

# Michigan Deer Hunters: Satisfied Stewards or Coerced Conservationists?

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# SURVEY DATA SOURCES

- 1994 [response = 71%; n = 2788]
- 1995 [65%; n = 792]
- 1999 [62%; n = 688]
- 2001 [60%; n = 5470]
  - all MI QDMA members [82%; n = 350]
- 2002 [60%; n = 2320]
- 2003 two "mobility" surveys
  - statewide [67%; n = 1919]
  - NLP (TB area & control co.s) [77%; n = 1894]
- 2003 [78%; n = 764]
- 2003 [66%; n = 1306]

[N = 18,291]



**Intentions:**  
Fill 'doe tag'



**Hunter Behavior:**  
Harvest antlerless deer



**Management Goal:**  
lower deer no.s;  
reduce deer/auto  
collisions

# Hunter Intentions to Harvest a "Doe"

- Under what conditions would you harvest a doe? (QDM survey)
  - Never (10%)
  - Last resort (31%)
  - Regularly for venison (27%)
  - \*Balance Buck/Doe ratio (28%)
  - \*If convinced of need to reduce herd (30%)
    - \*52% checked one or both of these

Belief re  
Consequences

Value of  
Consequences

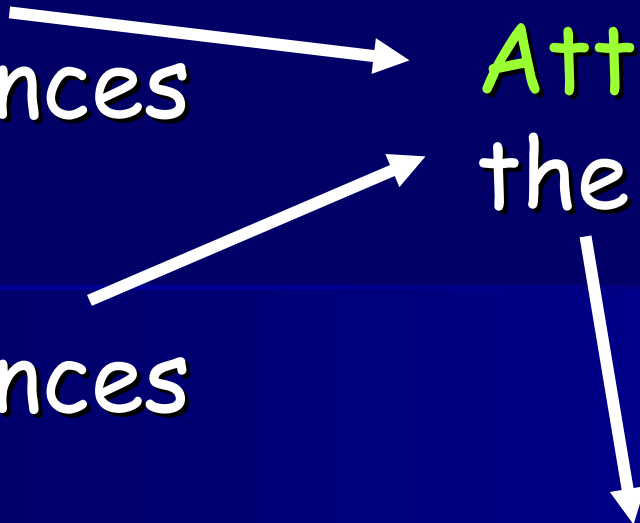
Attitude:re  
the Behavior

Intentions → Behavior

Attitude:  
Subjective  
Norm

Perceived  
Behavioral  
Control

Theory of  
Planned  
Behavior



# Beliefs about consequences

## Positive :

No action = high risk of collisions

Lowering deer no.s = lower risks

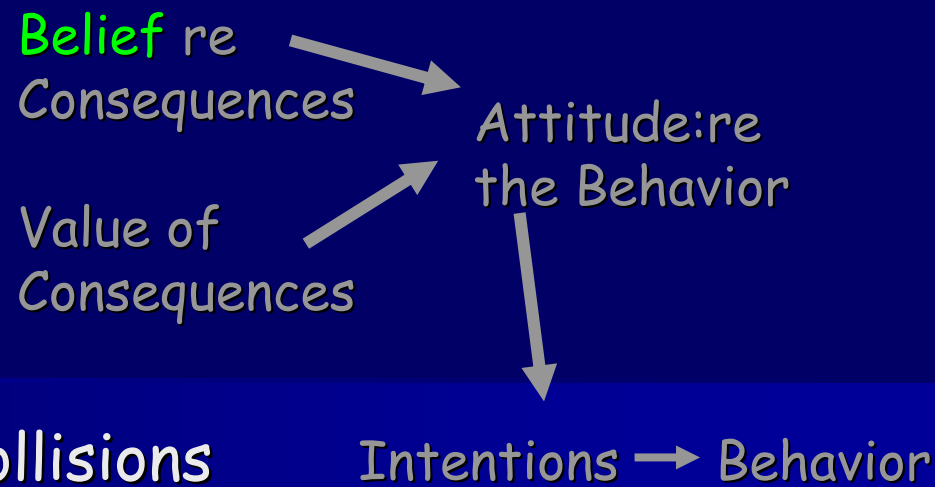
Fill "doe tag" = lower risk

## Negative:

Lowering deer no.s = impaired hunting quality

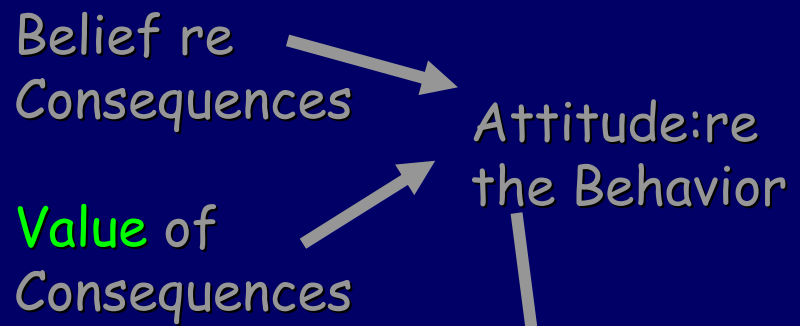
Lowering deer no.s ~~≠~~ reduce risk  
e.g., drivers create the risks; risk not related to deer no.s

Fill doe tag ~~≠~~ make a difference

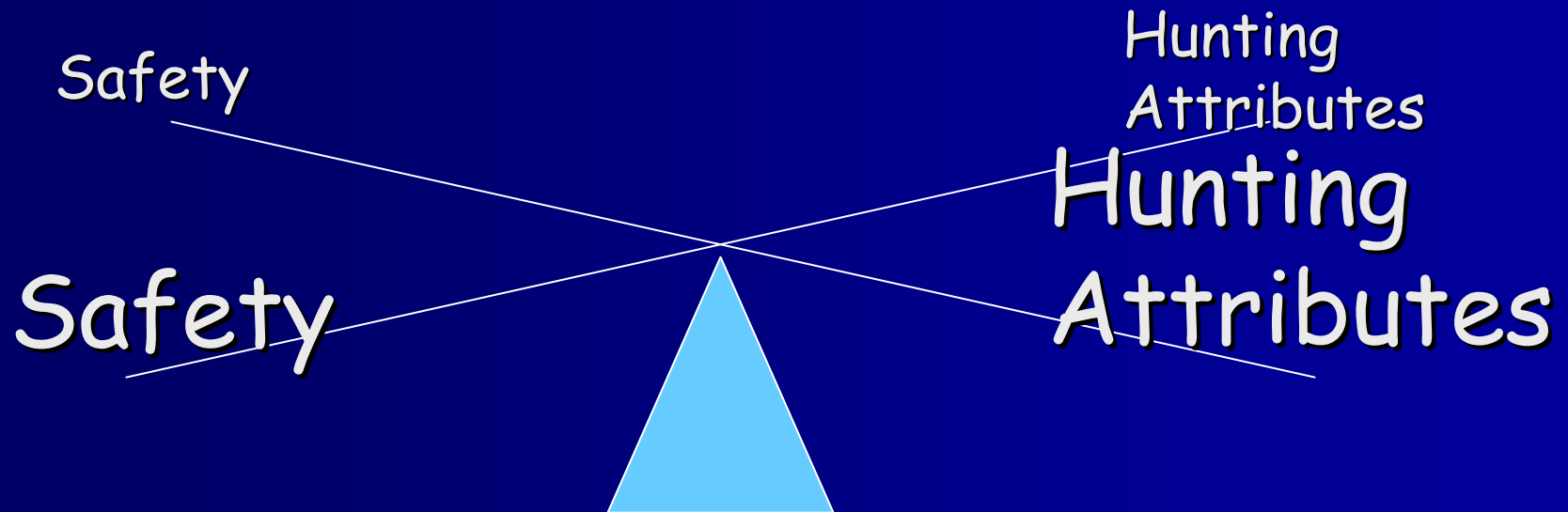


# Values Held re Consequences

- Safety of public, family, self
- Hunting Attributes; deer sightings; antler trophy



## Assignment of Priorities and Weights



SUM:[Beliefs X Values]

Attitude about  
Consequences

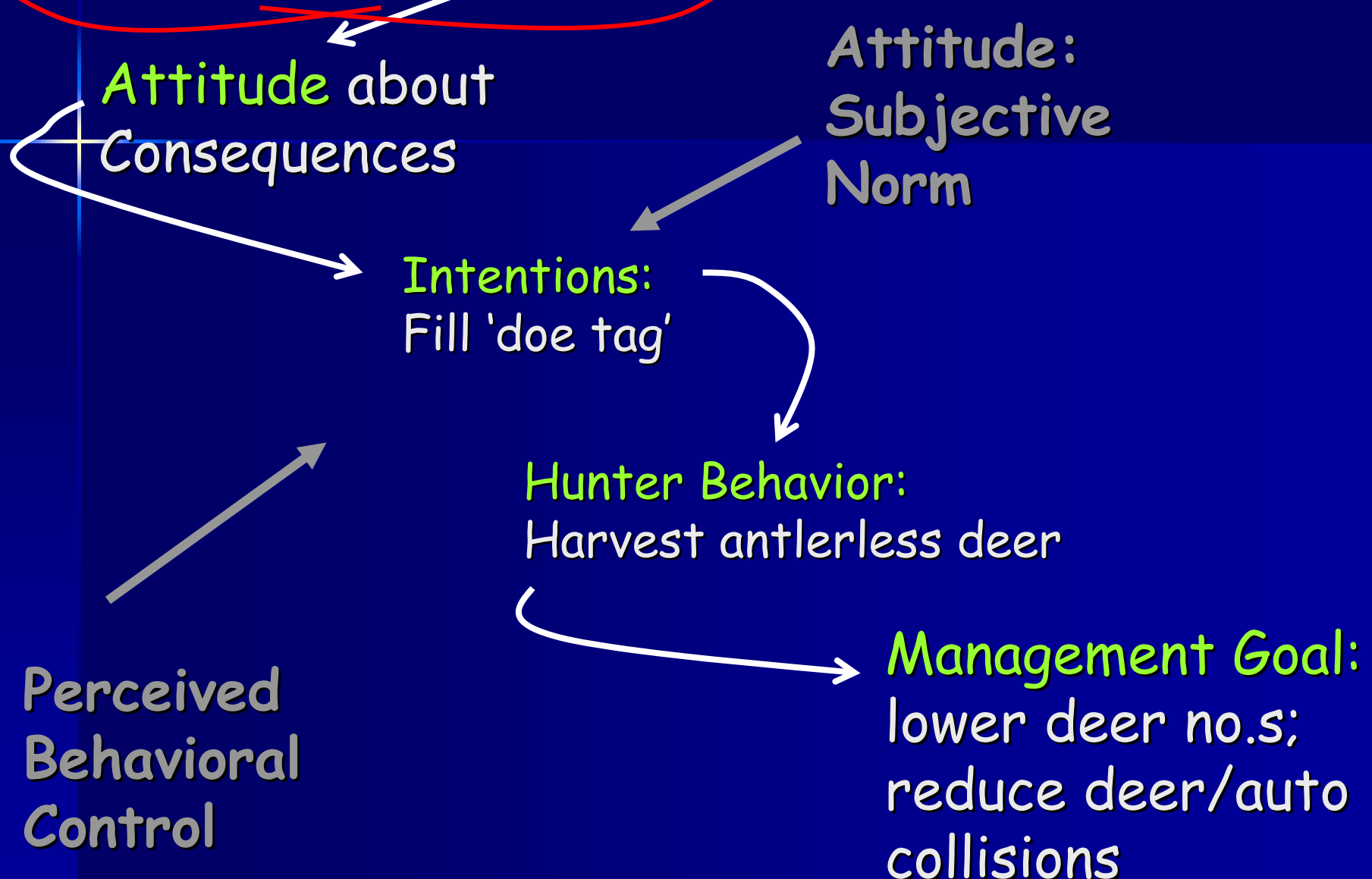
Attitude:  
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Hunter Behavior:  
Harvest antlerless deer

Perceived  
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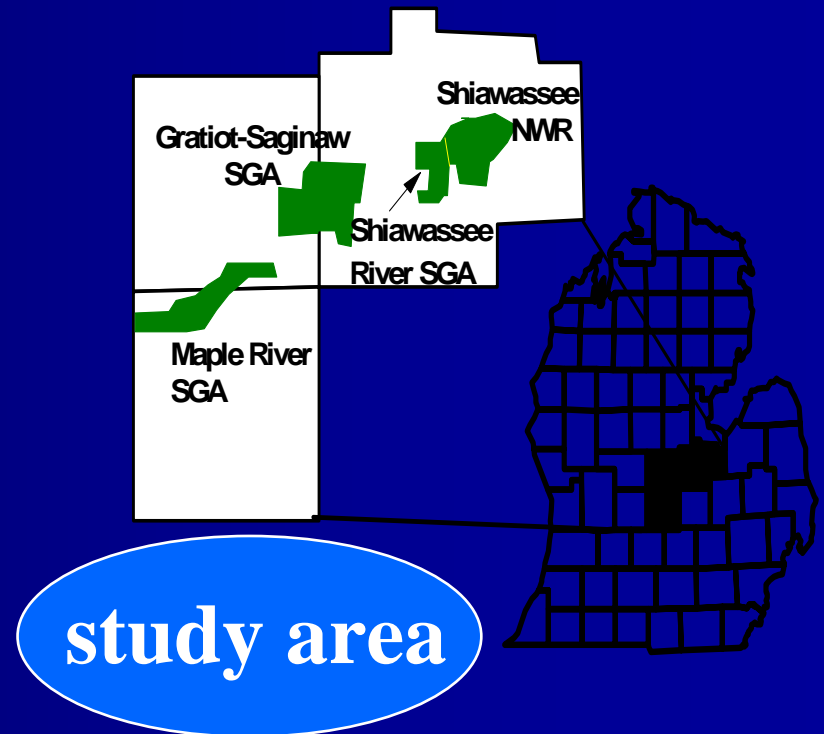
Management Goal:  
lower deer no.s;  
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collisions





# DO HUNTER VALUES AND BELIEFS SUPPORT STEWARDSHIP?

## CASE STUDY 1: SUPPORT FOR ECOSYSTEM BASED MANAGEMENT



# Case Study 1...

- Hunters held same **values** for biodiversity & ecosystem benefits as other study groups (e.g., Sierra Club members).
- Hunter beliefs: ecological attributes and benefits already sufficient

# DO HUNTER VALUES AND BELIEFS SUPPORT STEWARDSHIP?

## CASE STUDY 2: DEER NUMBERS VS SOCIAL & ECOLOGICAL COSTS (2001 QDM Survey)

Assumption: Stewards would prefer reduction in deer no.s if they acknowledged deer-related problems.

# Reported Deer Problems in Their Hunting Area

- TOO MUCH CROP DAMAGE (20%)
- TOO MUCH FOREST DAMAGE (12%)
- TOO MANY CAR-DEER ACCIDENTS (44%)
- 0 DEER PROBLEMS (49%)
- 1 PROBLEM (31%)
- 2 PROBLEMS (13%)
- 3 PROBLEMS (6%)

# How Many Deer Preferred?

- FEWER (11%)
  - SAME (22%)
  - MORE (47%)
- 
- (Greatest demand for more deer in NLP)

# STEWARDSHIP: DEER NO.S VS DEER PROBLEMS

- Reported 0 or 1 problem
  - 65% (2091) preferred more deer
- Acknowledged 2 or 3 problems (742)
  - 34% preferred more deer
  - 30% preferred same no.s
  - 36% preferred a reduction (Stewards?)

# FROM OTHER STUDIES...

- 83% rated crop losses less important than hunting benefits
- Hunters accepted scenarios with more deer-car accidents, deer health problems and forest over-browsing to maintain or increase deer no.s
  - So did many NON-hunters!
  - Hunters accepted even more problems for higher buck:doe ratios
    - But NON-hunters did NOT.

# DO HUNTER VALUES AND BELIEFS SUPPORT STEWARDSHIP?

- Most hunters DO place values on costs of deer problems
- Hunters fail to cooperate with - or oppose - management strategies due to
  - Conflicting **beliefs** re the actual consequences of deer densities and associated management
  - Competing **values** for benefits of abundant deer



# Addressing Hunter Values

- Maintain saliency of values

# Addressing Hunter Beliefs

- Impacts of abundant deer
  - Ecological
  - Social
- Nature and role of science and politics
- Credibility of science and management
- Deer biology
  - Beliefs about Deer No.s:
    - why intuition over science?



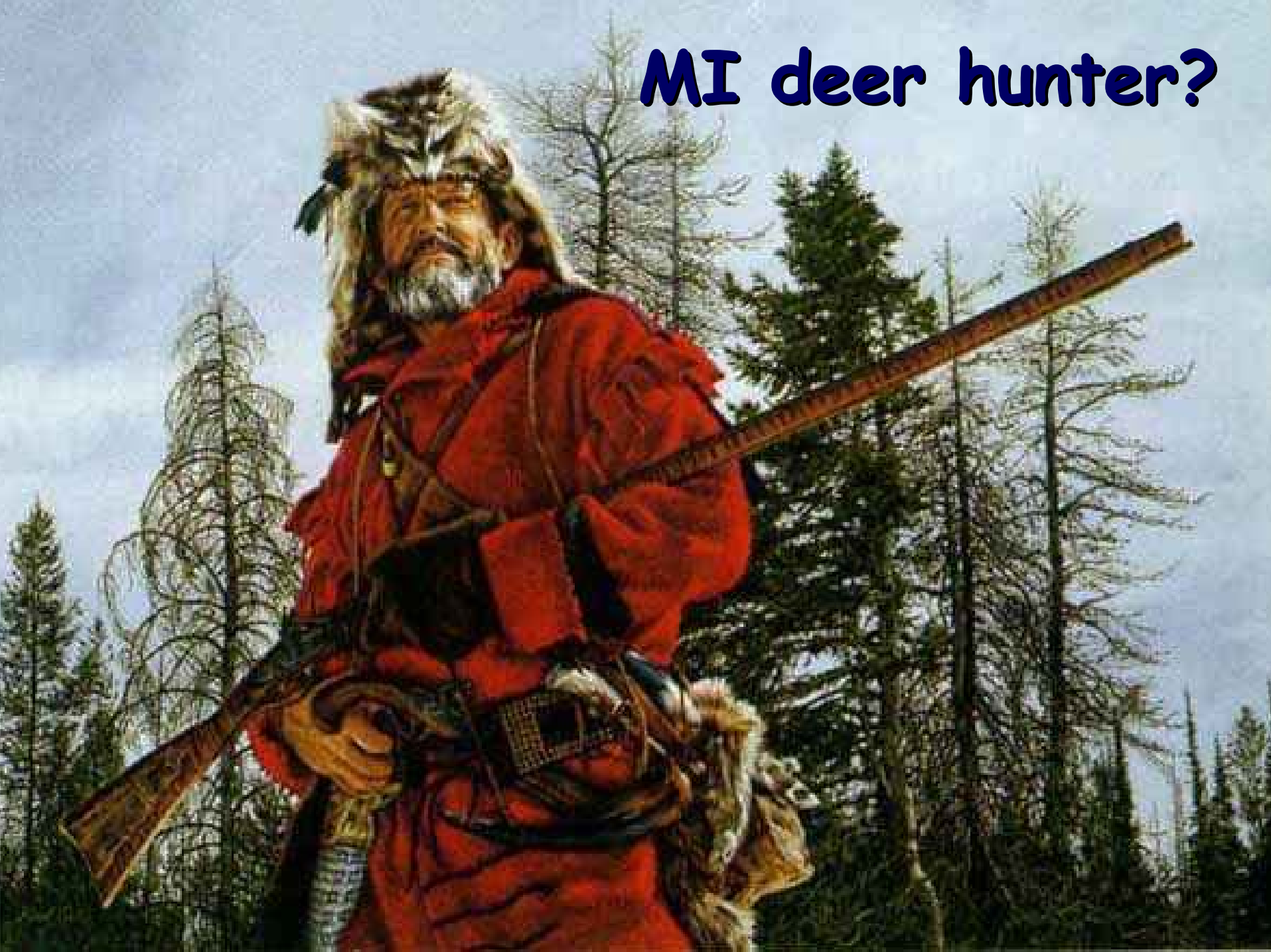
"There are no more deer!"

? ? ?





**MI deer hunter?**



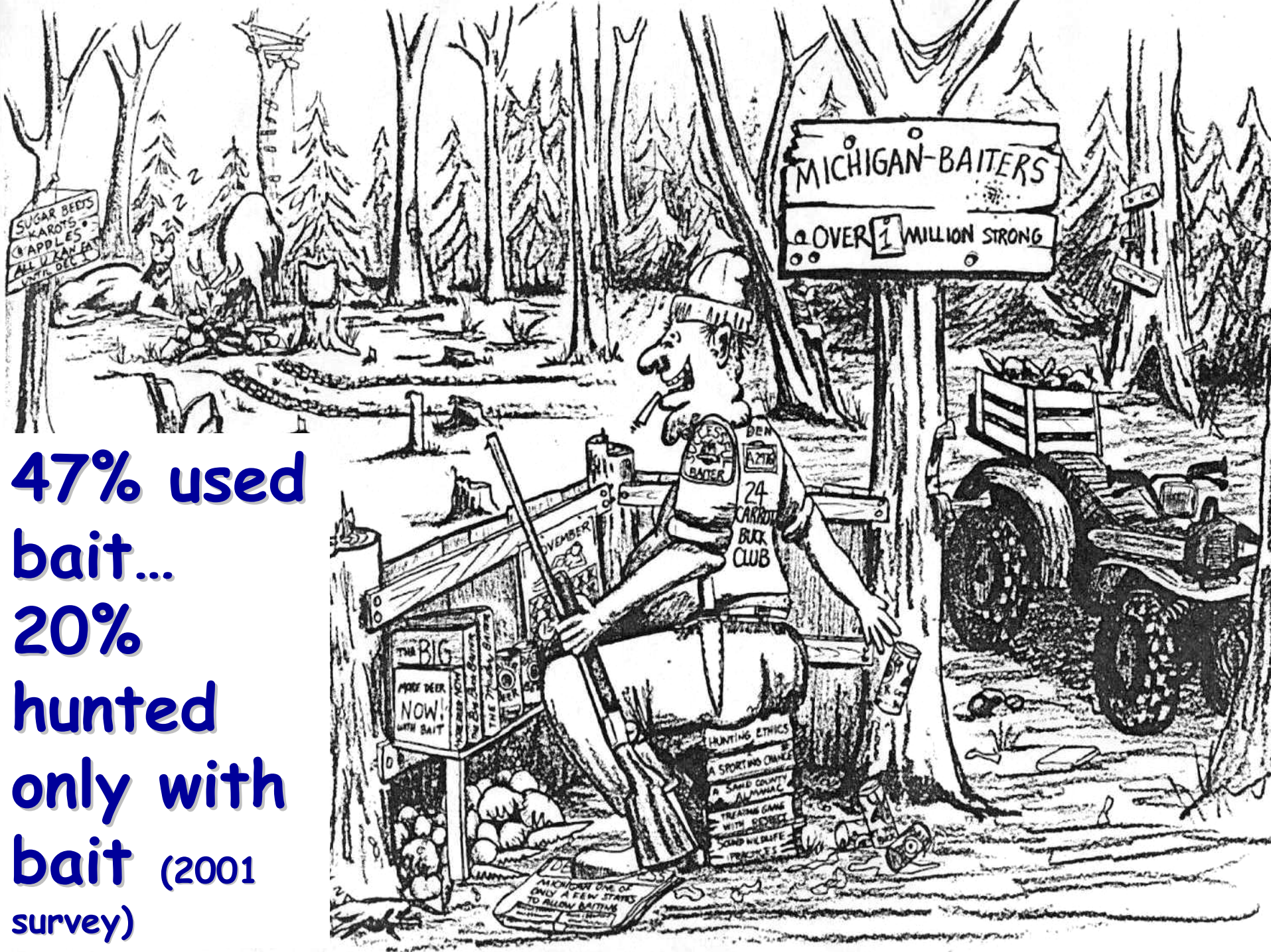
# MI Deer Hunters' Observations are Limited Temporally and Spatially

- Hunted 14 days/yr
- Off-season scouting: median = 3 days
  - 50% reported 0 days
- 50% of private land hunters:  $\leq 80$  acres



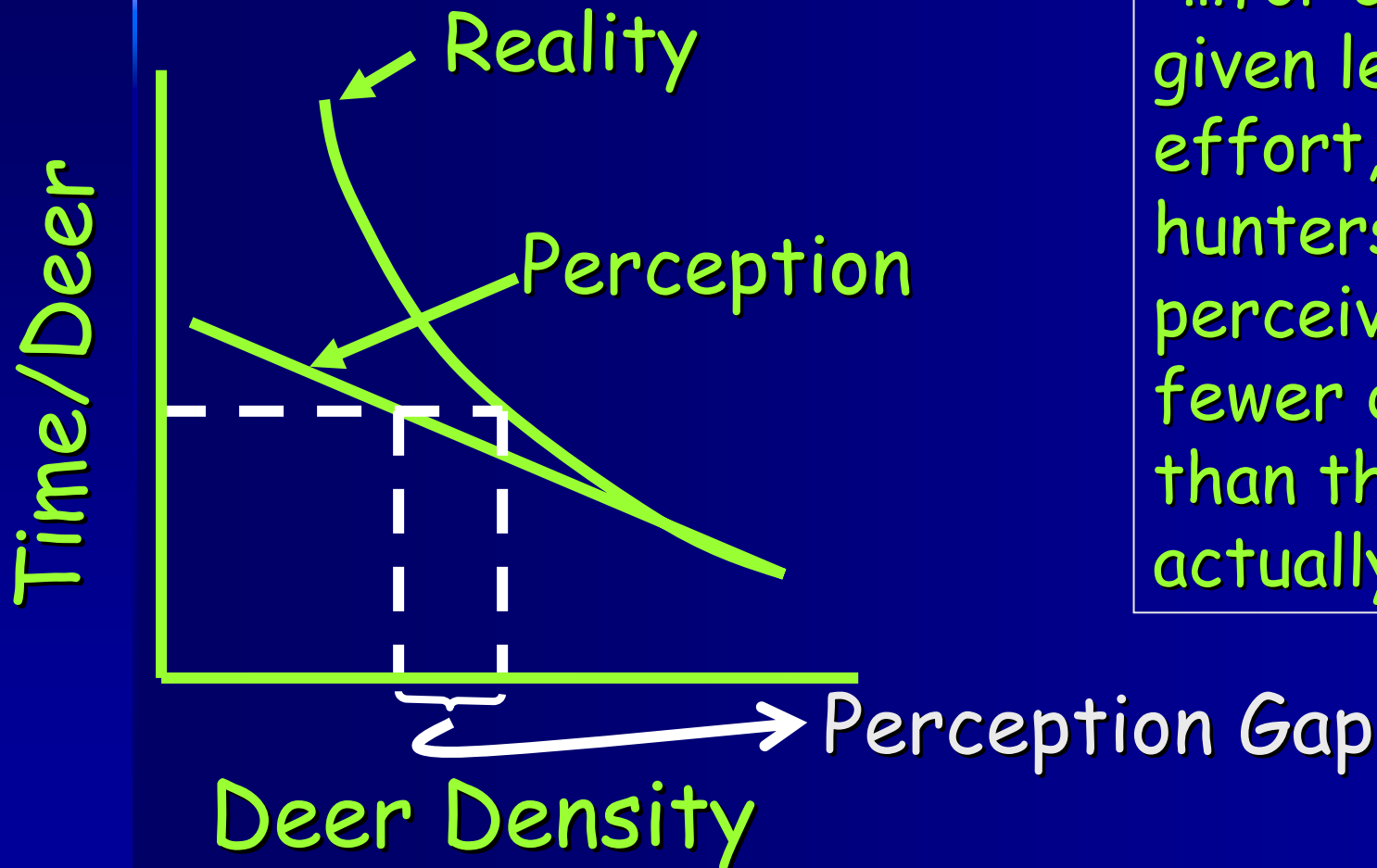


47% used  
bait...  
20%  
hunted  
only with  
bait (2001  
survey)



# Hypothetical Relationship: Hunter Effort, Perceptions and Deer Density

Van Deelen and Etter 2003



"...for any given level of effort, hunters will perceive fewer deer than there actually are."

Is Deer Hunter Satisfaction  
Incompatible with Michigan's  
Needs for Stewardship?



# Motivational Orientations

- Achievement
  - Harvest
  - Equipment, skills
  - Youngest
- Appreciative
  - Nature
  - Hunting experience
  - Most successful
- Affiliative
  - Social
  - oldest

# Hunter satisfaction is a moving target because...

## ■ motivations...

- vary with expectations
- differ among hunter segments
- vary by season of year
- are influenced by recreational specialization
- change over time

# Hunter Motivation and "Doe" Harvest

- Participation decline at 45-54 years
- Ave no. deer/hunter
  - Peaked at 25-44 yrs
  - Declined > 50 yrs
- "lower antlerless harvest among older hunters will cause antlerless harvest to lag behind buck harvest"

- Frawley 2004

# Is QDM a Solution?

- It Could Be...
  - Focus on Social Carrying Capacity
  - Better Educated Deer Hunters
  - Acceptance of Lower Deer No.s
- But It Isn't...
  - APR Does Not Equal QDM
  - Farming Practices
  - Interest of Private Land Hunters

# What To Do?

- No Quick Fixes
- Capitalize on Existing Opportunities (values, leadership)
- Make Credibility a Priority
  - Science
  - Policy setting
- Target Belief Systems
  - Ecology
  - Values at stake
- Active I&E

"... society ... reminds us that hunting is a privilege and not a ... right.

*Stewardship is the primary redeeming value that hunting has to offer society in exchange for the privilege..."*

Peyton & Bull 2005