Yearling Buck Management in New York

Results and Outcomes of a Structured Decision Making Process

February 2016

Note: This slide show was presented by DEC to representatives of several New York hunting, conservation, and other stakeholder organizations on February 2 and 4, 2016. Text annotations may be viewed by placing your cursor over the small message icon in the upper left corner of the slides.
Acknowledgments

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Yearling Buck Management – A Social Issue

Not biologically necessary
• healthy adult sex ratio
• healthy breeding activity

No tangible benefit to:
• hunting participation
• safety
• increased antlerless harvest
Why is this an issue?
Why is this an issue?

“We don't shoot any younger than 2.5 year old bucks. Problem is that surrounding hunters don't practice the same thing.”

“Any buck we get is a trophy, whether it is a spike or ten point.”

“I want to get a buck for the meat and don't really care about large antlers.”
Why is this an issue?

*Hunters have complex views and values.*

55% greatly value a better chance to take a large antlered buck, BUT 57% greatly value maintaining their freedom to choose.

33% interested in older bucks & supportive of restrictions
35% interested in any buck & not supportive of restrictions
17% value freedom but are supportive of restrictions

*Siemer and Decker, 2015*

*Bishop and LaMere, 2015*
Why is this an issue?

*Hunters have complex views and values.*

**Buck Hunting Rules**

- Satisfied: 58%
- Neither: 16%
- Dissatisfied: 26%

**Opportunity to Take a Big Buck**

- Satisfied: 41%
- Neither: 25%
- Dissatisfied: 34%

Siemer and Decker, 2015
Why is this an issue?

**The debate has been divisive and time consuming.**

- 5 advocacy groups to lobby ARs
- NYS Conservation Council & NY Farm Bureau oppose mandatory ARs
- > 5 formal requests for regulation & 2 legislative bills
- 60 FOIL requests ≈ hundreds of hours of staff time
- Hundreds of letters to hunters and legislators
- 10 public surveys, dozens of public meetings
Encourage various strategies to reduce harvest of young bucks (≤1.5 years old) in accordance with hunter desires.

Use objective criteria to determine and evaluate optimal strategies for reducing harvest of yearling bucks…
Elements of Structured Decision Making for Yearling Buck Management
Buck Management Zones

Adirondack
Northwestern
Lake Plains
Mohawk Valley
Southern Tier
Southeastern
Suffolk-Westchester
No Deer Hunting
Objectives

1. Hunter Satisfaction
   - Maximize opportunity to encounter and shoot a big buck
   - ... any buck
   - ... any deer
   - other factors (hunting opportunity, complexity)
Objectives

2. Population Management
   • Minimize impact on population management and monitoring

3. Minimize Costs
   • enforcement & compliance costs
   • education & outreach costs
Management Alternatives

...more than one way to satisfy the objectives!

• Mandatory ARs – all seasons (except Youth Hunt)
• Mandatory ARs (partial) – all of bow season through 1st week of the regular firearms season
• 1-buck bag limit
• Shorten regular season by 1 week in Southern Zone; 2 weeks in Northern Zone
• Actively promote voluntary ARs
• No change
Tools for Evaluating Alternatives

- Population Model
  - relative effect

- DEC biologist & law enforcement input
  - relative costs

- Hunter Survey
  - relative importance
Evaluating Alternatives

Deer Population Model – 5 year

- Harvest (Age- and sex-specific)
- Post-harvest $N_t$
- Non-harvest mortality (Age- and sex-specific; 0.5+ yr; winter, spring, summer)
- Recruitment
- Reproduction (Age-specific productivity)
- <0.5 year (summer) mortality
Evaluating Alternatives

Deer Population Model

Predicted Relative Change
≥2.5 Yr Buck Take

Mohawk Valley
Evaluating Alternatives

Deer Population Model

Predicted Relative Change

Total Buck Take

Mohawk Valley
Evaluating Alternatives

Deer Population Model

Predicted Relative Change

Population Growth

Mohawk Valley
Evaluating Alternatives

Relative Costs

Compliance & Enforcement

- MARs
- MARs (partial)
- 1-Buck
- Shorter Season
- Vol. Restraint
- No Change
Evaluating Alternatives

Relative Costs

- Outreach & Education
- Impact on Buck Take Index

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<thead>
<tr>
<th>Greatest Impact</th>
<th>Greatest Cost</th>
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<tbody>
<tr>
<td>MARs (partial)</td>
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<td>MARs (partial)</td>
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<td>1-Buck</td>
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<td>Shorter Season</td>
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<td>Vol. Restraint</td>
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Evaluating Alternatives

Relative Impact

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<th>Greatest Choice</th>
<th>Freedom of Choice</th>
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Image: Two individuals holding deer, presumably hunters.
Evaluating Alternatives

Hunter Survey

- What do hunters value?
  - objectives not alternatives
- Not a vote – tried that before

- 7,000 surveys mailed, fall of 2013
- 40% response rate
Evaluating Alternatives

Hunter Survey

How Often Do NY Hunters Pass Small Antlered Bucks?

- Always
- Very Often
- Often
- Sometimes
- Rarely
- Never
- Does not apply
What do hunters value?

**Average Rank of Importance to Hunters**

Opportunity to take:
- Big Buck
- Any Buck I Choose
- Any Deer
- Other Satisfaction

![Bar Chart showing the average rank of importance to hunters in different regions: Adirondack, Lake Plains, Mohawk, Northwestern, Southeastern & Suff/West, Southern Tier. The chart indicates varying degrees of importance for each opportunity across the regions.](image-url)
What do hunters value?

Average Rank of Importance to Hunters

Opportunity to take:
- Big Buck
- Any Buck I Choose
- Any Deer
- Other Satisfaction

Importance Rank

Southeastern & Suff./West.

Most

Least

Big Buck
Any Buck
Any Deer
Other
Trade-offs (weighting the objectives)

1. Maximize Hunter Satisfaction
   - Maximize opportunity for a big buck
   - Maximize opportunity for any buck
   - Maximize opportunity for any deer
   - Maximize other related satisfaction

2. Minimize Deer Population Impacts

3. Minimize Management Cost
Results for Mohawk Valley

To illustrate the process

Which alternative achieves the highest relative score?
Results for Mohawk Valley

To illustrate the process
Results for Mohawk Valley

To illustrate the process
Results for Mohawk Valley

To illustrate the process

Mohawk Valley

- MARs
- MARs (partial)
- 1-Buck
- Shorter Season
- Vol. Restraint
- No Change

Legend:
- Big Bucks
- Any Buck
- Any Deer
- Other Satisfaction
Results for Mohawk Valley
To illustrate the process

Mohawk Valley

- MARs
- MARs (partial)
- 1-Buck
- Shorter Season
- Vol. Restraint
- No Change

Legend:
- Big Bucks
- Any Buck
- Any Deer
- Other Satisfaction
- Population

Relative Score

0.00 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60
Results for Mohawk Valley

To illustrate the process
Summary of Results

No Change
(2nd - Vol. Restraint)

No Change
(2nd - MARs full season)

No Change
(2nd - Shorter Season)
Summary of Results – Benefits of SDM

Hunter values drive the decision

Adaptive Process

Outcome not sensitive to minor variation in biological or survey data

If we exclude concern for population growth or cost, results stay as “No Change” or “Voluntary Restraint”
Next Steps

Existing AR program… no changes planned
Encouraging Voluntary Restraint

Hunters want more large bucks AND the freedom to choose.
Encouraging Voluntary Restraint

From the Deer Plan

Educate hunters on their impact
Hunter Choices Matter!

Provide physical information about bucks
Enhance Data Collection to Inform Choices

Promote landowner-hunter co-ops
Foster Collaboration
Encouraging Voluntary Restraint

Consistent with public attitudes about hunting
Support hunting for meat, not trophies

Focus on more than antlers
Importance of habitat and population management
Encouraging Voluntary Restraint

Discussion:

• Q & A on SDM

• How can you help make Voluntary Restraint most effective?

Buck Harvest Management
www.dec.ny.gov/outdoor/27663.html
Results for Adirondacks:

Outcome
No Change
Results for Lake Plains

Outcome
No Change
Results for Mohawk Valley:

Outcome
No Change
Results for Northwestern:

Outcome
No Change
Results for Southeastern:

Outcome
No Change

Southeastern

- MARs
- MARs (partial)
- 1-Buck
- Shorter Season
- Vol. Restraint
- No Change

Legend:
- Big Buck
- Any Buck
- Any Deer
- Other Satisfaction
- Population
- Cost

Relative Score
Results for Southern Tier:

Outcome: No Change
Results for Suffolk-Westchester:

Outcome
No Change