfowl hunters

- Duck: 74%
- Small game: 35%
- Deer: 14%
- S. Turkey: 1%
- Fish-hunt Combo: 15%
- Other Combo: 5%
- Fish: 29%
- Inactive: 9%
Tracking waterfowl hunters

- Duck: 74%
- Small game: 36%
- Deer: 14%
- S. Turkey: 9%
- Fish: 2%
- Combo: 15%
- Other Combo: 14%
- Fish-hunt Combo: 5%

Inactive: 36 / 47
Tracking waterfowl hunters

- Duck: 74%
- Small game: 36%
- Deer: 14%
- S. Turkey: 15%
- Fish-hunt Combo: 14%
- Other Combo: 5%
- Fish: 29%
- Inactive: 9%

7%
Tracking waterfowl hunters

- Duck: 74%
- Small game: 38%
- Deer: 14%
- S. Turkey: 9%
- Fish-hunt Combo: 5%
- Other Combo: 15%
- Fish: 29%
- Inactive: 2%

38 / 47
Tracking waterfowl hunters

- Duck
- Small game
- Deer
- S. Turkey
- Fish-hunt Combo
- Other Combo
- Fish

Inactive: 9%
Tracking waterfowl hunters

- Duck: 74%
- Small game: 36%
- Deer: 14%
- S. Turkey: 15%
- Fish: 29%
- Other Combo: 5%
- Fish-hunt Combo: 14%
- Inactive: 74%
Tracking waterfowl hunters

1. Most waterfowl hunters will continue buying permits
2. If they stop, there is a good chance they become inactive
3. Once inactive, they tend to stay inactive
Kid-Friendly States: 5 Affordable Places to Take a Child Hunting

BY JOHN B. SNOW    JULY 9, 2014

2 Comments
Youth permits

Hypothesis for the decreases in survival:

1. Maybe influenced by the modelling technique and time frame of data
2. Youth who were incentivized by lower price may be less committed
3. As paying low price for youth permits becomes more ingrained, the transition to a general permit may be perceived as a greater barrier
Conclusions