

When Communities Collide



**Developing a Collaborative Approach to Community Based
White Tailed Deer Management on Bald Head Island, NC**

Roadmap



- What is community wildlife management?
- Project objectives
- Methodology
- Results
- Conclusions and future implications

Community Deer Management: An Introduction

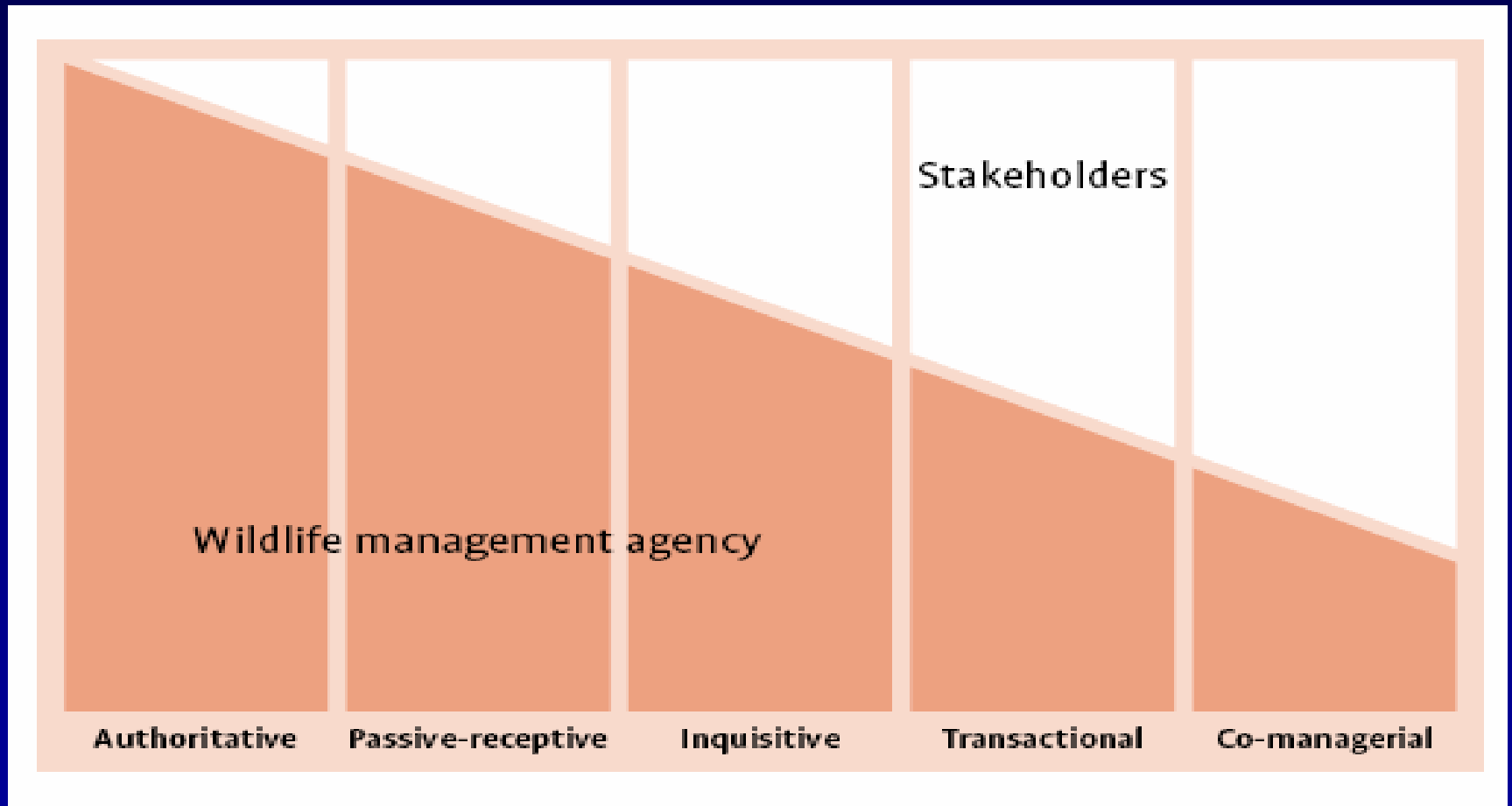
- Why manage deer?
- What is collaborative community deer management?
- Why take a collaborative approach?
- How can collaborative deer management be achieved?



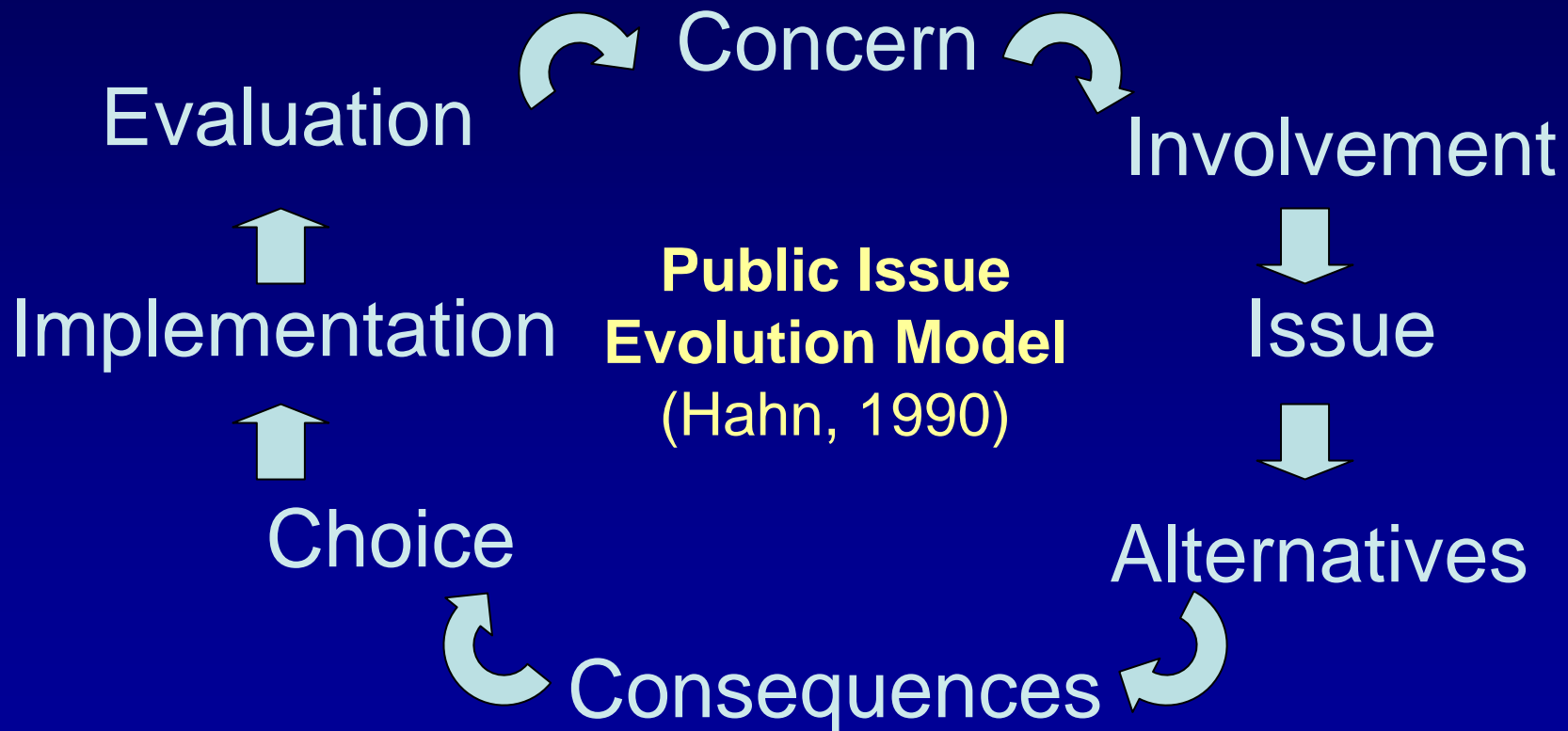
Understanding the Components of Community Deer Management

<u>Dimensions of Capacity</u>	<u>Intervention Tools</u>
Awareness of the issue	Education
Shared values/history	Assessment
Technical knowledge	Communication
Leadership skills	Agency flexibility

Approaches to Deer Management



Understanding how community deer conflicts evolve



Research Questions & Hypotheses

- Does the majority of the island community support a nonlethal deer management strategy?
 - *Yes, willingness to pay will be evident*
- Is the current public input representative of the BHI community?
 - *No; opinions will significantly differ*



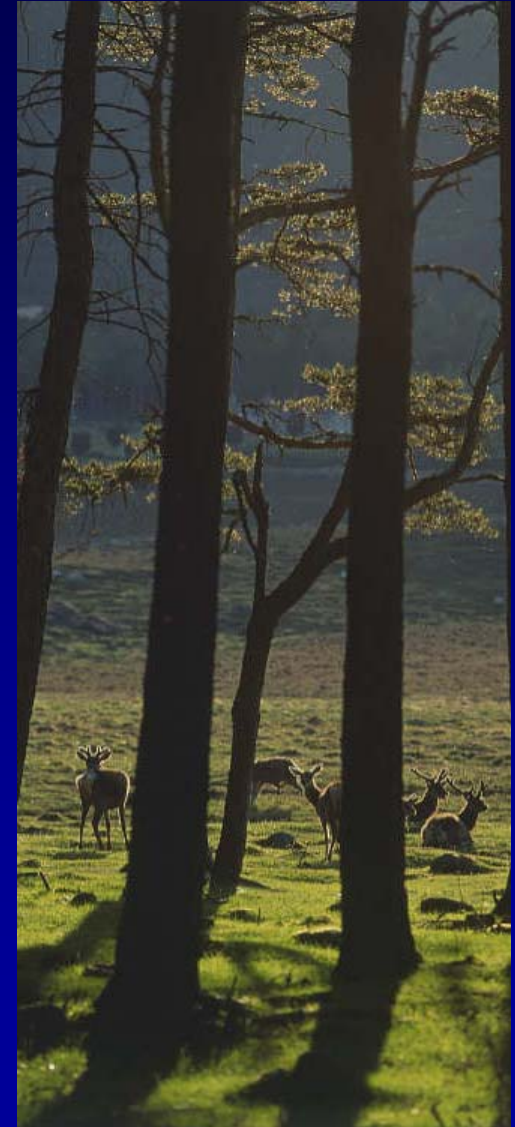
Project Objectives



- Assess the level of support from the BHI community for the proposed nonlethal management strategy
- Isolate the factors that influence community members' choice of wildlife management strategies
- Evaluate effectiveness of current public involvement
- Identify ways to engage stakeholders in the future

Project Design & Methodology

- Survey distribution
 - Email, Wildlife Overlook
- Sample Size
 - Assumed 7% failure rate, 39% response rate (Manfreda & Vehovar, n.d.)
- Question Design
 - 11 questions
 - Contingent Valuation (WTP)
- Analysis
 - Univariate statistical variables (mean, st. dev)
 - Two sided T test for statistical significance



Methodology & Results

	Number Distributed	Failure Rate	Response Rate	Total Collected
Emailed	199	19% (n=36)	41% (n=68)	68
Overlook	22	NA	NA	22
Other	3	NA	NA	3

TOTAL = 93

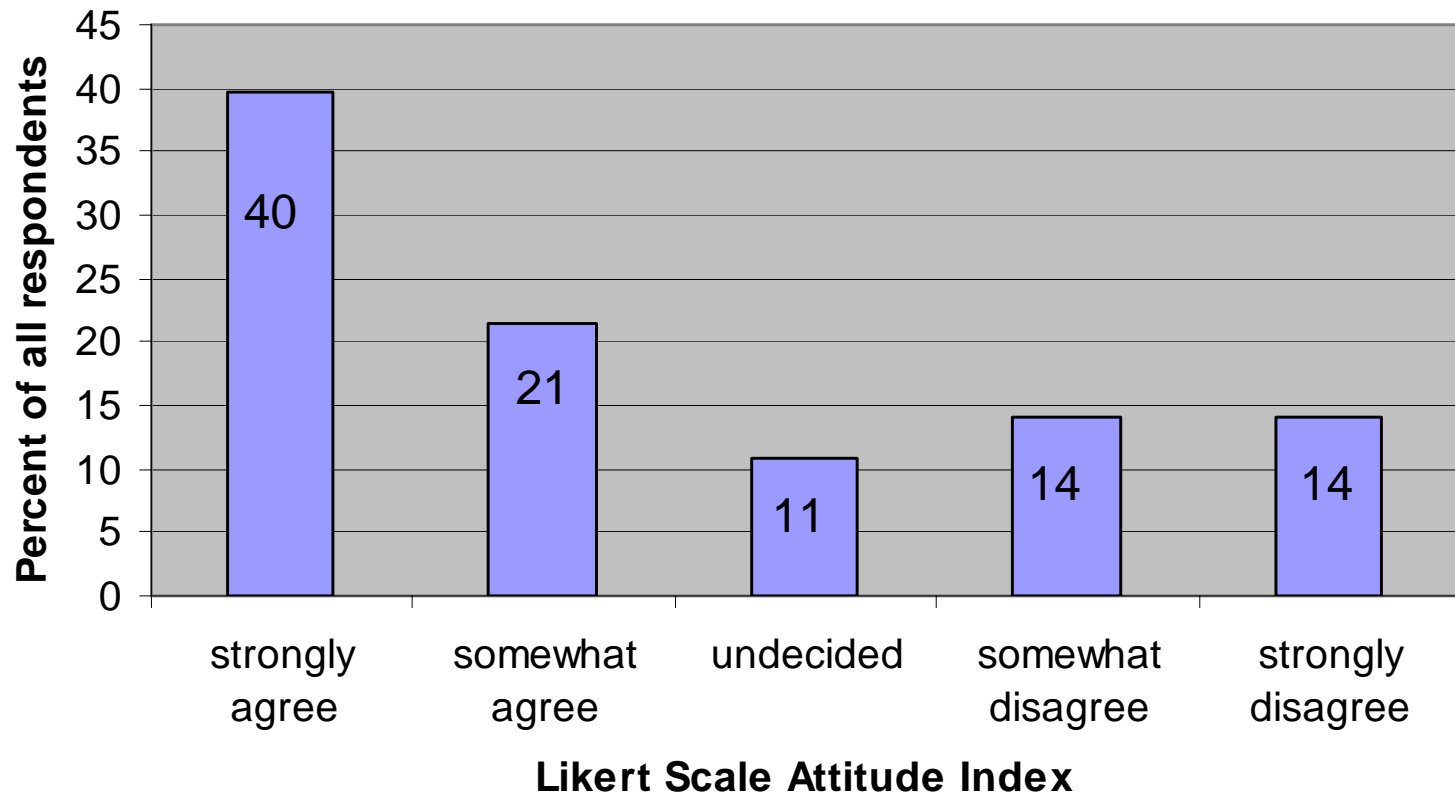
Results



- Demographic Results
 - Male 49.5%; Female 50.5%
 - Seasonal 61%; Permanent 39%
- Most people were aware that BHI manages the deer population (82.8%) but had never been to a deer management meeting (73%).
- Surprisingly, the management factor given the highest mean level of concern was the preservation of the maritime forest (2.4/5) 1= top priority

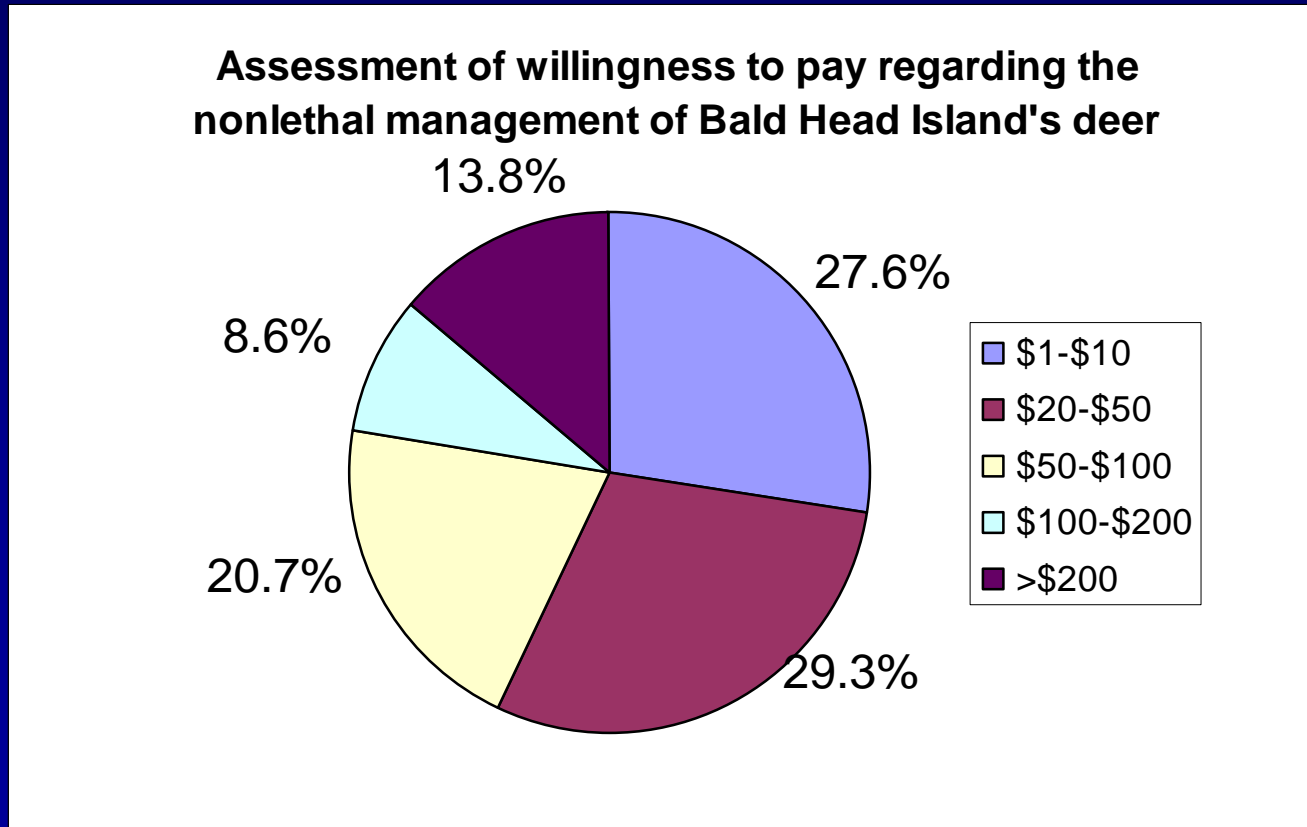
Results: Does the BHI community support the proposal for nonlethal management?

Assessing attitudes toward non lethal management in the BHI community



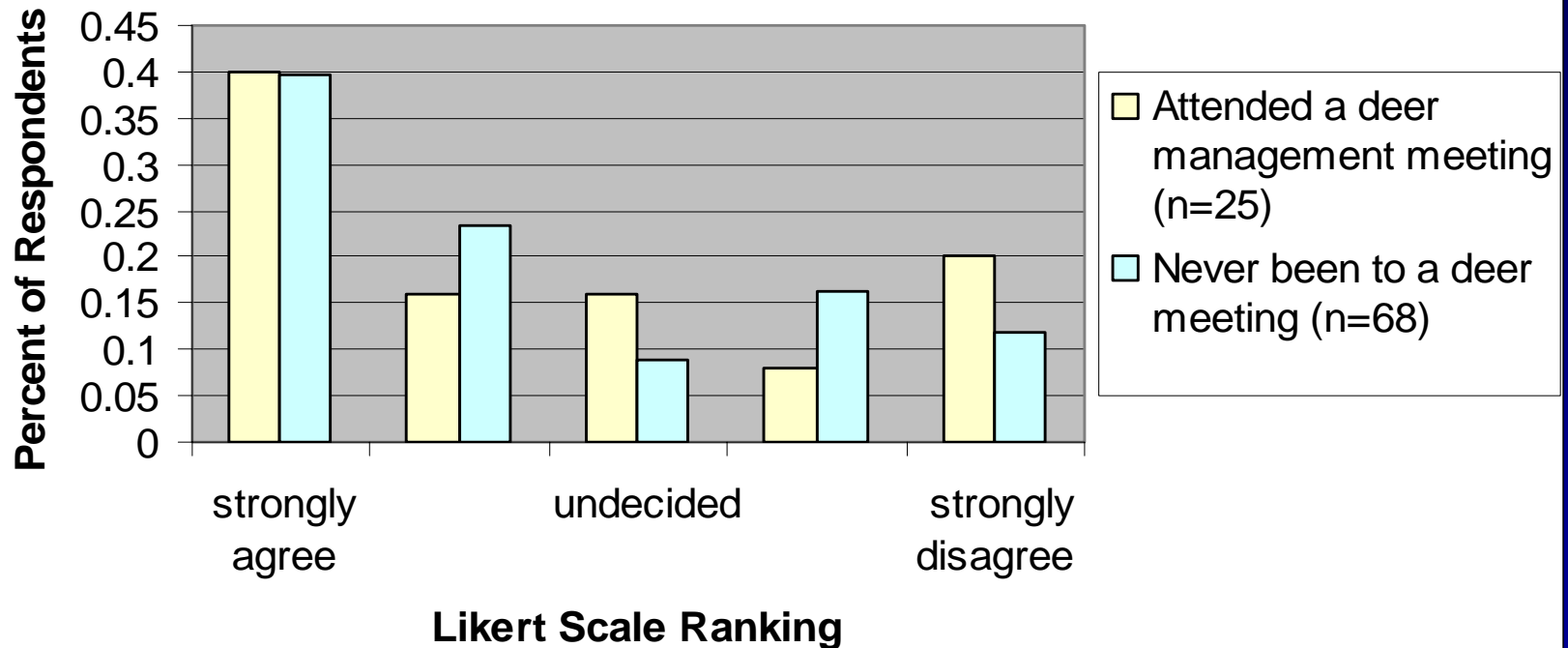
Results: Contingent Valuation

- 64% of respondents (n=79) expressed a willingness to pay for the nonlethal plan
- Mode (most common response) = \$20-\$50



Results: Is current public input (ie: deer management meeting) representative of the BHI community?

Testing the difference in community consensus between two samples



H_0 = two samples have the same mean

$p=0.67 > 0.05$

H_a = two samples have a different mean

Fail to reject null hypothesis.

Descriptive Data: A Closer Look

	Deer Management Sample	Remainder of Community
Reasons for not supporting proposal	Won't be effective (40%)	Time constraint/Not enough information (28%)
Percent unaware of deer management	0%	24%
Average WTP Value	\$50-\$100 (47%)	\$1-\$20 (35%)

Identifying Challenges to Building Community Consensus

- 26% of total population did not feel they had enough information to make decision
 - *Intervention tool: Awareness and Education*
- Feedback identified strong feelings and conflicting views on both sides
 - *Intervention tool: building capacity by encouraging social learning*

Implications for future deer management BHI

- Main points revisited
 - Nonlethal management is supported by a majority of the community, WTP exists
 - Currently public input is representative of the community
- Taking a collaborative approach
 - Target the community via outlets requested: email/website
 - As we proceed with exploring nonlethal methods, let BHI be an role model for other communities!



A photograph of three deer in a field of tall grass. The deer are looking towards the camera. The word "Questions?" is overlaid in the center in a yellow, sans-serif font. The background is a soft-focus landscape with trees and a blue sky.

Questions?

Works Cited

- Chase, L. C. 2001. Democratizing wildlife management: designing effective stakeholder involvement strategies. Dissertation, Cornell University. Ithaca, New York, USA.
- Manfreda, K., Vehovar, V. n.d. Survey Design Features Influencing Response Rates in Web Surveys. **Faculty of Social Sciences:** University of Ljubljana.
- Raik, D., Lauber, B., Decker, D., Brown, L. 2005. Managing Community Controversies in Suburban Wildlife Management: Adopting Practices that Address Value Differences. *Human Dimensions of Wildlife*. 10:109–122
- Rutberg, A, Naugle, R. 2007. Testing the Effectiveness of One Shot Immunocontraceptives on White Tailed Deer at Fripp Island, South Carolina. 2006 Progress Report. HSUS.

Fripp Island Case Study

Drug	% Does Not Pregnant
Spray Vac Aqueous	36.4 (n=11)
Spray Vac Non Aqueous	18.2 (n=10)
PZP Adjuvac heat formulated Pellets	100 (n=5)
PZP Adjuvac cold formulated pellets	80 (n=4)

*Sample from deer recaptured in 2006 (Rutberg & Naugle, 2007)