

Make Room for Wildlife: Effects of Exurban Development on Wildlife

Lessons from the Adirondacks

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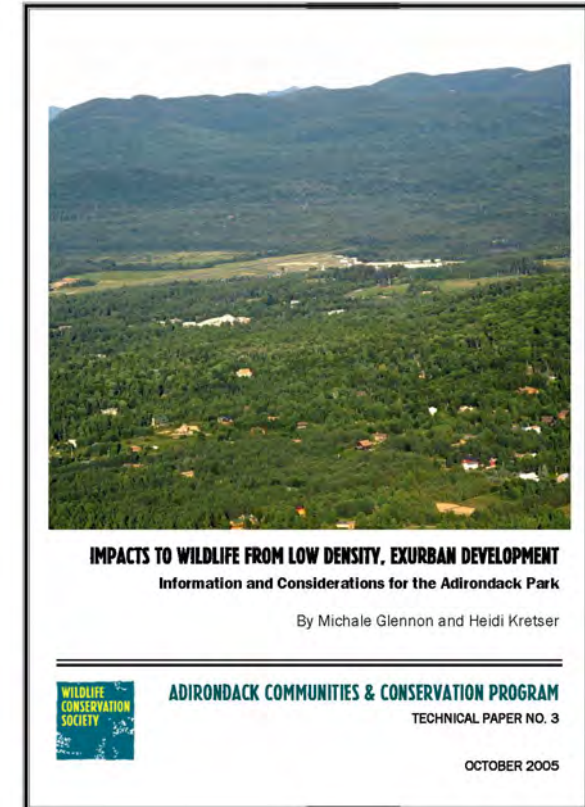
Exurban 101

Low
deve
large
away



Effects to Wildlife

- Ecosystem fragmentation
- Edge effects and nest predation
- Source-sink dynamics
- Disruption of movement, dispersal
- Altered community structure, composition
- Roads
- Recreation
- Domestic pets
- Human-wildlife conflicts
- Cumulative impacts



Available at www.wcs.org

Question 1: What is the size of the ecological effect zone associated with single exurban homes in the Adirondacks?

or

How far do you have to go from a house to find a bird community that doesn't know the house is there?



Ecological Effect Zone

Answer: The ecological impacts of development are larger than the physical footprint of homes and roads. It cannot be assumed that, because the surrounding matrix remains largely intact, effects are minimized.

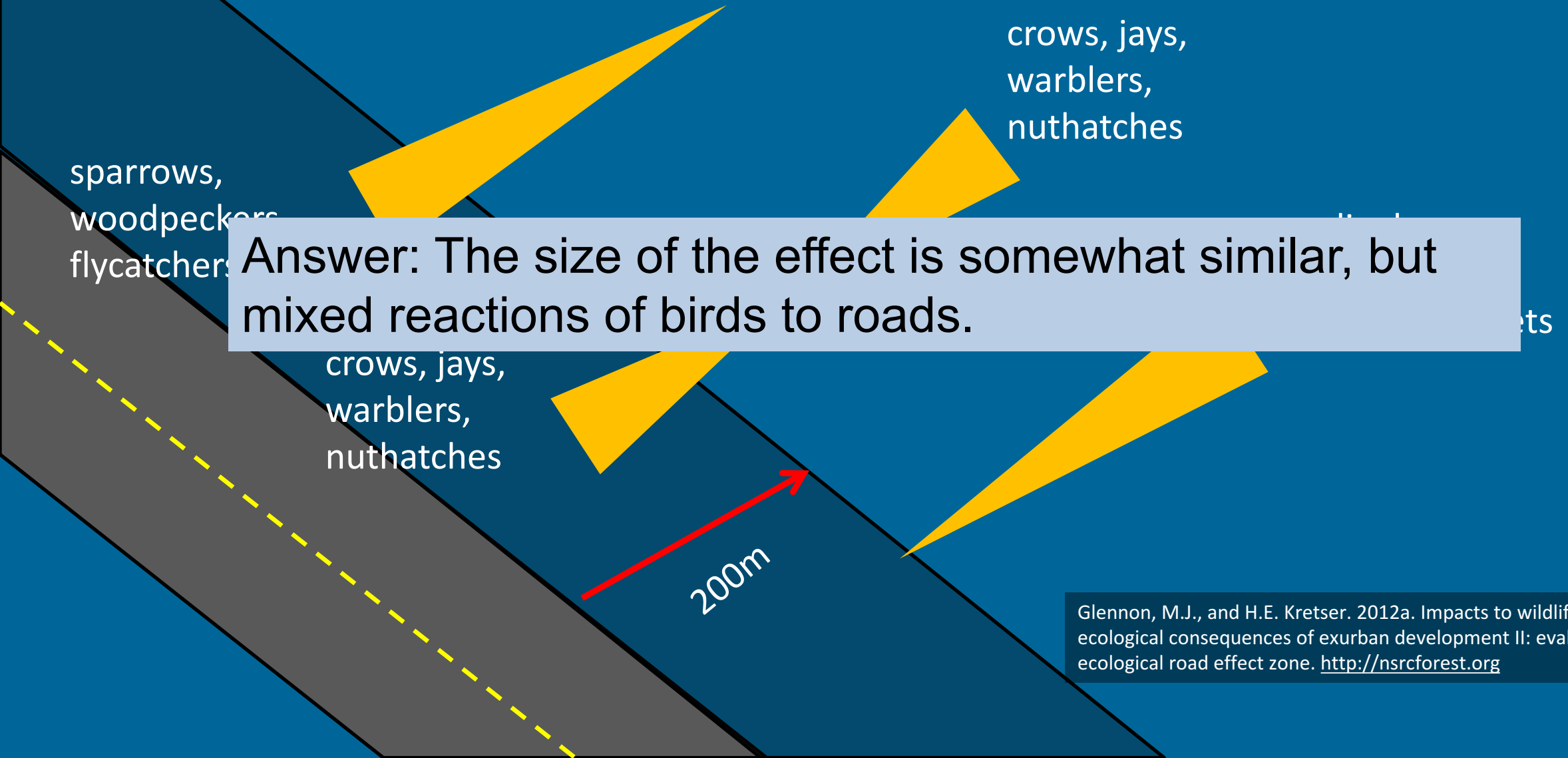
31 acres

Question 2: Same question, but for roads

or

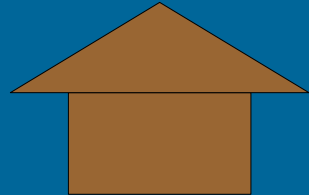
How far do you have to go from a rural Adirondack road to find a bird community that doesn't know the road is there?

Road Effect Zone



Glennon, M.J., and H.E. Kretser. 2012a. Impacts to wildlife from the ecological consequences of exurban development II: evaluating the ecological road effect zone. <http://nsrcforest.org>

Question 3: Can we separate houses from roads in terms of impacts to birds?



- Sparrows
- Chickadees
- Nuthatches
- Woodpeckers
- Cardinals/Buntings
- Warblers
- Wrens
- Vireos



Answer:
No, not
very well.

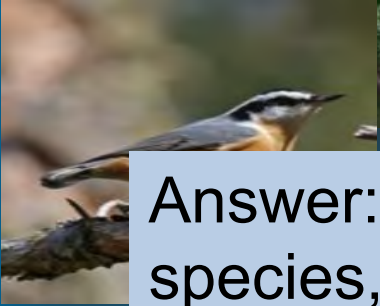
Question 4: What are the characteristics of faunal communities before and after residential construction?

or

Who are the angry birds?



Winning and Losing Strategies Across Taxa



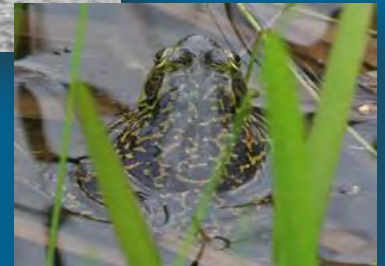
You have a better chance of going locally extinct after residential construction if you:

- Nest on the ground

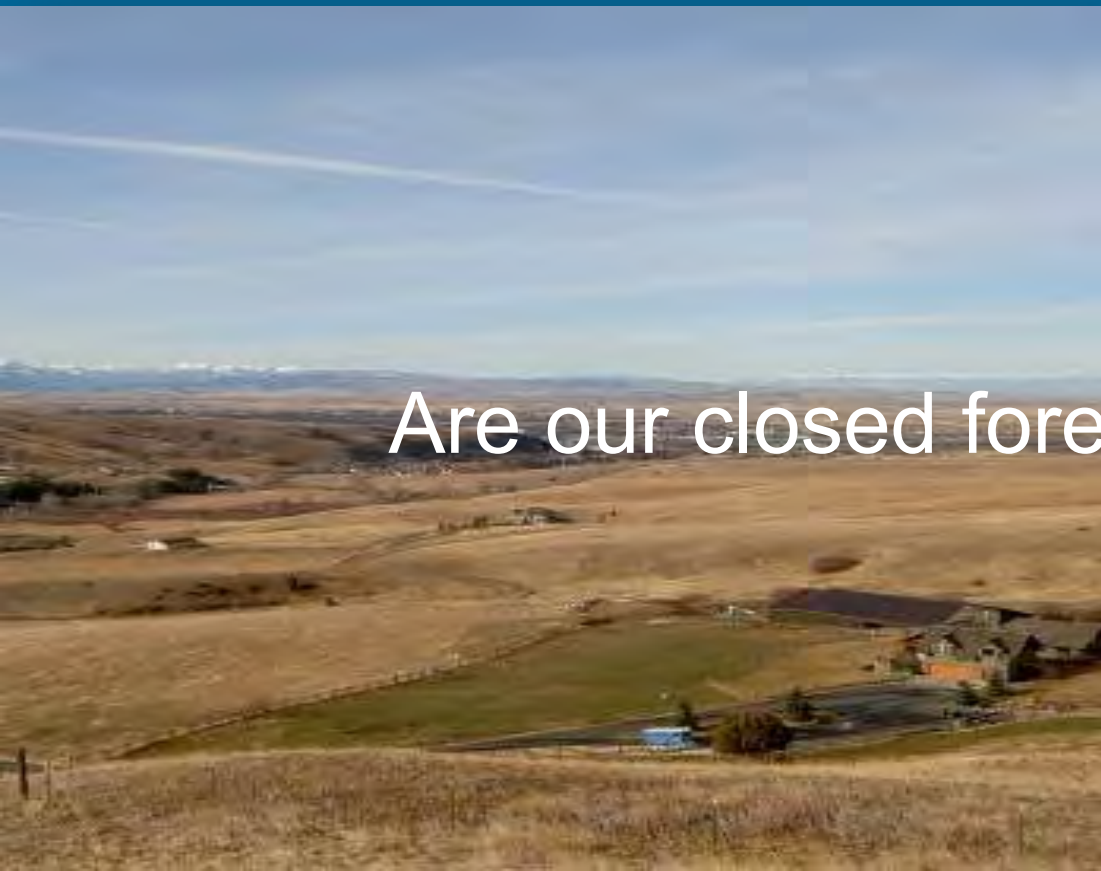
Answer: Ground/shrub nesters, Neotropical migrants, area sensitive species, insectivores, foliage gleaners, small bodied species, species with small clutch sizes, e.g., thrushes, tanagers, grosbeaks

You have a better chance of colonizing/ persisting after residential construction if you:

- Nest in a cavity or underground
- Are willing to eat many foods
- Are large and long-lived



Question 5: Do the effects of exurban development differ in the Adirondacks vs elsewhere?

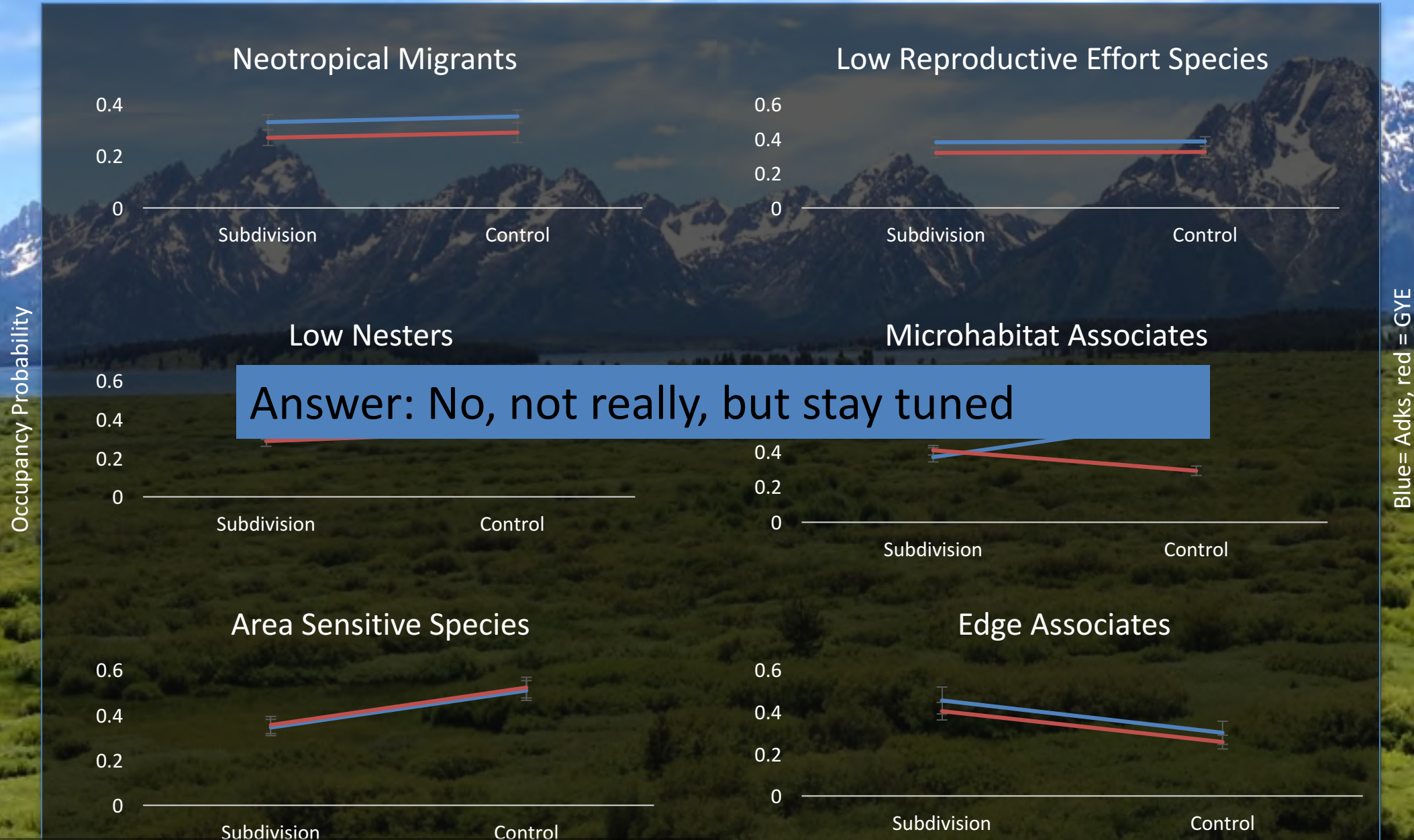


or



Are our closed forest systems more vulnerable?

Adirondacks vs Madison County, MT

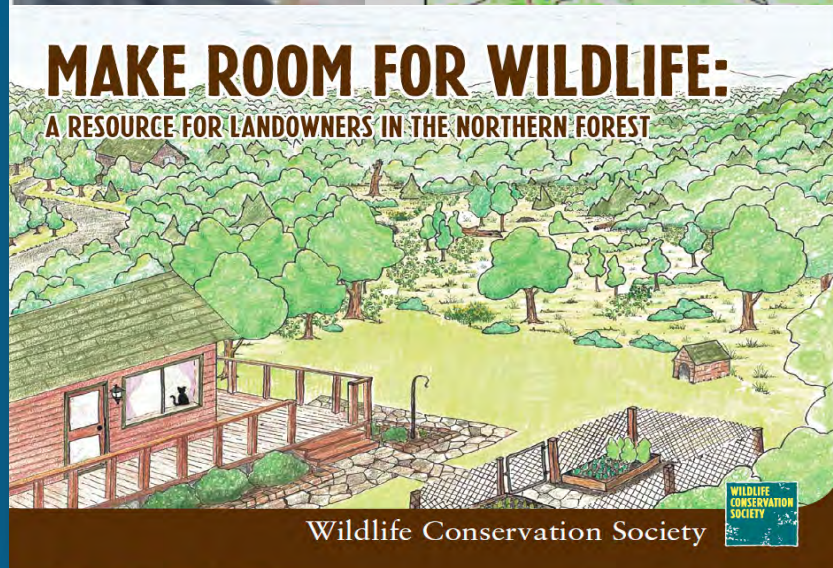
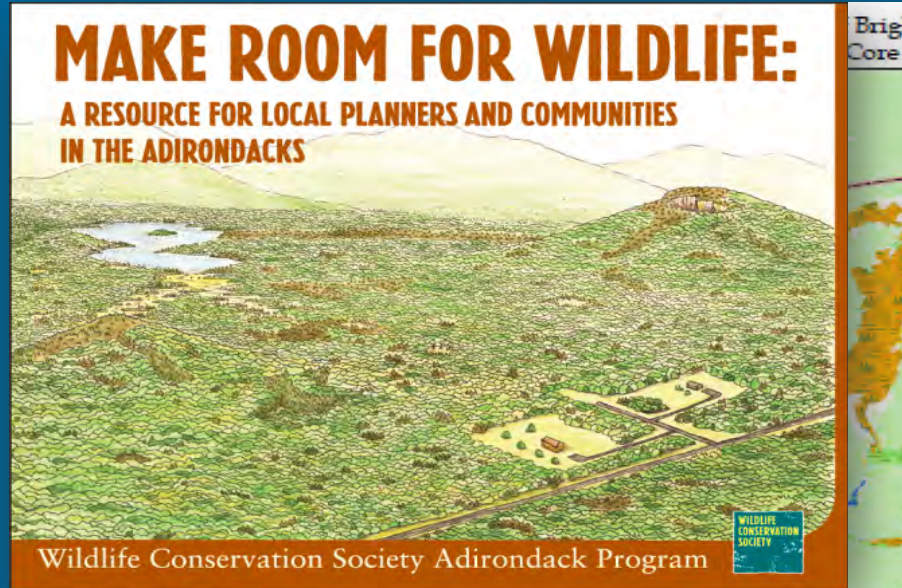


Question 6: What has been learned and how are we using the information?

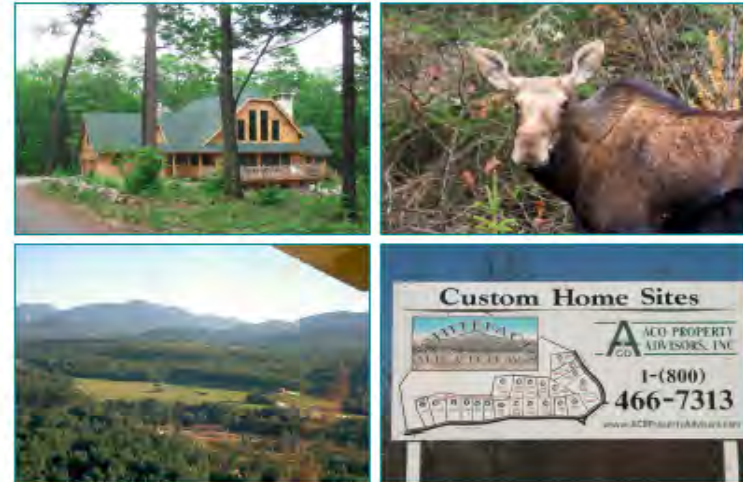
~~Adirondacks Myths are Debunked~~

- Because surrounding landscape remains forested and developed area small, effects are minor
 - Impact area can actually be much larger than development footprint
- Effects of exurban development are different from impacts of urbanization more generally
 - Scale smaller but changes similar, development is development → HOMOGENIZATION
- In the Adirondacks, development unlikely to impact wildlife because we have so much protected land
 - Distribution of habitat types is not equal between Forest Preserve and private lands (Glennon and Curran 2013)

Providing Technical Assistance



PROTECTING WILDLIFE CONNECTIVITY THROUGH LAND USE PLANNING: Best Management Practices and the Role of Conservation Development



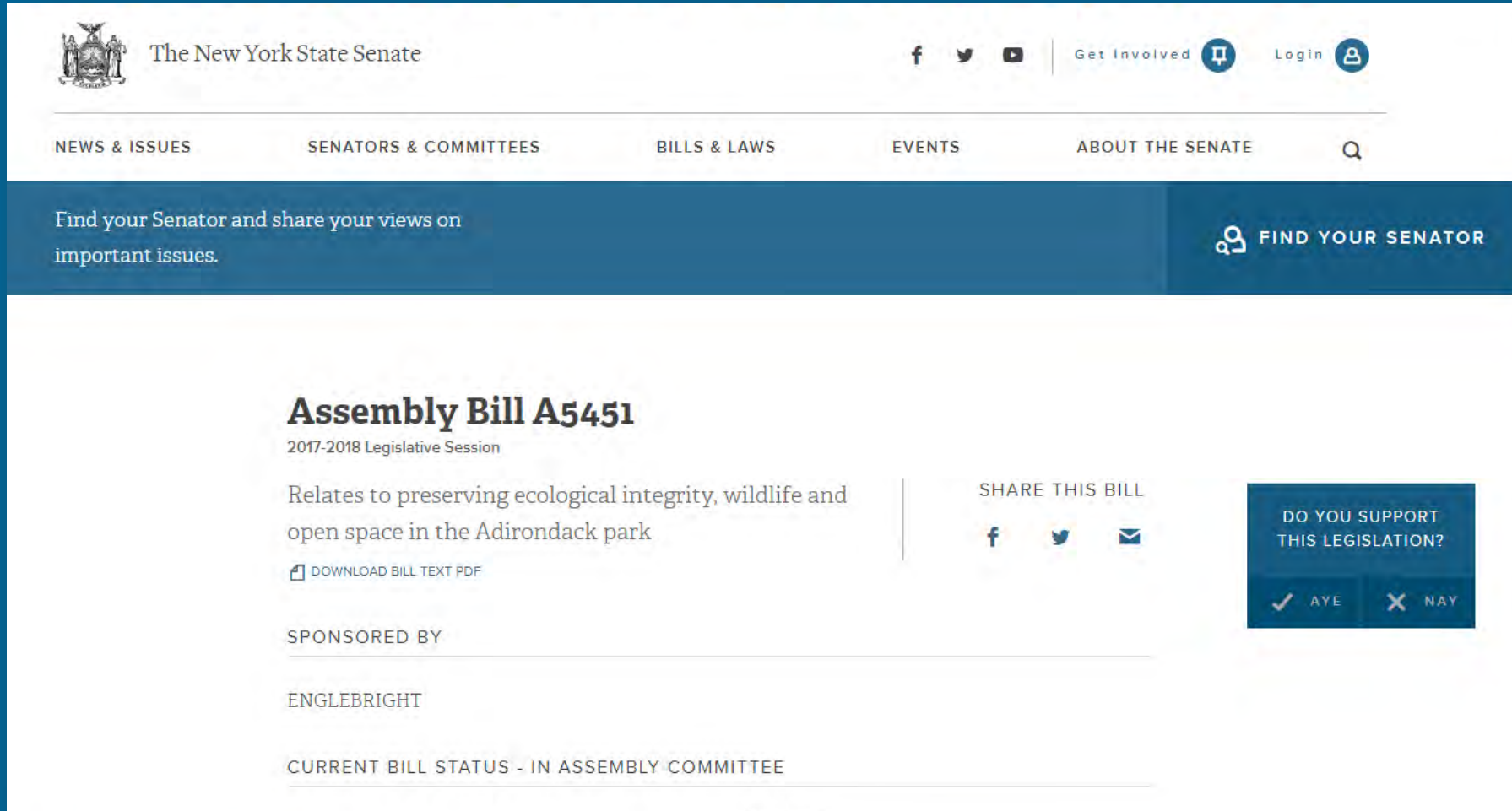
Wildlife Conservation Society
Adirondack Program Technical Paper No. 4
Zoë P. Smith, Michale J. Glennon, Leslie N. Karasin,
Sarah E. Reed, and Heidi E. Kretser
December 2012



Staying Connected Initiative Final Report

www.wcs.org

Influencing Policy



The screenshot shows the official website of The New York State Senate. At the top, the Senate's logo and name are on the left, while social media links for Facebook, Twitter, and YouTube, along with "Get Involved" and "Login" buttons, are on the right. A navigation bar below the header contains links for "NEWS & ISSUES", "SENATORS & COMMITTEES", "BILLS & LAWS", "EVENTS", and "ABOUT THE SENATE", followed by a search icon. A dark blue banner below the navigation bar encourages users to "Find your Senator and share your views on important issues." and includes a "FIND YOUR SENATOR" button with a magnifying glass icon. The main content area features a detailed page for "Assembly Bill A5451" from the "2017-2018 Legislative Session". The bill's description is "Relates to preserving ecological integrity, wildlife and open space in the Adirondack park". A link to "DOWNLOAD BILL TEXT PDF" is provided. To the right of the description is a "SHARE THIS BILL" section with icons for Facebook, Twitter, and email. Further right is a "DO YOU SUPPORT THIS LEGISLATION?" poll with "AYE" and "NAY" buttons. Below the description, the bill is listed as "SPONSORED BY ENGLEBRIGHT" and its "CURRENT BILL STATUS - IN ASSEMBLY COMMITTEE".

The New York State Senate

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Assembly Bill A5451

2017-2018 Legislative Session

Relates to preserving ecological integrity, wildlife and open space in the Adirondack park

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CURRENT BILL STATUS - IN ASSEMBLY COMMITTEE

Conservation Design Bill: Amend the Adirondack Park Agency Act to require Conservation Subdivision

Collaborating Across the Northeast



stayingconnectedinitiative.org



nsrcforest.org



Hudson
River
Estuary
Program



LANDSCAPE
CONSERVATION
COOPERATIVES

North Atlantic  Landscape Conservation Cooperative

northatlanticlcc.org

Providing Expert Testimony

Green groups hammer on resort's wildlife impact

June 23, 2011

By JESSICA COLLIER - Staff Writer (jcollier@adirondackdailyenterprise.com) , Adirondack Daily Enterprise

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RAY BROOK - Green group attorneys continued Wednesday to argue that the consultants who prepared application materials for the Adirondack Club and Resort could and should have done more study into the resort's potential impact on wildlife on the project site.

State Adirondack Park Agency staff had asked the LA Group, the Saratoga-based consultant group that wrote the project's APA application, to analyze the impact on wildlife, referring to

Wildlife Conservation

ed "Impacts to

ent through the



Michale Glennon, an expert witness for the Adirondack Council, testifies about potential impacts on wetland disturbance could have in a hearing session on the Adirondack Club and Resort Tuesday. (Enterprise photo— Jessica Collier)

ACR hearing is over

June 25, 2011

By JESSICA COLLIER - Staff Writer (jcollier@adirondackdailyenterprise.com) , Adirondack Daily Enterprise

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RAY BROOK - After 19 days of hearing sessions stretched out over three months, a state Adirondack Park Agency hearing on the Adirondack Club and Resort project ended Friday afternoon with all the parties were

"We're very glad to see the

Humans live in the Adirondacks, too

January 9, 2012

By Jon Kopp

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Is it not surprising that Bob Glennon and Adirondack Wild are demanding new hearings for the Adirondack Club and Resort? It brings to mind how often our views of the past can be distorted by our own desires for the future.

I believe that some in the Adirondack Park Agency and green groups like Adirondack Wild, the Adirondack Council and Wildlife Conservation Society would like to see a better definition of the term "undue adverse impact" when it comes to determining the extent of change caused by a development project to the environment and wildlife populations. The APA law is somewhat vague when it comes to defining what that term means, and that bothers them.

A term that is always bandied about by those groups is "biological integrity." It's used on 24 occasions in the testimony provided by Wildlife Conservation Society's Michale Glennon and Heidi Kretser at

Expert: More amphibians likely to be found on site

June 8, 2011

By JESSICA COLLIER - Staff Writer (jcollier@adirondackdailyenterprise.com) , Adirondack Daily Enterprise

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TUPPER LAKE - An expert witness for Adirondack Wild testified Tuesday that since he was able to find 11 species of amphibians on the Adirondack Club and Resort project site in eight-and-a-half hours, there are probably many more.

Biologist Michael Klemens, who testified in April that developers' application materials don't include enough information about wildlife on the property, was back Tuesday to answer questions about a rapid amphibian assessment he performed on public lands around the property during a spring amphibian migration period.

Klemens used sections of Read, Lake Simond and Ski Tow roads to survey amphibian activity over one day and night in April. He

ACR Site Impacts Assessment



Article Photos



Biologist Michael Klemens testifies about amphibians.

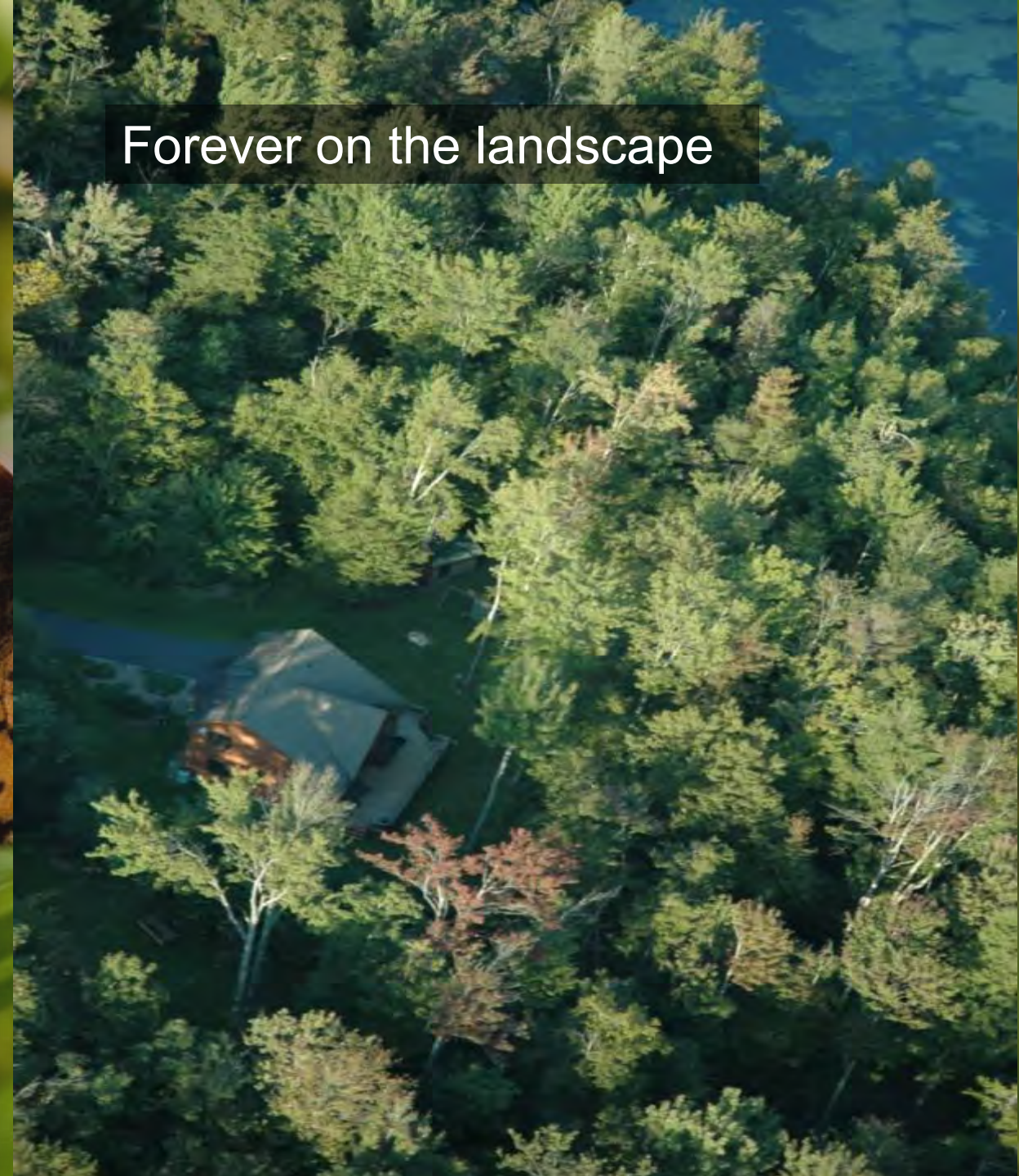
Working with Private Landowners





Months/years investment

Forever on the landscape



Acknowledgements

- NYS Biodiversity Research Institute
- National Science Foundation
- Northeastern States Research Cooperative
- National Geographic
- Northern NY Audubon
- Multi-state SWG program
- Doris Duke Foundation
- Adirondack Park Agency
- Tug Hill Commission
- Two Countries One Forest
- Hudson River Estuary Program
- Staying Connected Initiative
- Larry Master
- Many field technicians